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Random Walks in Random Media

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I declare that this thesis is based on my own work.

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Introduction

This thesis contains a study of three models for RWIREs. A RWIRE is a random walk where the transition probabilities are themselves random variables. These models can be used to investigate many physical problems including the motion of electrons in crystals with impurities. All the models studied here are one-dimensional discrete space models. The first model studied allows unit jumps forward and backward in both discrete and continuous time. The second model is a directed walk in continuous time where only unit jumps are allowed. The final model is like the second in that it is directed except integer jumps up to size R are permitted; this model is studied in discrete and continuous time.

In chapter 2 we address the problem of the unit jump directed RWIRE in discrete and continuous time. In Solomon [4], the "speed" of the RWIRE in discrete time is determined to be,

(1) $$\lim_{n\to\infty} X_n/n = \frac{1 - \mathbb{E}[\Sigma]}{1 + \mathbb{E}[\Sigma]} \quad \text{a.e.} \qquad \text{where} \quad \mathbb{E}[\Sigma] < 1.$$

(2) $$\lim_{n\to\infty} X_n/n = \frac{1 - \mathbb{E}[\Sigma^{-1}]}{1 + \mathbb{E}[\Sigma^{-1}]} \quad \text{a.e.} \qquad \text{where} \quad \mathbb{E}[\Sigma^{-1}] < 1.$$

(3) $$\lim_{n\to\infty} X_n/n = 0 \quad \text{a.e.} \qquad \text{where} \quad (\mathbb{E}[\Sigma])^{-1} \le 1 \le \mathbb{E}[\Sigma^{-1}].$$

In the more difficult continuous case we can only derive results for T_n,

(4) $$\lim_{n\to\infty} T_n/n = \frac{1 + \mathbb{E}[\Sigma]}{1 - \mathbb{E}[\Sigma]} \, \mathbb{E}\left[\frac{1}{W_{j,j+1} + W_{j,j-1}}\right] \quad \text{a.e.} \quad \text{where} \quad \mathbb{E}[\Sigma] < 1.$$

(5) $$\lim_{n\to\infty} T_{-n}/n = \frac{1 + \mathbb{E}[\Sigma^{-1}]}{1 - \mathbb{E}[\Sigma^{-1}]} \, \mathbb{E}\left[\frac{1}{W_{j,j+1} + W_{j,j-1}}\right] \quad \text{a.e. where} \quad \mathbb{E}[\Sigma^{-1}] < 1.$$

(6) $$\lim_{n\to\infty} T_n/n = \infty = \lim_{n\to\infty} T_{-n}/n \quad \text{a.e.} \qquad \text{where} \quad (\mathbb{E}[\Sigma])^{-1} \le 1 \le \mathbb{E}[\Sigma^{-1}].$$

The continuous time results were obtained by using Wald's identity and making

further use of Chung's results for Markov Chains with Stationary Transition Probabilities (see [3]). This significant extension to the work of Solomon was achieved without unduly complicating the work of Solomon.

In chapter 3 we look at the single jump directed RWIRE in continuous time. The equivalent discrete time model would obviously be trivial. The results from this model have already been published in [6]. This model is clearly less complicated than the model studied in chapter 2 and so it is possible for us to derive additional results. In addition to finding the "speed", i.e.

(7) $\lim_{t\to\infty} X(t)/t = (\mathbb{E}[W_0^{-1}])^{-1}$ a.e., we also look at the slow approach to infinity and finally determine a limiting distribution,

(8) $$\lim_{t\to\infty} \mathbb{P}\left[\frac{X(t) - \mathbb{E}[X(t)]}{\sqrt{t}} \le x \right] = \Phi_{\sigma^2}(x)$$ where $\Phi_{\sigma^2}(x)$

is the normal distribution with mean 0 and variance σ^2. These results are obviously stronger and are derived in a clearer way than the results of Aslangul et. al. (see [7]) below,

(9) $\lim_{t\to\infty} \mathbb{E}[X(t)]/t = (\mathbb{E}[W_0^{-1}])^{-1}$, and

(10) $\lim_{t\to\infty} \mathbb{V}(X(t))/t = \mathbb{E}[W_0^{-2}](\mathbb{E}[W_0^{-1}])^{-3}$.

The result in (9) involves an expectation, where (7) is true for almost every realisation of the random environment almost everywhere, (10) only gives the variance compared with a full limiting distribution in (8).

In chapter 3 we study the directed RWIRE in discrete and continuous time where integer jumps up to size R are allowed. The discrete case is fully determined, giving

(11) $\lim_{n\to\infty} X_n/n = \mathbb{E}[A_0^{(1)}+2A_0^{(2)}+3A_0^{(3)}+....+RA_0^{(R)}]$ a.e., and

(12) $$\lim_{n\to\infty} \mathbb{P}\left[\frac{X_n - \mathbb{E}[A_0^{(1)}+2A_0^{(2)}+ ... + RA_0^{(R)}]}{(n\sigma^2)^{1/2}} \le x \right] = \Phi(x)$$ in distribution,

where $\Phi(x)$ is the normal distribution function. The continuous time problem proved much more difficult and no limiting distribution was derived. The "speed"

for that case was found to be

(13) $$\lim_{t\to\infty} X(t)/t = \mathbb{E}[A_0^{(1)}+2A_0^{(2)}+....+RA_0^{(R)}].\mathbb{E}[(W_0^{(1)}+W_0^{(2)}+ ...+W_0^{(R)})^{-1}] \text{ a e.,}$$

using theorems and lemmas from chapter 2 and Wald's identity

Chapter 1 contains the various theorems, lemmas and definitions used to prove the results for all the RWIRE models The proof of these theorems are not given in chapter 1 Results of great importance which are only stated in Chung [3] are proved in chapter 1.

Notation

$\mathbb{N}$	...	is the set of strictly positive integers.
$\mathbb{N}_0$	..	is the set of positive integers
$\mathbb{Z}$	.	is the set of all integers
$\mathbb{E}$	.	is the expected value
$\mathbb{V}$	.	is the variance.
$\mathbb{P}$	...	is the probability measure.
a e		almost everywhere.
RWIRE		random walk in a random environment

Abstract

In this thesis we study three RWIRE models. A RWIRE is simply a random walk where the transition rates are themselves random variables. The first model studied is a unit jump non directed RWIRE in discrete and continuous time. Results are presented for the "speed" of the RWIRE in discrete time. It is also shown that the random environment slows down the random walk in the discrete time setting. The second model studied is a unit jump directed RWIRE in continuous time. Results for the "speed", the slow approach to infinity, and the limiting distribution are given for this model It is also shown, as in the first model, that the random environment slows down the random walk. The final model is a multiple jump directed RWIRE in both discrete and continuous time The discrete model findings include the "speed" and the limiting distribution. For the continuous case the "speed" is derived.

1. Important Results

This chapter contains the mathematical tools used in the analysis of the various RWIRE models studied. The contents vary widely from basics of probability, like the strong law of large numbers and the central limit theorem, to more specific topics like Chung's results on taboo probabilities. Below is a brief summary of the notation used

Notation. The set of all possible outcomes, the sample space, is denoted by Ω. ω is used to denote the elementary event, the σ-field is denoted by $\mathcal{F}$ and the probability measure by $\mathbb{P}$. Upper case letters are used where possible to denote random variables

1 Limit Theorems, The Ergodic Theorem and Wald's Identity

This thesis primarily deals with the long-term "average" behaviour of a RWIRE for various models of the environment In order to facilitate the calculation of these "averages" we outline the probabilistic techniques used in their calculation.

A Limit Theorems

Theorem 1. (Strong law of large numbers) Let $\{\xi n\}$, $n \in \mathbb{N}_0$, be a sequence of independent random variables with finite second moments, and let there be positive numbers bn such that $bn \uparrow \infty$ and

$$(1) \qquad \sum_{n=1}^{\infty} \frac{\mathbb{V}(\xi n)}{b_n^2} < \infty$$

Then

$$(2) \qquad Sn/bn \to \mathbb{E}[Sn]/bn \quad \text{a e}$$

In particular, if

$$(3) \qquad \sum_{n=1}^{\infty} \frac{\mathbb{V}(\xi n)}{n^2} < \infty \text{ , then}$$

(4) $S_n/n \to \mathbb{E}[S_n]/n$ a.e. (see [1] p.364) ■

In the case where the sequence of random variables $\{\xi_n\}$ are not only independent but also identically distributed, we can obtain a strong law of large numbers without requiring the existence of the second moment, provided the first absolute moment exists This is stated more clearly in the following theorem.

Theorem 2 (Strong law of large numbers). Let $\{\xi_n\}$, $n \in \mathbb{N}_0$, be a sequence of independent and identically distributed random variables with $\mathbb{E}[|\xi_1|] < \infty$.

Then

(5) $S_n/n \to \mathbb{E}[\xi_1]$ a.e. (see [1] p.366) ■

Theorem 3. (Central Limit Theorem). Let $\{\xi_n\}$, $n \in \mathbb{N}_0$, be a sequence of independent and identically distributed (non degenerate) random variables with $\mathbb{E}[\xi_1^2] < \infty$ and $S_n = \xi_1+\xi_2+ \dots +\xi_n$ Then as $n \to \infty$

(6) $$\mathbb{P}\left[\frac{S_n - n\mu}{(n\sigma^2)^{1/2}} \le x \right] \to \Phi(x), \quad x \in \mathbf{R},$$

where $\Phi(x) = (2\pi)^{-1/2}\int_{-\infty}^{x} e^{-u^2/2}\, du$, $\mu = \mathbb{E}[\xi_1]$ and $\sigma^2 = \mathbb{V}(\xi_1)$.

(See [1] p 324) ■

The central limit theorem also holds for some sequences of random variables that are not independent and identically distributed. Let $\{X_n\}$ be a sequence of independent random variables, with each X_k having finite mean μ_k and finite variance σ_k^2. We consider the normalized sum $T_n = \lambda_n^{-1}(S_n - \mathbb{E}[S_n])$, which has mean 0 and variance 1 If $Z(0,1)$ is a normally distributed random variable with mean 0 and variance 1, so that the distribution function of $Z(0,1)$ is $F_Z(z) = \Phi(z)$, we ask for conditions under which T_n converges to $Z(0,1)$

Theorem 4. (Lindenberg's Theorem). Let $S_n = X_1+X_2+\dots+X_n$, $n =1,2, \dots$ where the X_k's are independent random variables with finite mean μ_k and variance σ_k^2 Let $T_n = \lambda_n^{-1}(S_n - \mathbb{E}[S_n])$, where $\lambda_n^2 = \mathbb{V}(S_n) = \sum_{k=1}^{n}\sigma_k^2$, and let F_k be the distribution function of X_k If for every $\varepsilon > 0$,

$$\lambda_n^{-2} \sum_{k=1}^{n} \int_{\{x:|x-\mu|\geq\varepsilon\lambda\}} (x-\mu_k)^2 \, dF_k(x) \to 0 \quad \text{as } n\to\infty,$$

then T_n converges in distribution to the random variable $Z_{(0,1)}$ ■

The Lindenberg theorem is satisfied whenever the Liapunov condition below is satisfied.

(7) $$\lambda_n^{-2-\nu} \sum_{k=1}^{n} \mathbb{E}[|X_k-\mu_k|^{2+\nu}] \to 0 \quad \text{for some } \nu>0.$$

The following two Theorems are given in [6].

Theorem 5 (Loève). Let X_n, n = 1,2,3,....., be a sequence of independent random variables; suppose that there exists numerical sequences $b_n \uparrow \infty$ and $0 < r_n \leq 2$ such that

$$\sum_{n=1}^{\infty} b_n^{-r_n} \mathbb{E}[|X_n|^{r_n}] < \infty.$$

Then (i) $\sum_{n=1}^{\infty} b_n^{-1} (X_n - a_n) < \infty$ a e

(ii) $b_n^{-1} \sum_{j=1}^{n} (X_j - a_j) = 0$ a.e., where the numbers a_n are defined as follows·

$$a_n = \begin{cases} 0 & \text{if } 0 < r_n < 1 \\ \mathbb{E}[X_n] & \text{if } 1 \leq r_n \leq 2 . \end{cases}$$

Proof. The proof can be extracted from [9] page 253. ■

Theorem 6 (Marcinkiewicz-Zygmund) Let X_n, n = 1,2,3, .. be a sequence of independent identically distributed random variables. Suppose that for some $0 < \gamma < 2$, $\mathbb{E}[|X_n|^{\gamma}] < \infty$. Then

$$\lim_{n\to\infty} n^{-1/\gamma} \sum_{j=1}^{n} (X_j - a) = 0 \quad \text{a e.}$$

where $$a = \begin{cases} 0 & \text{if } 0 < \gamma < 1 \\ \mathbb{E}[X_1] & \text{if } 1 \leq \gamma \leq 2 \end{cases}$$ ■

B The Ergodic Theorem.

The Ergodic Theorem is a remarkable generalization of the strong law of large numbers. Before the theorem is stated we require some definitions (see [1]

p 376-p 385)

Definition 1 A transformation T of Ω into Ω is measurable if for every $A \in \mathcal{F}$,

$$T^{-1}A = \{\omega. T\omega \in A\} \in \mathcal{F}.$$

Definition 2. A measurable transformation T is a measure-preserving transformation if, for every $A \in \mathcal{F}$,

$$\mathbb{P}(T^{-1}A) = \mathbb{P}(A).$$

Definition 3. A set $A \in \mathcal{F}$ is invariant if $T^{-1}A = A$.

Definition 4 A measure-preserving transformation T is ergodic (or metrically transitive) if every invariant set A has measure either zero or one.

Definition 5. A random variable $\xi = \xi(\omega)$ is invariant if $\xi(\omega) = \xi(T\omega)$ for all $\omega \in T$.

Definition 6. A measure-preserving transformation is mixing (or has the mixing property), if for all A and $B \in \mathcal{F}$,

$$\lim_{n\to\infty} \mathbb{P}(A \cap T^{-n}B) = \mathbb{P}(A)\mathbb{P}(B).$$

Theorem 7. Every mixing transformation T is ergodic. ■

Theorem 8 (Birkhoff and Khinchin) Let T be a measure-preserving transformation and $\xi = \xi(\omega)$ a random variable with $\mathbb{E}[|\xi|] < \infty$. Then

$$\lim_{n\to\infty} n^{-1} \sum_{k=0}^{n-1} \xi(T^k\omega) = \mathbb{E}[\xi_1 | \mathbb{I}_{\xi n}] \quad \text{a e}$$

If also T is ergodic then

$$\lim_{n\to\infty} n^{-1} \sum_{k=0}^{n-1} \xi(T^k\omega) = \mathbb{E}[\xi] \quad \text{a.e.}$$ ■

Definition 7 A random sequence $\{\xi_n\}$ is strictly stationary if for every $k > 1$

$$\mathbb{P}((\xi_1, \xi_2, \ldots) \in B) = \mathbb{P}((\xi_{k+1}, \xi_{k+2}, \ldots) \in B).$$

Theorem 6. (Ergodic Theorem) Let $\{\xi_n\}$, $n \in \mathbb{N}_0$, be a strictly stationary sequence of random variables with $\mathbb{E}[|\xi_1|] < \infty$. Then

$$\lim_{n\to\infty} n^{-1} \sum_{k=1}^{n} \xi_k(\omega) = \mathbb{E}[\xi_1 | \mathbb{I}_{\xi n}] \quad \text{a.e.,} \tag{8}$$

(where $\mathbb{I}_{\xi n}$ is the set of invariant events involving only combinations of the

random variables from the sequence $\{\xi n\}$, see [1] p 385).

If $\{\xi n\}$, $n \in \mathbb{N}_0$, is also an ergodic sequence, then

$$(9) \qquad \lim_{n\to\infty} n^{-1} \sum_{k=1}^{n} \xi_k(\omega) = \mathbb{E}[\xi_1] \quad \text{a e} \qquad \blacksquare$$

Space does not permit the necessary rigorous support theory for this theorem. However, it is important that the reader be aware of its great importance in the derivation of a key result in Chapter 2. With this in mind I refer the reader to [1] p.376 - p.385.

C Wald's Identity

This identity is very important in the derivation of many of the results in this thesis Because of its importance some details of martingale theory, of which this identity is only one result , are given below. The idea of a martingale arose in the area of "gambling strategy" (see [2] p.29).

Definition 8. A stochastic process $\{Xn\cdot n=0,1,2,\ldots\}$ is a martingale if for $n=0,1,2,\ldots$

(i) $\mathbb{E}[|X_n|] < \infty$

and (ii) $\mathbb{E}[X_{n+1}|X_0,X_1,\ \ ,X_n] = X_n$. (See [2] p.238).

Let Xn be a players fortune after n plays of a game. The martingale property captures one notion of a game being fair in that the players fortune on the next play, is on average, his current fortune and is not otherwise effected by the previous history. In gambling terms a greater deal of sophistication can be added if we had a second random variable Y_n representing the outcomes of the games up to and including the nth play, and X_n being the players fortune after n plays where not all games are entered. A more general definition follows:

Definition 9 Let $\{Xn,n=0,1,2,\ \ldots\}$ and $\{Yn;n=0,1,2,\ldots\}$ be stochastic processes. We say $\{Xn\}$ is a martingale with respect to $\{Yn\}$ if, for $n=0,1,2,\ldots$

(i) $\mathbb{E}[|Xn|] < \infty$ and

(11) $\mathbb{E}[X_{n+1} | Y_0, Y_1, \ldots, Y_n] = X_n$ (See [2] p 239).

This definition will prove more usable than the previous definition. It is useful to think of $(Y_0, Y_1, \ldots, Y_n)$ as the history up to stage n From this definition and the law of total probability it is clear that,

$\mathbb{E}[X_{n+1}] = \mathbb{E}[X_n]$, and by induction

(10) $\mathbb{E}[X_n] = \mathbb{E}[X_0]$ for $n=0,1,2,\ldots$

Wald's Martingale

Let $Y_0=0$ and suppose $Y_1, Y_2, \ldots$ are independent identically distributed random variables having a finite moment generating function $\phi(\lambda) = \mathbb{E}[\exp(\lambda Y_k)]$ existing for some $\lambda \neq 0$. Then $X_0=1$ and $X_n = \phi(\lambda)^{-n}\exp\{\lambda(Y_1+Y_2+\ldots+Y_n)\}$ determines a martingale with respect to $\{Y_n\}$, because the function $f(y) = e^{\lambda y}$ is an eigenfunction for the Markov process of partial sums $S_n = Y_1+Y_2 \ldots Y_n$, and the associated eigenvalue is $\phi(\lambda)$. To show that $\{X_n\}$ is a martingale we note that

$$\begin{aligned}
\mathbb{E}[X_{n+1} | Y_0, Y_1, \ldots, Y_n] &= \mathbb{E}[\phi(\lambda)^{-n-1}\exp\{\lambda(Y_1+Y_2+\ldots+Y_{n+1})\} | Y_0, Y_1, \ldots, Y_n] \\
&= \mathbb{E}[\phi(\lambda)^{-n}\exp\{\lambda(Y_1+Y_2+\ldots+Y_n)\} | Y_0, Y_1, \ldots, Y_n] \\
&\quad \phi(\lambda)^{-1}\mathbb{E}[\exp\{\lambda Y_{n+1}\}] \qquad \text{(by induction)} \\
&= \phi(\lambda)^{-n}\exp\{\lambda(Y_1+Y_2+\ldots+Y_n)\} \\
&= X_n \quad \text{(See [2] p.264)}
\end{aligned}$$

We now have enough basics to define the idea of a Markov time and to introduce the Optional Sampling Theorem

Definition 10. A random variable C is called a Markov time with respect to $\{Y_n\}$ if C takes values in $\{0,1,2,3,\ldots,\infty\}$ and if for every $n=0,1,2,\ldots$ the event $\{C=n\}$ is determined by $(Y_0, Y_1, \ldots, Y_n)$.

Theorem 10 (The Optional Sampling Theorem). Suppose $\{X_n\}$ is a martingale and C is a Markov time. If $\mathbb{P}\{C<\infty\} = 1$ and $\mathbb{E}[\sup_{n>0} |X_{C\wedge n}|] < \infty$, then

(11) $\mathbb{E}[X_C] = \mathbb{E}[X_0]$ (See [2] p 259).

Corollary 1 Suppose $\{X_n\}$ is a martingale and C is a Markov time with respect to

$\{Y_n\}$. If

(i) $\mathbb{E}[C] < \infty$,

and there exists a constant $k < \infty$, for which

(ii) $\mathbb{E}[|X_{n+1}-X_n| \; |Y_0,Y_1,\dots,Y_n] \le k$, for $n < C$,

then $\mathbb{E}[X_C] = \mathbb{E}[X_0]$. (See [2] p.260).

In order to derive Wald's identity we set up the framework as follows Let $Y_0=0$ and $Y_1,Y_2, ..$ be nondegenerate independent identically distributed random variables having the moment generating function

$$\phi(\theta) = \mathbb{E}[\exp\{\theta Y_1\}]$$

defined and finite for θ in some open interval containing the origin Set $S_0=0$ and $S_n = Y_1+Y_2+\dots+Y_n$ Finally, $b > 0$ and $C = \min\{n \; S_n \ge b\}$.

The fundamental identity of Wald is

(12) $\mathbb{E}[\phi(\theta)^{-C}\exp\{\theta S_C\}] = 1$, valid for any θ satisfying $\phi(\theta) \ge 1$. We use Corollary 1 to Theorem 5 to show that (12) holds (see [2] p 265). We already know from our previous work that $X_n = \phi(\lambda)^{-n}\exp\{\lambda(Y_1+Y_2+\dots+Y_n)\}$ is a martingale.

Return to identity (12) and differentiate it with respect to θ to obtain

$$0 = \frac{d}{d\theta}\mathbb{E}[\phi(\theta)^{-C}\exp\{\theta S_C\}]$$

$$= -\phi'(\theta)\mathbb{E}[C\phi(\theta)^{-C-1}\exp\{\theta S_C\}] + \mathbb{E}[\phi(\theta)^{-C}S_C\exp\{\theta S_C\}]$$

Set $\theta = 0$, using $\phi(0) = 1$ and $\phi'(0) = \mathbb{E}[Y_1]$ Then

$$0 = -\mathbb{E}[Y_1]\mathbb{E}[C] + \mathbb{E}[S_C] \quad \text{or}$$

(13) $\mathbb{E}[S_C] = \mathbb{E}[Y_1]\mathbb{E}[C]$ (See [2] p 266).

This can be written formally as Wald's identity, i e :

Wald's Identity: Let $\xi_1,\xi_2,\dots$ be independent and identically distributed random variables with $\mathbb{E}[|\xi_1|] < \infty$ and K a Markov time then

(14) $\mathbb{E}[\xi_1+\xi_2+\dots+\xi_K] = \mathbb{E}[\xi_1]\mathbb{E}[K]$.

2. A random walk example with taboo probabilities.

This section provides the background knowledge used in the computation of terms like $_{k}f^{*}_{ij}$, for both discrete and continuous time cases This work comes almost entirely from Chung's, "Markov chains with stationary transition probabilities"; proofs of all Theorems and Lemmas are omitted Derivations are provided here to results that are only stated by Chung The random walks studied in this section have stationary transition probabilities

A Classification of states

Definition 1. We say i communicates with j, written i->j, if the chain may ever reach state j with positive probability starting from i. We say i and j communicate if i->j and j->i, in which case we write i<->j. (See [3] p 12).

Definition 2 The states i and j belong to the same class if and only if i<->j In addition any state which does not communicate with any other forms a class by itself A property defined for all states is called a class property if and only if its possession by one state in a class implies its possession by all states in a class. A state that communicates with every state it leads to is called essential; otherwise inessential. (See [3] p.13).

B Recurrence.

The probability that the Markov chain {Xn} is in state j for the first time at time m+n , given that it starts from i is

$\mathbb{P}\{X_{m+\nu}(\omega) \neq j,\ 0 < \nu < n,\ X_{m+n}(\omega) = j \mid Xm(\omega) = i\}$ defined for all $m \geq 0$ for which $\mathbb{P}\{Xm(\omega) = i\} > 0$ (see [3] p 17) Due to the stationarity of the transition probabilities the value of the conditional probability given above does not depend on m whenever it is defined. Using this knowledge we will from here on we write m=0 in spite of the fact that the conditional distribution may well be undefined for m=0 For the cases we will be dealing with, we define for $n \geq 1$

$$p^{(n)}_{ij} = \mathbb{P}(Xn(\omega) = j \mid X0(\omega) = i),$$

$$f^{(n)}_{ij} = \mathbb{P}(X_{\nu}(\omega) \neq j,\ 0 < \nu < n; Xn(\omega) = j \mid X0(\omega) = i) \quad \text{and}$$

$$f^*_{ij} = \sum_{n=1}^{\infty} f^{(n)}_{ij} \quad \text{(See [3] p 18).}$$

Thus f^*_{ij} is the probability that the Markov chain will be in the state j at least once

Theorem 1 i->j iff $f^*_{ij} > 0$; i<->j iff $f^*_{ij} f^*_{ji} > 0$. (See [3] p 19). ■

Theorem 2. For every i and j in I and $n \geq 1$ we have

$$p^{(n)}_{ij} = \sum_{\nu=1}^{\infty} f^{(\nu)}_{ij} p^{(n-\nu)}_{jj}$$

I is the state space of the random walk. (See [3] p 23). ■

Definition 3. State i is called recurrent (or persistent) if

$$\mathbb{P}(X_n = i \text{ for some } n\geq1 \mid X_0=i) = 1 ,$$

which is to say that the probability of eventual return to i, having started from i, is 1. If the probability is strictly less than 1, i is called transient.

Theorem 3. The state i is recurrent or non recurrent depending on whether the series

$$\sum_{n=0}^{\infty} p^{(n)}_{ii}$$ diverges or converges In the latter case the sum of the series is equal to $(1-f^*_{ii})^{-1}$ (See [3] p 12) ■

In Theorem 2 when i=j $p^{(n)}_{ii} = \sum_{\nu=1}^{\infty} f^{(\nu)}_{ii} p^{(n-\nu)}_{ii}$, $n \geq 1$ and let i be recurrent. In this case we have by definition $\sum_{n=1}^{\infty} f^{(n)}_{ii} = 1$ so that $\{f^{(n)}_{ii}, n \geq 1\}$ determines the probability distribution of a discrete, finite valued random variable. This will be called the recurrence time distribution of the recurrent state i and its first moment will be called the mean recurrence time The mean recurrence time will be denoted as m_{ii} where $m_{ii} = \sum_{\nu=1}^{\infty} \nu\, f^{(\nu)}_{ii} \leq \infty$ (See [3] p 28).

Definition 4.

The recurrent state i is called $\begin{cases} \text{null if } m_{ii} = \infty \\ \text{positive if } m_{ii} < \infty \end{cases}$ (See [3] p.31).

C. Taboo probabilities.

Let H be an arbitrary set of states. We define

$${}_H P_{ij}^{(n)} = \mathbb{P}(X_n(\omega)=j;\ X_\nu(\omega) \notin H,\ 0<\nu<n \mid X_0(\omega)=i) \qquad n \geq 1. \text{ (See [3] p.45).}$$

This tells us that ${}_H P_{ij}^{(n)}$ is the probability of entering state j after n jumps starting at state i without entering the taboo states defined by H on the way. Note also that $f_{ij}^{*} = {}_j P_{ij}^{*}$ As with f_{ij}^{*} we define

$${}_H P_{ij}^{*} = \sum_{n=1}^{\infty} {}_H P_{ij}^{(n)} \qquad \text{(See [3] p 46)}$$

Theorem 4. Within a recurrent class we have

$$\lim_{N\to\infty} \frac{\sum_{n=0}^{N} P_{ij}^{(n)}}{\sum_{n=0}^{N} P_{kl}^{(n)}} = \lim_{N\to\infty} \frac{\sum_{n=0}^{N} P_{jj}^{(n)}}{\sum_{n=0}^{N} P_{ll}^{(n)}} = \frac{{}_h P_{hj}^{*}}{{}_h P_{hl}^{*}} = \frac{1 + {}_l P_{jj}^{*}}{1 + {}_j P_{ll}^{*}} = \frac{{}_l f_{lj}^{*}}{{}_j f_{jl}^{*}} .$$ ■

A result arrived at in proving Theorem 4 is that

$$\lim_{N\to\infty} \frac{\sum_{n=0}^{N} P_{jj}^{(n)}}{\sum_{n=0}^{N} P_{hh}^{(n)}} = \frac{{}_h P_{hj}^{*}}{{}_j P_{hj}^{*}} = \frac{{}_h P_{hj}^{*}}{f_{hj}^{*}} = {}_h P_{hj}^{*} \qquad \text{(See [3] p.50)}$$

We call m_{ij} the mean first entrance time from state i to j where $f_{ij}^{*} = 1$ (so that $\{f_{ij}^{(\nu)}, \nu \geq 1\}$ determines the probability distribution of a discrete , finite valued random variable) and define it as

$$m_{ij} = \sum_{\nu=1}^{\infty} \nu\, f_{ij}^{(\nu)}$$

Theorem 5. If $f_{ij}^{*} = 1$ then

$$\sum_{k} {}_j P_{ik}^{*} = m_{ij} \quad . \text{ (See [3] p.51).}$$ ■

Corollary 1. The series $\sum_k {}_h P_{hk}^{*}$ converges in a positive class and diverges in a null class. (See [3] p.12). ■

If $f_{ij}^{*} = 1$ then for each p, $\sum_{n=1}^{\infty} n^p f_{ij}^{(n)}$ is the moment of order p of the first entrance time distribution from i to j. More generally, let H be the taboo set; we write

$${}_H m_{ij}^{(p)} = \sum_{n=1}^{\infty} n^p\, {}_H f_{ij}^{(n)} . \text{ (See [3] p.61).}$$

Theorem 6 If i,j and k belong to the same positive class and $j \neq k$, we have

$$m_{ij} + m_{kj} - m_{ij} = {}_k f^*_{ij}(m_{kj} + m_{jk}) \quad \text{(See [3] p 65).}$$ ■

<u>Corollary 1.</u> $m_{jj} = {}_j f^*_{jk}(m_{jk} + m_{kj})$ (See [3] p.65). ■

<u>Corollary 2.</u> $${}_k P^*_{ij} = \frac{{}_k f^*_{ij}}{{}_j f^*_{jk}} = \frac{m_{ij} + m_{kj} - m_{ij}}{m_{jj}}$$ ■

Putting i=k in Corollary 2 yields

$$\frac{m_{kk}}{m_{jj}} = \frac{{}_k f^*_{kj}}{{}_j f^*_{jk}} = {}_k P^*_{kj} \quad \text{(See [3] p.65)}$$

<u>Theorem 7</u> If for some $p \geq 0$ we have $m^{(p)}_{ij} < \infty$ then $\lim_{k\to\infty} {}_k m^{(p)}_{ij} = m^{(p)}_{ij}$ (See [3] p.66). ■

<u>Corollary 1</u> $\lim_{k\to\infty} {}_j m^{(p)}_{ik} f^*_{kj} = \lim_{k\to\infty} {}_j f^*_{ik} m^{(p)}_{kj} = 0$ (See [3] p.66) ■

D A random walk example.

This subsection contains a general method and an example that is fundamental to the method of Solomon All the results to this point will be used in the simple random walk example Most derivations and definitions below are given in [2] pages 71 to 76. Some important derivations are given to results only stated in [2]

The taboo probabilities ${}_H P^{(n)}_{ij}$ satisfy the system of equations

$$(1) \qquad {}_H P^{(n)}_{ij} = \sum_{k\notin H} P_{ik}\, {}_H P^{(n-1)}_{kj} \quad , \qquad n \geq 2$$

Noting that $n = 1$ is not covered by (1) above, and summing over n yields

$$\sum_{n=1}^{\infty} {}_H P^{(n)}_{ij} = \sum_{n=2}^{\infty} \sum_{k\notin H} P_{ik}\, {}_H P^{(n-1)}_{kj} + P_{ij} \text{ , and thus}$$

$$(2) \qquad {}_H P^*_{ij} = \sum_{k\notin H} P_{ik}\, {}_H P^*_{kj} + P_{ij} \quad .$$

Next, multiplying (1) through by n, and summing over n gives

$$\sum_{n=1}^{\infty} n\, {}_H P^{(n)}_{ij} = \sum_{n=2}^{\infty} n \sum_{k\notin H} P_{ik}\, {}_H P^{(n-1)}_{kj} + P_{ij} \text{ ,}$$

$${}_H M_{ij} = \sum_{k\notin H} P_{ik} \sum_{n=2}^{\infty} (n-1)\, {}_H P^{(n-1)}_{kj} + \sum_{k\notin H} P_{ik} \sum_{n=2}^{\infty} {}_H P^{(n-1)}_{kj} + P_{ij} \text{ ,}$$

using (2) on the last two terms on the right hand side gives

(3) $$ {}_H M_{ij} = \sum_{k \notin H} P_{ik} \, {}_H M^*_{kj} + {}_H P^*_{ij} $$

where $ {}_H M_{ij} = \sum_{n=1}^{\infty} n \, {}_H P^{(n)}_{ij} $

By a method of difference equations we are able to solve very general problems in terms of easily derived properties.

Where H consists of a single state j we see that $\{u_i, \ i \in I\}$ where

$$ u_i = \begin{cases} f^*_{ij} & \text{if } i \neq j \\ 1 & \text{if } i = j \end{cases} $$

is a solution of the system

$$ u_i = \sum_l P_{il} u_l, \quad i \neq j. $$

Warning: This does not say that $f^*_{ij} = 1$ if $i \neq j$, it says that $u_i = f^*_{ij}$ if $i \neq j$. No information is given about f^*_{ij} if $i = j$

This result is a simple consequence of (2), since $i \in I$, we can write (2) as

$$ u_i = \sum_{k \neq j} P_{ik} u_k + P_{ij} u_j $$

Where H consists of two states j and k and $j \neq k$ we see that $\{u_i, i \in I\}$ where

(4) $$ u_i = \begin{cases} {}_k f^*_{ij} & \text{if } i \neq j \text{ or } k \\ 1 & \text{if } i = j \\ 0 & \text{if } i = k \end{cases} $$

is a solution of the system

$$ u_i = \sum_l P_{il} u_l, \quad i \neq j \text{ or } k. $$

Furthermore $\{u_i, i \in I\}$ where

$$ u_i = \begin{cases} {}_k m_{ij} & \text{if } i \neq j \text{ or } k \\ 0 & \text{if } i = j \text{ or } k \end{cases} $$

is a solution of the system

$$ u_i = \sum_l P_{il} u_l + {}_k f^*_{ij} \qquad i \neq j \text{ or } k $$

The last exact solution is simply a sum of two solutions of the previous

equation, $\{u_i, i \in I\}$ where

$$u_i = \begin{cases} {}_k m_{ij} + {}_j m_{ik} & \text{if } i \neq j \text{ or } k \\ 0 & \text{if } i = j \text{ or } k \end{cases}$$

is a solution of the system

$$u_i = \sum_l P_{il} u_l + {}_k f^*_{ij} + {}_j f^*_{ik}, \quad i \neq j \text{ or } k.$$

If the state space is a recurrent class then the last system reduces to

$$u_i = \sum_l P_{il} u_l + 1 .$$

In the first two cases the conditions of finiteness and convergence are satisfied since we are dealing with probabilities. In the last two cases where we are dealing with mean first entrance times, finiteness and convergence must be ascertained A framework now exists for looking at quite complicated examples using the techniques of difference equations Consider a Markov chain whose state space is the set of all non negative integers The initial distribution is arbitrary and the transition matrix is given as follows. Let $\alpha_0 = 1$, $0 < \alpha_j < 1$, $\beta_j = 1 - \alpha_j$, $P_{j,j+1} = \alpha_j$, $P_{j,j-1} = \beta_j$, $j \geq 0$.

Therefore we are considering a random walk where the probability of a jump forward (or backward) is dependent on the position of the random walk, and only jumps of size one are permitted. In addition there is a reflecting barrier at zero.

Let us first compute f^*_{ij} According to the general method $u_i = f^*_{ij}$ for $i \neq j$ and $u_i = 1$ if $i = j$ is a solution of the system

$$u_i = \alpha_i u_{i+1} + \beta_i u_{i-1}, \quad 0 \leq i < j$$

$$u_j = 1.$$

A recurrence relation can be written as

$$\alpha_i (u_{i+1} - u_i) = \beta_i (u_i - u_{i-1})$$

Remembering that $\beta_i + \alpha_i = 1$ The unique solution is $u_i = \lambda$, $0 \leq i < j$, i.e u_i is constant, since $\alpha_0 = 1$. Thus by the uniqueness of the solution and looking in

particular at f^*_{0i} we obtain:

(5) $$f^*_{ij} = 1, \qquad 0 \le i < j.$$

To compute f^*_{ii} or f^*_{ji} we require ${}_kf^*_{ij}$.

If $j < k$ $u_i = {}_kf^*_{ij}$ if $i \ne j$ or k, $u_i = 1$ if $i = j$ and $u_i = 0$ if $i = k$ satisfies the following system:

$$u_i = \alpha_i u_{i+1} + \beta_i u_{i-1}$$

$$u_j = 1, \quad u_k = 0.$$

This system can be solved easily by recursion and since the solution is unique it must be ${}_kf^*_{ij}$ We have if $j < r < k$

$$\alpha_r(u_{r+1} - u_r) = \beta_r(u_r - u_{r-1})$$

$$(u_{r+1} - u_r) = \frac{\beta_r\beta_{r-1}\cdots\beta_{j+1}}{\alpha_r\alpha_{r-1}\cdots\alpha_{j+1}}(u_{j+1} - 1)$$

(6) $$-1 = \sum_{r=j}^{k-1}(u_{r+1} - u_r) = \sum_{r=j}^{k-1}\frac{\beta_r\cdots\beta_{j+1}}{\alpha_r\cdots\alpha_{j+1}}(u_{j+1} - 1)$$

(7) $$u_i - 1 = \sum_{r=j}^{i-1}(u_{r+1} - u_r) = \sum_{r=j}^{i-1}\frac{\beta_r\cdots\beta_{j+1}}{\alpha_r\cdots\alpha_{j+1}}(u_{j+1} - 1) \quad .$$

Setting $\rho_0 = 1$, $\rho_r = \frac{\beta_1\cdots\beta_r}{\alpha_1\cdots\alpha_r}$ and noting that we can write u_i as

$$u_i = \frac{-((u_i - 1) - (-1))}{-1},$$ using the expressions in (6) and (7) for -1 and $(u_i - 1)$ respectively gives:

(8) $${}_kf^*_{ij} = \frac{\sum_{r=i}^{k-1}\frac{\beta_r\cdots\beta_{j+1}}{\alpha_r\cdots\alpha_{j+1}}}{\sum_{r=j}^{k-1}\frac{\beta_r\cdots\beta_{j+1}}{\alpha_r\cdots\alpha_{j+1}}} = \frac{\sum_{r=i}^{k-1}\rho_r}{\sum_{r=j}^{k-1}\rho_r} \qquad j < i < k$$

By a reversal argument, as given below, we are able to show that

(9) $$_{j}f^{*}_{ik} = \frac{\sum_{r=j}^{i-1} \rho_r}{\sum_{r=j}^{k-1} \rho_r} \qquad j < i < k.$$

Note in order to show (9) we reverse the argument for computing $_{k}f^{*}_{ij}$ given earlier, i e.(the reversal argument given below is not presented in [2]).

If $j < k$, $u_i = {}_{j}f^{*}_{ik}$ if $i \neq j$ or k, $u_i = 1$ if $i = k$ and $u_i = 0$ if $i = j$, satisfies the system

$$u_i = \alpha_i u_{i+1} + \beta_i u_{i-1}$$

$$u_j = 0,\; u_k = 1.$$

Therefore, $$(u_{r+1} - u_r) = \frac{\alpha_{r+1}\alpha_{r+2} \quad \alpha_{k-1}}{\beta_{r+1}\beta_{r+2} \quad \beta_{k-1}}(1 - u_{k-1}) \qquad j < i < k$$

(10) $$1 = \sum_{r=j}^{k-1} (u_{r+1} - u_r) = \sum_{r=j}^{k-1} \frac{\alpha_{r+1} \quad \alpha_{k-1}}{\beta_{r+1} \quad \beta_{k-1}}(1 - u_{k-1}) \qquad j < i < k$$

(11) $$1 - u_i = \sum_{r=i}^{k-1} (u_{r+1} - u_r) = \sum_{r=i}^{k-1} \frac{\alpha_{r+1} \quad \alpha_{k-1}}{\beta_{r+1} \quad \beta_{k-1}}(1 - u_{k-1}) \qquad j < i < k$$

Noting that we can write u_i as

$$u_i = \frac{(1 - u_i) - 1}{-1}$$, using the expressions in (10) and (11) for 1 and $(1 - u_i)$ respectively gives

(12) $$_{j}f^{*}_{ik} = \frac{\sum_{r=j}^{i-1} \frac{\alpha_{r+1} \quad \alpha_{k-1}}{\beta_{r+1} \quad \beta_{k-1}}}{\sum_{r=j}^{k-1} \frac{\alpha_{r+1} \quad \alpha_{k-1}}{\beta_{r+1} \quad \beta_{k-1}}} = \frac{\sum_{r=i}^{k-1} \rho_r}{\sum_{r=j}^{k-1} \rho_r} \qquad j < i < k$$

Multiplying the quotient in the previous equation above and below by $\frac{\beta_j\beta_{j+1} \quad \beta_{j+1}}{\alpha_j\alpha_{j+1} \quad \alpha_{j+1}}$ gives (11).

The special cases where $i = j$ and $i = k$ can be derived as follows, if $j < k$

(13) $${}_jf^*_{jk} = \alpha_j\, {}_jf^*_{j+1,k} + \beta_j\, {}_jf^*_{j-1,k} = \frac{\alpha_j\rho_j}{\sum_{r=j}^{k-1}\rho_r} ,$$

the second term is zero since ${}_jf_{j-1,k} = 0$ for $j < k$. Similarly,

(14) $${}_kf^*_{kj} = \beta_k\, {}_kf^*_{k-1,j} = \frac{\beta_k\rho_{k-1}}{\sum_{r=j}^{k-1}\rho_r} , \text{ and}$$

(15) $${}_kf^*_{jj} = \alpha_j\, {}_kf^*_{j+1,j} + \beta_j\, {}_kf^*_{j-1,j} = \frac{\alpha_j \sum_{r=j+1}^{k-1}\rho_r}{\sum_{r=j}^{k-1}\rho_r} + \beta_j .$$

${}_kf^*_{j-1,j} = 1$ since ${}_kf^*_{j-1,j} = f^*_{j-1,j}$, and using the result from (5)

$$\frac{\alpha_j \sum_{r=j+1}^{k-1}\rho_r}{\sum_{r=j}^{k-1}\rho_r} + \beta_j = \frac{\alpha_j \sum_{r=j+1}^{k-1}\rho_r}{\sum_{r=j}^{k-1}\rho_r} + 1 - \frac{\alpha_j \sum_{r=j}^{k-1}\rho_r}{\sum_{r=j}^{k-1}\rho_r}$$

$$= 1 - \frac{\alpha_j\rho_j}{\sum_{r=j}^{k-1}\rho_r} = 1 - {}_jf^*_{jk}$$

Therefore, we have that ${}_kf^*_{jj} + {}_jf^*_{jk} = 1$ in this scheme whether the class is recurrent or not.

In a recurrent class $f^*_{ij} = 1$ if $i < j$ or $j < i$. By Theorem 7, with $p = 0$ we have

$$f^*_{10} = \lim_{k\to\infty} {}_kf^*_{10} = \lim_{k\to\infty} \frac{\sum_{r=1}^{k-1}\rho_r}{\sum_{r=0}^{k-1}\rho_r}$$

Hence $f^*_{10} = 1$ iff $\sum_r \rho_r = \infty$

Therefore, $f^*_{ij} = \lim_{k\to\infty} {}_kf^*_{ij} = 1$ for any finite i and j when $\sum_r \rho_r = \infty$

From (5) we have that $f^*_{ij} = 1$ for $i < j$ and thus $f^*_{jj} \geq f^*_{ij} f^*_{ji} = 1$. Therefore, by our definition of recurrence $\sum_r \rho_r = \infty$ is a necessary and sufficient condition for the walk to be recurrent.

In the case of recurrence, we have by Theorem 4 ,

$$(16) \qquad \lim_{N\to\infty} \frac{\sum_{n=1}^{N} P_{kk}^{(n)}}{\sum_{n=1}^{N} P_{00}^{(n)}} = {}_0P^{*}_{0k} = \frac{{}_0f^{*}_{0k}}{{}_kf^{*}_{k0}} = \frac{1}{\rho_{k-1}\beta_k} = \frac{1}{\alpha_k\rho_k} ,$$

${}_0f^{*}_{0k}$ can be got from (13) and ${}_kf^{*}_{k0}$ can be got from (7). By Corollary 1 to Theorem 5, the recurrence class of the Markov chain is positive if and only if

$$(17) \qquad \sum_k \frac{1}{\alpha_k\rho_k} = \sum_k \frac{\alpha_1 \ldots \alpha_{k-1}}{\beta_1 \quad \beta_{k-1}\beta_k} < \infty .$$

Using the result given below Corollary 2 of Theorem 6 gives

$$(18) \qquad \frac{m_{00}}{m_{kk}} = \frac{1}{\alpha_k\rho_k} ,$$

and by Theorem 5 $\sum_k {}_0P^{*}_{0k} = m_{00}$. Using (16) we are able to fully determine m_{00} as

$$(19) \qquad m_{00} = \frac{1}{\alpha_0\rho_0} + \sum_{k=1}^{\infty} \frac{1}{\alpha_k\rho_k} = 1 + \sum_{k=1}^{\infty} \frac{1}{\alpha_k\rho_k} .$$

With this result we can fully determine m_{jj} for any j using (18)

To compute m_{ij} where $i \neq j$ in the positive recurrent case we first compute ${}_km_{ij} + {}_jm_{ik}$ for $j < i < k$. According to the general method they satisfy the system

$$u_i = \alpha_i u_{i+1} + \beta_i u_{i-1} + 1 , \qquad j < i < k.$$

This system can be solved (the details are given below) to yield

$$(20) \qquad {}_km_{ij} + {}_jm_{ik} = \sum_{s=i}^{k-1} \rho_s \sum_{r=j+1}^{s} \frac{1}{\alpha_r\rho_r} - \frac{\sum_{s=i}^{k-1} \rho_s}{\sum_{s=j}^{k-1} \rho_s} \sum_{s=j+1}^{k-1} \rho_s \sum_{r=j+1}^{s} \frac{1}{\alpha_r\rho_r} , \quad j < i < k$$

Note formula (20) given above differs from formula (8) on page 75 of [3], there is a contradiction in that particular result. The derivation given below is omitted from [3]; however, we include it here because of its importance to the method of Solomon and our extensions of Solomon's work

$$(\alpha_s + \beta_s)u_s = \alpha_s u_{s+1} + \beta_s u_{s-1} + 1$$

$$(u_{s+1} - u_s) = \beta_s/\alpha_s \, (u_s - u_{s-1}) - 1/\alpha_s$$

$$(u_{s+1} - u_s) = \frac{\beta_s\beta_{s-1} \quad \beta_{j+1}}{\alpha_s\alpha_{s-1} \quad \alpha_{j+1}}(u_{j+1}) - \frac{\beta_s\beta_{s-1} \quad \beta_{j+2}}{\alpha_s\alpha_{s-1} \quad \alpha_{j+2}}\frac{1}{\alpha_{j+1}}$$

$$- \frac{\beta_s\beta_{s-1} \quad \beta_{j+3}}{\alpha_s\alpha_{s-1} \quad \alpha_{j+3}}\frac{1}{\alpha_{j+2}} - \ldots - \frac{1}{\alpha_s}, \qquad j < s < k$$

$$(u_{s+1} - u_s) = \rho_s/\rho_j (u_{j+1}) - \rho_j \sum_{r=j+1}^{s} \frac{1}{\alpha_r\rho_r}, \quad j < s < k.$$

$$-u_i = \sum_{s=i}^{k-1} (u_{s+1} - u_s) = \sum_{r=j+1}^{k-1} \rho_s/\rho_j (u_{j+1}) + \sum_{s=i}^{k-1} \rho_j \sum_{r=j+1}^{s} \frac{1}{\alpha_r\rho_r}, \quad j < i < k.$$

$$-u_{j+1} = \sum_{s=j+1}^{k-1} \rho_s/\rho_j (u_{j+1}) - \sum_{s=j+1}^{k-1} \rho_j \sum_{r=j+1}^{s} \frac{1}{\alpha_r\rho_r}, \quad j < i < k$$

$$u_{j+1} = \sum_{s=j+1}^{k-1} \rho_j \sum_{r=j+1}^{s} \frac{1}{\alpha_r\rho_r}\left(1 + \sum_{s=j+1}^{k-1} \rho_s/\rho_j\right)^{-1}.$$

$$u_i = -\sum_{s=i}^{k-1} \rho_s/\rho_j\left(\sum_{s=j}^{k-1}\rho_j \sum_{r=j+1}^{s} \frac{1}{\alpha_r\rho_r}\left(1 + \sum_{s=j+1}^{k-1} \rho_s/\rho_j\right)^{-1}\right) + \sum_{s=i}^{k-1}\rho_s \sum_{r=j+1}^{i} \frac{1}{\alpha_r\rho_r}$$

which yields (20) when $i \neq j$ and $i \neq k$.

From Theorem 7, and its Corollary we have that

$\lim_{k\to\infty} m^{(p)}_{j\,ik} = 0$ and $\lim_{k\to\infty} m^{(p)}_{k\,ij} = m^{(p)}_{ij}$, and as a direct result of these limits we can write m_{ij} as

$$m_{ij} = \lim_{k\to\infty} \sum_{s=i}^{k-1}\rho_j \sum_{r=j+1}^{s}\frac{1}{\alpha_r\rho_r} - \lim_{k\to\infty}\frac{\sum_{s=i}^{k-1}\rho_s}{\sum_{s=j}^{k-1}\rho_s}\sum_{s=j+1}^{k-1}\rho_s \sum_{r=j+1}^{s}\frac{1}{\alpha_r\rho_r}, \quad j < i < k.$$

$$m_{ij} = \lim_{k\to\infty} \sum_{s=i}^{k-1}\rho_s \sum_{r=j+1}^{s}\frac{1}{\alpha_r\rho_r} - \lim_{k\to\infty}\frac{\sum_{s=i}^{k-1}\rho_s}{\sum_{s=j}^{k-1}\rho_s}\sum_{s=i}^{k-1}\rho_s \sum_{r=j+1}^{s}\frac{1}{\alpha_r\rho_r}$$

$$- \lim_{k\to\infty} \frac{\sum_{s=1}^{k-1} \rho_s}{\sum_{s=j}^{k-1} \rho_s} \sum_{s=j+1}^{i-1} \rho_s \sum_{r=j+1}^{s} \frac{1}{\alpha_r \rho_r} \quad .$$

Multiplying the first term on the right above and below by $\sum_{s=j}^{k-1} \rho_s$ and rewriting the second term yields:

$$m_{ij} = \lim_{k\to\infty} \left[\frac{\sum_{s=1}^{k-1} \rho_s}{\sum_{s=j}^{k-1} \rho_s} \sum_{r=j+1}^{s} \frac{1}{\alpha_r \rho_r} \sum_{s=j}^{k-1} \rho_s - \frac{\sum_{s=1}^{k-1} \rho_s}{\sum_{s=j}^{k-1} \rho_s} \sum_{r=j+1}^{s} \frac{1}{\alpha_r \rho_r} \sum_{s=i}^{k-1} \rho_s \right]$$

$$- \lim_{k\to\infty} \frac{\sum_{s=1}^{k-1} \rho_s}{\sum_{s=j}^{k-1} \rho_s} \sum_{s=j+1}^{i-1} \rho_s \sum_{r=j+1}^{s} \frac{1}{\alpha_r \rho_r} \quad .$$

Obviously,

$$(21) \qquad m_{ij} = \lim_{k\to\infty} \frac{\sum_{s=1}^{k-1} \rho_s}{\sum_{s=j}^{k-1} \rho_s} \sum_{r=j+1}^{s} \frac{1}{\alpha_r \rho_r} \sum_{s=j}^{i-1} \rho_s - \lim_{k\to\infty} \frac{\sum_{s=1}^{k-1} \rho_s}{\sum_{s=j}^{k-1} \rho_s} \sum_{s=j+1}^{i-1} \rho_s \sum_{r=j+1}^{s} \frac{1}{\alpha_r \rho_r}$$

At this point we require the following Lemma.

Lemma 1. Let ρ, $n = 1,2,$ .. be positive numbers such that $\Sigma_n \rho_n = \infty$, and suppose that $\lim_{n\to\infty} A_n = A$ Then

$$\lim_{k\to\infty} \frac{\sum_{j=1}^{k-1} A_j \rho_j}{\sum_{j=1}^{k-1} \rho_j} = A$$

Proof.

$$\left| \frac{\sum_{j=1}^{n-1} A_j \rho_j}{\sum_{j=1}^{n-1} \rho_j} - A \right| = \left(\sum_{j=1}^{n-1} \rho_j \right)^{-1} \left| \sum_{j=1}^{n-1} \rho_j (A_j - A) \right|$$

$$\le \left(\sum_{j=1}^{n-1}\rho_j\right)^{-1}\sum_{j=1}^{m-1}\rho_j|A_j - A| + \left(\sum_{j=i}^{n-1}\rho_j\right)^{-1}\sum_{j=m}^{n-1}\rho_j|A_j - A|$$

As $A_j \to A$, $\forall\ \varepsilon > 0$, one can find an m such that $|A_j - A| < \varepsilon$ whenever $j \ge m$.

$$\left|\frac{\sum_{j=1}^{n-1} A_j\rho_j}{\sum_{j=1}^{n-1}\rho_j} - A\right| = \left(\sum_{j=1}^{n-1}\rho_j\right)^{-1}\sum_{j=1}^{m-1}\rho_j|A_j - A| + \varepsilon\frac{\sum_{j=m}^{n-1}\rho_j}{\sum_{j=1}^{n-1}\rho_j},$$

take the limit now as $n\to\infty$ (m fixed). The first term tends to zero.

$\left|\frac{\sum_{j=1}^{n-1} A_j\rho_j}{\sum_{j=1}^{n-1}\rho_j} - A\right| \le \varepsilon$. This holds for any ε; hence the limit must be zero, and the lemma is proved. ■

Applying the lemma to (21) gives

$$m_{ij} = \sum_{r=j+1}^{\infty}\frac{1}{\alpha_r\rho_r}\sum_{s=j}^{i-1}\rho_s - \sum_{s=j+1}^{i-1}\rho_s\sum_{r=j+1}^{s}\frac{1}{\alpha_r\rho_r}$$

$$m_{ij} = \sum_{s=j}^{i-1}\rho_s\sum_{r=s+1}^{\infty}\frac{1}{\alpha_r\rho_r}, \quad j < i. \tag{22}$$

Note (22) agrees with the result on page 76 of [3].

From Corollary 1 of Theorem 6 we have

$m_{jj} = f_j^*(m_{ji} + m_{ij})$ and using (13) and (22) gives us:

$$m_{jj} = \alpha_j\rho_j\left(\sum_{s=j}^{i-1}\rho_s\right)^{-1}\left(m_{ji} + \sum_{s=j}^{i-1}\rho_s\sum_{r=s+1}^{\infty}\frac{1}{\alpha_r\rho_r}\right) \tag{23}$$

Finally, after simple manipulations we are able to derive m_{ji} for $j < i$ using the results given for m_{jj} from (18) and (19), i e ,

$$m_{ji} = \sum_{s=j}^{i-1}\rho_s\left(1 + \sum_{r=1}^{s}\frac{1}{\alpha_r\rho_r}\right), \quad j < i. \tag{24}$$

3. Recurrence Criteria

We are concerned only with recurrence criteria for a random walk defined by

$Sn = \Sigma Yn$, $n \in \mathbb{N}_0$, where the Y's are independent and identically distributed random variables. The results stated in this section are used in chapter 2, to prove and extend the results of Solomon.

In order to obtain useful results in this area of study we again use the concept of Markov time An example of a Markov time is that of the first entrance time into a given Borel set A

$$C_A(\omega) = \begin{cases} \min\{n \in \mathbb{N}_0 : Z_n(\omega) \in A\} & \text{on } \bigcup_{n=1}^{\infty} \{\omega : Z_n(\omega) \in A\} \\ +\infty & \text{elsewhere.} \end{cases} \quad \text{(See [5] p.260).}$$

To see that $C_A(\omega)$ is indeed a Markov time, we need only observe that for $n \in \mathbb{N}$

$$\{\omega : \alpha_A(\omega) = n\} = \{\omega : Z_j(\omega) \in A^c,\ 1 \le j \le n-1,\ Z_n(\omega) \in A\}.$$

In the remainder of the section we drop the subscript A

Theorem 1. The statements (a) and (b) below are equivalent; the statements (a') and (b') are equivalent

(a) $\mathbb{P}(C<\infty) = 1$; (a') $\mathbb{P}(C<\infty) < 1$;

(b) $\mathbb{P}(\limsup_{n\to\infty} Sn = +\infty) = 1$; (b') $\mathbb{P}(\limsup_{n\to\infty} Sn = \infty)$. (See [5] p.263). ■

Theorem 2 For the general random walk, there are four mutually exclusive possibilities, each taking place a.e.

(i) $\forall\ n \in \mathbb{N}_0 \quad Sn = 0$;

(ii) $Sn \to -\infty$,

(iii) $Sn \to +\infty$,

(iv) $-\infty = \liminf_{n\to\infty} Sn < \limsup_{n\to\infty} Sn = +\infty$ (See [5] p 264). ■

Theorem 3.

$$\mathbb{P}(C < \infty) = 1 \quad \text{iff} \quad \sum_{n=1}^{\infty} n^{-1}\mathbb{P}(Sn \in A) = \infty;$$

in which case

$$\mathbb{E}[C] = \exp\{ \sum_{n=1}^{\infty} n^{-1}\mathbb{P}(Sn \in A^c) \quad \text{(See [5] p 280)}$$ ■

Theorem 4

$$\sum_{n=1}^{\infty} n^{-1}\mathbb{P}(Sn = 0) < \infty. \quad \text{(See [5] p.281)}$$ ■

2. The unit jump non-directed RWIRE

In this chapter we consider a random walk in one dimensional discrete and continuous time where only jumps of size one are permitted. This chapter contains results from Solomon, for the discrete case, and extends some of Solomon's results to the more complicated continuous time problem Throughout this chapter where we write random walk we mean, $X_n = \sum_{j=1}^{n} \Xi_j$ is a random walk where $\{\Xi_j\}$ is a sequence of random variables taking values of +1 and -1. Therefore, $\{X_n\}$ is a random walk on the integers, $\mathbb{Z}$, where X_n denotes the position of the random walk after n jumps.

1 Introduction

In order to understand the idea of a RWIRE consider a random walk where the probability of a jump forward or backward is dependent on the state occupied. Therefore, for a particular environment the probability of a jump forward (backward) at time n is α_{Xn} ($\beta_{Xn} = 1 - \alpha_{Xn}$), where $0 \le \alpha_{Xn} \le 1$. In a random environment the numbers $\alpha_{Xn} (\beta_{Xn})$, are replaced by the random variables $A_{Xn} (B_{Xn})$, where $0 \le A_{Xn} \le 1$. From this point on a particular environment will be denoted by the sequence $\{\alpha_j\}$. In the models studied below, the random variables A_{Xn}, for all positive n $\in \mathbb{Z}$, are assumed to be independent and identically distributed random variables.

The probability measure for a particular environment will be denoted as $\mathbb{P}(*|\alpha_n)$, and for the random environment as $\mathbb{P}(*|A)$. Therefore, using the law of total probability $\mathbb{P}(*) = \mathbb{E}_A[\mathbb{P}(*|A)]$, where the subscript A on the expectation means we are taking the expectation with respect to the random environment.

For the discrete case a jump is made every unit of time, in the continuous

case a jump is made after a random waiting time. Therefore, the continuous case introduces a degree of randomness more than the case handled by Solomon. In order to generate results for the continuous case similar to those for the discrete case we denote the position of the random walk at time t by X(t). Then for the discrete case $X(n)=X_n$.

When the environment is known, $\{X(t)\}$ is a Markov process i.e.

$$\mathbb{P}(X(t+s)=j+1 | X(t)=j, X(t-\delta)=i_{n-1}, \dots, X(0)=i_0; \alpha_n)$$

$$= \mathbb{P}(X(t+s)=j+1 | X(t)=j, \alpha_n)$$

A consequence of this is that the waiting times for the continuous case are exponentially distributed.

In the discrete case the transition probabilities are defined by

$$\mathbb{P}(X_{n+1}=j+1 | X_n=j, \alpha_n) = \alpha_{X_n} = \alpha_j,$$

$$\mathbb{P}(X_{n+1}=j-1 | X_n=j, \alpha_n) = \beta_{X_n} = \beta_j, \text{ and}$$

$$X_0 = 0.$$

The transition probabilities for the continuous case are defined by

$$\mathbb{P}(X(t+h)=j+1 | X(t)=j; w_n) = w_{j\,j+1}h + o(h),\ h \to 0^+,$$

$$\mathbb{P}(X(t+h)=j-1 | X(t)=j; w_n) = w_{j,j-1}h + o(h),\ h \to 0^+, \text{ and}$$

$$X(0)=0$$

In order to obtain a framework for the continuous case similar to that of the discrete case we note that,

$$\mathbb{P}(\text{jump forward from state } j \,|\, \text{a jump occurs from state } j; w_n)$$

$$= w_{j,j+1}/(w_{j,j+1}+w_{j,j-1}), \text{ and}$$

$$\mathbb{P}(\text{jump backward from state } j \,|\, \text{a jump occurs from state } j; w_n)$$

$$= w_{j,j-1}/(w_{j,j+1}+w_{j,j-1})$$

For the sake of simplicity we let the previous probabilities be represented by α_j and β_j i.e

$$\alpha_j = w_{j,j+1}/(w_{j,j+1}+w_{j,j-1}) \text{ and } \beta_j = w_{j,j-1}/(w_{j,j+1}+w_{j,j-1})$$

From this point on we are able to treat the discrete and continuous cases the same; with the exception that in the continuous case we don't know when the transitions occur. This implies that properties of ${}_{j}f^{*}_{ik}$, which does not depend on the times that the jumps occur, will be the same for the discrete and continuous cases.

A problem in extending the proofs for the discrete time case to continuous time is that we can have an infinite number of jumps in finite time in the continuous case From [2] p.135, only a finite number of jumps occur in finite time, if the following condition holds

$$(1) \qquad \sum_{n=0}^{\infty} \pi_n \sum_{k=0}^{n} \frac{1}{w_{k,k+1}\pi_k} = \infty$$

where $\pi_0 = 1$, $\pi_j = \dfrac{w_{0,1}w_{1,2}w_{2,3}\cdots w_{n-1,n}}{w_{1,0}w_{2,1}w_{3,2}\cdots w_{n,n-1}}$ $\qquad n=1,2,3,\ldots.$

When we are dealing with RWIRE the numbers $w_{j,j+1}$ are replaced by the random variables $W_{j,j+1}$ From this point we will assume that (1) is satisfied.

2 Solomon's results and their extension to continuous time.

The first two lemmas below are a direct result of the random walk example given in chapter 1, section 2. The remainder of the lemmas and theorems are concerned with recurrence criteria and the "speed" of the RWIRE All theorems and lemmas below are stated and proved in a similar way to the equivalent lemmas and theorems in the Solomon's paper, except Theorems 1,3,5 and 7

Lemma 1. Fix $\{\alpha_n\}$ with $0< \alpha_n <1$ for all n, set $\sigma_n = \beta_n/\alpha_n$ and

$$\rho_n = \sigma_1\sigma_2\ldots\sigma_n \ , \ n > 0$$
$$= \sigma_{-1}\sigma_{-2}\ldots\sigma_{-n} \ , \ n < 0$$

(i) Let $i < j$; then

$$f^{*}_{ij} = \left(\sum_{n=-\infty}^{i} \frac{1}{\sigma_n\sigma_{n+1}\cdots\sigma_j} \right) \left(\sum_{n=-\infty}^{j} \frac{1}{\sigma_n\sigma_{n+1}\cdots\sigma_j} \right)^{-1} < 1,$$

if $\sum_n \rho_{-n}^{-1} < \infty$.

$f^{*}_{ij} = 1$ if $\sum_n \rho_{-n}^{-1} = \infty$

(ii) Let $i > j$; then

$$f^*_{ij} = \left(\sum_{n=i}^{\infty} \sigma_j \ldots \sigma_n \right) \left(\sum_{n=j}^{\infty} \sigma_j \ldots\ldots \sigma_n \right)^{-1} < 1,$$

$$\text{if} \quad \sum_n \rho_n < \infty .$$

$$f^*_{ij} = 1 \quad \text{if} \quad \sum_n \rho_n = \infty .$$

(iii) If $f^*_{01} = 1$, then

$$m_{01} = (1+\sigma_0) + \sum_{j=-\infty}^{0} (1+\sigma_{j-1}) \sigma_j \sigma_{j+1} \ldots\ldots \sigma_0 .$$

Proof

(i) From (1.2.12)

$${}_k f^*_{ij} = \frac{\displaystyle\sum_{r=k}^{i-1} \frac{\alpha_{r+1} \quad \alpha_{j-1}}{\beta_{r+1} \quad \beta_{j-1}}}{\displaystyle\sum_{r=k}^{j-1} \frac{\alpha_{r+1} \quad \alpha_{j-1}}{\beta_{r+1} \quad \beta_{j-1}}} \qquad k < i < j$$

Theorem 1 2 7 when p=0 gives

$$\lim_{k \to \infty} {}_k f^*_{ij} = f^*_{ij} \quad \text{and by symmetry we have}$$

$$\lim_{k \to -\infty} {}_k f^*_{ij} = f^*_{ij}$$

$$f^*_{ij} = \lim_{k \to -\infty} {}_k f^*_{ij} = \frac{\displaystyle\sum_{r=-\infty}^{i-1} \frac{\alpha_{r+1} \quad \alpha_{j-1}}{\beta_{r+1} \quad \beta_{j-1}}}{\displaystyle\sum_{r=-\infty}^{j-1} \frac{\alpha_{r+1} \quad \alpha_{j-1}}{\beta_{r+1} \quad \beta_{j-1}}} \qquad k < i < j$$

$$= \frac{\left(\displaystyle\sum_{n=-\infty}^{i} \frac{1}{\sigma_n \sigma_{n+1} \quad \sigma_j} \right)}{\left(\displaystyle\sum_{n=-\infty}^{j} \frac{1}{\sigma_n \sigma_{n+1} \quad \sigma_j} \right)} \qquad k < i < j$$

The quotient is < 1 if $\displaystyle\sum_{n=-\infty}^{i} \frac{1}{\sigma_n \sigma_{n+1} \quad \sigma_j} < \infty$ and $= 1$ if $\displaystyle\sum_{n=-\infty}^{i} \frac{1}{\sigma_n \sigma_{n+1} \quad \sigma_j} = \infty$

Note $\sum_n \rho_{-n}^{-1} < \infty$ iff $\displaystyle\sum_{n=-\infty}^{i} \frac{1}{\sigma_n \sigma_{n+1} \quad .\sigma_j} < \infty$ and

$$\sum_n \rho_{-n}^{-1} = \infty \quad \text{iff} \quad \sum_{n=-\infty}^{i} \frac{1}{\sigma_n \sigma_{n+1} \quad .\sigma_j} = \infty ,$$

where $0 < \alpha_n < 1$, for all n. This proves (i)

(ii) From (1.2.8)

$$_k f^*_{ij} = \frac{\sum_{r=i}^{k-1} \rho_r}{\sum_{r=j}^{k-1} \rho_r} , \qquad j < i < k .$$

By a direct application of Theorem 1.2.7 with p=0 we have

$$\lim_{k\to\infty} {_k f^*_{ij}} = f^*_{ij} \quad \text{Then}$$

$$f^*_{ij} = \lim_{k\to\infty} {_k f^*_{ij}} = \left(\sum_{n=i}^{\infty} \sigma_j \ldots . \sigma_n \right)\left(\sum_{n=j}^{\infty} \sigma_j \ldots . \sigma_n \right)^{-1}$$

$$f^*_{ij} < 1 \qquad \text{if} \quad \sum_{n=i}^{\infty} \sigma_j \ldots . \sigma_n < \infty$$

$$\text{and} \quad f^*_{ij} = 1 \qquad \text{if} \quad \sum_{n=i}^{\infty} \sigma_j \ldots . \sigma_n = \infty$$

Note $\sum_n \rho_n < \infty$ iff $\sum_{n=i}^{\infty} \sigma_j \ldots . \sigma_n < \infty$

and $\sum_n \rho_n = \infty$ iff $\sum_{n=i}^{\infty} \sigma_j \ldots . \sigma_n = \infty$. Proving (ii).

(iii) Before computing m_{01} we notice that we have a problem since the theory in section 1 is based on reflecting barrier at 0. However, here we are attempting to find m_{01} where there is no reflecting at 0. To find m_{01} we first look at m_{10} under the old model where 0 is a reflecting barrier to the right. Using the formula

$$m_{ij} = \sum_{s=j}^{i-1} \rho_s \sum_{r=s+1}^{\infty} \frac{1}{\alpha_r \rho_r} \quad \text{where } i > j \quad \text{from (1.2.22)}$$

Therefore,

$$m_{i,i-1} = \rho_{i-1} \sum_{r=i}^{\infty} \frac{1}{\alpha_r \rho_r} \qquad i \geq 1.$$

It is clear that $m_{i,i+1}$ for $i \leq -1$ would be the same as $m_{i,i-1}$ for $i \geq 1$, where the positive integers are replaced by the negative integers and the β's and α's are switched Thus

$$m_{i,i+1} = \rho_{i+1}^{-1} \sum_{r=-\infty}^{i} \rho_r/\beta_r \qquad i \le -1$$

$$= \rho_{i+1}^{-1} \sum_{r=-\infty}^{i} \sigma_r \sigma_{r+1} \quad \sigma_i \rho_{i+1}/\beta_r \qquad i \le -1.$$

$$= \sum_{r=-\infty}^{i} \sigma_r \sigma_{r+1} \quad \sigma_i/\beta_r \qquad i \le -1.$$

Using $\beta r = \sigma_r/(1+\sigma_r)$ we find

$$m_{i,i+1} = \sum_{r=-\infty}^{i} (1+\sigma_r)\sigma_{r+1} \quad \sigma_i \qquad i \le -1$$

When we substitute in numbers we find

$$m_{-2,-1} = \sum_{r=-\infty}^{-2} (1+\sigma_r)\sigma_{r+1} \quad \sigma_{-2}, \text{ and}$$

$$m_{-1,0} = \sum_{r=-\infty}^{-1} (1+\sigma_r)\sigma_{r+1} \quad \sigma_{-1}.$$

Clearly, $m_{0,1} = \sum_{r=-\infty}^{0} (1+\sigma_r)\sigma_{r+1} \quad \sigma_{-1}\sigma_0.$

(iii) follows by a simple change in the summation. ■

The lemma below gives conditions which determine the long term behaviour of the random walk This theorem is stated for the continuous case; the discrete results are the same except the limits are taken with respect to n.

Lemma 2. Fix $\{\alpha_n\}$ with $0 < \alpha_n < 1$ for all n. Then

(i) $\sum_{n=1}^{\infty} (\rho_{-n})^{-1} = \infty, \quad \sum_{n=1}^{\infty} \rho_n < \infty \quad \Rightarrow \lim_{t\to\infty} X(t) = \infty$ a.e.

(ii) $\sum_{n=1}^{\infty} (\rho_{-n})^{-1} < \infty, \quad \sum_{n=1}^{\infty} \rho_n = \infty \quad \Rightarrow \lim_{t\to\infty} X(t) = -\infty$ a e.

(iii) $\sum_{n=1}^{\infty} (\rho_{-n})^{-1} = \infty = \sum_{n=1}^{\infty} \rho_n \quad \Rightarrow \{X(t)\}$ is recurrent and also that

$$-\infty = \liminf_{t\to\infty} X(t) < \limsup_{t\to\infty} X(t) = \infty \quad \text{a.e.}$$

Proof. From Lemma 1 $\sum_{n=1}^{\infty} (\rho_{-n})^{-1} = \infty \Rightarrow f_{ij}^{*} = 1$ for $i < j$, and $\sum_{n=1}^{\infty} \rho_n < \infty \Rightarrow f_{ij}^{*} < 1$ for $j < i$. Under our assumption that (1) holds, i e. only a finite number of jumps can occur in finite time, then (i) is proved.

(ii) is proved similarly with the α's and β's swapped.

(iii) From Lemma 1, we have that if $\sum_{n=1}^{\infty} (\rho_{-n})^{-1} = \infty$, and $\sum_{n=1}^{\infty} \rho_n = \infty$ then $f^*_{ij} = 1$ for any i and so the walk is recurrent by definition 1 2.3. Again since only a finite number of jumps occur in finite time, and $f^*_{ij} = 1$ for all finite i and j

$$-\infty = \liminf_{t\to\infty} X(t) < \limsup_{t\to\infty} X(t) = \infty \quad \text{a e} \qquad \blacksquare$$

Now we begin to utilise the results from section 1.3, we no longer look at a fixed environment $\{\alpha_n\}$, but instead address the problem of the random environment

Theorem 1. Let $\{Y_j\}_1^{\infty}$ be a sequence of i i d, non degenerate, finite valued random variables where

$$Sn = Y_1+Y_2+Y_3+\dots+Y_n \quad \text{then}$$

either $\limsup_{n\to\infty} \frac{Sn}{n^{1/2}} = \infty$ a.e. or $\lim_{n\to\infty} \frac{Sn}{n^{1/2}} = -\infty$ a e

Proof This proof is lengthy and given in Stone's "The growth of a Random Walk".

Lemma 3. Let $\{Y_j\}_1^{\infty}$ be a sequence of independently and identically distributed non degenerate finite valued random variables, let $Sn = Y_1+Y_2+Y_3+\dots+Y_n$

(i) $\sum_{n=1}^{\infty} n^{-1}\mathbb{P}(Sn>0) < \infty$ iff $\lim_{n\to\infty} Sn = -\infty$ a.e., in which case $\sum_{n=1}^{\infty} e^{Sn} < \infty$ a e

(ii) $\sum_{n=1}^{\infty} n^{-1}\mathbb{P}(Sn>0) = \infty = \sum_{n=1}^{\infty} n^{-1}\mathbb{P}(Sn<0)$ iff

$$-\infty = \liminf_{n\to\infty} Sn < \limsup_{n\to\infty} Sn = \infty \quad \text{a e}$$

in which case $\sum_{n=1}^{\infty} e^{-Sn} = \infty = \sum_{n=1}^{\infty} e^{Sn}$ a e

Proof.

(i) $\sum_{n=1}^{\infty} n^{-1}\mathbb{P}(Sn>0) < \infty$ iff $\mathbb{P}(C<\infty) < 1$ (by Theorem 1.3.3)

iff $\mathbb{P}(\limsup_{n\to\infty} Sn = +\infty) = 0$ (by Theorem 1.3 1)

iff $\mathbb{P}(\limsup_{n\to\infty} Sn = -\infty) = 1$ (by Theorem 1.3.2)

Since $\lim_{n\to\infty} Sn = -\infty$ then by Theorem 1

$$\lim_{n\to\infty} \frac{Sn}{n^{1/2}} = -\infty \quad \text{a.e}$$

Hence $Sn < -n^{1/2}$ eventually. Thus there exists an N such that

$$0 \le \sum_{n=N}^{\infty} e^{Sn} < \sum_{n=N}^{\infty} e^{-n^{1/2}} < \infty \quad \text{a e}$$

Since $\sum_{n=1}^{N} e^{Sn} < \infty$ then $\sum_{n=1}^{\infty} e^{Sn} < \infty$

(ii) $\sum_{n=1}^{\infty} n^{-1}\mathbb{P}(Sn > 0) = \infty$ iff $\mathbb{P}(C_{(0,\infty)} < \infty) = 1$ (by Theorem 1.3.3)

iff $\mathbb{P}(\limsup_{n\to\infty} Sn = \infty) = 1$ (by Theorem 1.3.1)

$\sum_{n=1}^{\infty} n^{-1}\mathbb{P}(Sn < 0) = \infty$ iff $\mathbb{P}(C_{(-\infty,0)} < \infty) = 1$ (by the dual of Theorem 1.3.3)

iff $\mathbb{P}(\liminf_{n\to\infty} S_n = -\infty) = 1$ (by the dual of Theorem 1 3 1)

It is obvious that if $-\infty = \liminf_{n\to\infty} Sn < \limsup_{n\to\infty} Sn = \infty$ a.e., that

$$\sum_{n=1}^{\infty} e^{-Sn} = \infty = \sum_{n=1}^{\infty} e^{Sn} \quad \text{a e.}$$

■

Theorem 2. Let $\{A_n\}_{-\infty}^{\infty}$ be a sequence of independent and identically distributed non degenerate random variables with $0 \le A_n < 1$ for all n, or $0 < A_n \le 1$ for all n Set $\Sigma_n = B_n/A_n$, $P_n = \Sigma_1\Sigma_2 \ldots \Sigma_n$ for $n > 0$ and $P_n = \Sigma_{-1}\Sigma_{-2} \ldots \Sigma_{-n}$ for $n < 0$.

(i) If $\sum_{n=1}^{\infty} n^{-1}\mathbb{P}(P_n > 1) < \infty$, then $\lim_{t\to\infty} X(t) = \infty$ a.e.

(ii) If $\sum_{n=1}^{\infty} n^{-1}\mathbb{P}(P_n < 1) < \infty$, then $\lim_{t\to\infty} X(t) = -\infty$ a.e.

(iii) If $\sum_{n=1}^{\infty} n^{-1}\mathbb{P}(P_n < 1) = \infty = \sum_{n=1}^{\infty} n^{-1}\mathbb{P}(P_n > 1)$, then $\{X(t)\}$ is recurrent and also

$$-\infty = \liminf_{t\to\infty} X(t) < \limsup_{t\to\infty} X(t) = \infty \quad \text{a e}$$

If $\mathbb{E}[\ln\Sigma]$ is defined (possibly $\mp\infty$), then (i),(ii) and (iii) correspond respectively to

(i') $\mathbb{E}[\ln\Sigma] < 0$,

(ii') $\mathbb{E}[\ln\Sigma] > 0$,

(iii') $\mathbb{E}[\ln\Sigma] = 0$.

Notice that the two series in (i) and (ii) cannot both converge simultaneously since $\sum_{n=1}^{\infty} n^{-1}\mathbb{P}(P_n = 1) < \infty$ by Theorem 1.3.4, and the fact the harmonic series diverges.

Proof. We will first prove two special cases i.e.

(a) $A_n = 1$ for some finite N and

(b) $A_n = 0$ for some finite N.

(a) If $A_n = 1$ for some $N < \infty$ then $P_n = 0$ for $n \geq N$

$$\sum_{n=N}^{\infty} n^{-1}\mathbb{P}(P_n > 1) = 0 \quad \text{and} \quad \sum_{n=1}^{\infty} n^{-1}\mathbb{P}(P_n > 1) < \infty .$$

Also $\sum_{n=1}^{\infty} P_n < \infty$ a e and because P_n and P_{-n} have the same distribution

$$\sum_{n=1}^{\infty} (P_{-n})^{-1} = \infty \quad \text{a e}$$

Hence by Lemma 2 $\mathbb{P}(\lim_{t\to\infty} X(t) = +\infty | A_n) = 1$.

Taking the expectation with respect to the random environment yields

$$\lim_{t\to\infty} X(t) = +\infty \quad \text{a.e., thus proving (i)}$$

(b) If $A_n = 0$ for some $N < \infty$ then $P_n = \infty$ for $n \geq N$, and

$$\sum_{n=1}^{\infty} n^{-1}\mathbb{P}(P_n < 1) < \infty$$

Also $\sum_{n=1}^{\infty} P_n = \infty$ a.e and because P_n and P_{-n} are from the same distribution $\sum_{n=1}^{\infty} (P\text{-}n)^{-1} < \infty$ a.e.

Hence by Lemma 2 $\mathbb{P}(\lim_{t\to\infty} X(t) = -\infty | A_n) = 1$.

Taking the expectation with respect to the random environment yields

$$\lim_{t\to\infty} X(t) = -\infty \quad \text{a e.}$$

It remains to prove (i), (ii) and (iii) for $0 < A_n < 1$.

(i) Suppose $\sum_{n=1}^{\infty} n^{-1}\mathbb{P}(\ln\Sigma_1 + \ln\Sigma_2 + \ldots + \ln\Sigma_n > 0) = \sum_{n=1}^{\infty} n^{-1}\mathbb{P}(P_n > 1) < \infty$, then

Lemma 3 implies

$$(2) \qquad \sum_{n=1}^{\infty} P_n = \sum_{n=1}^{\infty} e^{Sn} < \infty \quad \text{a e} ,$$

where $Sn = \ln\Sigma_1 + \ln\Sigma_2 + \ldots + \ln\Sigma_n$

Since P_n and P_{-n} have the same distribution

$$(3) \qquad \sum_{n=1}^{\infty} (P_{-n})^{-1} = \infty \quad \text{a.e.}$$

Hence using (2) and (3) and Lemma 2 implies

$$\mathbb{P}(\lim_{t\to\infty} X(t) = +\infty \mid A_n) = 1$$

Taking the expectation with respect to the random environment yields

$$\lim_{t\to\infty} X(t) = \infty \quad \text{a.e.}$$

(ii) Assume $\sum_{n=1}^{\infty} n^{-1}\mathbb{P}(Sn < 0) = \sum_{n=1}^{\infty} n^{-1}\mathbb{P}(P_n < 1) < \infty$.

$\sum_{n=1}^{\infty} n^{-1}\mathbb{P}(Sn > 0) = \infty$ since the series in (i) and (ii) cannot both converge.

Then from Lemma 3(i) $\lim_{n\to\infty} Sn \neq -\infty$ a.e.

Therefore, from Theorem 1 3.2 either

(c) $Sn \to \infty$ a e or

(d) $-\infty = \liminf_{n\to\infty} Sn < \limsup_{n\to\infty} Sn = \infty$ a e.

However, (d) cannot occur by Lemma 3(ii). Since $\lim_{n\to\infty} Sn = \infty$ a e we have that

(4) $$\sum_{n=1}^{\infty} e^{Sn} = \sum_{n=1}^{\infty} P_n = \infty \quad \text{a e.}$$

Since P_n and P_{-n} are from the same distribution

(5) $$\sum_{n=N}^{\infty} e^{-Sn} = \sum_{n=1}^{\infty} (P_{-n})^{-1} < \infty \quad \text{a e}$$

Using (4) and (5) and Lemma 2 we complete the proof of (ii).

(iii) is proved in a similar way using Lemma 3(ii) and Lemma 2(iii).

(i') To prove (i') assume $\mathbb{E}[\ln\Sigma_1] < 0$, then

$\mathbb{E}[\ln\Sigma_1] < 0$ iff $\lim_{n\to\infty} Sn = -\infty$ a.e (by the strong law of large numbers)

iff $\sum_{n=1}^{\infty} n^{-1}\mathbb{P}(Sn > 0) < \infty$ (by Lemma 3(i))

Using (i), the proof of (i') is complete. (ii') is proved similarly.

(iii') To prove (iii') assume $\mathbb{E}[\ln\Sigma_1] = 0$, then only possibility (iv) of Theorem 1.3 2 can hold.

Therefore by Lemma 3(ii) , we have that

$$\sum_{n=1}^{\infty} n^{-1}\mathbb{P}(Sn > 0) = \infty = \sum_{n=1}^{\infty} n^{-1}\mathbb{P}(Sn < 0).$$

Using (iii) this completes the proof of Theorem 2. ■

Note. In lemma 2 we have left out the case where $\sum_{n=1}^{\infty} (\rho_{-n})^{-1} < \infty$ and $\sum_{n=1}^{\infty} \rho_n < \infty$. However, for the random environment this case cannot occur since P_{-n} and P_n are from the same distribution. As a result of this it is clear that the results lemma 2 will hold "if and only if". A simple logical argument for this the case is presented below·

From the lemma we have

$$A \Rightarrow B \text{ and}$$

$$\bar{A} \Rightarrow \bar{B} \qquad \text{where } \bar{A} \text{ - not A and } \bar{B} \text{ not B}$$

Clearly as a result of this we have $B \Rightarrow A$.

Using Jensen's inequality i.e $\mathbb{E}[f(X)] \geq f(\mathbb{E}[X])$ for any convex function f, and using the fact that $-\ln(x)$ is convex we derive the following inequalities

(6) $\mathbb{E}[\ln\Sigma] \leq \ln(\mathbb{E}[\Sigma])$, and

(7) $-\mathbb{E}[\ln\Sigma] \leq \ln(\mathbb{E}[\Sigma^{-1}])$

Using (6) and (7) we can generate the following table:

$\mathbb{E}[\ln\Sigma] < 0$	$\mathbb{E}[\ln\Sigma] = 0$	$\mathbb{E}[\ln\Sigma] > 0$
$\mathbb{E}[\Sigma] < 1$ $\mathbb{E}[\Sigma] \geq 1$	$\mathbb{E}[\Sigma] \geq 1$	$\mathbb{E}[\Sigma] > 1$
$\mathbb{E}[\Sigma^{-1}] > 1$	$\mathbb{E}[\Sigma^{-1}] \geq 1$	$\mathbb{E}[\Sigma^{-1}] < 1$ $\mathbb{E}[\Sigma^{-1}] \geq 1$

Fig.1.

At this point we switch our attention to the ergodic properties of the system under consideration Ergodic theory is the mathematical study of the long-term average behaviour of systems. Solomon has successfully looked at the ergodic behaviour of the discrete case. In addition results are given for the continuous case; where possible the proofs of Solomon are generalized.

In the discrete case it is not possible to apply the strong law of large

numbers or the ergodic theorem directly to $\lim_{n\to\infty} Xn/n$ This is because Xn is not the sum of n strictly stationary random variables. However, the sequence $\{\tau_n\}$, defined below, will prove to be ergodic for both discrete and continuous time.

Let $T_0 = 0$

$$T_n = \min\{ t>0 \quad X(t)=n\}, \quad \text{if such a t exists,}$$

$$= \infty, \qquad \text{if no such t exists.}$$

$\tau_n = T_n - T_{n-1}$, define τ_{-n} and T_n similarly.

The sequence $\{\tau_n\}_1^\infty$ is strictly stationary, for the discrete case since the sequence {An} are independent and identically distributed random variables. Strict stationarity can be clearly seen from the following workings.

$$\mathbb{E}_A[\mathbb{P}(\tau_1 = 1 | A)] = \mathbb{E}[A_0]$$

$$\mathbb{E}_A[\mathbb{P}(\tau_2 = 1 | A)] = \mathbb{E}[A_1]$$

$$\vdots \qquad \vdots$$

$$\mathbb{E}_A[\mathbb{P}(\tau_n = 1 | A)] = \mathbb{E}[A_{n-1}]$$

$$\mathbb{E}_A[\mathbb{P}(\tau_1 = 1, \tau_2 = 3 | A)] = \mathbb{E}[A_0(1-A_1)A_0A_1]$$

$$\mathbb{E}_A[\mathbb{P}(\tau_2 = 1, \tau_3 = 3 | A)] = \mathbb{E}[A_1(1-A_2)A_1A_2]$$

$$\vdots \qquad \vdots \qquad \vdots$$

$$\mathbb{E}_A[\mathbb{P}(\tau_n = 1, \tau_{n+1} = 3 | A)] = \mathbb{E}[A_{n-1}(1-A_n)A_{n-1}A_n]$$

Note the sequence $\{\tau_n\}_1^\infty$ is not a sequence of independent random variables.

Since there is not an obvious generalization to the continuous case of Solomon's method for proving that the sequence $\{\tau_n\}_1^\infty$ is ergodic, we provide our own proof here. The theorem below is applicable to the discrete and continuous environments. This theorem provides a simpler method for proving that the sequence $\{\tau_n\}_1^\infty$ is ergodic than the method in [4] page 5. In the theorem that follows we assume that condition 1 holds for the continuous case.

We define a transformation $\mathcal{T}:\tau_i \to \tau_{i+1}$. Obviously this transformation is measure preserving for both the discrete and continuous time cases

<u>Theorem 3</u> If $\limsup_{t\to\infty} X(t) = \infty$ a.e. then

$$\lim_{i\to\infty} {}_kf^{*}_{i\,i+1} = 1 \text{ a.e}$$ and the measure preserving transformation $\mathcal{T}.\tau_i \to \tau_{i+1}$ is ergodic.

<u>Proof.</u> From (1 2.9) we have

$$\lim_{i\to\infty} {}_kf^{*}_{i\,i+1} = \lim_{i\to\infty} \frac{\sum_{r=k}^{i-1} P_r}{\sum_{r=k}^{i} P_r}$$

$$= 1 - \lim_{i\to\infty} \frac{P_i}{\sum_{r=k}^{i} P_r}$$

$$= 1 - \lim_{i\to\infty} \frac{P_i}{P_k + P_{k+1} + \qquad + P_i}$$

$$= 1 - \lim_{i\to\infty} \frac{\Sigma_1\Sigma_2 \qquad \Sigma_i}{P_k + P_{k+1} + \dots + P_i}$$

$$= 1 - \lim_{i\to\infty} \left(\Sigma^{-1}_{k+1}\Sigma^{-1}_{k+2} \quad \Sigma^{-1}_i + \Sigma^{-1}_{k+2}\Sigma^{-1}_{k+1} \quad \Sigma^{-1}_i + \dots + \Sigma^{-1}_i + 1\right)^{-1}$$

Because Σ_i and Σ_r are from the same distribution we have

$$\lim_{i\to\infty} {}_kf^{*}_{i\,i+1} = \left(1 + \sum_{r=1}^{i-k} (P_i)^{-1}\right)^{-1}$$

Using the fact that P_{-n} and P_n come from the same distribution, and that $\sum_{n=1}^{\infty} (P_{-n})^{-1} = \infty$ a e. since $\limsup_{t\to\infty} X(t) = \infty$ a.e. by Lemma 2, and the note below Theorem 2 we have

$$\lim_{i\to\infty} {}_kf^{*}_{i\,i+1} = 1 \text{ a.e..}$$

This result is equivalent to saying

$$\lim_{n\to\infty} \mathbb{P}(\mathcal{T}^n (\tau_i \le a) \cap (\tau_k \le b)) = \mathbb{P}(\lim_{n\to\infty} \mathcal{T}^n (\tau_i \le a)) \cap \mathbb{P}(\tau_k \le b)$$

$$= \mathbb{P}(\tau_1 \le a) \cap \mathbb{P}(\tau_k \le b)$$

Therefore, the measure preserving transformation $\mathcal{T}\ \tau_i \to \tau_{i+1}$ has the mixing property. From Theorem 1.1 7 the transformation $\mathcal{T}$ is ergodic. ■

It is important to note for the following two theorems that $\mathbb{E}[\Sigma] < 1$ implies $X(t) \to \infty$ a.e. (condition 1 is again assumed for the continuous case)

<u>Theorem 4.</u> In the discrete case

$$\mathbb{E}[\tau_1] = \frac{1 + \mathbb{E}[\Sigma]}{1 - \mathbb{E}[\Sigma]} \qquad \mathbb{E}[\Sigma] < 1$$

$$= \infty \qquad \mathbb{E}[\Sigma] \ge 1$$

<u>Proof.</u> If $\limsup_{n\to\infty} X_n < \infty$ a.e then $\mathbb{E}[\tau_1] = \infty$

We therefore assume $\limsup_{n\to\infty} X_n = \infty$ a.e. .Fix the environment $\{\alpha_n\}$ such that $\limsup_{n\to\infty} X_n = \infty$ a.e.

$$\mathbb{E}[\tau_1 | \alpha_n] = (1 + \sigma_0) + \sum_{j=-\infty}^{0} (1+\sigma_{j-1})\sigma_j\sigma_{j+1} \qquad \sigma_0 \text{ from Lemma 1(iii).}$$

Replacing the numbers α_n with the random variables A_n gives

$$\mathbb{E}[\tau_1 | A] = (1 + \Sigma_0) + \sum_{j=-\infty}^{0} (1+\Sigma_{j-1})\Sigma_j\Sigma_{j+1} \ . \quad \Sigma_0$$

Taking expectation with respect to the random environment yields

$$\mathbb{E}[\tau_1 | A] = (1 + \mathbb{E}[\Sigma_0])(1 + \sum_{j=-}^{0} \mathbb{E}[\Sigma]^{1-j})$$

Which can be rewritten as the result stated above ■

In order to arrive at the equivalent theorem for the continuous case we require the following definition.

<u>Definition 1</u> Let K be the random variable representing the number of jumps made before reaching state 1 for the first time. These positions jumped to we will call steps. Let D_1 be the random variable representing the time spent in step 1 before jumping to step 2 and let D_K be the random variable representing the time spent in step K before jumping to state 1 for the first time

<u>Theorem 5</u> In the continuous case

$$\mathbb{E}[\tau_1] = \frac{1 + \mathbb{E}[W_{j,j-1}/W_{j,j+1}]}{1 - \mathbb{E}[W_{j,j-1}/W_{j,j+1}]} \left(\mathbb{E}\left[\frac{1}{W_{j,j+1} + W_{j,j-1}} \right] \right)$$

where $\mathbb{E}[W_{j,j-1}/W_{j,j+1}] < 1$,

$= \infty$ where $\mathbb{E}[W_{j,j-1}/W_{j,j+1}] \geq 1$.

Proof. If $\limsup_{t\to\infty} X(t) < \infty$ then $\mathbb{E}[\tau_1] = \infty$. We therefore prove Theorem 5 assuming $\limsup_{t\to\infty} X(t) = \infty$ a.e.

It is obvious that

$$\mathbb{E}[\tau_1|A] = \mathbb{E}[D_1|A] + \mathbb{E}[D_2|A] + \ldots + \mathbb{E}[D_K|A].$$

Note that the sum above is not necessarily a sum of independent and identically distributed random variables as some states may be occupied more than once in reaching state 1 for the first time. However, if the sum is broken down into ascents and descents we may apply Wald's identity to each of these subsets of the overall sum, giving

$$\mathbb{E}[\tau_1] = \mathbb{E}[D_1]\mathbb{E}[\delta+\nu+\ldots.+\varphi] = \mathbb{E}[D_1]\mathbb{E}[K].$$

The time spent in a state before leaving it is exponentially distributed and all these waiting times are identically distributed, thus

$$\mathbb{E}[D_1] = \mathbb{E}\left[(W_{j,j+1}+W_{j,j-1})^{-1} \right] .$$

$\mathbb{E}[K]$ is simply $\mathbb{E}[\tau_1]$ from Theorem 4. Using the fact that $\Sigma_j = W_{j,j-1}/W_{j,j+1}$ completes the proof. ■

Theorem 6. In the discrete case

(i) $\mathbb{E}[\Sigma] < 1$ implies

$$\lim_{n\to\infty} T_n/n = \frac{1 + \mathbb{E}[\Sigma]}{1 - \mathbb{E}[\Sigma]} \text{ a.e.}, \quad \lim_{n\to\infty} X_n/n = \frac{1 - \mathbb{E}[\Sigma]}{1 + \mathbb{E}[\Sigma]} \text{ a.e.},$$

(ii) $\mathbb{E}[\Sigma^{-1}] < 1$ implies

$$\lim_{n\to\infty} T_{-n}/n = \frac{1 + \mathbb{E}[\Sigma^{-1}]}{1 - \mathbb{E}[\Sigma^{-1}]} \text{ a.e.}, \quad \lim_{n\to\infty} X_n/n = -\frac{1 - \mathbb{E}[\Sigma^{-1}]}{1 + \mathbb{E}[\Sigma^{-1}]} \text{ a.e.},$$

(iii) $(\mathbb{E}[\Sigma^{-1}])^{-1} \leq 1 \leq \mathbb{E}[\Sigma^{-1}]$ implies

$$\lim_{n\to\infty} T_n/n = \infty = \lim_{n\to\infty} T_{-n}/n \text{ a.e.}, \quad \lim_{n\to\infty} X_n/n = 0 \text{ a.e.}$$

Notice using Jensen's inequality that these three cases are mutually exclusive.

Examining the two possibilities not fully dealt with by (i) and (ii) above.

$$\mathbb{E}[\Sigma] \geq 1 \Rightarrow \begin{cases} \mathbb{E}[\Sigma^{-1}] < 1 & \text{(ii)} \\ \text{or } \mathbb{E}[\Sigma^{-1}] \geq 1 & \text{(iii)} \end{cases}$$

$$\mathbb{E}[\Sigma^{-1}] \geq 1 \Rightarrow \mathbb{E}[\Sigma] \leq 1 \qquad \text{(i)}$$

Proof. The results for T_n are a direct result of Theorem 3, Theorem 4 and Theorem 1.1.8. The results for T_{-n} follow from those for T_n by a reversal in the roles of the positive and negative integers.

To prove the cases for X_n we use

$$T_{k_n} \leq n \leq T_{k_n+1}, \qquad T_{-1_n} \leq n \leq T_{-1_n-1} \qquad \text{(see Fig 2)}$$

In (i) $X_n \to \infty$ by Fig.1, thus $k_n \to \infty$ a e

Since the random walk only moves one step at a time

$$k_n \leq X_n + (n - T_{k_n}).$$

Therefore,

$$\text{(8)} \qquad k_n/n - \left(1 - T_{k_n}/n\right) \leq X_n/n \leq (k_n + 1)/n$$

Note that since $X_n \to \infty$ and $\lim_{n\to\infty} T_{k_n}/n = 1$ that

$$\text{(9)} \qquad \lim_{n\to\infty} k_n/n = \lim_{n\to\infty} X_n/n$$

It is obvious that

$$\text{(10)} \qquad \lim_{n\to\infty} k_n/n = \lim_{n\to\infty} k_n/T_{k_n}.$$

Since $T_{k_n} \to \infty$ and $T_n \to \infty$ then

$\lim_{n\to\infty} k_n/T_{k_n} = \lim_{n\to\infty} n/T_n$, and using (9) and (10) gives,

$\lim_{n\to\infty} n/T_n = \lim_{n\to\infty} X_n/n$. This proves (i) and (ii) is proved similarly.

To prove (iii) note that

$$T_{k_n}/k_n \leq n/k_n \quad \text{and} \quad T_{-1_n}/1_n \leq n/1_n \quad \text{(See Fig.3)}$$

From Theorem 4 we know that when $\mathbb{E}[\Sigma] \geq 1$ that $k_n/n \to 0$ a.e. By the dual of

Theorem 4 where $\mathbb{E}[\Sigma^{-1}] \geq 1$ then $l_n/n \to 0$ a.e.

Because $X_n < k_n + 1$ and $-l_n - 1 < X_n$ we have

$(-l_n - 1)/n < X_n/n < (k_n + 1)/n$. Taking limits completes the proof. ∎

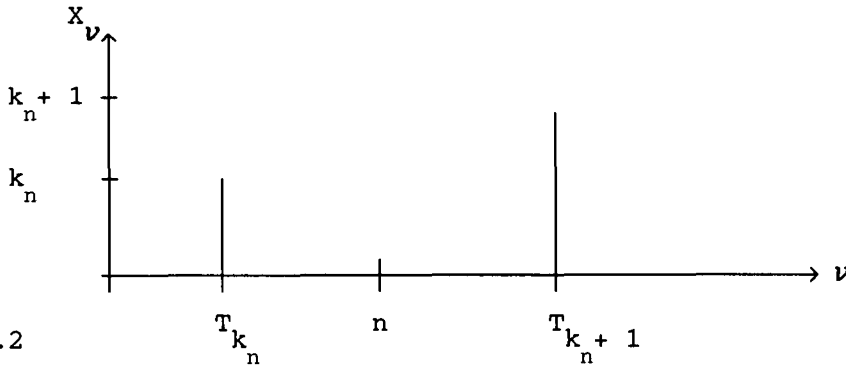


Fig.2

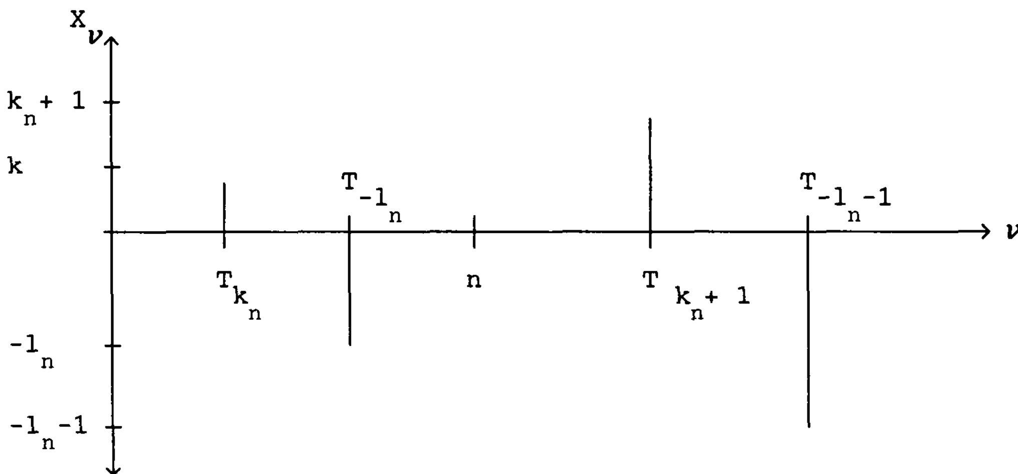


Fig.3

<u>Theorem 7</u> In the continuous case

(i) $\mathbb{E}[\Sigma] < 1$ implies

$$\lim_{n\to\infty} T_n/n = \frac{1 + \mathbb{E}[\Sigma]}{1 - \mathbb{E}[\Sigma]} \left(\mathbb{E}\left[\frac{1}{W_{j,j+1} + W_{j,j-1}} \right] \right) \quad \text{a.e.} ,$$

(ii) $\mathbb{E}[\Sigma^{-1}] < 1$ implies

$$\lim_{n\to\infty} T_{-n}/n = \frac{1 + \mathbb{E}[\Sigma^{-1}]}{1 - \mathbb{E}[\Sigma^{-1}]} \left(\mathbb{E}\left[\frac{1}{W_{j,j+1} + W_{j,j-1}} \right] \right) \quad \text{a.e.} ,$$

(iii) $(\mathbb{E}[\Sigma])^{-1} \leq 1 \leq \mathbb{E}[\Sigma^{-1}]$ implies

$$\lim_{n\to\infty} T_n/n = \infty = \lim_{n\to\infty} T_{-n}/n \quad \text{a.e}$$

<u>Proof.</u> The results for T_n are a direct result of Theorem 3, Theorem 5 and

Theorem 1.1.8. The result for T_{-n} follow from for T_n by a reversal in the roles of the positive and negative integers. ■

An interesting result from Theorems 6 is that the random environment "slows" down the random walk To see this replace A_n by $\mathbb{E}[A_n]$ in the discrete case. Therefore in the discrete case X_n is the sum of n independent and identically distributed random variables

Looking at the discrete case we have by the strong law of large numbers that

$$\lim_{n\to\infty} X_n/n = \mathbb{E}[A] - \mathbb{E}[B] \quad \text{a.e},$$

Jensen's inequality implies

$$\left(\mathbb{E}[A^{-1}]\right)^{-1} \leq \mathbb{E}[A]$$

Hence,

$$\begin{aligned} \frac{1 - \mathbb{E}[\Sigma]}{1 + \mathbb{E}[\Sigma]} &= \frac{2 - \mathbb{E}[\Sigma+1]}{\mathbb{E}[\Sigma+1]} \\ &= \frac{2 - \mathbb{E}[A^{-1}]}{\mathbb{E}[A^{-1}]} \\ &= 2(\mathbb{E}[A^{-1}])^{-1} - 1 \\ &\leq 2\mathbb{E}[A] - 1 \\ &= \mathbb{E}[A] - \mathbb{E}[B] \end{aligned}$$

and similarly

$$-\frac{1 - \mathbb{E}[\Sigma^{-1}]}{1 + \mathbb{E}[\Sigma^{-1}]} \geq \mathbb{E}[A] - \mathbb{E}[B].$$

3. The unit jump directed RWIRE

In this chapter we consider the directed RWIRE in continuous time Obviously this is a simpler problem to consider than the non directed RWIRE in continuous time dealt with in the previous chapter In chapter 2 we limited ourselves to the computation of the "speed" of the process. However, in this chapter the "speed" is determined using less limiting assumptions about the random environment, results for the slow approach to infinity and a limiting distribution for the process are fully determined also. The results proved below are given in [6]

In the previous chapter results were obtained by randomizing the environment and using theorems such as the law of total probability. In this chapter results are arrived at by a different method; here results that hold for a particular realisation are shown to hold for almost every realisation of the random environment under certain conditions.

1. The pure birth process

The directed RWIRE is simply the pure birth process with random transition rates. For this reason we write down some of the well known results for the pure birth process. This is a continuous time integer valued Markov process $\{X_t, t\geq 0\}$ with positive transition rates defined as follows·

(1) $\mathbb{P}[X(t) = n | X(0) = 0, w_n] = P_n(t), \qquad \mathbb{P}[X(0) = 0 | w_n] = 1$

where

$$(2) \quad \begin{cases} P'_n(t) = -w_n P_n(t) + w_{n-1} P_{n-1}(t) & n \geq 1 \\ P'_0(t) = -w_0 P_0(t) \end{cases}$$

As in the previous chapter it is more convenient for us to look at the

process in terms of the waiting times $\{\tau_n\}_1^\infty$ i.e.:

$$T_0 = 0$$

Let

$$T_n = \min\{t > 0 \cdot X(t) = n\}$$

(3) $\qquad = \infty \qquad$ if no such t exists

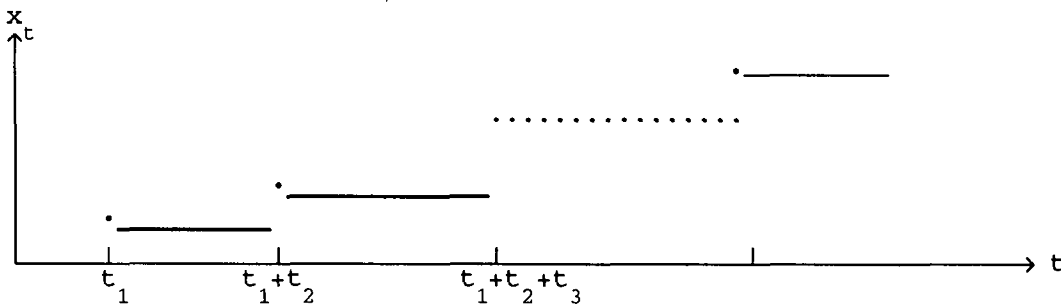
$$\tau_n = T_n - T_{n-1}$$

The waiting times $\{\tau_n\}_1^\infty$ is a sequence of independent and exponentially distributed random (on the fixed environment) i.e.:

(4) $$\mathbb{P}[\tau_j > x_j | w_n] = e^{-w_{j-1} x_j} \qquad j \geq 1$$

From (3) it is clear that

(5) $X_t = \max\{n : T_n \leq t\}$ and that $T_n = \sum_{j=1}^{n} \tau_j$ is the time of the jump to state n (or the time of the nth jump). A sample path $\{x_t, t \geq 0\}$ of the pure birth process and the corresponding realisation $\{t_j\}_1^\infty$ of the sequence of waiting times are represented in figure 1



Note that from (5), a sample path x_t reaches infinity in a finite time τ if and only if infinitely many jumps occur during $[0,\delta)$, i e

$$\sum_{j=1}^{\infty} t_j < \delta < \infty .$$

Using the fact that the random variables τ_j are independent and exponentially distributed, it is easy to check that the set of such paths has probability zero if and only if

(6) $$\sum_{j=0}^{\infty} w_j^{-1} = \infty$$

The following lemma links the speed of the process with the waiting times

Lemma 1 Suppose that (6) holds but $w_j^{-1} < \infty$, $j=0,1,2,\ldots$. Then for any $\alpha > 0$ the following relations hold almost everywhere

$$(7)\quad \limsup_{t\to\infty} X_t/t^{\alpha} = \left(\liminf_{n\to\infty} n^{-1/\alpha} \sum_{j=1}^{n} \tau_j \right)^{-\alpha}$$

$$(8)\quad \liminf_{t\to\infty} X_t/t^{\alpha} = \left(\limsup_{n\to\infty} n^{-1/\alpha} \sum_{j=1}^{n} \tau_j \right)^{-\alpha}$$

In particular,

$$\lim_{t\to\infty} X_t/t = \left(\lim_{n\to\infty} n^{-1/\alpha} \sum_{j=1}^{n} \tau_j \right)^{-\alpha}$$

Proof Under the conditions of the lemma

$\tau_j < \infty$, $\sum_{j=1}^{n} \tau_j \uparrow \infty$ almost everywhere. Therefore

$$(9)\quad \limsup_{t\to\infty} X_t/t^{\alpha} = \limsup_{t\to\infty} X_{\tau_1+\tau_2+\ \ +\tau_n}/(\tau_1+\tau_2+\ \ +\tau_n)^{\alpha} \quad \text{and}$$

$$(10)\quad \liminf_{t\to\infty} X_t/t^{\alpha} = \liminf_{t\to\infty} X_{\tau_1+\tau_2+\ \ +\tau_n}/(\tau_1+\tau_2+\ \ +\tau_n)^{\alpha}$$

But $X_{\tau_1+\tau_2+\ \ +\tau_n} = n$ so that the conclusion follows by rewriting

$$(11)\quad n/(\tau_1+\tau_2+\ldots+\tau_n)^{\alpha} = (n^{-1/\alpha}(\tau_1+.\ \ .+\tau_n))^{-\alpha}$$ ■

Proposition 1. Suppose that

(i) $\lim_{n\to\infty} n^{-1} \sum_{j=1}^{n} w_{j-1}^{-1} = a < \infty$, and

(ii) $\lim_{n\to\infty} n^{-1} \sum_{j=1}^{n} w_{j-1}^{-2} = 0$, then

$\lim_{n\to\infty} n^{-1} \sum_{j=1}^{n} \tau_j = a$ in probability i e

$$(12)\quad \forall\ \varepsilon > 0,\ \lim_{n\to\infty} \mathbb{P}[n^{-1}\left|\sum_{j=1}^{n} \tau_j - a\right| < \varepsilon|w_n] = 1$$

Proof. From [1] p.260 it is clear that if a random variable converges in distribution to a constant then it converges in probability to the same constant. Note $\lambda n^{-1} \sum_{j=1}^{n} \tau_j$ is treated as one random variable. Therefore, this proposition will be proved if it can be shown that

$$(13)\quad \lim_{n\to\infty} \mathbb{E}[\exp(\lambda n^{-1} \sum_{j=1}^{n} \tau_j)\,|w_n] = e^{-\lambda a} \quad \text{for all } \lambda \geq 0.$$

But since the random variables $\{\tau_j\}_1^n$ are independent

$$(14) \qquad \mathbb{E}[\exp(\lambda n^{-1}\sum_{j=1}^{n}\tau_j)\,|w_n] = \prod_{j=1}^{n}(1 + \lambda n^{-1}w_{j-1}^{-1})^{-1}$$
$$= \exp(-\sum_{j=1}^{n}\log(1 + \lambda n^{-1}w_{j-1}^{-1})) \;.$$

It is thus sufficient to prove

$$(15) \qquad \lim_{n\to\infty}\sum_{j=1}^{n}\log(1 + \lambda n^{-1}w_{j-1}^{-1}) = \lambda a.$$

This in turn follows from the assumptions (i) and (ii), in the statement of the proposition, because

$$\left|\lambda a - \sum_{j=1}^{n}\log(1+\lambda n^{-1}w_{j-1}^{-1})\right| \le \left|\lambda a - \lambda n^{-1}\sum_{j=1}^{n}w_{j-1}^{-1}\right| + \left|\lambda n^{-1}\sum_{j=1}^{n}w_{j-1}^{-1} - \sum_{j=1}^{n}\log(1+\lambda n^{-1}w_{j-1}^{-1})\right|$$
$$\le \lambda\left|a - n^{-1}\sum_{j=1}^{n}w_{j-1}^{-1}\right| + \sum_{j=1}^{n}\left|\lambda n^{-1}w_{j-1}^{-1} - \log(1+\lambda n^{-1}w_{j-1}^{-1})\right|$$
$$\le \lambda\left|a - n^{-1}\sum_{j=1}^{n}w_{j-1}^{-1}\right| + (\lambda^2/2n^2)\sum_{j=1}^{n}w_{j-1}^{-2} \;,$$

where we made use of the elementary inequality

$$(16) \qquad 0 < x - \log(1 + x) \le x^2/2 \qquad x \ge 0$$

■

It is possible to show that if a is zero or infinity that the previous proposition can be proved without the second assumption

<u>Proposition_2.</u> Suppose that for some $\gamma > 0$

$$(17) \qquad \lim_{n\to\infty} n^{-\gamma}\sum_{j=1}^{n} w_{j-1}^{-1} = a \;, \text{ where } a \text{ is either } 0 \text{ or } \infty.$$

Then $\lim_{n\to\infty} n^{-\gamma}\sum_{j=1}^{n}\tau_j = a$ in probability i e.

$$(18) \qquad \forall\ \varepsilon > 0,\ \lim_{n\to\infty}\mathbb{P}\left[n^{-\gamma}\sum_{j=1}^{n}\tau_j < \varepsilon\,\middle|\,w_n\right] = 1 \quad \text{if } a = 0,$$

$$(19) \qquad \forall\ \varepsilon > 0,\ \lim_{n\to\infty}\mathbb{P}\left[n^{-\gamma}\sum_{j=1}^{n}\tau_j > \varepsilon\,\middle|\,w_n\right] = 1 \quad \text{if } a = \infty$$

<u>Proof.</u>

Adopting the same method as Proposition 1 we have

$$(20) \qquad \mathbb{E}\left[\exp\left(-\lambda n^{-\gamma}\sum_{j=1}^{n}\tau_j\right)\middle|w_n\right] = \prod_{j=1}^{n}\left(1+\lambda n^{-\gamma}w_{j-1}^{-1}\right)^{-1}.$$

Note that for any non-negative numbers $a_1, a_2, \ldots, a_n$

$$(21) \qquad 1 + \sum_{j=1}^{n}a_j \le \prod_{j=1}^{n}(1+a_j) \le \exp\left(\sum_{j=1}^{n}a_j\right) \quad \text{and thus}$$

$$(22)\qquad \exp\left(-\sum_{j=1}^{n} a_j\right) \le \prod_{j=1}^{n} (1+a_j)^{-1} \le \left(1+\sum_{j=1}^{n} a_j\right)^{-1}$$

Using (22) it is obvious that

$$(23)\qquad \exp\left(-\lambda n^{-\gamma}\sum_{j=1}^{n}\tau_j\right) \le \mathbb{E}\left[\exp\left(\lambda n^{-\gamma}\sum_{j=1}^{n}\tau_j\right)\middle| w_n\right] \le \left(1+\lambda n^{-\gamma} w_{j-1}^{-1}\right)^{-1}.$$

Hence for any $\lambda \ge 0$

$$(24)\qquad \lim_{n\to\infty} \mathbb{E}\left[\exp\left(-\lambda n^{-\gamma}\sum_{j=1}^{n}\tau_j\right)\middle| w_n\right] = \begin{cases} 1 & \text{if } a=0 \\ 0 & \text{if } a=\infty, \end{cases}$$

which is the proposition proved. ∎

2. The "speed" of the RWIRE

At this point we concern ourselves with the pure birth process where the transition rates become random variables We will assume that the random variables that represent the transition rates are independent and identically distributed. For some results it is possible to relax assumptions concerning the random environment.

The transition rates of $\{w_j\}_0^\infty$ of the previous section are replaced by the independent and identically distributed random variables $\{W_j\}_0^\infty$ in this section. It can be shown that the "non-blow up" condition (6) holds for the random environment almost everywhere There must exist $0<c<\infty$ such that $\mathbb{P}[W_0<c] > 0$, so that

$$(25)\qquad \sum_{j=0}^{\infty} \mathbb{P}[W_j^{-1} > c^{-1}] = \sum_{j=0}^{\infty} \mathbb{P}[W_0 < c] = \infty$$

and thus by the Borel-Cantelli lemma,

$$(26)\qquad \mathbb{P}[W_j^{-1} > c^{-1} \text{ infinitely often}] = 1 \quad \text{implying}$$

$$(27)\qquad \mathbb{P}\left[\sum_{j=0}^{\infty} W_j^{-1} = \infty\right] = 1.$$

Employing Lemma 1, it is clear that $\lim_{t\to\infty} X(t)/t$ can be found by applying some law of large numbers to $\lim_{n\to\infty} n^{-1}\sum_{j=1}^{n}\tau_j$ Therefore, applying Kolmogorov's strong law of large numbers (for non-identically distributed random variables) to $\lim_{n\to\infty} \sum_{j=1}^{n}\tau_j$ for a particular realisation $\{w_n\}$ (of the random environment) gives

$$(28)\qquad \lim_{n\to\infty} n^{-1}\sum_{j=1}^{n}\tau_j = \lim_{n\to\infty} n^{-1}\sum_{j=1}^{n} W_{j-1}^{-1}.$$

assuming

(29) $\quad \sum_{n=1}^{\infty} V(\tau_n | w_n)/n^2 < \infty \qquad$ i.e. $\sum_{n=1}^{\infty} n^{-2} w_{n-1}^{-2} < \infty$.

Therefore, for almost every realisation of the random environment the following limit holds:

$$\lim_{t\to\infty} X(t)/t = (\mathbb{E}[W_0^{-1}])^{-1} \quad \text{assuming}$$

(30) $\quad \sum_{n=1}^{\infty} n^{-2} W_{n-1}^{-2} < \infty \quad$ a.e.

From the two-series theorem $\sum_{n=1}^{\infty} n^{-2} W_{n-1}^{-2} < \infty$ a.e. when

(31) $\quad \sum_{n=1}^{\infty} n^{-2} \mathbb{E}[W_{n-1}^{-2}] < \infty$ and $\sum_{n=1}^{\infty} n^{-2} V[W_{n-1}^{-2}] < \infty$.

It is obvious that the two conditions are satisfied whenever

(32) $\quad \mathbb{E}[W_0^{-4}] < \infty$.

Condition (32) is much weaker than the assumption made by [Aslangul et. al] where it is assumed that $\mathbb{E}[W_0^{-q}] < \infty$, for all $q \geq 0$ In Theorem 1 we will show that (32) can be further weekend by using Loève's version of the strong law of large numbers

Theorem 1. Suppose that for some $\varepsilon > 0$,

(33) $\quad \mathbb{E}[W_0^{-1-\varepsilon}] < \infty$.

Then for almost every realisation of the random environment the following limit holds

$$\lim_{t\to\infty} X_t/t = (\mathbb{E}[W_0^{-1}])^{-1} \quad \text{a e.}$$

Proof

For almost every realisation of the random environment we have to prove by Lemma 1 that

(34) $\quad \lim_{n\to\infty} n^{-1} \sum_{j=1}^{n} \tau_j = \mathbb{E}[W_0^{-1}] \quad$ a e.

By Theorem 1.1 5(ii) we will have

(35) $\quad \lim_{n\to\infty} n^{-1} \sum_{j=1}^{n} (\tau_j - w_{j-1}^{-1}) = 0 \quad$ a.e. provided that there exists an α where $1 \leq \alpha \leq 2$ such that

(36) $\sum_{n=1}^{\infty} n^{-\alpha} w_{n-1}^{-\alpha} < \infty$, where $\{w_n\}$ is a particular realisation of the random environment. By Theorem 1 1 5(i), condition (36) will hold on the random environment if for some $\beta<1$

(37) $$\sum_{n=1}^{\infty} n^{-\alpha\beta} \mathbb{E}[W_{n-1}^{-\alpha\beta}] < \infty.$$

For this condition to hold it suffices to choose α,β so that $\alpha\beta = 1+\varepsilon$, for instance

(38) $$\beta = 1-\varepsilon, \ \alpha = (1+\varepsilon)/(1-\varepsilon) .$$

Hence under the single assumption (33) we have

(39) $\lim_{n\to\infty} n^{-1} \sum_{j=1}^{n} (\tau_j - W_{j-1}^{-1}) = 0$ a.e., for almost every realisation of the random environment Therefore, by the strong law of large numbers for independent and identically distributed random variables, we have

$$\lim_{n\to\infty} \sum_{j=0}^{n-1} W_j^{-1} = \mathbb{E}[W_0^{-1}],$$ completing the proof of the theorem. ∎

It is possible to drop the assumption that the random environment is made up of identically distributed random variables. This assumption can be replaced by assuming

(40) $$\sum_{j=0}^{\infty} \mathbb{P}[W_j > \varepsilon] = \infty \quad \text{for some} \quad \varepsilon > 0$$

and

(41) $$\sum_{j=1}^{\infty} j^{-\delta} \mathbb{E}[W_{j-1}^{-\delta}] < \varepsilon \quad \text{for some } \delta \text{ where } \quad 0 < \delta < 2.$$

The first assumption (40) ensures, by the Borel-Cantelli lemma, that (6) still holds almost everywhere, for the random environment Using (41) it is clear that (36) still holds Theorem 1 remains valid provided that $\mathbb{E}[W_0^{-1}]$ is replaced by

(42) $$\lim_{n\to\infty} n^{-1} \sum_{j=0}^{n-1} \mathbb{E}[W_j^{-1}]$$

In chapter 2 we investigated the differences in the "speed" of the process when the random variables were replaced by their expectations We do this again and note that since the W_j's are identically distributed, the comparison random walk is a pure birth process where all transition rates are equal to

(43) $w = \mathbb{E}[W_j]$, and thus we are dealing with a Poisson process $\{N_t, t>0\}$

with rate w. Its "speed" is well known to be

(44) $$\lim_{t\to\infty} N(t)/t = w = \mathbb{E}[W_0].$$

Since the function x^{-1}, $x>0$ is convex we see by Jensen's inequality that

(45) $(\mathbb{E}[W_0^{-1}])^{-1} \le \mathbb{E}[W_0]$ so the random environment tends to slow down the process as expected, see similar results in chapter 2.

It is possible to weaken assumption (33) by proving $X(t)/t \to (\mathbb{E}[W_0^{-1}])^{-1}$ in probability for almost every environment.

<u>Theorem 2</u> Suppose that $\mathbb{E}[W_0^{-1}] < \infty$ Then for almost every realisation of the random environment the following limit holds:

(46) $$\lim_{t\to\infty} X(t)/t = (\mathbb{E}[W_0^{-1}])^{-1} \text{ in probability.}$$

<u>Proof.</u>

By proposition 1, it suffices to prove that the conditions

(47) $$\lim_{n\to\infty} n^{-1}\sum_{j=0}^{n-1} w_j^{-1} = \mathbb{E}[W_0^{-1}] \text{ and}$$

(48) $\lim_{n\to\infty} n^{-2}\sum_{j=0}^{n-1} w_j^{-2} = 0$, hold for almost every realisation of the random to conclude that

(49) $$\lim_{n\to\infty} n^{-1}\sum_{j=1}^{n} \tau_j = \mathbb{E}[W_0^{-1}] \text{ in probability.}$$

The first condition follows from the strong law of large numbers for independent and identically distributed random variables The second condition follows from the Macinkiewicz-Zygmund law of large numbers (see Theorem 1 1 6 with $X_j = W_{j+1}^{-2}$, $\gamma = 1/2$).

To see (49) implies (46) note that we must show

(50) $\lim_{t\to\infty} \mathbb{P}[|X(t)/t-(\mathbb{E}[W_0^{-1}])^{-1}| \le \varepsilon] = 1$ or to put it another way, that

(51) $\mathbb{P}[X(t)/t-(\mathbb{E}[W_0^{-1}])^{-1} \le -\varepsilon] = 0$ and $\mathbb{P}[X(t)/t-(\mathbb{E}[W_0^{-1}])^{-1} \ge \varepsilon] = 0$.

To show (51) note that

(52) $$\mathbb{P}[X(t)/t \le (\mathbb{E}[W_0^{-1}])^{-1}- \varepsilon] = \mathbb{P}[X(t) \le ((\mathbb{E}[W_0^{-1}])^{-1}- \varepsilon)t]$$

(53) $$= \mathbb{P}[\sum_{j=1}^{n(t)}\tau_j > t]$$

where n(t) is the integer part of

(54) $$n(t) = ((\mathbb{E}[W_0^{-1}])^{-1} - \varepsilon)t + 1.$$

Hence,

(55) $$\mathbb{P}[X(t)/t \le (\mathbb{E}[W_0^{-1}])^{-1} - \varepsilon] = \mathbb{P}[n(t)^{-1}\sum_{j=1}^{n(t)}\tau_j > t/n(t)]$$ tends to zero as

$t \to \infty$, since

$$\frac{t}{n(t)} \le \frac{t}{((\mathbb{E}[W_0^{-1}])^{-1}-\varepsilon)t}$$

$$\le \frac{1+\varepsilon}{((\mathbb{E}[W_0^{-1}])^{-1}}$$

$$= \mathbb{E}[W_0^{-1}] + \varepsilon\mathbb{E}[W_0^{-1}] .$$

One can prove in the same way that the second part of (51) also holds for all $\varepsilon > 0$. ■

3. The slow approach to infinity.

In Theorem 1 and Theorem 2 of section 2, we have assumed either implicitly or explicitly that $\mathbb{E}[W_0^{-1}] < \infty$. In this section we will investigate what happens when $\mathbb{E}[W_0^{-1}] = \infty$. In [7] they study this question by assuming that W_0 has a probability density function of the form

(56) $$\frac{d}{dx}\mathbb{P}[W_0 \le x] = f(x) = x^{\mu-1}g(x) \qquad 0 < \mu < 1$$

where g is some "cut off function". At a later stage we will introduce a more general version of (56). It is possible to obtain some results for the slow approach to infinity without assuming anything about the probability density function of the W_j's We first prove that if $\mathbb{E}[W_0^{-1}] = \infty$, no path of X_t can go to infinity as fast as t.

Lemma 2. Let x_j, $j=0,1,2,\dots,n-1$ be non-negative numbers and $0 \le \alpha \le 1$. Then

(57) $$n^{\alpha-1}\sum_{j=1}^{n} x_j^{\alpha} \le \left(\sum_{j=1}^{n} x_j\right)^{\alpha} \le \sum_{j=1}^{n} x_j^{\alpha}$$

Proof To obtain the right-hand inequality, note that

(58) $$x_j \Big/ \sum_{k=1}^{n} x_k \le 1$$ so that since $0 \le \alpha \le 1$

(59) $$x_j \Big/ \sum_{k=1}^{n} x_k \le \left(x_j \Big/ \sum_{k=1}^{n} x_k\right)^{\alpha} .$$

(60) $$1 \le \sum_{j=1}^{n} \left(x_j \Big/ \sum_{k=1}^{n} x_k\right)^{\alpha}$$

Therefore, $\left(\sum_{j=1}^{n} x_j\right)^{\alpha} \le \sum_{j=1}^{n} x_j^{\alpha}$. This completes the proof of the right hand inequality

To prove the left-hand inequality we use Hölder's inequality:

$$p > 1$$

$$1/p + 1/q = 1$$

$$\sum_{k=1}^{n} c_k d_k \le \left(\sum_{k=1}^{n} c_k^p\right)^{1/p} \left(\sum_{k=1}^{n} d_k^q\right)^{1/q} .$$

Where $p = 1/\alpha$, $q = 1/(1-\alpha)$ we have

(61) $$\sum_{k=1}^{n} c_k d_k \le \left(\sum_{k=1}^{n} c_k^{1/\alpha}\right)^{\alpha} \left(\sum_{k=1}^{n} d_k^{1/(1-\alpha)}\right)^{1-\alpha}$$ Hence,

(62) $$\left(\sum_{j=1}^{n} a_j^{\alpha} b_j^{\alpha}\right)^{1/\alpha} \le \left(\sum_{j=1}^{n} a_j\right) \left(\sum_{j=1}^{n} b_j^{\alpha/(1-\alpha)}\right)^{(1-\alpha)/\alpha}$$ where $c_k = a_k^{\alpha}$ and $d_k = b_k^{\alpha}$ in (61).

Replacing a_j with x_j and b_j by 1 in (62) we have

(63) $$\left(\sum_{j=1}^{n} x_j^{\alpha}\right)^{1/\alpha} \le n^{(1-\alpha)/\alpha} \left(\sum_{j=1}^{n} x_j\right)$$ Thus

$$n^{\alpha-1}\left(\sum_{j=1}^{n} x_j^{\alpha}\right) \le \left(\sum_{j=1}^{n} x_j\right)^{\alpha}$$ completing the proof. ∎

Theorem 3. Suppose that $\mathbb{E}[W_0^{-1}] = \infty$ but that $\mathbb{E}[W_0^{-\alpha}] < \infty$ for all $0 < \alpha < 1$

Then for almost every realisation the random environment, the following limit holds:

$$\lim_{t \to \infty} X(t)/t = 0 \quad \text{a e}$$

Proof Using the left-hand inequalities of Lemma 2

$$n^{-\gamma} \left(\sum_{j=1}^{n} x_j\right)^{\gamma} \ge n^{-1} \sum_{j=1}^{n} x_j^{\gamma}$$

$$n^{-1} \sum_{j=1}^{n} x_j \ge \left(n^{-1} \sum_{j=1}^{n} x_j^{\gamma}\right)^{1/\gamma}$$, therefore

(64) $$n^{-1}\sum_{j=1}^{n}\tau_j \geq \left(n^{-1}\sum_{j=1}^{n}\tau_j^{\gamma}\right)^{1/\gamma}, \text{ so that}$$

(65) $$\liminf_{n\to\infty} n^{-1}\sum_{j=1}^{n}\tau_j \geq \left(\liminf_{n\to\infty} n^{-1}\sum_{j=1}^{n}\tau_j^{\gamma}\right)^{1/\gamma}.$$

But if we choose $0 < \gamma < 1$ we can prove as in Theorem 1 that for almost every realisation of the random environment that:

(66) $$\lim_{n\to\infty} n^{-1}\sum_{j=1}^{n}\tau_j = \Gamma(\gamma+1)\mathbb{E}[W_0^{-\gamma}] \quad \text{a.e..}$$

Hence,

(67) $$\liminf_{n\to\infty} n^{-1}\sum_{j=1}^{n}\tau_j \geq (\Gamma(\gamma+1)\mathbb{E}[W_0^{-\gamma}])^{1/\gamma} \quad \text{a.e.}$$

This holds for almost all $\gamma<1$. Take the supremum over all γ's in the right hand side of (67) to give

(68) $$\liminf_{n\to\infty} n^{-1}\sum_{j=1}^{n}\tau_j = \infty \quad \text{a.e. which is equivalent to showing}$$

$$\lim_{t\to\infty} X(t)/t = 0 \quad \text{a.e , completing the proof}$$ ■

As illustrated in Theorem 3 the rate of approach to infinity is not linear when $\mathbb{E}[W_0^{-1}] = \infty$ In the following theorem a lower limit is given for the approach of X_t to infinity where $\mathbb{E}[W_0^{-\alpha}] < \infty$ for some $\alpha<1$. As in the previous section results that hold for almost every realisation of the random environment almost everywhere require stronger assumptions than results that hold for almost every realisation of the random environment in probability

Theorem 4 The following results hold for almost every realisation of the random environment:

(i) if $\mathbb{E}[W_0^{-\alpha}] < \infty$ for some $\alpha<1$, then

(69) $$\lim_{t\to\infty} X_t/t^{\alpha} = \infty \quad \text{in probability.}$$

(ii) if $\mathbb{E}[W_0^{-\alpha-\varepsilon}] < \infty$ for some $\alpha+\varepsilon<1$, $\varepsilon>0$, then

(70) $$\lim_{t\to\infty} X_t/t^{\alpha} = \infty \quad \text{a.e.}$$

Proof By Lemma 1 and Proposition 2, (i) will hold, if almost every realisation of the random environment satisfies the following limit:

(71) $$\lim_{n\to\infty} n^{-1/\alpha}\sum_{j=1}^{n}W_{j-1}^{-1} = 0 \quad \text{a.e.}$$

But this is precisely the result guaranteed by the Marcinkiewicz-Zygmund law of

large numbers when $\mathbb{E}[W_0^{-\alpha}] < \infty$, see Theorem 1.1.6.

To prove (ii) take $\alpha<\gamma<\alpha+\varepsilon$. Using the right hand inequality in Lemma 2

(72) $$\limsup_{n\to\infty} n^{-1/\alpha} \sum_{j=1}^{n} \tau_j \le \left(\limsup_{n\to\infty} n^{-1} \sum_{j=1}^{n} \tau_j^{\gamma} \right)^{1/\gamma} .$$

But since $\gamma<\alpha+\varepsilon$ and $\mathbb{E}[W_0^{-\alpha-\varepsilon}] < \infty$, we can prove as in Theorem 1 that

(73) $$\lim_{n\to\infty} n^{-1} \sum_{j=1}^{n} \tau_j^{\gamma} = \Gamma(\gamma+1)\mathbb{E}[W_0^{-\gamma}] < \infty \quad \text{a.e.}$$

Hence,

(74) $$\liminf_{t\to\infty} X(t)/t^{\gamma} \ge \left(\Gamma(\gamma+1)\mathbb{E}[W_0^{-\gamma}]\right)^{-1} > 0$$

so that

(75) $$\liminf_{t\to\infty} X(t)/t = \liminf_{t\to\infty} (X(t)/t^{\gamma})t^{\gamma-\alpha} = \infty .$$ ■

It has been possible to obtain both an upper and a lower limit on the "speed" of approach of X(t) to infinity when $\mathbb{E}[W_0^{-1}] = \infty$, using Theorems 3 and 4 respectively This was done without any assumptions about the probability distribution function of W_j, $j=0,1,2,3,\ldots$. The next partial result places a better upper bound on X(t) without assuming anything about the probability distribution function of W_j, $j=0,1,2,3,\ldots$.

Proposition 3 Suppose that for some $\alpha>0$, $\mathbb{E}[W_0^{-\alpha}] = \infty$ Then for almost every realisation of the random environment

$$\liminf_{t\to\infty} X(t)/t^{\alpha} = 0 \quad \text{a.e.}$$

Proof We prove first that for almost every realisation of the random environment

(76) $$\limsup_{n\to\infty} n^{-1/\alpha} \sum_{j=1}^{n} w_{j-1}^{-1} = \infty.$$

This is because for any number c

(77) $\mathbb{P}[n^{-1/\alpha} \sum_{j=1}^{n} W_{j-1}^{-1} > c] \ge \mathbb{P}[n^{-1/\alpha} W_{n-1}^{-1} > c]$ and the sum

(78) $\sum_{n=1}^{\infty} \mathbb{P}[n^{-1/\alpha} W_{n-1}^{-1} > c] = \sum_{n=1}^{\infty} \mathbb{P}[c^{-\alpha} W_{n-1}^{-1} > n]$ diverges to infinity when $\mathbb{E}[W_0^{-\alpha}] = \infty$. Hence by the Borel-Cantelli lemma

(79) $\mathbb{P}[n^{-1/\alpha}W_0^{-1} > c \ \text{ i o. }] = 1$ and so

(80) $\mathbb{P}[n^{-1/\alpha} \sum_{j=1}^{n} W_{j-1}^{-1} > c \ \text{ i o. }] = 1$, implying that

(81) $\limsup_{n\to\infty} n^{-1/\alpha}\sum_{j=1}^{n} W_{j-1}^{-1} > c$ a.e. But this holds for any c, proving (76).

Now let

(82) $L = \limsup_{n\to\infty} n^{-1/\alpha}\sum_{j=1}^{n}\tau_j$. Because the random variables $\{\tau_j\}_1^{\infty}$ are independent the random variable L is degenerate, (and possibly infinite) see [1] p.358. We see from (82) that

(83) $e^{-\lambda L} = \liminf_{n\to\infty} \exp(-\lambda n^{-1/\alpha}\sum_{j=1}^{n}\tau_j)$, so that by Fatou's lemma, (14) and (76) we get that

(84) $e^{-\lambda L} \le \liminf_{n\to\infty} \mathbb{E}[\exp(-\lambda n^{-1/\alpha}\sum_{j=1}^{n}\tau_j)]$

(85) $\le \liminf_{n\to\infty}(1 + \lambda n^{-1/\alpha}\sum_{j=1}^{n} W_{j-1}^{-1}) = 0$. Using the result from Lemma 1 completes the proof ■

To obtain further results for the behaviour of $X(t)/t^{\alpha}$ when $\mathbb{E}[W_0^{-\alpha}] = \infty$ will require a knowledge of the probability distribution of W_0 For the remainder of this section we will assume that the probability distribution function of W_0 satisfies the following asymptotic relationship:

(86) $\mathbb{P}[W_0 \le x] \sim x^{\mu}L(x)$ as $x \to 0^+$, where $0 < \mu < 1$, and L(x) is a function which varies slowly at the origin, see [9] p 276. Note that (86) is more general than the condition assumed by [7] It is possible to write (86) as

(87) $1 - \mathbb{P}[W_0^{-1}\le y] \sim y^{-\mu}L(y^{-1})$ as $y \to +\infty$.

By a standard Tauberian theorm (see [8] p.445,447) it can be shown that (87) is equivalent to

(88) $1 - \mathbb{E}[\exp(-\lambda W_0^{-1})] \sim \Gamma(\mu+1)\lambda^{\mu}L(\lambda)$ as $\lambda \to 0^+$

The asymptotic relationship (88) holds the key to the following proposition.

Proposition 4 Suppose that condition (86) holds, and let

(89) $b = \lim_{x\to 0^+} L(x)$

Then

(i) if $\alpha>\mu$,

(90) $\lim_{n\to\infty} n^{-1/\alpha}\sum_{j=1}^{n} W_{j-1}^{-1} = \infty$ a.e.

(ii) if $0 \le b < \infty$

$$\text{(91)} \qquad \limsup_{n\to\infty} n^{-1/\mu} \sum_{j=1}^{n} W_{j-1}^{-1} = \infty \quad \text{a.e.}$$

$$\text{(92)} \qquad \liminf_{n\to\infty} n^{-1/\mu} \sum_{j=1}^{n} W_{j-1}^{-1} = 0 \quad \text{a.e. but}$$

$$\text{(93)} \qquad \lim_{n\to\infty} n^{-1/\mu} \sum_{j=1}^{n} W_{j-1}^{-1} = Y$$

in distribution where the random variable Y is characterised by

$$\text{(94)} \qquad \mathbb{E}[e^{-\lambda Y}] = \exp\left(-b\Gamma(\mu+1)\lambda^{\mu}\right)$$

(iii) if $b=\infty$

$$\text{(95)} \qquad \lim_{n\to\infty} n^{-1/\mu} \sum_{j=1}^{n} W_{j-1}^{-1} = \infty \quad \text{in distribution.}$$

Proof. For $\lambda \ge 0$, $\alpha \ge \mu$ compute

$$\text{(96)} \qquad \lim_{n\to\infty} \mathbb{E}\left[\exp\left(-\lambda n^{-1/\alpha} \sum_{j=1}^{n} W_{j-1}^{-1}\right)\right] = \lim_{n\to\infty} \left(\mathbb{E}\left[\exp\left(-\lambda n^{-1/\alpha} W_0^{-1}\right)\right]\right)^n$$

Rewriting

$$\text{(97)} \qquad \left(\mathbb{E}\left[\exp\left(-\lambda n^{-1/\alpha} W_0^{-1}\right)\right]\right)^n = \left(1-\left(1-\mathbb{E}\left[\exp\left(-\lambda n^{-1/\alpha} W_0^{-1}\right)\right]\right)\right)^n$$

$$\text{(98)} \qquad = \left(1 - \frac{1-\mathbb{E}\left[\exp\left(-\lambda n^{-1/\alpha} W_0^{-1}\right)\right]}{\lambda^{\mu} n^{-\mu/\alpha} L(\lambda n^{-1/\alpha})\Gamma(\mu+1)} \lambda^{\mu} n^{-\mu/\alpha} L(\lambda n^{-1/\alpha})\Gamma(\mu+1)\right)^n$$

We write (98) in this form since

$$1-\mathbb{E}\left[\exp\left(-\lambda n^{-1/\alpha} W_0^{-1}\right)\right] \sim (\lambda n^{-1/\alpha})^{\mu} L(\lambda n^{-1/\alpha})^{\mu}\Gamma(\mu+1) \qquad \text{as } \lambda n^{-1/\alpha} \to 0$$

$$\text{(99)} \qquad = \lambda^{\mu} n^{-\mu/\alpha} L(\lambda n^{-1/\alpha})\Gamma(\mu+1) \qquad \text{as } n\to\infty.$$

Therefore using (99),(98) and the definition

$$e^{-\delta} = \lim_{n\to\infty}\left(1-\frac{\delta}{n}\right)^n \quad \text{we have}$$

$$\text{(100)} \qquad \lim_{n\to\infty} \mathbb{E}\left[\exp\left(-\lambda n^{-1/\alpha} \sum_{j=1}^{n} W_{j-1}^{-1}\right)\right] = \begin{cases} 0 & \text{if } \alpha > \mu \\ \exp(-b\Gamma(\mu+1)\lambda^{\mu} & \text{if } \alpha = \mu,\ 0 \le b < \infty \\ 0 & \text{if } \alpha = \mu,\ b = \infty \end{cases}$$

proving (93) and (95)

To conclude the proof, let

$$\text{(101)} \qquad l = \liminf_{n\to\infty} n^{-1/\alpha} \sum_{j=1}^{n} W_{j-1}^{-1}$$

As the W_{j-1}^{-1} are independent random variables, l is degenerate. Moreover for $\lambda \ge 0$

$$\text{(102)} \qquad \limsup_{n\to\infty} \exp\left(-\lambda n^{-1/\alpha} \sum_{j=1}^{n} W_{j-1}^{-1}\right) = e^{-\lambda l}$$

so that by Fatou's lemma

$$(103)\qquad e^{-\lambda l} = \limsup_{n\to\infty} \mathbb{E}\Big[\exp\Big(-\lambda n^{-1/\alpha}\sum_{j=1}^{n} W_{j-1}^{-1}\Big)\Big].$$

If $\alpha = \mu$, $0 \le b < \infty$, this reads by (100)

$$(104)\qquad e^{-\lambda l} \ge e^{-b\Gamma(\mu+1)\lambda^{\mu}} \qquad \lambda \ge 0 \quad \text{hence}$$

$$(105)\qquad 1 \le b\Gamma(\mu+1)\lambda^{\mu} \qquad \lambda \ge 0.$$

This can hold for all λ's only if $l=0$. This proves (92); the proof of (91) is similar. Finally in order to prove (90), note that (100) implies that when $\lambda > \mu$

$$(106)\qquad \sum_{n=1}^{\infty}\Big(\mathbb{E}\Big[\exp\Big(-\lambda n^{-1/\alpha} W_0^{-1}\Big)\Big]\Big)^n < \infty. \text{ Then for any } c > 0$$

$$(107)\qquad \sum_{n=1}^{\infty}\mathbb{P}\Big[\, n^{-1/\alpha} W_0^{-1} < c\Big] < \infty \text{ and so by the Borel-Cantelli lemma}$$

$$(108)\qquad \mathbb{P}\Big[\, n^{-1/\alpha} \sum_{j=1}^{n-1} W_j^{-1} < c \quad \text{i o}\Big] = 0 \text{ and thus}$$

$$\liminf_{n\to\infty} n^{-1/\alpha} \sum_{j=1}^{n-1} W_j^{-1} > c \text{, a.e. Since this holds for every } c > 0,$$

(90) follows . ∎

Note (106) implies (107) since

$$\sum_{n=1}^{\infty}\mathbb{E}\Big[\exp\Big(-\lambda n^{-1/\alpha}\sum_{j=0}^{n-1} W_j^{-1}\Big)\Big] = \sum_{n=1}^{\infty}\Big(\mathbb{E}\Big[\exp\Big(-\lambda n^{-1/\alpha} W_0^{-1}\Big)\Big]\Big)^n < \infty \quad \text{Therefore,}$$

$$\sum_{n=1}^{\infty} \int_0^{\infty} \mathbb{P}\Big[\exp\Big(-\lambda n^{-1/\alpha}\sum_{j=0}^{n-1} W_j^{-1}\Big) > x\Big]\Big)\, dx < \infty \quad \text{and}$$

$$(109)\qquad \sum_{n=1}^{\infty}\sum_{k=1}^{\infty}\mathbb{P}\Big[\exp\Big(-\lambda n^{-1/\alpha}\sum_{j=0}^{n-1} W_j^{-1}\Big) > k\Big] < \infty. \text{ Obviously, after switching the}$$

summation signs:

$$\sum_{n=1}^{\infty}\mathbb{P}\Big[\exp\Big(-\lambda n^{-1/\alpha}\sum_{j=0}^{n-1} W_j^{-1}\Big) > k\Big] < \infty \quad \text{and}$$

$$\sum_{n=1}^{\infty}\mathbb{P}\Big[\, n^{-1/\alpha}\sum_{j=0}^{n-1} W_j^{-1} < c\Big] < \infty \quad \text{where} \quad c = (\lambda \ln(k))^{-1}$$

Using Proposition 4 we will now give upper and lower bounds on the approach to infinity where we assume (86).

Theorem 5. Assume (86). Then the following results hold for almost every realisation of the random environment.

(i) if $\alpha>\mu$

$$(110)\qquad \lim_{t\to\infty} X(t)/t^{\alpha} = 0 \quad \text{in probability}$$

(ii) if $0 \le b \le \infty$

(111) $$\liminf_{t\to\infty} X(t)/t^{\mu} = 0 \quad \text{a.e.}$$

(112) $$\limsup_{t\to\infty} X(t)/t^{\mu} = \infty \quad \text{a.e.}$$

Proof. Property (110) follows from Proposition 2 and Proposition 4(i). Property (111) is in fact the upper bound on X(t) obtained earlier in Proposition 3. To prove (112) we look at the random variable

(113) $$l = \liminf_{n\to\infty} n^{-1/\mu} \sum_{j=1}^{n} \tau_j .$$

We write (113) in a form where we can use Fatou's lemma i e.,

(114) $$\exp(-\lambda l) = \limsup_{n\to\infty} \exp(-\lambda n^{-1/\mu} \sum_{j=1}^{n} \tau_j)$$

Using Fatou's lemma and (23) we arrive at the inequality,

(115) $$\exp(-\lambda l) \ge \limsup_{n\to\infty} \mathbb{E}[\exp(-\lambda n^{-1/\mu} \sum_{j=1}^{n} \tau_j) \,|\, w_n]$$

(116) $$\ge \limsup_{n\to\infty} \left(1 + \lambda n^{-1/\mu} \sum_{j=1}^{n} w_{j-1}^{-1}\right)^{-1} .$$

Using (92) from Proposition 4 we have,

(117) $$\exp(-\lambda l) \ge 1$$

Since this is true for any positive λ then l must be 0, the conclusion follows from Lemma 1 ∎

4. Convergence to the Normal distribution.

We already know from Theorem 1, assuming $\mathbb{E}[W_0^{-1-\varepsilon}] < \infty$ where $\varepsilon>0$, that

$$\lim_{t\to\infty} X(t)/t = (\mathbb{E}[W_0^{-1}])^{-1}$$

We might expect by some central limit type argument that $\lim_{t\to\infty} t^{-1/2}(X(t) - t/\mathbb{E}[W_0^{-1}])$ would converge to a normal random variable. This in fact is not the case since $t/\mathbb{E}[W_0^{-1}]$ is not a good enough approximation to $\mathbb{E}[X(t)]$ on this new magnified scale. It turns out that the function P(t) defined on the random environment as,

(118) $$P(t) = \max\{n \ \sum_{j=0}^{n-1} W_j^{-1} \le t\}$$

is a sufficiently improved approximation.

Note. p(t) is similar to P(t) except P(t) applies to a particular realisation of the random environment.

Before we start deriving a central limit theorem result we state some simple properties of P(t) Obviously, if (6) holds $p(t) \uparrow \infty$ as $t \uparrow \infty$. From (118) we have

$$\sum_{j=0}^{p(t)-1} w_j^{-1} \leq t < \sum_{j=0}^{p(t)} w_j^{-1} \tag{119}$$

so that for almost every realisation of the random environment

$$\lim_{t\to\infty} t/P(t) = \mathbb{E}[W_0^{-1}] \tag{120}$$

Obviously the upper bound on (118) is a random variable that is not independent of the summand W_j does not cause any problems (see [11] p.13)

Lemma 3. Suppose that $\mathbb{E}[W_0^{-2}] < \infty$, then for almost every realisation of the random environment

$$\lim_{t\to\infty} t^{-1/2} \left|t - \sum_{j=0}^{P(t)-1} W_j^{-1}\right| = 0. \tag{121}$$

Proof. From (119)

$$0 \leq t - \sum_{j=0}^{p(t)-1} w_j^{-1} \leq w_{p(t)}^{-1}.$$

In view of (120) it is sufficient to prove

$$\lim_{n\to\infty} n^{-1/2} W_n^{-1} = 0 \quad \text{a.e} \tag{122}$$

for almost every realisation of the random environment. By the Borel-Cantelli lemma this will follow from,

$$\sum_{n=0}^{\infty} \mathbb{P}[W_n^{-1} > \varepsilon n^{1/2}] < \varepsilon, \quad \forall \ \varepsilon>0 \tag{123}$$

which in turn follows from the assumption of the lemma, since

$$\begin{aligned} \sum_{n=0}^{\infty} \mathbb{P}[W_n^{-1} > \varepsilon n^{1/2}] &= \sum_{n=0}^{\infty} \mathbb{P}[\varepsilon^{-2} W_0^{-2} > n] \\ &\leq \mathbb{P}[\varepsilon^{-2} W_0^{-2} > 0] + \int_0^{\infty} \mathbb{P}[\varepsilon^{-2} W_0^{-2} > x]\, dx \\ &= 1 + \varepsilon^{-2} \mathbb{E}[W_0^{-2}] \end{aligned} \tag{124}$$

■

The central limit result follows:

Theorem 6. Suppose that $\mathbb{E}[W_0^{-6}]<\infty$ Then for almost every realisation of the random environment the following limit holds·

$$\lim_{t\to\infty} \mathbb{P}[t^{-1/2}(X(t)-P(t)) \leq x] = \Phi_\sigma(x) \tag{125}$$

Φ_σ is the normal distribution function defined below:

(126) $$\Phi_\sigma(x) = 1/\sigma\sqrt{2\pi}\int_{-\infty}^{x} e^{-y^2/2\sigma^2}dy \text{ , where}$$

(127) $$\sigma^2 = \mathbb{E}[W_0^{-2}](\mathbb{E}[W_0^{-1}])^{-3}$$

Proof. For a particular realisation of the random environment we have

(128) $$\mathbb{P}[t^{-1/2}(X(t)-p(t)) \le x|w_n] = \mathbb{P}[X(t) \le xt^{1/2}+p(t)|w_n]$$

(129) $$= \mathbb{P}[\sum_{j=1}^{N(t)} \tau_j > t|w_n]$$

where N(t) stands for the integer part of $xt^{1/2}+ p(t) +1$ i.e.

(130) $$N(t) = [xt^{1/2}+p(t) +1].$$

We now write (128) in a form that will yield a central limit theorem result:

(131) $$\mathbb{P}[\sum_{j=1}^{N(t)} (\tau_j-w_{j-1}^{-1})/\sigma_{N(t)} > \rho(t)|w_n]$$ where $\sigma_{N(t)}$ stands for

(132) $$\sigma_{N(t)} = \left(\sum_{j=1}^{N(t)} w_{j-1}^{-2}\right)^{1/2}$$ and the right side $\rho(t)$ is

(133) $$\rho(t) = (t-\sum_{j=1}^{N(t)} w_{j-1}^{-1})/\sigma_{N(t)}$$

For the fixed environment the random variables τ_j are independent and exponentially distributed with parameters w_{j-1} Obviously the convergence of the random variable

(134) $$\sum_{j=1}^{n}(\tau_j-w_{j-1}^{-1})/\sigma_n$$ to the normal distribution as n tends to infinity, can be verified either by checking the Lindenberg condition or by direct calculation:

(135) $$\exp(-\lambda^2/2)\mathbb{E}[\exp\{-\lambda\sum_{j=1}^{n}(\tau_j-w_{j-1}^{-1})/\sigma_n\}|w_n]$$
$$= \exp(-\lambda^2/2)\exp\sum_{j=1}^{n}[\lambda w_{j-1}^{-1}/\sigma_n - \log(1+\lambda w_{j-1}^{-1}/\sigma_n)]$$
$$= \exp\sum_{j=1}^{n}[\lambda w_{j-1}^{-1}/\sigma_n - \lambda^2 w_{j-1}^{-2}/2\sigma_n^{\ 2} - \log(1+\lambda w_{j-1}^{-1}/\sigma_n)]$$

The elementary inequality

$$-x^3/3 \le x - x^2/2 - \log(1+x) \le 0, \quad x \ge 0$$

implies for $\lambda \ge 0$,

(136) $$\exp(-\frac{\lambda^3}{3}\sum_{j=0}^{n-1}w_j^{-3}/\sigma_n^{\ 3}) \le \exp(-\lambda^2/2)\mathbb{E}[\exp\{-\lambda\sum_{j=1}^{n}(\tau_j-w_{j-1}^{-1})/\sigma_n\}|w_n] \le 1.$$

For almost every realisation of the random environment

(137) $$\sum_{j=0}^{n-1} W_j^{-3}/\sigma_n^3 = n^{-3/2} \sum_{j=0}^{n-1} W_j^{-3}\Big/\left(n^{-1}\sum_{j=0}^{n-1} W_j^{-2}\right)^{3/2}.$$

By the Marcinkiewicz-Zygmund law of large numbers,

(138) $\lim_{n\to\infty} \sum_{j=0}^{n-1} W_j^{-3}/\sigma_n^3 = 0$, for almost every realisation of the random environment. Hence,

(139) $\lim_{n\to\infty} \mathbb{E}[\exp\{-\lambda \sum_{j=1}^{n}(\tau_j - W_{j-1}^{-1})/\sigma_n\}] = \exp(-\lambda^2/2)$, or equivalently

(140) $F_n(x) = \mathbb{P}[\sum_{j=1}^{n}(\tau_j - W_{j-1}^{-1})/\sigma_n \le x] \to \Phi_1(x)$ as $n\to\infty$.

By (129),(131) we have a result similar to (140) i.e.,

(141) $$\mathbb{P}[t^{-1/2}(X(t)-P(t)) \le x] = 1 - F_{N(t)}(\tau(t)).$$

Obviously $N(t) \uparrow \infty$ as $t \uparrow \infty$ by (130). We now look at $\rho(t)$ as $t\to\infty$ [see (133)] for almost every realisation of the random environment:

(142) $$\rho(t) = \frac{N(t)^{-1/2}[t - \sum_{j=0}^{N(t)-1} W_j^{-1}]}{[N(t)^{-1/2} \sum_{j=0}^{N(t)-1} W_j^{-2}]^{-1/2}}$$

The denominator of (142) tends to $(\mathbb{E}[W_0^{-2}])^{1/2}$ for all realisations of the random environment. In order to determine the numerator we rewrite it as follows:

(143) $$t^{-1/2}(t - \sum_{j=0}^{P(t)-1} W_{j-1}^{-1})\,[t/N(t)]^{1/2} - N^{-1/2}(t) \sum_{j=P(t)}^{N(t)-1}(W_j^{-1} - \mathbb{E}[W_0^{-1}])$$
$$+ [N(t)-P(t)]\, N^{-1/2}(t)\mathbb{E}[W_0^{-1}],$$ where we have assumed $x > 0$, so that $N(t) > P(t)$. The first term in (143) tends to zero by Lemma 3, (130) and (120). The second converges by Lemma 4 (below). Finally the last term is equivalent to

(144) $\lim_{t\to\infty} -[xt^{1/2} + 1]N^{-1/2}(t)\mathbb{E}[W_0^{-1}]$, and converges by (120) to

(145) $-x(\mathbb{E}[W_0^{-1}])^{3/2}$. Thus, for almost every realisation of the random environment,

(146) $\lim_{t\to\infty} \rho(t) = -x(\mathbb{E}[W_0^{-1}])^{3/2}(\mathbb{E}[W_0^{-2}])^{-1/2}$. The case $x < 0$ is dealt with in a similar way. Moreover, the convergence of F_n to Φ_1 in (140) is known to be uniform (see [1] p.342). Because the convergence is uniform we can take the $\lim_{t\to\infty}$ inside the integration in (141). Therefore, for almost every realisation

of the random environment,

(147) $$\lim_{t\to\infty} \mathbb{P}[t^{-1/2}(X(t)-P(t)) \le x] = 1 - \Phi_1(-x(\mathbb{E}[W_0^{-1}])^{3/2}(\mathbb{E}[W_0^{-2}])^{-1/2})$$

(148) $$= \Phi_\sigma(x), \quad \text{with } \sigma^2 \text{ as it is in (127),}$$

by (140),(141) and (145). ■

Remark·

As a direct consequence of symmetry about the mean of the normal distribution we can move from (147) to (148).

Let Z be a normally distributed random variable with mean 0 and variance 1. Then

$$1 - \mathbb{P}[Z\le -xl] = \mathbb{P}[Z/l\le x] \text{ \{by symmetry of the normal distribution\}}$$

$$= \mathbb{P}[Y\le x] \quad \text{\{where } Y = Z/l\text{\}}.$$

Note. Y is a normal random variable with mean 0 and variance l^{-2}

$$\mathbb{E}[Y] = \mathbb{E}[Z/l] = 0 \text{ and}$$

$$\mathrm{Var}[Y] = \mathrm{Var}[Z/l] = 1/l^2.$$

We assumed the result of Lemma 4 in Theorem 6, we now prove this result·

Lemma 4 Let Y_j, $j=1,2,3,\ldots$, be independent identically distributed random variables $\mathbb{E}[Y_j] = 0$, $\mathbb{E}[Y_j^6] < \infty$. Then

$$\lim_{n\to\infty} n^{-1/2} \sum_{j=n}^{n+1+\sqrt{n}} Y_j = 0 \text{ a e.}$$

Proof It suffices to prove

(149) $$\forall\ \varepsilon>0, \quad \mathbb{P}\left[\left|n^{-1/2} \sum_{j=n}^{n+1+\sqrt{n}} Y_j\right| > \varepsilon \text{ i.o}\right] = 0$$

This will by the Borel-Cantelli lemma, follow from

(150) $$\sum_{n=1}^{\infty} \mathbb{P}\left[\left|n^{-1/2} \sum_{j=n}^{n+1+\sqrt{n}} Y_j\right| > \varepsilon\right] < \infty$$

But

(151) $$\mathbb{P}\left[\left|n^{-1/2} \sum_{j=n}^{n+1+\sqrt{n}} Y_j\right| > \varepsilon\right] \le \mathbb{E}\left[\left|n^{-1/2}/\varepsilon \sum_{j=n}^{n+1+\sqrt{n}} Y_j\right|^6\right]$$

(152) $$= n^{-3}\varepsilon^{-6}\mathbb{E}\left[\left(\sum_{j=n}^{n+1+\sqrt{n}} Y_j\right)^6\right]$$

We expand the right hand side of (152) using the binomial expansion and

remembering that $\mathbb{E}[Y_j] = 0$, yields

$$n^{-3}\varepsilon^{-6}\left\{\sum_{j=n}^{n+1+\sqrt{n}} \mathbb{E}[Y_j^6] + \frac{6!}{4!2!}\sum_{\substack{j,k=n\\ j\neq k}}^{n+1+\sqrt{n}} \mathbb{E}[Y_j^4]\mathbb{E}[Y_k^2]\right.$$

$$+\frac{6!}{3!3!}\sum_{\substack{j,k=n\\ j<k}}^{n+1+\sqrt{n}} \mathbb{E}[Y_j^3]\mathbb{E}[Y_k^3]$$

$$\left.+\frac{6!}{2!2!2!}\sum_{\substack{j,k,l=n\\ j<k<l}}^{n+1+\sqrt{n}} \mathbb{E}[Y_j^2]\mathbb{E}[Y_k^2]\mathbb{E}[Y_l^2]\right\}$$

$$= n^{-3}\varepsilon^{-6}\{\mathbb{E}[Y_1^6]n^{-1/2}+15\ \mathbb{E}[Y_1^4]\mathbb{E}[Y_1^2]n^{1/2}(n^{1/2}-1)$$

$$+\ 20(\mathbb{E}[Y_1^3])^2n^{1/2}(n^{1/2}-1)(n^{1/2}-2)/6\}$$

which obviously tends to zero. ■

4. The multiple jump directed RWIRE

In the previous chapters we were concerned with a RWIRE where only jumps of size one were permitted. Here we gain some results for the RWIRE where integer jumps forward up to size R are studied. Again we assume $X(0) = 0$ giving that the random walk will be on the positive integers. Allowing jumps of sizes greater than one adds a further degree of randomness to the problem, with the states occupied now becoming random In this chapter we consider both the discrete and continuous cases; unlike in chapter 2, the directed discrete RWIRE is no longer trivial

1 Introduction and Notation for the Discrete case.

The probability of a jump forward of size j, where $j \le R$, is dependent on the state occupied, i e. $\alpha_{X_n}^{(j)}$ is the probability of a jump forward of size j at time n From the definition of the problem we have $0 \le \alpha_{X_n}^{(j)} \le 1$ if $j \le R$ and $\alpha_{X_n}^{(1)} + \alpha_{X_n}^{(2)} + \ldots + \alpha_{X_n}^{(R)} = 1$ In a random environment the numbers $\alpha_{X_n}^{(j)}$ are replaced by the independent and identically distributed random variables $A_{X_n}^{(j)}$, where $0 \le A_{X_n}^{(j)} \le 1$ if $j \le R$ and $A_{X_n}^{(1)} + A_{X_n}^{(2)} + \ldots A\alpha_{X_n}^{(R)} = 1$. To this point the assumptions are similar to those made earlier in the Solomon case. However, it is necessary to make the additional assumption that $A_{X_p}^{(j)}$ and $A_{X_q}^{(l)}$ are independent when $p \ne q$ and $0 < j,l \le R$ In this new setting where jumps up to size R can occur, the size of the jth jump becomes a random variable which we will call S_j.

We define the transition probabilities in a given environment $\{\alpha_n\}$ as

$$\mathbb{P}[X_{n+1}=j+a \mid X_n=j;\alpha_n] = \begin{cases} \alpha_{X_n}^{(a)} = \alpha_j^{(a)} & 0<a\le R \\ 0 & \text{otherwise} . \end{cases}$$

Therefore in the random environment the transition probabilities are

$$\mathbb{P}[X_{n+1}=j+a \mid X_n=j, A] = \begin{cases} A_{X_n}^{(a)} = A_j^{(a)} & 0<a\le R \\ 0 & \text{otherwise} . \end{cases}$$

From these definitions we can see that $\{S_n\}$, $n \in \mathbb{N}_0$, is a sequence of independent and identically distributed random variables in the random environment.

$$\mathbb{P}[S_1=1, S_2=1; \alpha_n] = \alpha_0^{(1)}\alpha_1^{(1)}$$

$$\mathbb{P}[S_2=1, S_3=1; \alpha_n] = \alpha_1^{(1)}\alpha_2^{(1)}\alpha_0^{(1)} + \alpha_2^{(1)}\alpha_3^{(1)}\alpha_0^{(2)} + \ldots + \alpha_R^{(1)}\alpha_{R+1}^{(1)}\alpha_0^{(R)} .$$

Randomizing the environment and using the law of total probability gives

$$\mathbb{P}[S_1=1, S_2=1] = \mathbb{P}[S_1=1]\mathbb{P}[S_2=1] = (\mathbb{E}[A_0^{(1)}])^2 .$$

$$\mathbb{P}[S_2=1, S_3=1] = \mathbb{P}[S_2=1]\mathbb{P}[S_3=1] = (\mathbb{E}[A_0^{(1)}])^2 .$$

2. Results for the Discrete case

In the discrete case we note that $X_n = \sum_{j=1}^{n} S_j$, and because $\{S_n\}$ is a sequence of independent and identically distributed random variables, we can use the strong law of large numbers and the central limit theorem to describe the long term behaviour of the process. Before we do this we must find $\mathbb{E}[S_1]$ and $\mathbb{V}(S_1)$

Lemma 1.

(i) $\mathbb{E}[S_1] = \mathbb{E}[A_0^{(1)}+2A_0^{(2)}+3A_0^{(3)}\ldots RA_0^{(R)}]$ and

(ii) $\mathbb{V}(S_1) = \mathbb{E}[A_0^{(1)}+2^2A_0^{(2)}+3^2A_0^{(3)}\ldots R^2A_0^{(R)}] - (\mathbb{E}[A_0^{(1)}+2A_0^{(2)}+3A_0^{(3)}\ldots RA_0^{(R)}])^2$

Proof

(i) Since $\mathbb{P}[S_1=1 \mid W] = A_0^{(1)}$ and

$$\mathbb{P}[S_1=j \mid W] = A_0^{(j)} \quad \text{where} \quad 0 < j \le R.$$

Using the law of total probability $\mathbb{P}[S_1=j] = \mathbb{E}[A_0^{(1)}]$ where $0 < j \le R$.

Thus we have proved (i) since $\mathbb{E}[S_1] = \sum_{j=1}^{R} j\, \mathbb{P}[S_1=j]$

(ii) The proof is the same as (i). ■

Using this lemma and the fact that $X_n = \sum_{j=1}^{n} S_j$ is a sum of n independent

identically distributed random variables, we know by the strong law of large numbers and the central limit theorem that:

$$(1)\qquad \lim_{n\to\infty} Xn/n = \mathbb{E}[S1] = \mathbb{E}[A_0^{(1)}+2A_0^{(2)}+3A_0^{(3)}....RA_0^{(R)}] \quad \text{a.e. and}$$

$$(2)\qquad \lim_{n\to\infty} \mathbb{P}\left[\frac{Xn - \mathbb{E}[A_0^{(1)}+2A_0^{(2)}+... +RA_0^{(R)}]}{(n\sigma^2)^{1/2}} \le x\right] = \Phi(x),$$

where $\sigma^2 = \mathbb{E}[A_0^{(1)}+2^2A_0^{(2)}. \; .R^2A_0^{(R)}] - (\mathbb{E}[A_0^{(1)}+2A_0^{(2)}+.. +RA_0^{(R)}])^2$.If we replace the random variables $\{A_n^{(j)}\}$ by their expectations we find that their is no change in the "speed" of the process This result differs from the result obtained in chapters 2 and 3.

3 Introduction and Notation for the Continuous case

It is more difficult to obtain results for the continuous case because of the additional complication of not knowing when the jumps occur. We attempt to define the continuous case in much the same way as the discrete case.

The transition probabilities for the continuous case in the fixed environment are

$$\mathbb{P}[X(t+h)=j+a \mid X(t)=j;\{w_n\}] = \begin{cases} w_j^{(a)}h + o(h),\ h\to 0^+ & 0 < a \le R \\ 1 - \sum_{i=1}^{R} w_j^{(i)}h + o(h),\ h\to 0^+ & a = 0 \\ 0 & \text{otherwise.} \end{cases}$$

Also, for the continuous time case on the fixed environment we have

$\mathbb{P}$[jump of size k from state $j \mid$ a jump occurs from state j; $\{w_n\}$]

$$= \frac{w_j^{(k)}}{w_j^{(1)}+w_j^{(2)} \; . \; w_j^{(R)}} \qquad 0 < k \le R.$$

If we let this probability be denoted by $\alpha_j^{(k)}$ then we have as in the discrete case tha $\alpha_j^{(1)}+\alpha_j^{(2)}+.. + \alpha_j^{(R)} = 1$ and $0 \le \alpha_j^{(R)} \le 1$. Then for the continuous case when the environment is randomized we let

$$A_j^{(k)} = \frac{W_j^{(k)}}{W_j^{(1)}+W_j^{(2)}\dots W_j^{(R)}} \qquad 0 < k \le R.$$

Then as in the discrete case $A_j^{(k)}$ is an independent and identically

distributed random variable with $0 \le A_j^{(k)} \le 1$ if $k \le R$ and $A_j^{(1)} + A_j^{(2)} + . \quad + A_j^{(R)} = 1$. Again $A_p^{(r)}$ and $A_q^{(s)}$ are independent when $p \ne q$ and $0 < r,s \le R$ and the sequence $\{S_n\}$, $n \in \mathbb{N}_0$, is a sequence of independent and identically distributed random variables in the random environment.

Definition 1. The states visited during the RWIRE are defined to be the random variables $V_1, V_2, \ldots, V_j, \ .\ ,$ since $X(0) = 0$ we have $V_0 = 0$. Denote the time the random walk first reaches state V_j as T_{V_j} i.e.

$T_{V_j} = \min\{t.X(t)=V_j\}$ and denote the waiting time by τ_{V_j} and define it as

$\tau_{V_j} = T_{V_j} - T_{V_{j-1}}$. We define K to be the random variable representing the the number of jumps to the smallest state greater than or equal to n. Finally, we define Rn as

$R_n = \min\{t\ X(t) \ge n\}$, and note that $R_n = T_{V_j}$ for all n where $V_{j-1} < n \le V_j$.

4. Results for the Continuous case.

Lemma 1

$$\lim_{n\to\infty} \mathbb{E}[K/n] = (\mathbb{E}[A_0^{(1)} + 2A_0^{(2)} \quad RA_0^{(R)}])^{-1}$$

Proof. From our definition of K we have

$$\mathbb{E}[S_1|W] + \mathbb{E}[S_2|W] + .. \quad + \mathbb{E}[S_{K-1}|W] < n \le \mathbb{E}[S_1|W] + \mathbb{E}[S_2|W] + . \quad + \mathbb{E}[S_K|W]$$

These sums are random sums of independent and identically distributed random variables and K is a Marko

identity as $\mathbb{E}[S_j] < \infty$ (since only jumps up to size R can occur). Using Wald's identity we have

$\mathbb{E}[K-1]\mathbb{E}[S_1] < n \le \mathbb{E}[K]\mathbb{E}[S_1]$ and

$\mathbb{E}[K/n] - 1/n < (\mathbb{E}[S_1])^{-1} \le \mathbb{E}[K/n]$

Taking the limit as $n\to\infty$ we obtain

$$(3) \qquad \lim_{n\to\infty} \mathbb{E}[K/n] = (\mathbb{E}[S_1])^{-1}$$

Thus using Lemma 4 1(i) we have completed the proof. ■

Theorem 1.

Suppose that $\mathbb{E}[(W_0^{(1)}+W_0^{(2)}+ \dots +W_0^{(R)})^{-2}] < \infty$, then

(i) $$\lim_{n\to\infty} \mathbb{V}(R_n/\sqrt{n}) = (\mathbb{E}[A_0^{(1)}+2A_0^{(2)}+ \dots +RA_0^{(R)}])^{-1} \cdot (2\mathbb{E}[(W_0^{(1)}+ \dots +W_0^{(R)})^{-2}] - \mathbb{E}[(W_0^{(1)}+ \dots +W_0^{(R)})^{-1}]).$$

(ii) $$\lim_{n\to\infty} R_n/n = (\mathbb{E}[A_0^{(1)}+2A_0^{(2)}+ \dots +RA_0^{(R)}])^{-1}.\mathbb{E}[(W_0^{(1)}+ \dots +W_0^{(R)})^{-1}]$$

Proof.

$$\mathbb{V}(R_n/\sqrt{n}) = \mathbb{E}_W[\mathbb{V}(R_n/\sqrt{n}|W)] + \mathbb{V}(\mathbb{E}[R_n/\sqrt{n}|W)$$

$$\mathbb{E}[\mathbb{V}(R_n/\sqrt{n}|W)] = n^{-1}\ \mathbb{E}[\mathbb{V}(\tau_{V1}|W)+ \dots +\mathbb{V}(\tau_{VK}|W)]$$

Since τ_{Vj} and τ_{Vl} are independent whenever $j \neq l$. The right hand side satisfies Wald's identity, therefore

$$\mathbb{E}[\mathbb{V}(R_n/\sqrt{n}|W)] = \mathbb{E}[K/n]\mathbb{E}[Var(\tau_{V1}|W)].$$

Using the fact that τ_{V1} is exponentially distributed and the result of Lemma 1 we have

(4) $$\lim_{n\to\infty} \mathbb{E}[\mathbb{V}(R_n/\sqrt{n}|W)] = (\mathbb{E}[S_1])^{-1}\mathbb{E}[(W_0^{(1)}+ \dots +W_0^{(R)})^{-2}]$$

We look now at $\mathbb{V}(\mathbb{E}[R_n/\sqrt{n}|W])$.

$$\mathbb{V}(\mathbb{E}[R_n/\sqrt{n}|W]) = n^{-1}\ \mathbb{V}(\mathbb{E}[\tau_{V1}+ \dots +\tau_{VK}|W]).$$

Applying Wald's identity we get

$$\mathbb{V}(\mathbb{E}[R_n/\sqrt{n}|W]) = \mathbb{V}(\mathbb{E}[\tau_{V1}|W]).\mathbb{E}[K/n]$$
$$= \mathbb{V}((W_0^{(1)}+ \dots +W_0^{(R)})^{-1}).\mathbb{E}[K/n]$$

Using Lemma 1 we have

(5) $$\lim_{n\to\infty} \mathbb{V}(\mathbb{E}[R_n/\sqrt{n}|W]) = (\mathbb{E}[S_1])^{-1}.\mathbb{V}((W_0^{(1)}+ \dots +W_0^{(R)})^{-1}).$$

Adding (4) and (5) we obtain (i).

A result of (i) is that $\lim_{n\to\infty} \mathbb{E}[R_n/n] = \lim_{n\to\infty} R_n/n$.

From the definition of the random variable R_n we have

$$\mathbb{E}[R_n/n|W] = n^{-1}\ \mathbb{E}[\tau_{V1}+ \dots +\tau_{Vk}|W]$$

Applying Wald's identity to the right hand side gives

$$\mathbb{E}[R_n/n|W] = \mathbb{E}[\tau_{V1}|W].\mathbb{E}[K/n]$$

Taking the expectation with respect to the random enviornment yields

$$\mathbb{E}[R_n/n] = \mathbb{E}[\tau_{V1}].\mathbb{E}[K/n]$$

Taking the limit as $n\to\infty$, remembering that τ_{V1} is exponentially distributed and using the result from Lemma 1 completes the proof. ■

If we now look at the problem in the same manner as in chapter 1, we can show that under certain conditions

$$\lim_{t\to\infty} X(t)/t = \mathbb{E}[A_0^{(1)}+2A_0^{(2)}+3A_0^{(3)}\ldots RA_0^{(R)}]\left(\mathbb{E}[(W_0^{(1)} + W_0^{(1)} + \ldots + W_0^{(1)})^{-1}]\right)^{-1}$$

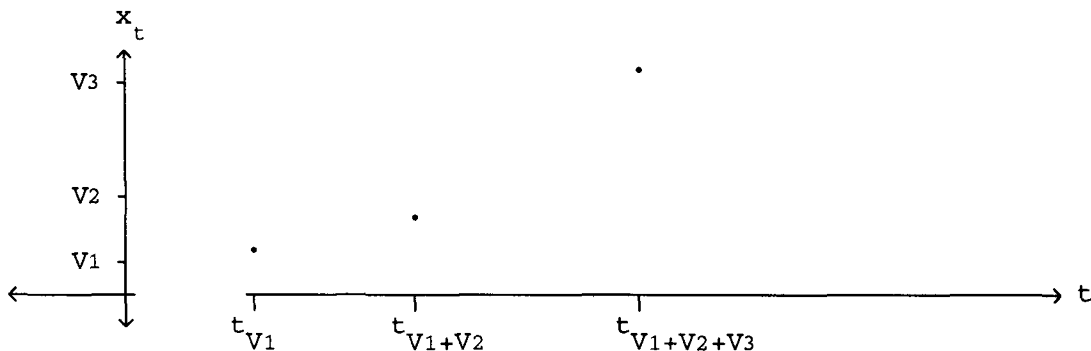


Fig 1 (an example of a particular realisation)

It is clear that a sample path x_t reaches infinity in a finite time τ if and only if infinitely many jumps occur during $[0,\tau)$, i e.

$$\sum_{j=1}^{\infty} T_{V_j} < \tau < \infty .$$

Using the fact that the random variable T_{V_j} are independent and identically distributed, it is easy to check that the set of such paths has a probability zero if and only if

$$(6)\quad \sum_{j=0}^{\infty} \frac{1}{w_j^{(1)} + w_j^{(2)} + \ldots + w_j^{(R)}} = \infty \quad .$$

<u>Lemma 2</u> Suppose that (6) holds but $(w_j^{(1)}+w_j^{(2)}+\ldots +w_j^{(R)})^{-1} < \infty \quad j= 0,1,2$.

Then for any $\alpha > 0$ the following relations hold almost everywhere:

$$(i)\qquad \limsup_{t\to\infty} X_t/t^{\alpha} = \left(\liminf_{n\to\infty} Vn^{-1/\alpha} \sum_{j=1}^{n} \tau_{V_j}\right)^{-\alpha}$$

$$(ii)\qquad \liminf_{t\to\infty} X_t/t^{\alpha} = \left(\limsup_{n\to\infty} Vn^{-1/\alpha} \sum_{j=1}^{n} \tau_{V_j}\right)^{-\alpha}$$

In particular

(iii) $\lim_{t\to\infty} X_t/t^{\alpha} = \left(\lim_{n\to\infty} Vn^{-1/\alpha} \sum_{j=0}^{n-1} \tau_{V_j}\right)^{-\alpha}$ wherever the limit in the right-hand side exists.

Proof. Under the conditions of the lemma

$$\tau_{V_j} < \infty , \quad \sum_{j=1}^{n} \tau_{V_j} \uparrow \infty \quad \text{a.e., so that}$$

$$\limsup_{t\to\infty} X_t/t^{\alpha} = \limsup_{t\to\infty} X_{\tau_{V0}+\tau_{V1}+..+\tau_{Vn-1}} / (\tau_{V0}+\tau_{V1}+...+\tau_{Vn-1})^{\alpha}$$

$$\liminf_{t\to\infty} X_t/t^{\alpha} = \liminf_{t\to\infty} X_{\tau_{V0}+\tau_{V1}+...+\tau_{Vn-1}} / (\tau_{V0}+\tau_{V1}+..+\tau_{Vn-1})^{\alpha}$$

But $X_{\tau_{V0}+\tau_{V1}+..+\tau_{Vn-1}} = Vn$

So that the conclusion follows by rewriting

$$Vn/(\tau_{V1}+\tau_{V2}+...+\tau_{Vn})^{\alpha} = \left(Vn^{-1/\alpha}(\tau_{V1}+\tau_{V2}+...+\tau_{Vn})\right)^{-\alpha}$$ ■

By randomizing the environment again it can be shown shown in the same way as in chapter 3 that

$$\mathbb{P}\left[\sum_{j=0}^{\infty} \frac{1}{w_j^{(1)}+w_j^{(2)}+...+w_j^{(R)}} = \infty\right] = 1$$

Therefore, the computation of $\lim_{t\to\infty} X(t)/t$ reduces to that of

$$\left(\lim_{n\to\infty} Vn^{-1} \sum_{j=1}^{n} \tau_{V_j}\right)^{-1}.$$

It is also possible to extend Theorem 1 from chapter 3 as follows.

Theorem 2. Suppose that for some $\varepsilon > 0$,

$$\mathbb{E}\left[\left(W_0^{(1)}+W_0^{(2)} \quad +W_0^{(R)}\right)^{-1-\varepsilon}\right] < \infty$$

Then for the RWIRE X(t) obeys

$$\lim_{t\to\infty} X(t)/t = \mathbb{E}[A_0^{(1)}+2A_0^{(2)}+....+RA_0^{(R)}]\,\mathbb{E}\left[\left(W_0^{(1)}+W_0^{(2)} \;..+W_0^{(R)}\right)^{-1}\right]^{-1} \quad \text{a e}$$

Proof. Similar to Theorem 1 chapter 3. ■

Similarly we can extend Theorem 2 from Chapter 3 the case where only jumps of size one can occur to the case where jumps up to size n can occur.

Theorem 3.

Suppose that $\mathbb{E}\left[\left(W_0^{(1)}+W_0^{(2)} \;..\; +W_0^{(R)}\right)^{-1}\right] < \infty$. Then for the RWIRE the following limit holds

$$\lim_{t\to\infty} X(t)/t = \mathbb{E}[A_0^{(1)} + 2A_0^{(2)} + \ \dots + RA_0^{(R)}]\mathbb{E}\left[\left(W_0^{(1)} + W_0^{(2)} \ \dots + W_0^{(R)}\right)^{-1}\right]^{-1}$$

in probability.

Proof. Similar to Theorem 2 chapter 3. ■

There is no simple way to compare the "speed" of the RWIRE and "speed" of the random walk where the random transition rates are replaced by their expectations. The "speed" of the random walk on the non-random environment is

$$\lim_{t\to\infty} X(t)/t = \mathbb{E}[W_0^{(1)} + 2\mathbb{E}[W_0^{(2)} + \ \dots \ + RW_0^{(R)}].$$

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A Natural Death Or The Death Of The Natural: Towards A Legal Critique Of Death In Ireland.

by

Patrick John Hanafin B.A.

Thesis submitted 02/05/1995 in satisfaction of the requirements for the degree of Doctor of Philosophy. This work was completed at Dublin City University Business School, under the supervision of Dr. David Tomkin. The thesis is based on the candidate's own work.

DECLARATION

I hereby certify that this material which I now submit for assessment on the programme of study leading to the award of Doctor of Philosophy, is entirely my own work and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

Signed: ID No.:93701039

Date:24 May 1995

DEDICATION

To the memory of my father.

"Media vita in morte sumus".

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ABSTRACT

Death has been viewed in cultural terms in Ireland more as rite than right. Engrained in the collective consciousness is the conception of death as part of nature's course, a societal rite of passage. This in turn is influenced by the peculiar Irish attitude to nature and the natural which has found legal expression in the Constitution of 1937 with its homage to the ideals of natural law. The way in which successive governments have approached the issues spanning the natural cycle: contraception, birth, education, marriage and sexuality has borne the imprint of a pre-modern approach to social, ethical and legal dilemmas. The right to die is as much part of the debate over the right to life as is the status of the unborn. Chapter one is an introductory chapter which outlines in greater detail the extent of the question to be broached and the method of its answer. In the second chapter, the issue of defining death is studied. The relationship between both legal and ethical definitions of this concept and the practice of medicine is examined. In chapter three the topic of pregnancy termination is examined, with special reference to the legal and ethical problems which arise in this area of medical practice. Chapter four examines the problem raised by the issue of treatment withdrawal or passive euthanasia and proposes a framework for its resolution. Chapters five and six deal with the issues raised by active intervention to end life in the medical context. Chapter five examines the issue of active euthanasia and chapter six analyses the related but discrete area of assisted suicide. Chapter seven contains the review and conclusions, and tentatively suggests that a more patient-oriented approach be taken by the law in resolving such dilemmas.

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CHAPTER ONE: INTRODUCTION.

> *[H]e was overwhelmed* by the belated suspicion that it is life, more than death, that has no limits.[1]

1.0 Introduction to Statement of Problem in Thesis.

This thesis examines the application of law and ethics to the issue of death and dying. Is it possible successfully to apply legal and ethical principles to the everyday problems which arise in the care of the terminally ill or incurable patient? The thesis proceeds to discuss the appropriateness of legal intervention in this area of clinical practice. What role should the law play in this field? Is there a consensus between the law's approach to this topic and that of the health care provider?

A central theme of this thesis is the idea of resolving the conflicting interests of the individual patient and the medical professional. In resolving any particular dilemma one must decide how much importance to give, on the one hand, to the autonomy of the individual patient and, on the other, to the freedom of the medical professional to intervene. Thus, the question can be framed in terms of the competing values of autonomy and the professionally perceived best interests of the individual.

The thesis shall centre on certain areas of the doctor-patient relationship in an attempt to examine the

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[1] Garcia Marquez, (1988, p.352).

foregoing questions. Thus, the thesis takes as its focus issues revolving around the topic of death, and perhaps more specifically, the means which people employ to attain such a state. It may seem particularly morbid to speak of attaining a state of not being, when the majority of human beings strive assiduously to avoid it. However, there are members of the human race for whom life is no longer an attractive alternative. The terminally ill person may consider death to be a release from a life consisting of pain and frustration. The individual who commits suicide has chosen death over a life which is filled with pain. Moreover, the person in a persistent vegetative state though insentient and unable to choose, may, while conscious, have expressed a wish to die if he ever entered such a state.

In such instances, whether the person is competent or not, a decision must be made which will either lead to death or to continuing to live. This decision cannot be made in a vacuum. In arriving at the decision, one must take into account the legal and ethical consequences involved.

The thesis begins with an analysis of the way in which death is perceived in society, and how the institutions of medicine and the law have shaped our perception of death and how it should be confronted. The competing viewpoints on how far the law should impinge on individual autonomy are analyzed in an attempt to discover the limits of legal intervention. From this general discussion the work then

moves on to the more specific application of law to the various aspects of death in the clinical context. Is it possible to discover particular ethical stances being reflected in legislation and judicial decisions in this area and, if so, to what extent does this affect the doctor-patient relationship?

The theoretical model on which this thesis is based is that of the ethical understanding of a right to life and in what circumstances, if ever, that right may be waived. When one speaks of the taking of life, one may initially think of equating it with such emotive synonyms as 'killing' and 'homicide'. Yet this is too simplistic a generalisation of the issue. There may be particular extenuating circumstances, depending on the context in which the taking of life occurs. One cannot apply the same standards to the cold-blooded taking of life by, for example, a terrorist who places a bomb in a crowded shopping centre to the doctor who withdraws life-sustaining medical treatment from a patient in a persistent vegetative state based on the previously expressed wishes of the patient when he was in a sentient state.

However, there are those who will say that the taking of all human life, no matter at what stage of development, is murder.[2] This thesis attempts to evaluate the competing arguments of those who are opposed to the taking of human life in all circumstances, and those who believe that there should be exceptions where the taking of life may be

[2] Grisez and Boyle, (1979, pp.1-15).

justified.[3]

The particular ethical model which one adopts in relation to the right to life will thus have implications for the legal regulation of such areas of medical practice as pregnancy termination, euthanasia, suicide and the definition of death for clinical purposes. Indeed, as will be seen, this area is riddled with contradiction and uncertainty. For example, the adoption by the legislatures of the United States of a legal definition of death based on the whole brain standard recognizes the idea that the patient is not dead until all activity in both the higher and lower brain have ceased. Notwithstanding this, many state courts have approved the termination of treatment of patients in a persistent vegetative state[4] who are still

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[3] See Feinberg, (1977, p.121), where he provides an example of such a view:

> [t]he right to die is simply the other side of the coin of the right to live. The basic right underlying each is the right to be one's own master, to dispose of one's lot as one chooses, subject of course to the limits imposed by the like rights of others. Just as my right to live imposes a duty on others not to kill me, so my right to die, which it entails, imposes a duty on others not to prevent me from implementing my choice of death, except for the purpose of determining whether that choice is genuinely voluntary, hence truly mine. When I choose to die by my own hand, I insisit upon my claim to the non-interference of others. When I am unable to terminate my own life, I waive my right to live by exercising my right to die, which is one and the same thing as releasing at least one other person from his duty not to kill me.

[4] See for example, In Re Quinlan 355 A.2d 647 (N.J.) (1976) and In Re Torres 357 N.W.2d 332 (Minn. 1984).

alive according to the whole brain death standard, as it is only their higher brain function, which controls thought and consciousness, which is permanently damaged, while the brain-stem, that part of the lower brain that regulates such functions as breathing, blood pressure and temperature, continues to function. Such patients can remain alive in the biological sense with the aid of artificial hydration and feeding.

Thus, the task of the following sections in this chapter is to place the various arguments in relation to the concept of the taking of life in a general moral framework. The purpose of this exercise is to link the various policy stances and attitudes which shall be encountered in the ensuing chapters to particular moral or philosophical models of society. To fully understand why there is such a deep division in many societies over the question of life, death, and dying, one must be acquainted with the ethical models which influence these diverse viewpoints. In carrying out such an investigation, perhaps, one may also find some means of reconciling these diverse models, as indeed Ronald Dworkin has proposed.[5]

The work proceeds to look at the issues which arise after the death of the individual. How does the law regard the corpse? Is there a residual respect for the former person or does the law collaborate in the view of the corpse as a mere source of spare parts? This shall demonstrate that the problem of consent and respect for the

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[5] Dworkin, (1993, pp.3-29).

individual do not cease to be pertinent on the death of an individual.

The work shall then concentrate on specific areas in the practice of medicine where conceptions of life and death are of particular relevance. The issue of pregnancy termination which raises passionate debate on both sides of the argument, is examined from an ethical and legal viewpoint. In particular, the discussion analyses to what extent ethical views on the issue are reflected in legislative initiatives. The question of why such an intimate area of human activity should be regulated by the criminal law is examined. The issue is also examined in the context of reproductive autonomy. To what extent is the way in which this issue is treated by the legislature and the judiciary a reflection of the legal attitude to female autonomy? What lessons can be learned from the public and legal debate on this aspect of the right to life for the equally contentious issue of euthanasia?

The topic of euthanasia is then examined. How far does the autonomy of the individual extend? Can citizens be said to be truly autonomous if they are forbidden from exercising a right to die? Does such a right exist, and if so, in what circumstances may the individual exercise it? This issue allows one to examine the role of the health professional in contemporary society and to what extent the Hippocratic tradition of life preservation may now be altered in the light of advances in medical technology.

Suicide is another topic which provokes emotional

responses. Societal and legal attitudes to the taking of one's life are examined. The discussion then focuses on the question of physician-assisted suicide and legal responses to it.

In the review and conclusions, the work suggests that a more patient-oriented approach should be taken by the law in the resolution of medical dilemmas. This would require a shift on the part of the law towards a model which views individual autonomy as being more important than the interests of the common good. An integral part of this development is the development of a more open and equal dialogue between all those concerned in this area of medical practice, health care providers, patients and policy-makers.

1.1 Introduction.

This chapter focuses on the varying models which one may apply to the question of the taking of life and how and to what extent these models influence public policy in the area of death and dying. The remainder of the chapter analyses the way in which death is perceived in cultural terms and how the medicalization of death has led to the legal appropriation of death.

1.2 The Natural Law Model and the Taking of Life.

This model holds that all instances of deliberate

killing of an innocent human being are morally wrong. This conception of killing falls into what Ronald Dworkin has referred to as a duty-based moral view.[6] This model, however, allows for certain exceptions where the taking of life may be deemed to be justified. Thus, acts which do not have as their primary motivation the killing of another, but nonetheless lead to his death, may be justified. This category of exceptions includes such acts as killing in self-defence[7] and pregnancy termination which results indirectly from attempts to save the life of the mother who is suffering from uterine cancer. This argument was later to be adapted by Roman Catholic theologians to form the

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[6] Dworkin, (1984, p.171).

[7] Aquinas, (1975, question 64, article 7, reply, p.43), provides the following justification for killing in self-defence:

> we can see that an act of self-defence may have two effects: the saving of one's own life, and the killing of the attacker. Now such an act of self-defence is not illegitimate just because the agent intends to save his own life, because it is natural for anything to want to preserve itself in being as far as it can. An act that is properly motivated may, nevertheless, become vitiated if it is not proportionate to the end intended. And this is why somebody who uses more violence than is necessary to defend himself will be doing something wrong. On the other hand, the controlled use of counter-violence constitutes legitimate self-defence, for according to the law it is legitimate to answer force with force provided it goes no further than due defence requires. Moreover a person is not obliged under pain of loss of eternal life to renounce the use of proportionate counter-force in order to avoid killing another, for a man is under a greater obligation to care for his own life than for another's.

basis of the doctrine of double effect.[8] The doctrine of double effect would allow for an exception to the natural law model of the right to life when it can be determined that the intention of the actor was not to kill but to bring about some other result such as the curing of pain. Thus, for example, Roman Catholic Church moral teaching would allow for an exception to the moral prohibition on killing in a case where a doctor intended to alleviate a patient's pain by administering a pain-killing drug, but this intentional act had the unintended side effect or double effect of killing the patient.[9] A second category of exceptions is based on the idea that the intentional taking

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[8] Mangan, (1949, pp.41-48).

[9] See, Sacred Congregation for the Doctrine of the Faith, (1980, pp.2-3), wherein it is stated:

> [b]ut the intensive use of painkillers is not without difficulties, because the phenomenon of habituation generally makes it necessary to increase their dosage in order to maintain their efficacy. At this point it is fitting to recall a declaration by Pius XII, which retains its full force. In answer to a group of doctors who had put the question: 'Is the suppression of pain and consciousness by the use of narcotics... permitted by religion and morality to the doctor and the patient (even at the approach of death and if one foresees that the use of narcotics will shorten life)?'
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> The Pope said 'If no other means exist, and if, in the given circumstances, this does not prevent the carrying out of other religious and moral duties: 'Yes''. In this case, of course, death is in no way intended or sought even if the risk of it is reasonably taken; the intention is simply to relieve pain effectively, using for this purpose painkillers available to medicine.

See in addition, Glover, (1990, p.87) and Tomkin and Hanafin, (1995, pp.149-154).

of life in certain circumstances may be justified. Thus, in the case of capital punishment, the execution of a murderer is seen as justified on the grounds that he has transgressed a basic moral principle and has therefore forfeited his right to life.[10] Moreover, in the case of killing in war, the defence of one's country or some justifiable cause is seen as sufficient justification for the intentional killing of others.[11]

Thus, this approach to the question of taking life tends to an absolutist view, leaving aside the exceptions which are included in the model. Thus, the element of individual choice or autonomy has no place in this moral view. As Dworkin has written, in adverting to the general category of duty-based moral theories, such a model is concerned with the moral quality of an individual's acts and supposes "that it is wrong, without more, for an

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[10] Aquinas, (1975, question 64, article 2, reply, p.23), states that:

> every part is related to the whole precisely as imperfect to perfect, which is the reason why every part is naturally for the sake of the whole. If, therefore, the well-being of the whole body demands the amputation of a limb, say in the case where one limb is gangrenous and threatens to infect the others, the treatment to be commended is amputation. Now every individual person is as it were a part of the whole. Therefore if any man is dangerous to the community and is subverting it by some sin, the treatment to be commended is his execution in order to preserve the common good, for a little leaven sours the whole lump.

[11] Aquinas, (1972, question 40, article 1, reply, pp.81-85).

individual to fail to meet certain standards of behaviour".[12]

However, on the surface, the approach of classical natural law theory to killing may seem inconsistent. If, as this moral view holds, the taking of another life is immoral and one has a duty not to kill, why then are there so many exceptions to this general rule? Germain Grisez, arguing from the perspective of natural law theory, has attempted to examine these inconsistencies with the aim of developing "a consistent, but not excessively rigid, natural law ethics of killing".[13]

Grisez has attempted to criticise and reformulate the original argument of Aquinas on killing. He takes issue with the stance taken by Aquinas in relation to capital punishment and the justification of killing in war. Grisez's arguments against the justifications put forward by Aquinas for capital punishment are threefold. Firstly, if, as Aquinas argues, the preservation of the common good is adequate justification for killing those who kill, why could it not be used as adequate justification for the killing of the 'innocent'?[14] Grisez notes that Aquinas:

> ignores the possibility that the innocent can endanger the common good, but the diseased part of the body which threatens the life of the whole certainly need not be regarded as morally guilty.[15]

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[12] Dworkin, (1984, p.174).

[13] Grisez, (1970, p.64).

[14] Ibid., p.67. For Grisez, such examples of the taking of 'innocent' life would include abortion and euthanasia.

[15] Ibid.

Secondly, Grisez argues that capital punishment is not strictly necessary to protect the common good. Rather, a less dramatic form of action may serve to protect the common good from those who attempt to interfere with it. Thus, for example, imprisonment may prove to be as effective and not as morally repugnant. Finally, according to Grisez, Aquinas is mistaken in drawing an analogy between society and the human body. Aquinas argued that just as a diseased member of the body affects the whole, so does a wrongdoer in society affect the common good. As a result he must be disposed of through capital punishment just as a diseased member is amputated. However, Grisez believes that the principal difficulty with this argument is:

> that the individual person is not a part of the community in the way that members of a body are parts of the whole organism. 'Wholeness', 'common good', and 'subordination of parts' are not univocal. Aquinas surely was aware that he was arguing by analogy, but he apparently did not carefully consider how weak the analogy is.[16]

For Grisez, the fact that someone has perpetrated an evil does not justify the state in perpetrating a further evil to punish this wrongdoer. By executing the wrongdoer one is also destroying human life which for Grisez is an intrinsic good:

> [e]ach good that is intrinsic to the human person participates in the dignity of the person, a dignity that is beyond calculable price and measurable worth. Goods for man can be priced; goods in man can only be prized.[17]

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[16] Ibid., p.68.

[17] Ibid., p.69.

Thus, for Grisez, by depriving the wrongdoer of his life one is also interfering with that greater good which he shares with the rest of humanity; human life. On this model of the sanctity of life the capital punishment exception cannot be countenanced. As Grisez states:

> [w]e may be right in feeling that a wrongdoer is not worthy of life, but such a feeling attests to the fact that life itself is a good of the personal order. If we attack the life of the wrongdoer, we destroy that which remains good - his human life. Perhaps we do so in order to indirectly attack in him the moral evil we hate and fear. If so, it seems we are willing to do an evil by destroying a good in order that we may achieve the good of destroying an evil.[18]

Grisez then proceeds to take issue with the Aquinian justification of killing in war. The view of Aquinas that killing in war can be justified on the basis that one is fighting for a just cause is viewed by Grisez as a weak argument. He counters this argument in the following terms:

> [p]erhaps one side can know that the other has done an injustice worth fighting about, but no one using military force can be confident that the enemy personnel he kills are guilty of anything. In fact, one can be confident that many enemy personnel sincerely believe their side is just. Such individuals can hardly be viewed as criminals, abandoning (as it were) human dignity, and subjecting themselves to the condition of brute animals...
>
> Even if an enemy power is as such guilty of injustice and even if we can know it to be so, still only a fiction can distribute the guilt of injustice to each individual among the enemy's military personnel, all of whom nevertheless are considered fair victims for deadly action until they are no longer able to fight.[19]

Grisez, however, favours the justification proposed by

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[18] Ibid., p.70.

[19] Ibid., pp.71-72.

Aquinas for killing in self-defence, as a valid exception to the general rule against the taking of life. Thus, he justifies this exception on the grounds of the actor's intention:

> if one intends not the death of another but only the safety of his own life, then one need not identify himself as a killer. One's attitude toward human life itself and toward everything related to it can remain that of a person unwilling to take human life.[20]

This justification is based on Grisez's interpretation of the doctrine of double effect. As understood by Grisez this doctrine would allow for a 'good' end to be brought about by an 'evil' means:

> a good effect which in the order of nature is preceded in the performance by an evil effect need not be regarded as a good end achieved by an evil means, provided that the act is a unity and only the good is within the scope of intention. Means and end in the order of human action do not necessarily correspond to cause and effect in the order of nature, because a means must be an integral human act. If the unity of action is preserved and the intention specifying the action is good, whether the good or evil effect is prior in the order of nature is morally irrelevant.[21]

In practical terms, Grisez's model would not lead to all taking of life as being regarded as morally impermissible. Under this amended model of double effect Grisez would extend the traditional range of exceptions to the traditional natural law prohibition on abortion. In addition to the traditional exceptions where a termination was brought about due to the removal of a cancerous uterus

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[20] Ibid., p.76.

[21] Ibid., pp.89-90.

or in the case of an ectopic pregnancy, he would add the following:

> when the pregnancy itself was dangerously overloading an ill mother's heart and kidneys. In such a case, I think the foetus may be removed, because although it will certainly die, the very same act (through a humanly indivisible process) lessens the strain on the mother and contributes to the mother's safety, which alone need be intended by an upright agent.
>
> Another example would be the crushing of a baby stuck in the birth canal. The very act of crushing and removing the baby, an act in fact destructive of its life, saves the mother from otherwise perhaps inevitable death. On the same principle, one would be equally justified in cutting away the mother to rescue the baby. Of course, if the baby is crushed more than necessary to relieve the mother or if the mother is cut more than necessary to release the baby, the excess damage would lie within the scope of intention and the act would be evil.[22]

This model holds true only for those who believe that there exist objectively 'good' and 'evil' acts. Moreover, it is interesting to note that when the intention is to abort to save the life of the mother or to treat a cancerous uterus, the double effect principle is conveniently applied. However, when the intention is to avoid a pregnancy brought about as the result of a rape or to prevent the birth of a deformed child, then in Grisez's model the abortion suddenly becomes a bad means to a good end. This casuistical approach is hardly consistent, as Grisez hopes it to be. It is rather an arbitrary means of justifying killing in certain cases (usually where the person to be killed is a sentient human being) rather than others.

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[22] Ibid., p.94.

Alan Donagan[23] provides us with another duty-based account of the morality of killing. For Donagan, the moral base line is that "no man may at will kill another".[24]

However, like Aquinas and Grisez, he accepts that this moral precept is not absolute and that it is subject to certain exceptions. Thus, for Donagan, if it is reasonably believed necessary to kill an attacker to save a potential victim, the attacker not only may be killed but ought to be.[25] In Donagan's opinion, an actor who uses violence on others forfeits his own right not to have violence done unto him. Thus:

> the immunity to violence to which everybody consequently has a moral right is obviously conditional; and perhaps its most obvious condition is that one not further one's own ends by resorting to violence or threatening it. If anybody, in furthering his own ends, resorts to violence or threatens it, he ceases to satisfy the condition of his right to immunity and may be forcibly withstood. By violating the immunity of others, he forfeits his own.[26]

Similarly, Donagan holds that the killing of enemy combatants in a just war is a valid exception to the rule against the taking of life. Thus, he would hold that it is:

> plausible that the danger to be apprehended from the enemy's armed services are permissible at any time; and that the deaths of noncombatants who are killed in direct attacks on military installations are to be deemed accidental, on the ground that it is the enemy's fault that noncombatants are there. Accordingly, in a just war it is accounted permissible to kill and

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[23] Donagan, (1977, pp.83-87).

[24] Ibid., p.83.

[25] Ibid., p.87.

[26] Ibid., p.85.

disable enemy combatants who are not at the time attacking anybody, and to bombard installations even when it will result in the deaths of noncombatants. What is forbidden is directly to attack noncombatants or nonmilitary installations.[27]

As for abortion, Donagan, like Grisez, regards it as a question of killing an innocent life. However, he is prepared in certain instances to allow it to occur. Unlike Grisez, his justification for the exceptional cases of permissible abortion are not premised on a version of the doctrine of double effect, but on a principle which bears to it a striking resemblance. Rather, he looks to another principle which has its roots in the Judaeo-Christian tradition, what he refers to as the Pauline principle. Donagan defines the Pauline principle in the following terms:

> [i]t is impermissible to do evil that good may come of it, to which, because of Saint Paul's much-quoted formulation of it in Romans 3:8, I shall refer as 'the Pauline principle'.[28]

This principle underpins his moral outlook on killing. Even to this principle exceptions exist. Just as in the case of a just war or in the case of self-defence there are instances in which the act of terminating a pregnancy may not be looked upon as being morally impermissible. Thus, he argues:

> [i]t follows that the principle it is impermissible for anybody at will to use force upon another applies to adult and child alike, to born and unborn. However, just as it is legitimate to use force on children for purposes

[27] Ibid., p.87.

[28] Ibid., p.149.

for which it would not be legitimate to use it on adults, so very difficult questions are raised about the extent to which it is legitimate to use force upon an unborn child.[29]

Donagan's response to these difficult questions fits broadly into the duty-based model even if the method he uses is not identical to that used by Grisez. Rather than taking the doctrine of double effect as his justificatory basis, he appeals instead to the Pauline principle:

> [t]he duty of bringing up one's children well, and of promoting a reasonable balance between population and terrestrial resources, are duties of beneficence, and contain the qualification 'by all means in one's power'. The duties not to commit abortion or infanticide, and not to mutilate oneself by sterilisation, are all absolute prohibitions. Hence it is not inconsistent with the duty to bring up one's children adequately, or to contribute to the limitation of the population, to refuse to adopt unlawful means of doing so. Evil is not to be done that good may come of it.[30]

Applying his argument that the rational actor who forfeits his right not to have violence used against him by attacking another to the case of the unborn, Donagan argues:

> [a] man is entitled to return the fire of a hunter who, thinking him to be a deer, innocently *shoots at him*, if only to save himself; and on the same ground he may kill somebody who strictly speaking is not acting at all, for example a berserk or drugged assailant. The crux is that a mother, to whom her unborn child owes its very life, is not obliged to submit to being killed by labour in childbed; and bystanders are called upon, unless she direct otherwise, to save her life by removing from her body the child that is killing her, treating it as an involuntary pursuer. An analogous case would be shooting to kill an insane child who only so can be prevented

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[29] Ibid., p.83.

[30] Ibid., p.167.

> from cutting his mother's throat. In all these cases, what matters is not the innocence of the assailant but what is due to the victim. And in any threat to a mother's life arising out of her pregnancy, her status as victim is beyond serious question.[31]

The primary source of Irish law, Bunreacht na hEireann 1937, owes a large debt to this view of morality, for it is from such a duty-based moral view that the Constitution derives its theoretical underpinning.[32] One need look no further than the Preamble to the Constitution to discover its Thomist nature. Thus, the Constitution is enacted in the name of: "the Most Holy Trinity, from Whom is all authority and to Whom, as our final end, all actions both of men and states may be referred".

As one commentator has noted, the Preamble makes clear:

> that the Constitution and the laws which owe their force to the Constitution derive, under God, from the people and are directed to the promotion of the common good. If a judicial decision rejects the divine law or has not as its object the common good, it has not the character of law. This idea is no strange addition to the common law; it is as old as Coke.[33]

The implications of such a philosophical model for the way in which the law views the taking of life are of fundamental importance to this thesis. In subsequent chapters the practical legal ramifications of this philosophical stance for issues such as treatment

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[31] Ibid., p.163.

[32] For further analysis see, Clarke, (1993, pp.177-178); Costello, (1956, pp.403-407); Keogh, (1987, pp.4-6) and O'Hanlon, (1993a, pp.8-11).

[33] Henchy, (1962, p.557).

withdrawal, active euthanasia and physician-assisted suicide is examined. One aspect of the taking of life which has been the subject of judicial examination, pregnancy termination, is also examined in order to discover if the presence in the Constitution of such a philosophical model has had a bearing on the way in which this issue is dealt with in practice.

It is submitted that the argument against taking the life of the unborn may be applied mutatis mutandis to the question of the taking of life in the case of the terminally ill or incurable patient. As with abortion, the natural law model admits of exceptions to this general prohibition, again based on a variant of the doctrine of double effect, where, for example, the doctor intended a 'good' end, the easing of pain, but in the process 'indirectly' caused the death of the patient.

The attitude which one adopts to the place of the natural law in Irish jurisprudence will have implications for individual autonomy in areas which fall within the category of the taking of life. Due to the special significance afforded to the right to life in duty-based moral views, the scope for individual autonomy in relation to the taking of life in the medical context will be severely curtailed.

Thus, if as certain commentators claim,[34] all positive laws must ultimately defer to the supremacy of the natural

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[34] See, Costello, (1956, pp.403-405); Henchy, (1962, p.557) and O'Hanlon, (1993a, pp.8-10).

or divine law, then the outcome in practical legal terms will be a severe curtailment on the right to die and to the right to choose to terminate a pregnancy.[35] As one of those commentators, Costello J., pointed out, while writing extra-judicially, that if it is necessary for the court to determine the nature of the individual who is the subject of certain constitutional rights, then:

> the courts can properly ascertain that nature in the light of the Christian revelation which the Constitution proclaims the people to have accepted... it can clearly be inferred that the Constitution rejects legal positivism as a basis for the protection of fundamental rights, and suggests instead a theory of natural law from which these rights can be derived.[36]

Such an argument assumes that the Constitution as enacted in 1937 recognises the superiority of the divine or natural law and as such any legal provisions or for that matter constitutional amendments which conflict with the ideals of natural law are invalid even if they are technically in agreement with the provisions of the Constitution.

This was the argument put forward by Roderick O'Hanlon, another member of the judiciary arguing extra-judicially, when he claimed that the constitutional mechanism of consulting the people on issues of constitutional importance may not be entirely appropriate in all circumstances.[37] He was advancing this argument

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[35] O'Hanlon, (1993a, p.10).

[36] Cited by Sheehy, (1992, p.22).

[37] Article 46.1 of Bunreacht na hEireann 1937 provides that:

[a]ny provision of this Constitution may be

against the backdrop of the decision of the Supreme Court in the case of Attorney-General v X and Others[38] and the subsequent referendums on the issues of pregnancy termination, the right to travel and the right to information. O'Hanlon J. framed the question in theoretical terms:

> [i]s there any limitation on the power in Article 46.1 of the Constitution by which '[a]ny provision of this Constitution may be amended'?
>
> This question goes to the root of the nature of law. It obliges us to consider the relationship between basic human rights and the process of political resolution of issues of public controversy.[39]

The manner in which O'Hanlon J. answers this question is influenced by his conception of law, a conception which fits quite comfortably into the natural law model. He is thus able to claim that the Constitution is based on precepts of natural law and, as such, these precepts should be adhered to "so long as they remain part of the

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> amended, whether by way of variation, addition, or repeal, in the manner provided by this Article.

Article 46.2 outlines the mechanism for such amendments:

> [e]very proposal for an amendment of this Constitution shall be initiated in Dail Eireann as a Bill, and shall upon having been passed by both houses of the Oireachtas, be submitted by Referendum to the decision of the people in accordance with the law for the time being in force relating to the Referendum.

Article 47 sets out the procedure for such referendums.

[38] [1992] 1 I.R. 1.

[39] O'Hanlon, (1993a, p.8).

Constitution".[40]

O'Hanlon J.'s conclusions are of relevance to the subject matter of this thesis in that they constitute a major argument against the liberalisation of laws in relation to the treatment of the terminally ill or incurable patient. His conception of rights tends to view the right to life as absolute, except in a number of exceptional circumstances which accord with Roman Catholic teaching (the doctrine of double effect and the act-omission distinction).[41] If one were to accept his argument that the Constitution may only be interpreted in the light of natural law doctrine, and in particular, the classical model of this doctrine as espoused by Thomas Aquinas and adopted by the Roman Catholic Church, then one limits the autonomy of the individual to choose to act in accordance with his own wishes rather than in accordance with a moral code. Thus, O'Hanlon J. is able to arrive at the following conclusions as to which rights are to be valued in society:

> [i]t is universally accepted that the most fundamental of all human rights is the right to life. The most elementary and universal aspect of this right is the right not to be killed for the sake of another or for some further end. This right is enjoyed equally by all human beings at all times. It is attacked whenever abortion, murder or euthanasia are practised.[42]

A number of observations may be made on this point. Firstly, O'Hanlon J. argues that the right to life is the

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[40] Ibid.

[41] For a practical legal exegesis of these arguments see, Chapters Four and Five of this thesis.

[42] O'Hanlon, (1993, p.10).

most fundamental of all rights. However are not all rights fundamental? Is it logical to say that any one right is in theory more fundamental than any other? O'Hanlon J. seems to be saying here that such a right is absolute, yet in the next sentence he goes on to qualify this right by saying that it involves a right not to be killed for the sake of another or for some further end. Is it not logical to infer from this statement that one can have one's life taken in circumstances where it is not being taken for the sake of another or for some further end? Does this not contradict even the exceptions to the right to life put forward by Aquinas? That is to say, in the case of capital punishment (the other end being punishment), self-defence (the life here is taken both for the sake of another, the victim, and for another end, to prevent the death of the victim), and in time of a just war (the other end being the defence of a just cause or of a country).

The argument that any piece of legislation, constitutional amendment or judicial decision which was in conflict with the natural or divine law would be invalid seems to depart entirely both from legal reality and logic. Thus, a statute such as the Criminal Justice (Sexual Offences) Act 1993 which decriminalized homosexual acts between consenting males over the age of seventeen, the decision of the Supreme Court in the case of Attorney-General v X and Others[43] and the subsequent amendments to the Constitution on the rights to travel and information

[43] [1992] 1 I.R. 1.

are all invalid according to O'Hanlon J.'s vision of the protection of human rights and of law in general. For someone who is quite attached (when it suits his argument) to the rhetoric of fundamental rights this is quite a dubious outcome. Thus, according to his conception of individual rights it is quite acceptable to treat individuals differently in the eyes of the law because of their sexual orientation, to brand them as criminals because of what they are and tacitly endorse discrimination against such individuals, to prevent individuals from moving freely outside of the jurisdiction, and to prevent individuals from obtaining access to information which is freely accessible in other states and which may affect other rights such as their right to privacy and their right to medical treatment? Would such a conception of rights prevent a minor who has been the victim of rape from having a pregnancy termination?

One could extend this view further to other aspects of personal autonomy which come into conflict with the right to life as understood by the natural law model. Thus, under O'Hanlon J.'s view of human rights, an incurably ill patient could be prevented from being assisted to die by his medical practitioner, from requesting that his life be terminated by lethal injection to cut short the indignity of lying in his own excrement and being fed through a drip.

Moreover, an incurably ill patient could be prevented from exercising his right to travel out of this jurisdiction to a country where the practice of physician-

assisted suicide or active voluntary euthanasia is not outlawed. For someone who speaks so boldly of universally recognized rights, why does he not recognize the universally recognized rights which his model would render inoperative in practice? Thus, from the foregoing examples, O'Hanlon J. does not recognize fundamental rights which are recognized as norms of international law by the majority of democratic states, namely the right to privacy, the right to freedom of movement, the right to equality, and the right to medical treatment.

In practice we have seen that the courts and Parliament have not been so literalist in their respective interpretations of the spirit and meaning of the Constitution. This seems to lead one to the tentative conclusion that the interpretation of a constitution is not as clear-cut as O'Hanlon J. would have us believe and that in accepting the philosophical bases of the Constitution one does not have to accept blindly a set of moral dogma into the bargain. This is to be plainly construed from the interpretation of the American Constitution which was also inspired by the ideals of natural rights.[44] However this fact did not constrict the Supreme Court in the United States adopting a model of constitutional interpretation which was far from absolutist or literalist. Did the framers of the United States Constitution envisage that one day the document which they produced would be used to champion the cause of individual rights?

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[44] See, White, (1978, pp.1-10).

One must remember that at the time of the introduction of the American Constitution the franchise did not extend beyond property owning males and that slave-ownership was condoned. Are we to remain constricted in our efforts to improve the lot of humanity by adhering to a petrified constitutional document? Or are we to allow such a document to be expressive of the rights and interests of all citizens equally? As David Feldman has so aptly put it in the context of the American Constitution but which is equally valid when talking of the Irish Constitution:

> [d]uring the nineteen eighties, American conservatives gained the ascendency over the liberals: pro-life groups made headway at the expense of pro-choice groups; evangelical religious fundamentalism advanced against nineteen sixties humanism; and judicial activism retreated in the face of changes. One aspect of the growth of religious and constitutional fundamentalism - both characterized by a largely uncritical commitment to a sacred text - was that the focus of constitutional inquiries changed. Instead of asking questions about the legitimate range of underlying rights, such as privacy, in a constitution committed to individual freedom, the new conservative judges asked questions about surface rights, such as whether the Constitution entrenches a fundamental right to carry on the particular activity under consideration. Any right which is not apparent in the Constitution became, at best, a liberty to be protected only by the partial shield of due process.[45]

One could conclude that the meaning of a constitution is dependent on the theoretical model which is applied to it by the reigning polity (including the judiciary). Under the model proposed by O'Hanlon J., one can see what Feldman has referred to as an "uncritical commitment to a sacred text", and what Ronald Dworkin has referred to as a

[45] Feldman, (1993, p.364).

'constitution of detail'.[46] Thus, the right to life is seen as more fundamental than other equally valid rights and is adhered to even when it would interfere greatly with the autonomy of the individual. This is the traditional Irish model. This is also the view adopted by religious and conservative thinkers who claim that there exists a certain natural order of things which must be adhered to. Any form of behaviour which does not conform with this ideal is immediately viewed as suspect.

This, however, is not the only model of the Constitution. As Feldman's critique implies there are equally valid theoretical models which may be used as the basis for our conceptualization of the role of law in society. It is important to examine these alternative models because their ramifications for the way in which we view the issue of the taking of life are radically different to the model proposed by those who adhere to the natural law's duty-based view.

1.3 The Utilitarian Model and the Taking of Life.

This model is an example of what Ronald Dworkin refers to as a goal-based moral view.[47] Such a moral view has been described by one commentator in the following terms:

it views morality as concerned with the

[46] Dworkin, (1993, p.119).

[47] Dworkin, (1984, p.171).

production of desirable or valuable states of affairs or experiences - commonly human happiness, welfare or desire satisfaction; their production is the goal of morality. Human actions are morally evaluated in terms of their tendency to promote these goals, and right action is that action which, among the alternatives open to an agent, maximizes these valuable consequences for any and all persons affected.[48]

Legal positivism attempts to divorce laws from societal or divine norms. It is therefore antithetical to the deontological nature of natural law theory. Thus, the natural law model as propounded by O'Hanlon J. which would view all laws or judicial decisions which did not conform to certain moral norms as being invalid could be countered using the positivist critique which would view all laws which were validly passed and enacted by Parliament as being valid irrespective of whether they conformed with some notional ideal of morality. As McCoubrey has suggested:

> [t]his amounts to the proposition that legislation which is morally defective is not thereby formally invalidated or unenforceable.[49]

A forceful advocate of the idea of positivism was Jeremy Bentham,[50] who developed a critique of law which assumed that rights did not flow from some divine or natural law but were derived from positive legislation.[51] As one commentator has concluded in referring to Bentham's utilitarian perspective on law:

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[48] Brock, (1993, p.96).

[49] McCoubrey, (1987, p.84).

[50] See for example, Bentham, (1823, pp.1-25).

[51] See further, Hart, (1982, pp.2-20).

> Bentham's positivism had a liberating political influence, in that it enabled law, as a system of rules posited and so open to amendment by a politically sovereign body, to become a tool in the hands of social reformers.[52]

The underlying principle of utilitarianism allows one to judge a particular act not by whether it is in conformity with some moral code but on the basis of the amount of pleasure or pain which the act would cause. Acts are thus judged on their consequences. Behaviour is therefore neither absolutely right nor wrong. The consequences of such behaviour must be analyzed in order to decide on the way in which one should act under this theory. As Peter Singer has noted:

> [t]he classical utilitarian regards an action as right if it produces as much or more of an increase in the happiness of all affected by it than any alternative action, and wrong if it does not.
>
> The consequences of an action vary according to the circumstances in which it is performed. Hence a utilitarian can never be properly accused of a lack of realism, or of a rigid adherence to ideals in defiance of practical experience.[53]

Applying the utilitarian model to the taking of life, one does not automatically arrive at a consistent answer in every possible case. Rather the answer one gets to the question "is it right to take life in this case?" will vary from case to case depending on the amount of good or bad consequences which the taking of life would produce. In the words of Dan Brock:

> [i]n this goal-based view, killing a human being is morally justified if and only if doing so

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[52] Feldman, (1993, p.26).

[53] Singer, (1993, p.3).

maximizes the production of the goals of the theory, however they are specified, and is morally wrong if it does not; killing is morally evaluated according to its production of the goals the theory specifies as valuable.[54]

In order to further evaluate the utilitarian perspective on the taking of life, it will be necessary to analyze the critique of killing advanced by utilitarian theorists. The aim of this task is twofold. Firstly, to present the application of utilitarian theory to the subject matter of this thesis and secondly to discover the benefits or otherwise of adopting such a model.

The writings of the Australian ethicist Peter Singer provide one with a detailed critique of the taking of life in its many contexts from a utilitarian perspective.[55]

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[54] Brock, (1993, p.96).

[55] As a utilitarian, Singer takes the view that in relation to the taking of life, one should act in a manner which maximizes the satisfaction of the interests of the person affected. Singer does not believe that killing is wrong in all circumstances. He is of the opinion that an action is morally wrong if it runs counter to a person's desires. Thus, if a person has a desire to live, then to kill that person is wrong. However this does not exclude all instances of the taking of life. Singer and Kuhse, (1993, p.159), suggest that:

> we regard the lives of self-conscious beings as in some way like ardous and uncertain journeys, at different stages, in which various amounts of hope and desire, as well as time and effort have been invested in order to reach particular goals and destinations. We might regard a decision not to bring an infant into the world as akin to preventing a journey from getting under way, but this is not in itself seriously wrong, for the voyager has made no plans and set no goals. Gradually, as goals are set, even if tentatively, and a lot is done in order to increase the probability of the goals being reached, the wrongness of bringing the journey to a premature end increases.

Singer though following broadly in the utilitarian tradition is not a classical utilitarian in the mould of Bentham,[56] or Mill.[57] Rather, he falls into the category of what is known as a preference utilitarian. This influences the stance he takes on particular moral issues. As a preference utilitarian, Singer would hold that:

> an action contrary to the preference of any being is, unless this preference is outweighed by contrary preferences, wrong.[58]

The views of the classical utilitarian vary to a certain degree. Thus, as Singer has pointed out, the classical utilitarian such as Bentham would judge actions:

> by their tendency to maximise pleasure or happiness and minimise pain or unhappiness. Terms like 'pleasure' and 'happiness' lack precision, but it is clear that they refer to something that is experienced, or felt - in other words, to states of consciousness. According to classical utilitarianism, therefore, there is no direct significance in the fact that desires for the future go unfulfilled when people die. If you die instantaneously, whether you have any desires for the future makes no difference to the amount of pleasure or pain you experience.[59]

For a preference utilitarian the taking of the life of a person who prefers to continue living is wrong. However this does not amount to an absolute prohibition on the

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Towards the end of life, when most things that might have been achieved have either been done, or are now unlikely to be accomplished, the loss of life may again be less of a tragedy than it would have been at an earlier stage of life.

[56] See further, Bentham, (1823, pp.5-15).

[57] See, Mill, (1972, pp.18-25).

[58] Singer, (1993, p.94).

[59] Ibid., pp.90-91.

taking of life. One must remember that this is a species of utilitarianism. Thus, as Singer adds:

> [e]ven for preference utilitarianism, the wrong done to the person killed is merely one factor to be taken into account, and the preference of the victim could sometimes be outweighed by the preferences of others.[60]

Thus, to take an example of the taking of life in the medical context, active euthanasia, it may be possible to justify such an act both within the model of classical and preference utilitarianism. As Singer argues, a classical utilitarian could claim that since self-conscious beings "are capable of fearing their own death, killing them has effects on others".[61]

However, this will not always hold true. Thus, as Singer observes:

> [t]he classical utilitarian objection does not apply to killing that takes place only with the genuine consent of the person killed. That people are killed under these conditions would have no tendency to spread fear or insecurity, since we have no cause to be fearful of being killed with our own genuine consent. If we do not wish to be killed, we simply do not consent. In fact, the argument from fear points in favour of voluntary euthanasia, for if voluntary euthanasia is not permitted we may, with good cause, be fearful that our deaths will be unnecessarily drawn out and distressing.[62]

Similarly, the claim by the preference utilitarian that the desire of the person to go on living would count as an argument in favour of the prohibition of killing does not hold true in this case either. However:

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[60] Ibid., p.95.

[61] Ibid., p.194.

[62] Ibid.

> [j]ust as preference utilitarianism must count a desire to go on living as a reason against killing, so it must count a desire to die as a reason for killing.[63]

Singer can justify the utilitarian account of the taking of life in this particular context in the following terms:

> although there are reasons for thinking that killing a self-conscious being is normally worse than killing any other kind of being, in the special case of voluntary euthanasia most of these reasons count for euthanasia rather than against. Surprising as this result might at first seem, it really does no more than reflect the fact that what is special about self-conscious beings is that they can know that they exist over time and will, unless they die, continue to exist. Normally this continued existence is fervently desired; when the foreseeable continued existence is dreaded rather than desired however, the desire to die may take the place of the normal desire to live. Thus the case for voluntary euthanasia is arguably much stronger than the cases for non-voluntary euthanasia.[64]

Thus, the issue of the taking of life, on the preference utilitarian view, is quite straightforward in relation to this aspect of medical treatment. However, how for example is a preference utilitarian going to evaluate the position of those beings who are unable to hold preferences? Such beings would include the severely handicapped neonate, the foetus, or perhaps the patient in a persistent vegetative state.

On this point one can begin to see even more fundamental differences between the natural law model of the taking of life and the utilitarian model. More

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[63] Ibid., p.195.

[64] Ibid., pp.195-196.

fundamental in that it adverts to the understanding of the very term life itself. As shall be demonstrated in Chapter Three this definitional difference has proved divisive. The traditional natural view would see all forms of human life including pre-sentient human life as sacred. As a result all taking of life as thus understood is morally 'wrong', except of course for the recognized exceptions to this rule as discussed in the previous section. For a utilitarian such as Singer the definition of the term 'life' is quite different.

Singer makes a distinction between those beings who can have preferences or desires or who can conceive of themselves as distinct entities existing over time. Such beings are given the appellation of persons. A person could thus be described as a sentient human being, for example. What then of those living beings who are not sentient and who do not thus fall into a category of complete personhood?

How is the taking of the lives of such beings to be evaluated under the preference utilitarian model? In approaching this question, Singer takes his cue from Michael Tooley who is one of the foremost advocates of the personhood thesis. According to Tooley there is a direct correlation between the desires or preferences a being is capable of having and the rights that the being can be said to have. Tooley[65] has argued that:

having a right to life presupposes that one is

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[65] Tooley, (1972, pp.37-40).

> capable of desiring to continue existing as a subject of experiences and other mental states. This in turn presupposes both that one has the concept of such a continuing entity and that one believes that one is oneself such an entity. So an entity that lacks such a consciousness of itself as a continuing subject of mental states does not have a right to life.[66]

Tooley is aware of the problems which arise for instance in the case of a sleeping being or an unconscious being:

> [d]oes an individual in such a state have any desires? People do sometimes say that an unconscious individual wants something, but it might be argued that if such talk is not to be simply false it must be interpreted as actually referring to the desires the individual would have if he were now conscious. Consequently, if the analysis of the concept of a right proposed above were correct, it would follow that one does not violate an individual's right if one takes his car, or kills him, while he is asleep.[67]

In a later reformulation of his argument[68] Tooley addressed this problem. He amended his original proposition in relation to those who could hold rights by stating that it is only those beings who have or have had in the past the concept of having a continued existence who can have a right to life. Thus only such beings would have a continued interest in existing. This would allow one to include within the domain of personhood the unconscious or sleeping being.

One can therefore conclude on this basis that if a being is not capable of conceiving of its continued existence, it cannot possess a right to life. Thus,

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[66] Ibid., p.49.

[67] Ibid., p.48.

[68] Tooley, (1983, pp.6-18).

according to Tooley's model, abortion and infanticide would be morally permissible. He does not advocate an unlimited policy of infanticide. He argues that:

> a newborn baby does not possess the concept of a continuing self, any more than a newborn kitten possesses such a concept. If so, infanticide during a time interval shortly after birth must be morally acceptable.[69]

However, Tooley does believe that a line must be drawn, but states that such a process should not be difficult:

> in the vast majority of cases in which infanticide is desirable, its desirability will be apparent within a short time after birth. Since it is virtually certain that an infant at such a stage of its development does not possess a serious right to life, there is excellent reason to believe that infanticide is morally permissible in most cases where it is otherwise desirable. The practical moral problem can thus be satisfactorily handled by choosing some period of time, such as a week after birth, as the interval during which infanticide will be permitted. This interval could then be modified once psychologists have established the point at which a human organism comes to believe that it is a continuing subject of experiences and other mental states.[70]

This view, it will be observed, is antithetical to the natural law view of life as sacred. The concept of life as understood in that model encompasses all biological human life, including the foetus.

In placing an emphasis on the requirement of personhood, one is enabled to argue, as Tooley has done, that the taking of the lives of non-persons is morally justified. As will be seen in subsequent chapters this view will have practical implications for the manner in which

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[69] Tooley, (1972, p.63).

[70] Ibid., p.64.

one approaches the questions of pregnancy termination and treatment withdrawal. On this model, one could argue that the foetus or the patient in a persistent vegetative state are not persons. The above mentioned beings would not fulfil the requirements of personhood and therefore would not possess a right to life. Buchanan has collated the following indicators of personhood, none of which a foetus or a patient in a persistent vegetative state possess:

> (a) the ability to be conscious of oneself as existing over time - as having a past and a future, as well as a present;
> (b) the ability to appreciate reasons for or against acting; being (sometimes) able to inhibit impulses or inclinations when one judges that it would be better not to act on them;
> (c) the ability to engage in purposive sequences of actions.[71]

Thus, the moral status of the being in question is another factor which the utilitarian takes into account in deciding whether the taking of life is morally justified in any particular instance.

Finally, Singer also takes into account the principle of autonomy. Unlike other ethical models such as, for example, the rights model, respect for individual autonomy is not of primordial importance for utilitarians. As Singer observes:

> [u]tilitarians do not respect autonomy for its own sake, although they might give great weight to a person's desire to go on living, either in a preference utilitarian way, or as evidence that the person's life was on the whole a happy one. But if we are preference utilitarians we must allow that a desire to go on living can be outweighed by other desires, and if we are classical utilitarians we must recognise that

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[71] Buchanan, (1988, p.284).

> people may be utterly mistaken in their expectations of happiness. So a utilitarian, in objecting to the killing of a person, cannot place the same stress on autonomy as those who take respect for autonomy as an independent moral principle.[72]

Thus, autonomy is only one factor which is to be weighed in the balance when deciding on the justifiability of the taking of human life under the utilitarian model.

1.4 The Rights Model and the Taking of Life.

The rights-based moral view differs from the natural law view in that the focus is on individual rights rather than duties.[73] According to Dworkin, rights-based models are concerned with:

> the independence rather than the conformity of individual action. They presuppose and protect the value of individual thought and choice.[74]

As Brock has noted:

> [r]ights function differently than duties in that they delineate areas in which the person possessing the right is at liberty to act as he sees fit and to act in his own interest as he understands it, as opposed to delineating specific constraints to which he must conform.[75]

Moreover within the rights model the individual is deemed to be free from interference in the exercise of his right. It could therefore be looked upon as a model which respects above all else the principle of individual autonomy. Thus,

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[72] Singer, (1993, pp.99-100).

[73] Dworkin, (1984, p.171).

[74] Ibid., p.172.

[75] Brock, (1993, p.97).

as Brock observes:

> [r]ights-based views emphasize a view of persons as capable of forming purposes, of making plans, of weighing alternatives according to how well they fulfil those plans and purposes, and of acting on the basis of this deliberation. Rights protect our exercise of these, capacities whose exercise is often associated with the notion of autonomy, independent of how doing so promotes goals specified as valuable.[76]

Applying this model to the question of the taking of life, one can state that an individual has a right to life unless and until he waives that right. However in waiving that right the individual must act voluntarily and be capable of waiving that right. Thus, on a rights analysis the *taking* of life is morally wrong when that life is taken without the right-holder having waived that right.

However, if the right-holder has validly waived his right not to be killed then the rights view will not hold the taking of life in such circumstances to be morally wrong. Brock[77] outlines the possible consequences of applying the rights model by detailing two different scenarios in the medical context. In the first scenario, a patient is suffering from a terminal and incurable disease, as a result of which, he is unable to lead a normal life. He is expected to die from this disease within a year. In addition he has no friends or relatives who care about him. He makes it known that everything be done to keep him alive for as long as possible, despite the expense of this treatment. Due to certain unique features of his condition,

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[76] Ibid.

[77] Ibid., pp.99-100.

if he is killed now it is likely that new medical knowledge will be obtained that will enable the suffering of similar patients to be alleviated.[78] In applying the rights-based model to this scenario, Brock concludes that the taking of the life of this patient would be morally wrong as he has neither waived, forfeited or failed to exercise his right not to be killed.[79]

In the second scenario Brock cites the following facts:

> Smith has terminal, incurable cancer. It completely prevents him from leading a normal life, causes him considerable though not unbearable pain and suffering, and he is expected to die from it in roughly a year. His treatment is expensive, but such that his family can afford it without undue stress. Smith is fully in control of his rational faculties, has given long and serious thought to his situation, and has decided he wants to die because life in his present condition is not worth living. He is unable, in his present situation, to bring about his own death, and requests another... to do so. He will only die if steps directly intended to kill him are taken.[80]

If one were to apply the rights-based model to this case then it would be morally permissible to take Smith's life. This is so because Smith has waived his right not to be killed by asking for his life to be terminated, and is competent so to do.

Therefore, it can be seen that the particular model which one adopts in approaching the topic of the taking of life in the medical context will have a practical bearing

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[78] Ibid., p.99.

[79] Ibid., p.100.

[80] Ibid., p.99.

on the decision arrived at in each particular case. The implications of each of these models for patient autonomy are examined in the chapters which follow.

1.5 The Medicalization of Death.

The genesis of scientific medicine in the nineteenth century prompted the transformation of the process of dying from an individual confrontation with mortality to an increasingly impersonal experience controlled by third parties in the form of health care professionals. The individual no longer took the leading role in this tragedy. Instead, death became the preserve of the professional. The doctor now took the leading role in this battle with the inevitable, with the doctor as hero, death as the villain, and the dying patient now relegated to the role of a mere conduit.

This monumental cultural shift from natural death to technological death has been described by Aries[81] as the move from the 'tame' death to the 'invisible' death. The 'tame' death is seen by Aries as part of a natural process. Death was accepted as part of the cycle of life. Death is expected and accepted. Once the individual knows that his death is near, he does not rail against it but bows to the inevitable. There is no heroic struggle against a powerful enemy. Aries takes as his model of the 'tame' death, the death of the knights of the Round Table. The knights,

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[81] Aries, (1981, pp.5-20).

according to Aries:

> do not die just anyhow. Death is governed by familiar ritual that is willingly described. The common, ordinary death does not come as a surprise, even when it is the accidental result of a wound or the effect of too great an emotion.[82]

This death is marked by certain characteristics. Firstly, it announces its arrival in the form of a sign. Death is impending and cannot be escaped. Thus:

> King Ban has been badly hurt falling off his horse. Ruined, driven from his land and his castle, he runs away with his wife and son. He stops to watch the castle 'which had been his great consolation' burning in the distance. He cannot overcome his grief: 'King Ban thought about these things. He put his hands over his eyes, and a great sorrow seized him and oppressed his heart. He could not shed a tear, his breath stopped, and he fainted. He fell off his palfrey so hard...'
>
> When King Ban regained consciousness, he observed that bright red blood was issuing from his mouth, nose, and ears. 'He looked up at heaven and said as well as he could... O Lord God... help me, for I see and I know that my end has come'. <u>I see and I know</u>.[83]

Once the individual has been made aware of his impending death a routine ritual took place. What Aries describes as the 'familiar simplicity' of this routine is the second characteristic of the 'tame' death. The individual, forewarned of his death, now goes about the uncomplicated process of dying:

> [a]fter the regret for life, the dying man of the Middle Ages goes on to perform the customary rites: he asks forgiveness of his friends, takes his leave of them, and commends them to God.[84]

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[82] Ibid., p.6.

[83] Ibid.

[84] Ibid., p.16.

The third characteristic of the 'tame' death is the public character of such a way of dying. Death is viewed as a shared experience. The actor does not die alone in a hospital room. Rather, as Aries points out:

> [d]eath was always public. Hence the profound significance of Pascal's remark that one dies alone, for at that time one was never physically alone at the moment of death. Today his statement has lost its impact, for one has a very good chance of literally dying alone, in a hospital room.[85]

The dying of the individual was thus a communal experience.

Thus, death was ritualized, routinized and a collective experience:

> [t]he social group had been stricken by death, and it had reacted collectively, starting with the immediate family and extending to a wider circle of relatives and acquaintances. Not only did everyone die in public... but the death of each person was a public event that moved, literally and figuratively, society as a whole. It was not only an individual who was disappearing, but society itself that had been wounded and that had to be healed.[86]

This model of death and dying was applicable in Ireland until relatively recent times.[87] However, today the tradition of 'waking' the dead has all but disappeared. This development has been ascribed variously to opposition from the Roman Catholic clergy[88] and the growth of the commercialisation of death in the shape of the professional

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[85] Ibid., p.19.

[86] Ibid., p.559.

[87] See further, Sheehy, (1994, pp.494-503).

[88] See, O'Suilleabhain, (1976, pp.1-12).

mortician.[89] Sheehy has outlined the advantages for the wider society in adhering to the model of the 'tame' death. The advantages accrue both to the bereaved and to the wider societal group:

> [f]or the bereaved, traditional mourning rites and practices of bereavement constitute a socially sanctioned and meaningful way of externalising the grief, frustration, anxiety and related responses experienced on the death of another. For the social group, it ensures that the psychologically disturbed state of the individual is rendered less harmful for the integrity of the ongoing social order by permitting the bereaved person to indulge in what would otherwise be viewed as 'deviant' or unacceptable behaviour.[90]

Sheehy also notes that Irish culture has adopted a model of life as being endowed by a spiritual agent. Certain stages in the life of an individual are of marked symbolic importance. There exists a natural cycle whereby life is regarded as coming from a sacred source, only to return to that source when life ends.

> Irish culture shares with many others a view that the life of an individual consists of a progression from a sacred, through a secular, to a sacred realm once more... Fundamental life crises have been ritualised in religion to a point where the primary ones are raised to the importance of highly significant social and spiritual events. Within Roman Catholic doctrine, for instance, five of the seven sacraments relate directly to times of transition in the life cycle...
>
> The ecclesiastic authority and symbolic role of the priest in the performance of these rituals is considerable. The part he plays and the symbols he manipulates are of the highest religious importance, since he validates the 'passage rites' with the absolute power of divine presence. In this way, the divine elements

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[89] See, Sheehy, (1994, p.500).

[90] Ibid., p.503.

validate significant transitions, including death, through the social order.[91]

The secularisation of Irish society in recent times does not appear to have weakened the desire of individuals to engage in death ritual, albeit in a less intense manner than heretofore. Thus, as Sheehy concludes:

> [t]he secularisation of Irish society and the commensurate weakening of institutionalised religion has changed the content and performance of death ritual but appears not to have diminished a commitment to it. The symbolic rites which integrate the culture of the living with the immutable ancestral culture of the dead... provide part of a social contract among the living in which death is given meaning through a reassurance of continued existence after dying, within the cultural and spiritual lineage of the dead and the vitality of the surviving order.[92]

The second model of death put forward by Aries is that of the 'invisible' death of contemporary society. This is the way we die today, intubated, unconscious in a hospital bed, divorced from our community. Death is viewed almost as a stigma, an evil to be avoided at all costs. This death has been facilitated by the advances in medical technology whereby the medical professional strives to overcome the reality of death using a technological armoury. This is the death which has brought in its wake the increased interest of the legal actor, whether it be the courts in deciding whether a patient in a persistent vegetative state should be allowed to die or the legislature in introducing statutes to define death in a legal sense. Thus, as Aries sees it, the <u>locus</u> of death has been shifted from the home

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[91] Ibid., p.502.

[92] Ibid., pp.505-506.

to the hospital, and with this geographical shift has come a shift in our conception of death:

> [b]y a swift and imperceptible transition someone who was dying came to be treated like someone recovering from major surgery. This is why, especially in the cities, people stopped dying at home...
>
> The time of death can be lengthened to suit the doctor. The doctor cannot eliminate death, but he can control its duration, from the few hours it once was, to several days, weeks, months, or even years...
>
> Sometimes this prolonging of life becomes an end in itself, and hospital personnel refuse to discontinue the treatments that maintain an artificial life.[93]

The medicalization of death is the first step towards the need for legal intervention in this area. In the days of the 'tame' death it was quite straightforward. The individual died in the bosom of his community free from the interventions of third parties who used his body as a battleground in their war against mortality. Now, medicine has the ability to postpone the moment of death. This development has been accompanied by myriad legal complications which have brought the patient into another alien environment, that of the courtroom. Now that one can determine death by measuring brain waves, one has had to redefine death. Now that people live longer due to advances in disease control death does not come swiftly but is often slow and lingering. This leads to individuals asking to be relieved of this burden through active euthanasia or physician-assisted suicide. But is this not murder in the eyes of the law? Now that artificial respiration can keep

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[93] Aries, (1981, pp.584-585).

accident victims alive indefinitely, the problem of when such intervention should cease arises. Is such cessation of treatment illegal? Death has been taken out of the hands of the dying. Instead as Aries has put it:

> [d]eath no longer belongs to the dying man, who is first irresponsible, later unconscious, nor to the family, who are convinced of their inadequacy. Death is regulated and organized by bureaucrats whose competence and humanity cannot prevent them from treating death as their 'thing', a thing that must bother them as little as possible in the general interest.[94]

1.6 The Legal Appropriation of Death.

As adverted to in the preceding section, with the medicalization of death came attendant legal problems. The focus of inquiry came to be placed on the surrounding circumstances of the actor's death rather than on the issue of death itself. It was no longer a simple question of knowing that you were about to die and accepting it calmly. Now that his destiny was in the hands of the medical profession it did not matter largely what the individual thought or knew, the medical professional always knew better. If an individual or a family tried to assert their independence in the matter by expressing a desire to be relieved of this prolonged life sentence, they were plunged into the even more clinical world of the legal professional. Despite the fact that the individual was employing the law as a means of obtaining what had previously been his death-right, the law further reified

[94] Ibid., p.588.

the individual. The locus was shifted to the even more alien and impersonal environment of the courtroom and the gap between the individual and his death was further widened by legal bureaucracy. The individual's access to his own death had now to be secured through the instrumentality of legal actors making death an even more impersonal and remote experience. Even though the law was establishing a right to die, one must ask oneself two questions. Why did one, in the age of medicalized death, have to establish a right which had heretofore been well established in a cultural sense? Secondly why was the legal process used to secure this right?

These questions may sound rather basic but they conceal far more than they reveal about the nature of individual autonomy in the context of medical death and the role of law in society. We can answer these questions superficially by saying that in such a case there is a conflict of values and opinions and that in such a conflictual situation the natural adjudicator is the judge. However, this does not answer the question of why in a society which values individual autonomy, the individual has become so alienated from his body that he can no longer control his own death. Nor does it answer the question of the true role of law in society. Should law in effect be concerned with intervening in a conflict so fundamental to individual autonomy as control over one's own life or death? In an ideal society the answer would be clear, the individual should be allowed to die naturally without the

vain intervention of technology. However, we do not live in an ideal society and issues even as fundamental as this must be dealt with by surrogates, in this case the legal actors, rather than the individual himself. In turn, the way in which law and policy actors deal with such issues is informed by the particular moral view which they hold, thus further clouding what was hitherto a simple issue.

Daniel Callahan[95] has attempted to place this conundrum in a legal perspective. He picks up the gauntlet offered by Aries of whether it is possible ever to return to the model of the 'tame' death?[96] Callahan while not altogether disagreeing with the way in which the law was used to (re)establish a right to die, is not at the same time, altogether happy with this approach. He believes that:

> we have discovered in the language of choice and rights still another kind of evasion... Faced with the possibility of going in different directions with death in the nineteen sixties and nineteen seventies, we collectively chose to add still another barrier between ourselves and a steady look at death; we chose 'choice' about death, rather than death itself, as the new, supposedly liberating focus. This was, at the time, a perfectly reasonable response. Many people were in fact being denied a right to have treatment terminated, and a corrective was needed. It also served most effectively to stimulate public interest and discussion.
>
> Death was, in a sense, taken out of the

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[95] Callahan, (1993, pp.11-22).

[96] Aries, (1974, p.107), posed the following question:

> [m]ust we take for granted that it is impossible for our technological culture ever to regain the naive confidence in destiny which had for so long been shown by simple men when dying?

> closet. But instead of being put forward for common thought and probing, it was put into the courtroom, turned into a matter of grand human rights.[97]

Callahan instead calls for a different response to the problem. Instead of placing the solution entirely in the hands of the law, cognisance must be taken of other aspects of society such as morality and cultural values. He thus points out that:

> there is an ever-present hazard in a culture that too easily mistakes the limited purpose of law for the broader and deeper demands of morality. It is that the aim of overcoming obstacles to choice to make way for meaning will be taken as the end of the matter, the latter task forgotten and slighted, culturally starved of the means of sustenance.[98]

Callahan proposes that the establishment of legal rights in the area of death is but a tiny contribution to the overall resolution of the problem. He is arguing for a context or a backdrop against which these rights can be exercised. He wants such rights to be "undergirded by rich cultural and moral resources, and incentives to exercise that right wisely".[99]

He is, in effect, arguing for the reinstatement of some form of moral <u>coda</u> in society which gives, in his terms, another dimension to choices about death and dying. This dimension is the moral dimension. He notes that in abandoning the collective idea of a common destiny typical of the era of the 'tame' death, we have robbed death of its

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[97] Callahan, (1993, p.35).

[98] Ibid., p.36.

[99] Ibid.

cultural significance and have been unable to find an enduring replacement. Thus, he claims:

> we do not have the shared sense of destiny that Phillipe Aries identified as central to the possibility of a tame death in an earlier time. We have tried, to be sure, to find substitutes, but in each case they turn out to be ways of better mastering and controlling death, not of finding a common way to seek and share its meaning and accept its inevitability.[100]

Callahan acknowledges that it may be rather difficult to return to such a model but urges that we at least try. He sees a need to re-evaluate the medical interpretation of death, to divest ourselves of what he terms 'technological monism', by which he means:

> the tendency to erase the difference between human action as a cause of what happens in the world, and independent, natural biological processes, those old-fashioned causes of disease and death.[101]

It is in this idea of 'technological monism' that we can begin to see the reason why law has become increasingly involved in the treatment of the dying. The move from seeing nature as the culpable party in the death of the individual to seeing the individual medical actor as culpable, has inevitably brought law, with its ideas of fault and responsibility, into the scenario. As Callahan puts it:

> [w]here once we human beings as moral agents stood helpless in the face of nature, whose workings were outside the range of our responsibility, now everything is in some sense thought to be our responsibility. Causality and culpability have been collapsed together. The

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[100] Ibid., p.225.

[101] Ibid., p.67.

> doctor who cannot save a patient faults her lack of skill, or medicine's lack of a cure; it might have been otherwise. The nurse who watches a feeding tube removed from a hopelessly ill patient thinks the patient is being killed by the removal, not by the disease that made the tube necessary. The euthanasia advocate holds that, by our adherence to a fictitious notion of 'allowing to die' from an underlying disease, we wilfully condemn a patient to needless suffering; direct killing would be more merciful, and the act of killing no different in any case from that of allowing to die. The euthanasia opponent, wary of badly motivated people using nature and its ways as an excuse, comes to see culpability in the movement to make allowing to die easier.[102]

On this analysis it can be seen that the move from the 'tame' death to the invisible or medicalized death has brought with it the need for greater legal involvement in the dying process.

The involvement of the law is twofold. Firstly there is the intervention of constitutional law with its notions of individual rights. This is used to establish within the new model of death a right to die, employing terms such as a right to privacy or autonomy or choice. Secondly there is the intervention of the criminal law, with its notions of fault and responsibility. This is used to regulate the behaviour of the individual medical actor, based on the premise that it is the actions of the medical actor, and not the disease as was previously the case, which cause the death of the individual patient. The thesis examines the way in which law intervenes in the medical treatment of death and dying in order to establish whether, and to what extent, such intervention is either necessary or effective.

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[102] Ibid.

Should we merely view death as a question of rights or is there some other way in which the conflict between a 'tame' death and medical intervention can be resolved? Moreover, is the intervention of the criminal law in this area based on a mistaken premise? Is there any need for such intervention in the area of medical treatment? If not, what alternative models should be applied? In addition it will be necessary to analyse the various practical ramifications of the theoretical models which have informed the legal debate on the taking of life to date, with a view to testing their validity and the contribution, if any, which they can make to the resolution of the problem.

CHAPTER TWO: WHAT IS DEATH? - DEFINITIONS AND THEIR CONSEQUENCES.

> Medical judgments are informed by philosophical presuppositions, whether or not the latter are explicitly formulated. The diagnosis of any illness may be clinical and empirical, but it would be lacking in significance if there were no underlying concepts of health and disease. Whether a patient is classified dead or alive depends on our understanding of the relevant concept of death.[1]

2.0 Introduction.

Death as a cultural phenomenon has changed in nature, as has been discussed in Chapter One. This chapter surveys the parallel shift in the legal nature of death. The medicalization of death has had profound implications for the way in which death is perceived. One of these implications has been the increasing involvement of the law in shaping the definitional boundaries of death. Why has the law played such an instrumental role in the definition of what was previously a natural process? Is the legal interpretation of death the correct one? In defining death, is law confirming an agreed understanding of death or is it providing a particular interpretation which is not shared by the wider society? This chapter is an attempt to examine the limits of legal language in defining a cultural concept, over which there is no common accord.

This discourse on the meaning of death is not without

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[1] Lamb, (1988, p.9).

practical importance. As will be seen in this chapter the area of organ transplantation is affected to a greater or lesser degree by the manner in which we choose to interpret death. As one leading commentator on this aspect of medical practice has stated:

> [t]he history of the determination of death on the basis of the condition of the brain has been interconnected with the history of organ transplantation. Any explanation of the former requires some familiarity with the latter. The connection, which was established historically, retains considerable contemporary relevance and it is likely that the determination of death and organ transplantation will remain intertwined in the future.[2]

2.1 Beginnings and Ends - Definitional Boundaries on Death.

The concept of death has always been the subject of varied interpretation. The debate over the exact point at which a person can be regarded as dead is not one which has emerged as a result of the introduction of new medical techniques and technology such as organ transplants and artificial ventilation. Rather, the debate in contemporary society on the idea of death tends to focus on these areas, as they provide graphic illustrations of the need to define a satisfactory concept of death.

The debate about the determination of human life has been an ongoing one which may not even today have generated a satisfactory response or a response which is acceptable to all the participants in this debate. One would be

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[2] McCullagh, (1993, p.1), but see, contra, Lamb, (1993, p.209).

mistaken in thinking that the diagnosis of death has always been a medical function. Indeed in the classical period the physician's role in relation to the terminally ill or dying patient was to inform the patient and next-of-kin of the prognosis of death. This role did not extend to the need to actually diagnose the death of the patient when that eventuality transpired or indeed to certify this death.[3] However, on the theoretical plane, the classical physician tended to the opinion that the heart was the organ which was of greatest significance in determining the death of the individual. Thus, the dividing line between the states of living and death was heartbeat.[4]

The traditional approach to defining biological death was based on the irretrievable cessation of heart and lung function. However, there were those who questioned this approach. Thus, certain commentators believed that the only certain indicator of death was putrefaction.[5] Another concern of many writers and thinkers in the period to the nineteenth century was the phenomenon of premature burial.[6] This fear seemed to reach a height of intensity after the discovery of artificial respiration in the eighteenth century.[7] The idea that one could be revived from the seemingly irretrievable state of death alarmed many.

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[3] See further, Robbins, (1970, pp.282-283).

[4] See, Ackerknecht, (1968, pp.19-21).

[5] See further, Garrison, (1929, p.272).

[6] See further, Aries, (1981, pp.376-378).

[7] See for example, Winslow, (1748, pp.1-10).

However, this fear was to a large extent dissipated by the latter part of the nineteenth century by advances in medical technology. One of the most important developments was the introduction of the stethoscope in 1819.[8] This enabled the physician to detect with greater certainty heart and lung activity. The introduction of technology into medical practice was to have profound implications for the way in which death was perceived.

2.2 Advances in Medical Technology and the Definition of Death.

The development of artificial respirators in the nineteen fifties led to a need to amend pre-existing notions of death. This development led to the medical professional being able to keep the body alive even though brain function had ceased. Thus, if such an individual were to be judged on the existing heart-lung criterion of diagnosing death, he would be regarded as being alive. A new definition of death was thus needed to provide for this eventuality.

The development of a definition of death based on brain function began in France in 1959[9] when two neurologists wrote of the coma depasse. In this state, the patient was in an irreversible coma and had lost the capacity to breathe. The patient can continue to live in

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[8] See further, Reiser, (1981, pp.20-32).

[9] Mollaret and Goulon, (1959, pp.3-6).

this condition only with the aid of an artificial ventilator. However, outside France the idea of coma depasse gained little acceptance. It was not until 1968 that the English speaking world began to recognise the use of brain function as a means of diagnosing death.[10] The Harvard criteria for brain death were the absence of cerebral responsiveness; the absence of induced or spontaneous movement; the absence of spontaneous respiration and the absence of brain-stem and deep tendon reflexes. Thus, the traditional heart-lung criterion of death came to be superseded by the whole brain criterion of death as set out in the Harvard Report. The idea of whole brain death takes into account the functions of both the higher and lower brain. The higher brain or cerebrum controls consciousness, thought, language, memory and feeling. The lower brain or brain-stem controls functions such as temperature, respiration and blood pressure. The Report recommended that, except in cases involving hypothermia and the use of depressant drugs, death is to be declared when the patient exhibits unreceptivity and unresponsiveness; no spontaneous movements or breathing and no reflexes. Such tests should be repeated after a period of twenty-four hours had elapsed.[11]

In the wake of the Harvard Report states in the United States began to formulate statutory definitions of death based on the whole brain death formulation. The state of

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[10] Beecher, (1968, pp.337-338).

[11] Ibid.

Kansas was the first state to introduce such legislation in 1970.[12] This statute however, did not replace the former cardio-respiratory definition of death but rather provided alternative definitions. In other words the Kansas statute did not come down firmly on either the side of the traditional definition of death or on the side of the whole brain death formulation. It provided that a person may be pronounced dead for legal and medical purposes if:

> (i)... based on ordinary standards of medical practice, there is the absence of spontaneous respiratory and cardiac function and, because of the disease or condition which caused, directly or indirectly, these functions to cease, or because of the passage of time since these functions ceased, attempts at resuscitation are considered hopeless; and, in this event, death will have occurred at the time these functions ceased; or
> (ii) if... there is the absence of spontaneous brain function; and if based on ordinary standards of medical practice, during reasonable attempts to either maintain or restore spontaneous circulatory or respiratory function in the absence of aforesaid brain function, it appears that further attempts at resuscitation or supportive maintenance will not succeed, death will have occurred at the time these conditions first coincide. Death is to be pronounced before artificial means of supporting respiratory and circulatory function are terminated and before any vital organ is removed for the purposes of transplantation.

The statute has been the subject of a number of criticisms. Ian Kennedy in 1971[13] argued that under the Kansas statute an individual may be deemed to be simultaneously dead and alive. This stems from the apparent connection between the diagnosis of death and organ

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[12] Determination of Death Act 1970, Kansas Session Laws Ch. 378 (1970).

[13] See, Kennedy, (1971, pp.946-947).

transplantation in the Kansas statute. This point was further developed by Capron and Kass who stated that although:

> there is nothing in the Act itself to indicate that physicians will be less concerned with safeguarding the health of potential organ donors, the purposes for which the Act was passed are not hard to decipher, and they do little to inspire the average patient with confidence that his welfare (including his not being prematurely declared dead) is of as great concern to medicine and the [s]tate of Kansas as is the facilitation of organ transplantation... One hopes that the form the statute takes does not reflect a conclusion on the part of the Kansas legislature that death occurs at two distinct points during the process of dying. Yet this inference can be derived from the Act, leaving open the prospect that X at a certain stage in the process of dying can be pronounced dead, whereas Y, having arrived at the same point, is not said to be dead.[14]

As a result of their dissatisfaction with the existing statutory definitions of death, Capron and Kass proposed a single concept of death which provided that:

> [a] person will be considered dead if in the announced opinion of a physician, based on ordinary standards of medical practice, he has experienced an irreversible cessation of spontaneous respiratory and circulatory functions. In the event that artificial means of support preclude a determination that these functions have ceased, a person will be considered dead if in the announced opinion of a physician, based on ordinary standards of medical practice, he has experienced an irreversible cessation of spontaneous brain functions. Death will have occurred at the time when the relevant functions ceased.[15]

The Capron-Kass proposal does not contain alternative definitions of death, as was the case in the Kansas

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[14] Capron and Kass, (1972, pp.579-580).

[15] Ibid., p.580.

statute. Instead it proposes two sets of criteria which they claim are "predicated upon the single phenomenon of death".[16]

Thus, if it is possible to base the diagnosis of death on cardio-respiratory criteria this will suffice, but if this is not possible due to a patient receiving artificial ventilation, then brain activity shall be used as the relevant indicator. They rationalise this by stating that the proposal:

> does not leave to arbitrary decision a choice between two apparently equal yet different 'alternative definitions of death'. Rather, its second standard is applicable only when 'artificial means of support preclude' use of the first. It does not establish a separate kind of death, called 'brain death'. In other words, the proposed law would provide two standards gauged by different functions, for measuring different manifestations of the same phenomenon. If cardiac and pulmonary functions have ceased, brain functions cannot continue; if there is no brain activity and respiration has to be maintained artificially, the same state (death) exists.[17]

This model statute as conceived by Capron and Kass was subsequently adopted by the state legislatures of a number of American states including Michigan,[18] West Virginia,[19]

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[16] Ibid., p.581.

[17] Ibid.

[18] Determination of Death Act 1975, Michigan Compiled Laws section 336.8b (1975).

[19] Determination of Death Act 1975, West Virginia Code section 16-19-1c (1975), later replaced by the model outlined in the Uniform Brain Death Act 1978, 12 Uniform Laws Annotated 17 (Supp. 1985), Uniform Brain Death Act 1980, West Virginia Code sections 16-10-1 to 16-10-3 (1980).

Louisiana,[20] Iowa[21] and Montana.[22]

A further important development in the legal definition of death came about as a result of the publication in 1981 of a Report compiled by the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research.[23] Included in the Commission's Report was a proposed Uniform Determination of Death Act 1980[24] which stated that:

> [a]n individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions, or (2)irreversible cessation of all functions of the entire brain, including the brain-stem, is dead. A determination of death must be made in accordance with accepted medical standards.[25]

The model proposed is similar to the Capron-Kass model in that it provides for both the traditional cardio-respiratory criterion for death as well as for the whole brain formulation. The Commission justified the retention

[20] Determination of Death Act 1976, Louisiana Revised Statutes Annotated section 9:111 (1976).

[21] Determination of Death Act 1976, Iowa Code Annotated section 702.8 (1976).

[22] Determination of Death Act 1977, Montana Session Laws Ch. 377 (1977), later replaced by the model outlined in the Uniform Determination of Death Act 1980, 12 Uniform Laws Annotated 271 (Supp. 1985), Uniform Determination of Death Act 1983, Montana Revised Code Annotated section 50-22-101 (1983).

[23] President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, (1981, pp.1-2).

[24] 12 Uniform Laws Annotated 271 (Supp. 1985).

[25] President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, (1981, p.2).

of the heart-lung standard in the following manner:

> [t]he conservative nature of the reform here proposed will be more apparent if the statute refers explicitly to the existing cardio-pulmonary standard for the determination of death. The brain-based standard is, after all, merely supplementary to the older standard, which will continue to be adequate in the overwhelming majority of cases in the foreseeable future. Indeed, of all the hospital deaths at four acute hospitals in the Commission's survey, only about eight per cent could have been declared dead by neurological criteria prior to cardiac arrest. The study clearly illustrates that the use of cardio-pulmonary criteria predominates. In the first place, the brain-based criteria are relevant only to a limited patient population (i.e. comatose patients on respirators). Even among this population, only one-fourth of those who died at the four acute centres in the Commission's study met the brain-based criteria before meeting the cardio-pulmonary standard.[26]

Nonetheless, this compromise, it may be argued, detracts from the theoretical soundness of the report. Thus, the problem remains, that there exists more than one criterion for defining death. This leads to a situation which is fraught with both theoretical and practical problems. In defining death, surely, clarity should be the primordial requirement. Allowing two standards to co-exist is hardly a precursor to intellectual clarity. Why did the Commission choose this far from satisfactory route? The justification proffered by the Commission was that:

> 'whole brain' signs of life and death are less well comprehended by non-specialists... The heart and lungs move when they work; the brain does not. Thus, since any incorporation of brain-oriented standards into the law necessarily changes somewhat the type of measures permitted, a statute will be more acceptable the less it

[26] Ibid., p.59.

otherwise changes legal rules.[27]

This seems to suggest that the Commission was aiming for the lowest common denominator in arriving at a formulation of death. However, in attempting to define death in terms which the average American citizen can understand, one is leaving all scientific method at the door. Why should the Commission go to such lengths to produce a formulation of death which was susceptible to easy understanding? Rather, should not the legal definition of death be based on the latest and most accurate scientific formulations of the diagnosis of death? In general, if one were only to formulate legislation on the premise that it must be readily understandable to the average citizen then many pieces of necessarily complex legislation would never be adopted. This is not an elitist argument of the variety that only lawyers should understand the law, but rather a recognition that in many areas of legal regulation it is necessary to introduce legislation based on complex scientific and technical issues.

Lamb believes that the Commission by defining death in such terms has created a situation where:

> an outmoded concept of death is promoted for legal pragmatic purposes rather than out of a desire for conformity with theoretical and clinical requirements. It may be the case that a peasant community in the backwoods will not have access to mechanical ventilation and cardiac resuscitation facilities and that, for all practical purposes, death is inevitable with the onset of irreversible cardio-respiratory arrest. But the death of the organism as a whole does not occur, either in the backwoods or in the most

[27] Ibid., pp.58-59.

> expensively equipped university hospital, until the brain, the critical system, is no longer capable of integrating the vital subsystems.[28]

However, the model statute as outlined by the Commission has not been the subject of universal criticism. Indeed, a number of states in the United States have adopted this model statute in state legislation governing the diagnosis of death.[29] Thus, while the whole brain death formulation has been accepted in legislation, it is as an adjunct to the traditional heart-lung definition of death. This perhaps reflects an unwillingness on the part of legislators to adopt a more radical approach to the definition of death which reflects actual advances in medical technology. A more radical approach of adopting a sole criterion of death based on brain function has been advocated by a number of commentators. These proposals shall now be examined.

In 1975, the American Bar Association adopted a single definition of death based on brain function which stated:

> [f]or all legal purposes, a human body with irreversible cessation of total brain function, according to usual and customary standards of medical practice, shall be considered dead.[30]

Other bodies in the United States have advocated a single whole brain definition of death. In 1978, the National Conference of Commissioners on Uniform State Laws proposed

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[28] Lamb, (1988, p.27).

[29] See further, Smith, (1986, pp.850-888).

[30] See, Anonymous, (1975, p.463).

the Uniform Brain Death Act 1978.[31] This model statute provides that:

> [f]or legal and medical purposes, an individual who has sustained irreversible cessation of all functioning of the brain, including the brain-stem, is dead. A determination under this section must be made in accordance with reasonable medical standards.[32]

This proposal was subsequently adopted by the state of West Virginia in its statute pertaining to the definition of death.[33] Similarly, in Canada, the Law Reform Commission[34] recommended a definition of death based solely on the irreversible cessation of all brain functions.

The advantage of such definitions lies in their conceptual clarity. Rather than adopting the compromise solution of the President's Commission, these definitions recognise the scientific reality of the phenomenon of death. As *Culver* and *Gert*[35] *have observed:*

> [t]hroughout history, whenever a physician was called to ascertain the occurrence of death, his examination included the following important signs indicative of permanent loss of functioning of the whole brain: unresponsivity; lack of spontaneous movements including breathing; and absence of pupillary light response. Only one important sign, lack of heartbeat, was not directly indicative of whole brain destruction. But since the heartbeat stops within several minutes of apnoea, permanent absence of the vital signs is an important sign of permanent loss of

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[31] 12 Uniform Laws Annotated 17 (Supp. 1985).

[32] Section 1.

[33] Uniform Brain Death Act 1980, West Virginia Code sections 16-10-1 to 16-10-3 (1980).

[34] Law Reform Commission of Canada, The, (1981, pp.3-7).

[35] Culver and Gert, (1982, pp.187-194).

> whole brain functioning. Thus, in an important sense, permanent loss of whole brain functioning has always been the underlying criterion of death.[36]

As a consequence, Culver and Gert draw a distinction between the criteria for determining death, that is, when the brain is dead, and tests which predict death, for example, the irreversible cessation of heart and lung functions.[37] This argument is supported by Lamb when he states that:

> [i]t is necessary to recognise (1) that the concept of brain death does not represent a new way of being dead; (2) that the concept of death does not lend itself to antithetical criteria, and (3) that there is only one way of being dead and that is when the brain is dead. Tests for spontaneous cessation of cardio-respiratory functions are consequently only predictive of death. They amount to a necessary, but not sufficient, indicator of death.[38]

Green and Wikler[39] point out that what is at issue is not whether the person is dead or not but whether the person in such a state should be kept alive. They argue that there

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[36] Ibid., p.187.

[37] Ibid., p.194. See in addition, Bernat, Culver and Gert, (1981, p.393), wherein they state:

> [a] person will be considered dead if in the announced opinion of a physician, based on ordinary standards of medical practice, he has experienced an irreversible cessation of all brain functions. Irreversible cessation of spontaneous respiratory and circulatory functions shall be considered sufficient proof for the irreversible cessation of brain functions in the absence of any medical evidence to the contrary. Death will have occurred at the time when brain functions have irreversibly ceased.

[38] Lamb, (1988, p.30).

[39] Green and Wikler, (1980, pp.105-117).

is:

> little real argument of any kind for regarding the brain dead as dead...
>
> We have only to realize that the moment of pulling the plug need not be the moment of death to see that defining death is a different job from deciding when it is best to remove life-support systems. The heart-lung definition of death did not, and could not, itself, have required pointless maintenance of the brain dead. That severe prescription emerges only when we add the premise that the living must not be abandoned. What the moral arguments show, then, is not that the brain dead are dead but that the brain dead need not be cared for. The moral argument addresses a moral issue which is, unfortunately confused by many with the task of defining death.[40]

However, this is not to say that a singular whole brain definition is the definitive answer to the problem of defining death. The whole brain definition has been subjected to criticism from two opposing camps. On the one hand are those who believe it is too radical and, on the other, are those who believe that it does not go far enough.

Those who object to the complete abandonment of the traditional model of diagnosis of death in favour of a sole criterion based on whole brain death do so for a variety of reasons.

The Mind-Body Dualism Objection.

There are those who believe that the concentration on brain activity as the basis for the diagnosis of death is rather too reductionist as it denies, in their view, the

[40] Ibid., pp.116-117.

importance of the rest of the body to human identity. These commentators state that such a position creates a division or dualism of the cerebral and corporeal aspects of the human being. Hans Jonas,[41] for example, argues that:

> [m]y identity is the identity of the whole organism, even if the higher functions of personhood are seated in the brain. How else could a man love a woman and not merely her brains? How else could we lose ourselves in the aspect of the face? Be touched by the delicacy of a frame? It's this person's and no one else's. Therefore, the body of the comatose, so long as - even with the help of art - it still breathes, pulses, and functions otherwise, must still be considered a residual continuance of the subject that loved and was loved, and as such is still entitled to some of the sacrosanctity accorded to such a subject by the laws of God and men.[42]

Similarly, Grisez and Boyle proceed on the premise that mind-body dualism is false. They conclude that:

> human activities, including those which seem most distinctively personal, those which no one denies to be intrinsic constituents of human flourishing, are not separate from a person's life. Life is not a characteristic of one part of a whole, and these activities properties of some other part of it. Rather, life pervades these activities or they lack reality - unless one supposes them to have reality altogether apart from the living body one also calls 'mine'. And one's human life includes one's activities. They perfect oneself, but they are not distinct from one's life as an end is distinct from an instrument used to realize it.[43]

On this view, the body and the mind are inextricably intertwined and the death of only one part of the human

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[41] See, Jonas, (1974, pp.135-140).

[42] Ibid., p.139.

[43] Grisez and Boyle, (1979, pp.377-378).

body is not consistent with the death of the person.[44] This view is the antithesis of the Cartesian conception of the human body and the human mind being distinct entities. The Cartesian claims that the pure mind or consciousness maintains the body during life. On this view, at death, the pure mind or soul survives the body.[45] The Cartesian view is not accepted by many religions, including Judaism, Islam and Christianity[46] which see mind and body as indivisible.

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[44] But see, contra, Stacy, (1992, pp.516-517), where he states that:

> [o]ne must recognize the inherent limits of this criticism. This criticism cannot mean that a consciousness-based concept of death renders the body irrelevant. Because certain bodily functions, including 'extracerebral' functions, are necessary to sustain consciousness, a consciousness-based concept requires the death of certain crucial aspects of the body. Even under the heart-centred definition of death that Jonas defends death still occurs though biological activity persists for some time. Both heart-centred and consciousness-centred definitions require the death of only certain aspects of the body. They merely select different aspects.

[45] See further, Cohen, (1984, pp.7-27) and Spicker, (1970, pp.3-23).

[46] See for example, Lamb, (1988, p.58), where he observes:

> [i]n this case, however, it is not necessary to engage in conflict with the major religious movements. Brain-related criteria for death are only crudely reductionist if it is insisted that the person is nothing more than his brain. Obviously there is more to a person than a brain. But to say that a person will not be unless endowed with a brain is not to say that a person is his brain. A person will not be without a head, but we do not say that a person is a head. There is nothing in brain-related criteria for diagnosing death that commits one to

The (Ine)Quality of Life Argument.

Certain writers object to a singular brain-based definition of death as it might lead to certain beings, notably the unconscious, being treated in a less humane fashion than others. They argue that considerations such as quality of life may be used as the basis for rationing treatment. Thus, they might argue, people in a persistent vegetative state or the permanently unconscious may be deprived of life because their life, such as it is, is not considered worth continuing. Thus, for example, Grisez and Boyle lament that:

> [h]uman life in itself no longer has sanctity. What is important is the quality of life, the extent to which an individual's life contributes instrumentally to the attainment and enjoyment of specifically human and personal values. Whenever some human individual's life is not of sufficient quality - whether measured from the individual's own perspective or from the perspective of society or both - that life becomes a disvalue. Such a life is unwanted because it is useless; it is evil because it is unwanted; it must be destroyed because it is evil...
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> It is hard to believe that a society which has committed itself so heavily to social welfare could turn about and systematically seek to limit and reduce the burden of welfare by mass killing. But the legalization is fact. And abortion has been legalized on the basis that the unborn are not persons and can be destroyed if they are unwanted by the women who bear them and by society at large. Others who are unwanted differ but little from the unborn.[47]

This hyperbolic style of writing is symptomatic of

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reductionism. One might even point out that traditional criteria for death never reduced a person to his or her lungs or heart.

[47] Grisez and Boyle, (1979, p.13).

many of the proponents of this argument. Indeed as Stacy points out:

> [m]uch of the criticism of the breadth of the consciousness-based definition comes from opponents of abortion. They find a consciousness-based concept of human life uncongenial because it implies that the foetus is not actual human life earlier in its development... Abortion's opponents desire a concept of life broad enough (and a concept of death narrow enough) to support the conclusion that the foetus is an actual person from the moment of conception.[48]

Thus, the (ine)quality of life, or sanctity of life, argument holds that all human life is inherently valid and should not be terminated. This respect for life is not extended to non-human animals. In effect the proponents of this argument tend to have a particular agenda, the prohibition of abortion and euthanasia. Is this not a little too arbitrary? Is it not even hypocritical that one could, having argued for the protection of all life, then add the exception that such a definition should not include animal life. Grisez and Boyle answer this charge in the following manner:

> [d]rawing the line at this point is not at all unreasonable. As Rawls and others have pointed out, the legal system is made by humans for humans. By it human individuals regulate their relationships to each other so that these relationships reflect not merely the interests which humans share with other animals but the peculiarly human ideals of liberty and justice in which other animals do not participate. Still, to qualify for legal personhood, and to have one's basic rights protected, in particular one's right to life, nothing beyond the common property of species membership can be required, or else the problems of quality which varies by degrees will

[48] Stacy, (1992, p.510).

emerge.[49]

However, it could be argued that by excluding certain species from the category of lives which are deserving of protection the proponents of this argument are guilty of the very selectivity of which they accuse their opponents.

The Slippery Slope Argument.

This argument holds, in the context of defining death, that, if one were to allow a definition of death based solely on the whole brain death criterion then this would just be the beginning of a descent down a slippery slope where the definition would become increasingly narrow. Thus, opponents of this development argue that once whole brain death was accepted then it would only be a short step to a definition of death based on the irreversible function of higher brain function, and eventually certain persons who lacked consciousness such as anencephalic neonates would be included in the scope of the definition. Thus, Kamisar argues:

> [d]oes anyone really believe that if a number of states expanded their definition of 'death' to include permanently unconscious patients, that would be the end of it? Does anybody really doubt that ten or twenty years down the road the definition would be expanded again? The next time around, the definition of 'death' would, at least, embrace elderly incompetent patients who, though in extreme states of disability, are conscious.[50]

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[49] Grisez and Boyle, (1979, pp.237-238).

[50] Kamisar, (1991, p.1232).

However, there are those who believe that the whole brain formulation of death will not lead to a descent down the slippery slope. Thus, Walton states that:

> [b]ecause the case for whole brain death admits of well-established, and widely corroborated criteria, with a clear clinical picture of pathological destruction that irreversibly and inevitably leads to death in a short time, we can see how it is much less open to the slippery slope refutations than the case for cerebral death.[51]

Walton's use of language in the above paragraph has been criticised and exploited by Lamb in arguing against this thesis. Lamb focuses on Walton's reference to the whole brain definition as a state which "irreversibly and inevitably leads to death". He interprets this as meaning:

> that whole brain death is not death, but a state prior to death. Drinking a litre of sulphuric acid will lead inevitably to death. So will leaping out of an aeroplane without a parachute. These are not states of death; they are preludes to death. The point of whole brain formulations is that they are intended to determine the state, not the imminence of death. For this reason the slippery slope argument is highly relevant when applied to the slipshod equating of 'going to die' with 'not going to recover', and 'virtually dead' with 'is dead'. Patients suffering permanent damage to the cerebral hemispheres may not recover, and from some ethical standpoints may be 'virtually dead', but they may not actually be dying, and provided they still possess a viable brain-stem they are certainly not dead.[52]

The slippery slope argument appears to rest on the premise that by allowing, for example, abortion or euthanasia, then society will become increasingly immune to death and suffering to the extent that the value or

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[51] Walton, (1980, p.51).

[52] Lamb, (1988, pp.109-110).

sanctity of life is diminished. However, there are those who believe that this belief is incorrect. Thus, Friedman argues that:

> [a]ll slippery slope arguments rest on some asserted empirical evidence indicating that a future slide is likely... such fears are primarily fuelled by the intuition that where no natural stopping point exists along a continuum the possibility of future encroachment is greater than in cases where a well-defined boundary can be identified. However, this belief is incorrect. The flaw in such reasoning can be demonstrated by examining the bases underlying the slippery slope argument. Part of its strength lies in the linguistic imprecision which necessarily accompanies all legal formulae devised by society. The imprecision may arise either intentionally, unavoidably, or negligently. In any case, the advocate making the slippery slope argument claims that any move from the current state of affairs to the instant case will eventually lead to the danger case because of the inherent looseness in the rule created to address the instant case.[53]

2.3 Beyond Whole Brain Death: Neocortical or Higher Brain Death.

On the other hand, there are those commentators who believe that the diagnosis of death should be based on the irreversible cessation of the functioning of the higher brain. Such a formulation of death is based on the loss of consciousness and cognition in the patient. On this definition, a patient whose brain-stem continues to function but whose higher brain functioning has ceased would be considered to be dead. Thus, for example, patients in a persistent vegetative state could on this standard be

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[53] Friedman, (1990, pp.975-976).

declared dead.[54] Such patients are capable of existing without the aid of a respirator.[55] Yet, as Youngner and Bartlett point out:

> [d]espite the continued ability to spontaneously integrate vegetative functions, a patient who has irreversibly lost the capacity for consciousness and cognition is dead. What remains alive is only a mindless organism.[56]

However, Green and Wikler argue that if the loss of mental capacity which occurs at brain death constitutes death, it

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[54] Smith, (1986, pp.857-858), points out that:

> [a] person may suffer an irreversible loss of consciousness and cognition, the earmarks of higher brain activity, without losing brain-stem functions. Under a neocortical definition, a patient in this non-cognitive persistent vegetative state is dead. The patient would not be considered dead under a whole brain death standard because the brain-stem, the portion of the lower brain that regulates vegetative functions such as breathing, blood pressure, temperature, and neuroendocrine control would continue to function. For example, victims of cardiac or respiratory arrest, asphyxiation, stroke, or head trauma may become neocortically dead but not whole brain dead. This condition can occur when deprivation of circulatory or respiratory functions occurs for a period of time brief enough to spare the brain-stem but long enough to cause permanent damage to the cerebrum. Vegetative patients who are neocortically dead can remain biologically alive with intravenous feeding and antibiotics for much longer periods of time than patients who have sustained whole brain death. Although heart and lung functions typically cease within hours or a few days after whole brain death, cardiopulmonary activities can continue for many years in neocortically dead patients. Karen Ann Quinlan's situation is the most familiar example of this phenomenon.

[55] See further, Jennett and Plum, (1972, pp.734-737).

[56] Youngner and Bartlett, (1983, p.254).

is neither for moral or biological reasons but for ontological reasons.[57] They conclude that:

> a given person ceases to exist with the destruction of whatever processes there are which normally underlie that person's psychological continuity and connectedness. We know these processes are essentially neurological, so that irreversible cessation of upper brain functioning constitutes the death of that person. Whole brain death is also death for persons, but only because whole brain death is partly comprised of upper brain death. Tests for either will be tests for death.[58]

Thus, for Green and Wikler, it is loss of upper brain function which marks the person's death. They also strive to frame an argument which is free from moral premises. They therefore do not engage in an analysis of personhood and whether persons are the only beings who may possess rights. Rather they claim that the:

> most likely account of personal identity serves to show that after brain death the person who entered the hospital has literally ceased to exist. Our claim that the person has died, of course, follows immediately from this. The account of personal identity uses as 'data' determinations of the identities of persons and bodies in certain circumstances, but involves no testing of moral intuitions.[59]

Others, however, are not as morally neutral in their analysis of the issue. Such theorists claim that without consciousness the individual cannot think and choose for himself and as such is unable to function as a person. It has been argued that only those who possess desires and

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[57] Green and Wikler, (1980, p.118).

[58] Ibid., p.127.

[59] Ibid., p.132.

interests may possess rights.[60] Thus, the possession of consciousness and self-awareness allows one to distinguish between persons and human beings. Human beings may be defined as being the issue of a member of the species homo sapiens. As Friedman has observed "persons can be viewed as a subset of humanity".[61]

What distinguishes persons from the generality of humanity is the possession of certain characteristics such as self-awareness and sentience. These characteristics enable persons to have interests and as a result rights. Thus, for example, the patient in a persistent vegetative state would not be capable of having rights per se. As Feinberg has argued:

> [w]hat if, nevertheless, we think of the catatonic schizophrenic and the vegetating patient with irreversible brain damage as absolutely incurable? Can we think of them as possessed of interests and rights too, or is this combination of traits a conceptual impossibility? Shocking as it may at first seem, I am driven unavoidably to the latter view. If redwood trees and rose bushes cannot have rights, neither can incorrigible human vegetables. The trustees who are designated to administer funds for the care of these unfortunates are better understood as mere custodians than as representatives of their interests since these patients no longer have interests. It does not follow that they should not be kept alive as long as possible: that is an open moral question not foreclosed by conceptual analysis. Even if we have duties to keep human vegetables alive they cannot be duties to them. We may be obliged to keep them alive to protect the sensibilities of others, or to foster humanitarian tendencies in ourselves, but we cannot keep them alive for their own good, for they are no longer capable of having a 'good' of their own. Without awareness, expectation,

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[60] See further, Feinberg, (1974, pp.159-184).

[61] Friedman, (1990, p.952).

> belief, desire, aim and purpose, a being *can have* no interests; without interests, he cannot be benefited; without the capacity to be a beneficiary, he can have no rights.[62]

Smith[63] has advocated a move towards a new definition of death based on the loss of higher brain function. He cites the case of vegetative patients who are neocortically dead but are not considered to be dead under the existing whole brain definition. If one were to base the definition of death on the loss of higher brain function, then such patients would be considered dead for legal purposes. This move would have profound implications for the way in which we now deal with the patient in a persistent vegetative state. This model would provide a different solution to the problem of treatment withdrawal for the patient in such a state. As Smith points out:

> [w]hich justification for terminating treatment of the irreversibly unconscious makes more sense: withholding feeding or life-support because the patients are already dead, or terminating therapy to living persons because relatives believe that the patients' lives should end because substitute decision-makers suspect that the patients would have wanted this result...
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> If neocortical death is the death of the human being, however, the 'substituted judgement' test becomes an unnecessary mind trip, a profound leap into the dark work of the permanently insentient. Worse, the current use of the 'substituted judgement' model creates procedural and legal presumptions against withholding or terminating treatment or nourishment. The 'substituted judgement' approach unreasonably burdens families, physicians, and courts with the agonizing decision of whether to 'play God' and 'let the patient die', even though, rightly viewed, human death has already occurred. Finally, the desire to obtain the legal results

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[62] Feinberg, (1974, p.177).

[63] See, Smith, (1986, pp.850-888).

> of death (insurance benefits, inherited property, favourable date of death tax valuations, or remarriage) may motivate relatives or guardians to terminate a patient's biological existence or deliberate precisely as to when death should be doled out.[64]

Smith also saw the implications of this new model of death for organ transplants. He was of the opinion that since a neocortically dead patient could be maintained for years, as opposed to the current situation where a whole brain dead patient could only be maintained for a matter of hours or days, the possibility of being able to obtain an increased supply of useable organs for transplantation purposes arose under the neocortical death model.[65] This would lead to a situation where the patient in a persistent vegetative state who had been declared dead for legal purposes could then be used as an organ transplant resource to be dipped into when necessary. Smith stresses the need for the consent of the relatives of the deceased or the prior consent of the deceased.

2.4 Brain Death and Organ Transplantation.

The question of organ transplantation is often linked to the issue of determination of death, although for ethical purposes the two issues should be regarded as being entirely separate. Nonetheless, it is necessary to explain why these two areas of medical practice are often perceived

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[64] Ibid., pp.871-872.

[65] Ibid., pp.883-885.

to be complementary, and to discuss the practical implications of adopting a particular model of death for the issue of organ transplantation.

Ireland does not have specific legislation in relation to the donation and transplant of human organs. In its absence, the general legal principles which govern the individual's capacity to consent to medical procedures is applicable to this aspect of medical practice. In addition, the Medical Council has adopted articles 13, 14 and 15 of the Principles of Medical Ethics in Europe[66] as a guide to practice in this area. Article 13 provides that in a case where it is impossible to reverse the terminal processes leading to the cessation of a patient's vital functions which are being artificially maintained, doctors will satisfy themselves that death has occurred.

At least two doctors acting independently of each other should take meticulous steps to verify this situation and record their findings in writing. They shall be independent of the team which is to carry out the transplantation. Article 14 provides that doctors removing an organ for transplantation may give particular treatment designed to maintain the condition of that organ. The doctors must also take all practical steps to satisfy themselves that the donor had not expressed an opinion, or left instructions, on the matter either in writing or with his or her family. Article 15 provides that doctors removing organs for transplantation, should take all

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[66] Medical Council, The, (1994, pp.37-38).

practical steps to satisfy themselves that the donor had not expressed an opinion, or left instructions, on the matter either in writing or with his family.

The transplantation of regenerative tissue such as bone marrow and also of blood would appear to be legally valid so long as the donor is capable of giving legally valid consent to the procedure. Thus, the general common law principles in relation to consent to medical treatment are applicable here.[67] However, problems may arise where the donor is not capable of giving consent such as in the case of a cadaver, a foetus, or an anencephalic neonate. This is not to say that the legal rights in each case are the same. The first example raises issues of property rights and the remaining examples raise issues in relation to the giving of consent by proxy.

It must be stated that the development of the brain death standard was not a response to the need to obtain useable organs for transplantation purposes and should not be thought of in such terms.[68] However, the issues have

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[67] See for example, Reibl v Hughes (1980) 114 D.L.R. (3d) 1; Walsh v Family Planning Services Ltd. [1992] 1 I.R. 496.

[68] Lamb, (1993, p.209), points out that:

> [i]n the interests of both scientific accuracy and ethical propriety it is essential to separate questions relating to the need to obtain organs for transplantation from questions related to the conceptual and factual aspects of determining death. Greater demand for more donors is inevitable. Under these circumstances physicians can be subjected to conflicting moral demands when the organs of one patient can be used to save the life of

become mistakenly related, due to the rapid pace of development of transplant science and the use of brain dead patients as sources of organs. The moral question which requires to be answered here is whether in using brain dead patients as organ sources we are respecting the sanctity of those patients' lives or are in fact, as some would argue, hastening their death to obtain much needed bodily parts.

Certain commentators argue, despite evidence to the contrary, that the primary purpose of definitions of death based on brain function is to allow surgeons to obtain more useable organs for the purposes of transplantation surgery. Josef Seifert cogently advances the argument in favour of this proposition. Arguing against the brain death standard for determining death, he advances the following proposition in relation to the presumed relationship between brain death and organ transplantation:

> [i]t is widely recognized that doctors who are interested in transplantations may be easily influenced in their diagnoses of brain death in concrete cases by their own or their colleague's practical purposes.[69]

Having made such a dramatic and grave allegation, Seifert does not attempt to provide documentary evidence of this tendency, nor does he allude to the various ethical guidelines set down by professional medical bodies. Thus,

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another. To avoid potential conflicts between the attending physician and the needs of the transplant team, practices have been consolidated which ensure that the donor's physician should have no role in the transplantation procedure itself.

[69] Seifert, (1993, p.193).

article 13 of the Principles of Medical Ethics in Europe, as discussed above, stipulates that the medical team involved in the diagnosis of death and the transplant team should be entirely separate. Moreover, when new standards for the determination of death were being developed, transplant surgery was still in a relatively experimental phase of development. As Lamb has noted:

> it should be stressed that in the nineteen fifties, long before cardiac transplantation, when renal transplantation was highly experimental, conducted only on genetically identical twins with near total irradiation of the recipient, there were profound ethical discussions concerning the value of ventilation to asystole, when treatment for patients in irreversible apnoeic coma was obviously futile and increasingly gruesome. Advances in resuscitative technology and intensive care made it inevitable that attention would focus upon neurological integration rather than on the maintenance of the cardiac pump, whether or not transplantation was involved.[70]

Seifert also supports his contention by reference to the alleged phenomenon of patients having woken from brain death. He claims that "such cases are well documented".[71] However the evidence to the contrary seems to invalidate his claim. In 1980, a BBC Panorama programme investigated the phenomenon of patients who had recovered after prolonged periods of unconsciousness.[72] Medical reaction to the programme demonstrated that the patients who were the subjects of the documentary had not met the criteria

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[70] Lamb, (1993, p.209).

[71] Seifert, (1993, p.193).

[72] See, Bradley and Brooman, (1980, pp.1258-1259).

required for diagnosis of brain death.[73] As one leading commentator has observed:

> [t]o the extent that the existence of brain death as a factual state and the reliability of measures used to diagnose it have been challenged on the grounds of subsequent recovery of consciousness in patients satisfying brain death criteria, the absence of any reliable reports of such recovery strongly supports both existence of the state and reliability of the diagnostic measures. An argument has sometimes been presented to the effect that, if recovery has been observed following a diagnosis of brain death, the concept itself is spurious... There do not appear to have been any adequately authenticated incidents in which subjects meeting all the criteria of brain death have recovered.[74]

Seifert does not mince his words in spelling out the perceived moral consequences of transplanting organs from the brain dead:

> [r]ecognizing the distinction between mathematical-metaphysical certainty and moral certainty, we must say that we do not possess any moral certainty, not even a moral probability, that brain death is actually death...
> ... different kinds of action demand different degrees of moral certainty... To commit an action which risks killing a person, however, takes the highest degree of moral certainty. And such a certainty is not only completely absent in the case of brain death but all the evidence points in the opposite direction.[75]

It is clear from the tone of his argument that Seifert supports an absolutist moral viewpoint similar to that of the sanctity of life argument or the formulations to be found in classical natural law doctrine. Thus, for him there is only moral certainty, despite convincing arguments

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[73] See further, McCullagh, (1993, pp.34-35).

[74] Ibid.

[75] Seifert, (1993, p.195).

to the contrary. This would explain his casuistical conclusion that:

> even if the defenders of the brain death definitions were theoretically right, they would still be morally wrong.[76]

Seifert's equating of the taking of organs from a patient who has been pronounced brain dead, with manslaughter seems to lack any foundation in legal reality. In a 1972 case in the state of Virginia, Tucker v Lower,[77] a court was faced with such a contention. In that case the question to be determined was whether the medical practitioners who removed a brain-dead patient from a respirator and then transplanted his heart into a patient who was dying of cardiac failure were guilty of wrongful death. The jury was directed in the following terms:

> [i]n determining the time of death you may consider the following elements... among them the time of complete and irreversible loss of all function of the brain.[78]

The attitude of Seifert and those who criticise the use of brain dead subjects as organ donors has a deeper significance. As Paris[79] has demonstrated, this thinking is common to diverse groupings who have in common a naturalist or creationist view of society and humanity. Examples of

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[76] Ibid.

[77] Richmond, Virginia L. and Eq. Ct., Unreported, 23 May, 1972, cited by Paris, (1989, p.37).

[78] Ibid.

[79] Paris, (1989, pp.38-40).

such groups range from right to life groups[80] to certain orthodox Jewish groups.[81] In addition, Paris draws a link

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[80] Paris, (1989, p.38), cites the following examples of the right to life stance:

> [f]or example, the Minnesota Citizens Concerned For Life... testified at a legislative hearing that 'it opposes not only brain death legislation but any imposed definition of death'. Such an action, contends Mary Winter, president of People Concerned for the Unborn Child, a powerful Pittsburgh-based anti-abortion group, 'would be the first step to the 'dehumanization' of the critically ill and to euthanasia'.
>
> People Concerned's memorandum attacking the U.D.D.A. [The Uniform Determination of Death Act 1980] shows the thinking behind their position. It begins by 'exposing' support for the legislation by 'euthanasia-prone' groups and then articulates their true worry: 'As pro-lifers, we hold that science has proven that human life begins at fertilisation. A definition of death which refers to brain function is anti-life because in the early stages of human development there is no brain... A statute equating brain function with life would further legally dehumanize the unborn'. While the anti-abortion stance is admirable, the statement fails to distinguish those with future potential for brain function from those who have exhausted that capacity.

[81] Paris, (1989, pp.38-39), has discovered only one orthodox Jewish spokesman who has publicly denounced the brain-based definition of death:

> Rabbi David Bleich of Yeshiva University opposes brain death standards on the ground that independent cardiac activity still occurs... He articulated [this view] at a 1977 conference on Biomedical Ethics in the Perspective of Jewish Teaching, when he stated 'Dysfunction of the brain should not be confused with destruction of the brain. Only destruction of the brain can be entertained as a possible definition of death'. Rabbi Moses Tendler (Rabbi Bleich's colleague at Yeshiva University), Rabbi Seymour Siegal, and Dr. Isaac Franck took issue with his interpretation of the criteria for the determination of death.

between the views held by these groups and certain academic opponents of brain death, revealing that the motivations of such commentators are more than purely academic. They also have a moral message to communicate through their arguments. He cites the case of the attack on the brain death standard by Byrne, O'Reilly and Quay in their 1979 article.[82]

Paris demonstrates the influence of traditional thinking on the authors of this article. In the article, the authors claim that the destruction of the brain is necessary for death. Paris adds:

> [l]est there be any doubt as to their standard for irreversible function, the authors provide examples of evidence of death: 'If someone's head has been completely crushed by a truck or vaporized by a nuclear blast, or if his brain has been dissolved by a massive injection of sulphuric acid.[83]

Such extreme examples mirror the extreme views of the authors on the topic. Such views, Paris points out are informed by their particular world view:

> Dr. Byrne and Father Quay are not content to state their position. They claim that a brain-function criterion 'stands in flat contradiction to the religious beliefs of Christians, Jews, Moslems, Hindus and many others'.[84]

However, Paris, after a search of the available literature could find no evidence of the above assertion:

> [a] thorough search of the literature finds no Catholic moral theologian, no Protestant ethicist, and but one Orthodox Jewish spokesman

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[82] See, Byrne, O'Reilly and Quay, (1979, pp.185-190).

[83] Paris, (1989, p.38).

[84] Ibid.

supporting their contention.[85]

2.5 Legal Regulation of Organ Transplantation.

Introduction.

As already stated, Ireland lacks a statutory framework for the regulation of organ transplants. This aspect of medical practice is thus regulated by the common law doctrine of consent and the ethical guidelines laid down by the relevant professional regulatory bodies. This situation is far from satisfactory given the many legal difficulties which surround this area. It is doubtful that the present form of regulation will be sufficient to deal with the potential problems which may arise in this particular area of the physician-patient relationship. The following section identifies the potential areas of difficulty in this area and the legislative policies which have been adopted by certain other common law jurisdictions to fill the interstices in the common law regulatory framework. In doing so, my intention is to both stress the need for legislative intervention in this field and to analyze the possible alternative models available to Irish legislators.

The American Model.

The legislative basis for organ transplantation in the

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[85] Ibid.

United States is the Uniform Anatomical Gift Act 1968,[86] as amended in 1987.[87] This legislative model was endorsed by the National Conference of Commissioners on Uniform State Laws and the American Bar Association in 1968 as a response to the shortage of suitable organs for transplant. The Uniform Anatomical Gift Act 1968 was intended to codify and make readily accessible the law in relation to organ transplantation. The Uniform Anatomical Gift Act 1968 provides that competent persons of eighteen years or over may donate a bodily part by will, donor card or other document.[88] Such donation becomes effective on the death of the donor. Section 1(e) of the Uniform Anatomical Gift Act 1968 defines a bodily part as:

> organs, tissues, eyes, bones, arteries, blood, other fluids and any other portions of a human body.

The confusion that may arise as to whether the wishes of the next-of-kin are to be respected in relation to the transfer of the bodily parts of the deceased is dispelled by the fact that the Uniform Anatomical Gift Act 1968 does not require the consent of surviving family members. The Uniform Anatomical Gift Act 1968 does however specify that the next-of-kin may authorize a donation only in the absence of actual notice of contrary indications by the

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[86] 8A Uniform Laws Annotated 16 (1983).

[87] Uniform Anatomical Gift Act 1987, 8A Uniform Laws Annotated 2 (Supp. 1989).

[88] Section 2(a).

deceased.[89] In addition the Uniform Anatomical Gift Act 1968 delimits the class of persons or institutions who may become valid donees of gifts of bodies or parts of bodies. These are outlined as follows in section 3:

> (1) any hospital, surgeon, or physician, for medical or dental education, research, advancement of medical or dental science, therapy, or transplantation; or
> (2) any accredited medical or dental school, college or university for education, research, advancement of medical or dental science or therapy; or
> (3) any bank or storage facility, for medical or dental education, research, advancement of medical or dental science, therapy or transplantation; or
> (4) any specified individual for therapy or transplantation needed by him.

While improving the situation in relation to the availability of suitable organs for donation, the Uniform Anatomical Gift Act 1968 did not provide a complete solution to the problem of the shortage of supply in transplantable organs. As Childress has noted:

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[89] Section 2(b). Where the deceased has not specified his intentions in relation to the use of his bodily parts on death, section 2(b) also sets out which members of the surviving family take priority in making the decision:

> [w]here the decedent has not previously made her wishes known the following persons, in order of priority stated... may give all or any part of the decedent's body for any purpose specified in section 3:
> (1) the spouse,
> (2) an adult son or daughter,
> (3) either parent,
> (4) an adult brother or sister,
> (5) the guardian of the person of the decedent at the time of his death,
> (6) any other person authorized or under obligation to dispose of the body.

The Uniform Anatomical Gift Act 1987 amended this list to include "a grandparent of the decedent" after "(4) an adult brother or sister" and eliminates the former number (6).

> [o]pinion polls indicate that individuals are more willing to donate the organs of family members and even of their own children than they are to donate their own organs by signing donor cards. In a series of polls, over eighty per cent of the respondents indicated that they were very or somewhat likely to donate the organs of family members... A cynical interpretation of these results would be mistaken. When put in the context of the stated reasons for reluctance to sign donor cards, the opinion polls suggest rather that the individuals who donate family members' organs can view themselves as buffers or barriers between the untrustworthy system and the potential source of organs... When there is a signed donor card, people cannot see a protective buffer or barrier because the donation in principle, though not in practice, has already occurred unless the donor changes his or her mind before incompetence or death.[90]

In practice only a tiny percentage of those who are used as organ donors actually have in their possession a donor card on their being pronounced dead.[91] It is thus open to the next-of-kin to make the decision in relation to the donation of the deceased's bodily parts.

Another difficulty is the misplaced fear on the part of many physicians of legal action. Thus, even in cases where the deceased is carrying an organ donor card at the time of his death, many doctors will not remove a bodily part without first requesting the permission of the surviving relatives.[92] In addition, there is a certain

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[90] Childress, (1989, pp.93-94). See also, Prottas, (1993, pp.137-150).

[91] Anonymous, (1990, p.1619).

[92] See, Task Force on Organ Transplantation, (1986, p.30), where it is stated that despite:

> the recovery of organs from thousands of donors annually for more than a decade and increasing litigation throughout the health care system, law suits arising out of organ

reluctance among some medical personnel to remove organs from beating heart donors, such as those patients who have been declared brain dead. This delay is fatal in terms of obtaining a salvageable organ. To prevent injury to the recipient of the transplant organ, organs must be removed when the brain function has ceased but while the heart and lungs are being maintained by means of artificial respiration. As one commentator has put it:

> [t]here still remains an uneasiness about the provision of meticulous care to a human being who may be physiologically stable but legally dead, and this is enhanced by the fact that sophisticated medical care is suddenly and irrevocably withdrawn once organs are harvested from such patients.[93]

In 1984, Congress passed the National Organ Transplantation Act 1984[94] in an effort to encourage greater donations of useable organs. The National Organ Transplantation Act 1984 provided for a means of grant-aiding organ procurement agencies and created a national organ procurement and matching network. The 1984 Act also specifically criminalized the purchase and sale of all human organs for transplant. However, in policy terms these legislative models have not produced the desired effect, an equilibrium between organs supplied and organs required. In fact, the number of those awaiting organ donations far outstrips the number of available organs. This has led to

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procurement are almost unknown.

[93] Cited in McCullagh, (1993, p.81).

[94] 42 United States Code Annotated section 273 (c) (West Supp. 1989).

further policy initiatives in this area in an attempt to strike a balance between supply and demand. These initiatives shall now be discussed.

Presumed Consent Laws.

In the United States, a number of states have introduced presumed consent laws which allow the removal of organs on the basis of the presumed consent of the deceased or the deceased's surviving relatives in the absence of an expressed desire not to have his or her organs harvested on death. These laws generally pertain to either corneal tissue or pituitary glands.[95] The presumed consent laws generally apply when a body is under the jurisdiction of a coroner.[96] The laws allow the coroner to authorize the removal of corneal tissue or pituitary glands or in rare cases, eyes, where a request for such tissue for the purpose of transplant or therapy is made by an authorized recipient; where the removal would not interfere with the course of an autopsy; where the removal would not alter the deceased's facial appearance; and where no objection by either the deceased or the next-of-kin is known to the coroner. The final criterion is often referred to as an opt-out provision, whereby there exists a rebuttable

[95] See further, Jaffe, (1990, pp.535-536).

[96] For example, a coroner is normally empowered to carry out an autopsy in order to establish the cause of death of an individual who has died in suspicious circumstances, in an accident or as the result of criminal activity.

presumption, based on the deceased's pre-mortem silence on the matter, that the organs are available for transplantation.

This presumption may be rebutted by the next-of-kin making known their objection to the use of the deceased's organs in such a manner. The coroner is under no duty to enquire into the exact wishes of the next-of-kin or the deceased. It is for the next-of-kin to come forward with any objection to the transplant. Moreover, the coroner is afforded immunity from suit in the event of the next-of-kin suing the coroner after the removal of the organs in question on the grounds that the consent of the next-of-kin was not obtained.[97]

This has not prevented a number of litigants challenging presumed consent statutes on constitutional grounds.[98] In State v Powell,[99] the parents of the victim of a road traffic accident challenged the action of the coroner who had removed the deceased's corneal tissue without their consent.

At first instance, the Florida presumed consent statute was found to be unconstitutional in that it violated procedural and substantive due process, deprived the surviving family members of equal protection and was

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[97] See, Jaffe, (1990, pp.536-538).

[98] State v Powell 497 So.2d 1188 (Fla. 1986), cert. denied, 481 U.S. 1059 (1987); Georgia Lions Eye Bank v Lavant 255 Ga. 60, 335 S.E.2d 127 (1985); Tillman v Detroit Receiving Hospital 360 N.W.2d 275 (Mich. Ct. App. 1984).

[99] 497 So.2d 1188 (Fla. 1986), cert. denied, 481 U.S. 1059 (1987).

tantamount to a taking of private property for a non-public purpose. On appeal, the Supreme Court of the state of Florida reversed this decision. The Florida Supreme Court analyzed the objectives of the presumed consent law and concluded that it was a reasonable means of achieving a permissible legislative objective of providing sight to many of Florida's blind citizens.[100]

Moreover, the Florida Supreme Court observed that the physical invasion of cornea removal was infinitesimally small in comparison to the autopsy itself.[101] On the question of the intervention constituting a taking of private property for a non-public purpose it was held that there were no property rights in a dead body, and that as a result no unconstitutional taking had occurred in this case. In Georgia Lions Eye Bank v Lavant,[102] the parents of an infant who had died of Sudden Infant Death Syndrome took an action against the defendant eye bank which had been authorized by the coroner to remove corneal tissue during an autopsy.

At first instance, it was held that the piece of legislation governing presumed consent in the state of Georgia was in violation of due process in that it deprived individuals of a property right in the corpse of the next-of-kin, and that it failed to provide notice and an

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[100] 497 So.2d 1188 (Fla. 1986), cert denied at 1191.

[101] Ibid.

[102] 255 Ga. 60, 355 S.E.2d 127 (1985).

opportunity to object to the taking of the tissue.[103] The decision was subsequently appealed to the Supreme Court of the state of Georgia. The Georgia Supreme Court reversed the decision of the lower court holding that there is no constitutional property right in the body of a deceased person.

The Georgia Supreme Court did add that at common law there existed, what amounted to, a quasi-property right in a corpse, this common law right was of no significance constitutionally.[104] In Tillman v Detroit Receiving Hospital[105] the plaintiff claimed that the statute authorizing removal of corneal tissue without consent was a breach of the constitutional right to privacy. However, the plaintiff's argument was rejected on the grounds that the constitutional right to privacy is a personal right which ends with the death of the individual to whom it attaches.

These cases all tended to support the notion that as property rights do not inhere in the body then as a result the non-consensual taking of bodily matter is legally acceptable in this particular instance. It may have been entirely appropriate to formulate a judicial rule which prohibited a property right in the human body in the seventeenth or eighteenth century when the concepts of organ harvesting or 'gene rape' were unheard of. However,

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[103] 355 S.E.2d 127 (1985), p.128.

[104] Ibid.

[105] 360 N.W.2d 275 (Mich. Ct. App. 1984).

can such a stance be justified today in a world which has changed beyond the recognition of those who framed this so-called 'no property' rule? Those who extol the virtues of a judge-made system of laws speak of the ability of such a system to adapt to changing societal scenarios. However, in this instance, as in many others, the common law system has been found wanting.

In the context of presumed consent laws therefore, this leads to a situation where the non-consensual taking of bodily materials is legally valid and not open to constitutional challenge. While the intention behind such laws is laudable, the wider availability of transplant organs and tissue, the moral question of the justifiability of using individuals as mere spare part banks remains. The problem is articulated thus by James Childress:

> for presumed donation to be ethically valid, it must satisfy very rigorous standards. Silence may only indicate a lack of understanding of the means of dissent or of the proposed course of action; hence vigorous public education would be required, along with easy ways to register dissent.[106]

The difficulties raised by the non-adherence to the doctrine of informed consent in this area could, to a large degree, be dissipated if one were to use the theory of tacit consent as the basis for such intervention, argues Childress. He frames this argument in the following terms:

> tacit consent... is consent that is expressed silently or passively by omissions or by failures to indicate or signify dissent... The potential consenter must be aware of what is going on and know that consent or refusal is appropriate, must

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[106] Childress, (1989, p.97).

> have a reasonable period of time for objection, and must understand that expressions of dissent will not be allowed after this period ends. He or she must also understand the accepted means for expressing dissent, and these means must be reasonable and relatively easy to perform. Finally, the effects of dissent cannot be 'extremely detrimental to the potential consenter'. Some of these conditions ensure the consenter's understanding; others ensure the consenter's voluntariness. When these conditions are met, the potential consenter's silence may be construed as tacit consent. Such consent may be ethically valid in some circumstances.[107]

The philosophical foundations of the theory of tacit consent are to be found in the writings of John Locke.[108] Locke adverted to tacit consent in the context of the relationship between the individual and the state, but such

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[107] Ibid., pp.96-97. See also the discussion of tacit consent by Simmons, (1976, pp.279-280), where he establishes similar criteria for the validity of a tacit consent:

> (1) [t]he situation must be such that it is perfectly clear that consent is appropriate and that the individual is aware of this. This includes the requirement that the potential consenter be awake and aware of what is happening. (2) There must be a definite period of reasonable duration when objections or expressions of dissent are invited or clearly appropriate, and the acceptable means of expressing this dissent must be understood by or made known to the potential consenter. (3) The point at which expressions of consent are no longer allowable must be made clear in some way to the potential consenter... (4) The means acceptable for indicating dissent must be reasonable and reasonably easily performed. (5) The consequences of dissent cannot be extremely detrimental to the potential consenter. The violation of either (4) or (5) will mean that silence cannot be taken as a sign of consent, even though the other conditions for consent and tacit consent be satisfied.

[108] Locke, (1994, section 119, pp.347-348).

a model can be applied in equal measure to relations between patients and doctors or between individuals generally. Locke framed the discussion in the following terms:

> [t]he difficulty is, what ought to be looked upon as a tacit consent, and how far it binds, i.e. how far any one shall be looked on to have consented, and thereby submitted to any government, where he has made no expressions of it at all. And to this I say, that every man, that hath any possession, or enjoyment, of any part of the dominions of any government, doth thereby give his tacit consent, and is as far forth obliged to obedience to the laws of that government.[109]

In applying this model of tacit consent to the organ transplant situation, one may argue that presumed consent laws while having survived constitutional challenge, do not perhaps value the sovereignty of the individual. As Locke put it:

> [f]or a man, not having the power over his own life, cannot, by compact, or his own consent, enslave himself to any one, nor put himself under the absolute, arbitrary power of another.[110]

This is a definition of the concept of inalienable rights. Thus, an individual may not give up such rights even where he has consented to do so. An example of a so-called inalienable right is the right to life. Thus, the criminal law in Ireland has adopted this notion in the rule that an individual cannot consent to his own murder.

However, a necessary condition of an inalienable right is that such a right inheres in an individual. In the case

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[109] Ibid.

[110] Ibid., section 23, p.24.

of presumed consent the law does not recognize a right to property in the body, therefore the question of an inalienable right in this instance does not arise. If, however, one were to recognize a right to property in the body, could such a right be classed as an inalienable right and therefore not amenable to transfer, making presumed consent laws invalid?

The idea of presumed consent has not won total approval in the United States. Veatch has argued that such a model is antithetical to individual autonomy. He argues:

> [i]f the body is essential to the individual's identity, in a society which values personal integrity and freedom, it must be the individual's first of all to control, not only over a lifetime, but within reasonable limits after that life is gone as well. If the body is to be made available to others for personal or societal research, it must be a gift.[111]

Thus, Veatch would favour a model similar to that of the Uniform Anatomical Gift Act 1968, based on the idea of consensual giving or donation of the organ. Ramsey bases his argument on a similar view:

> [t]he positive consent called for by Gift Acts, answering the need for gifts by encouraging real givers, meets the measure of authentic community among men. The routine taking of organs would deprive individuals of the exercise of the virtue of generosity.[112]

However, Ramsey is not altogether in favour of the model represented by the Uniform Anatomical Gift Act 1968. He would alter this model and proposes in its stead the following formula:

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[111] Veatch, (1976, pp.268-269).

[112] Ramsey, (1970, p.210).

> the pre-mortem giving of cadaver organs ought also be if possible a familial or shared decision. So also families that shared in pre-mortem giving of organs could share in freely receiving if one of them needs transplant therapy. This would be - if workable -; a civilizing exchange of benefit that is not the same as commerce in organs.[113]

This model may not be entirely workable in practice. Indeed as one commentator has put it:

> [t]he family in its most intense moment of grief must sign or refuse to sign approval forms. Any policy that places the onus of approval on the family at the moment of death is not only insensitive but doomed to failure. When a young person... suddenly and unexpectedly dies, his family may be dumbfounded, may find it difficult if not impossible to believe that he has died, and yet at the same time be agonizingly aware of the fact that he has died. In addition to being stunned, a family member in grief often bears a sense of guilt. When the family is in such a frame of mind, it would be inclined to see the granting of permission for the removal of any organ from the deceased as hurting or violating or demeaning the loved one.
>
> When we find ourselves in these 'boundary situations' - when our lives have become unravelled - we need ritual, routine, and automatic procedures. These procedures ought to be those that reflect our collective judgment expressed in more normal times.[114]

One way in which one could justify the presumed consent model is on the utilitarian basis of effectiveness. In comparison to the donation or voluntarist model, the presumed consent model increases the supply of useable organs. As Childress has noted:

> [p]resumed consent laws] have been effective. For example, substantial increases occurred in cornea transplants in the few years after such legislation in Georgia (from 25 in 1978 to over 1,000 in 1984) and Florida (from 500 in 1978 to

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[113] Ibid., pp.212-213.

[114] Muyskens, (1978, p.96).

> over 3,000 in 1984)... It is possible that presumed consent laws endure without major vocal opposition because of different views about different [human body parts] - corneas versus solid organs - and because the public is largely unaware of these laws, even in the dozen or so states where they exist.[115]

However, after noting the arguments for such laws, Childress concludes that they are ultimately not ethically valid. He bases this view on the fact that the public are largely unaware of such laws. From this he infers the following:

> presumed donation laws are not ethically valid because of a lack of understanding on the part of the 'donors' who are allegedly 'donating' by their silence. Under such circumstances the policy is actually one of expropriation masquerading as presumed consent.[116]

There are others, however, who favour the utilitarian argument in favour of presumed consent. Harris argues this case forcefully when he writes:

> [i]s the squeamishness, sentimentality or ignorance of relatives of the dead a sufficiently important value to warrant protection at the cost of hundreds of lives annually?... If the state can order post-mortem examination of the dead on the slightest pretexts, where for example there is the vaguest suspicion as to the cause of death, how much more important and useful it would be to order post-mortem transplantation! If the ability to use cadaver organs for transplants were automatic there is no doubt that many hundreds, perhaps even many thousands of lives could be saved annually at the same 'social cost' that we already (willingly?) pay for judicial certainty as to the cause of death.[117]

This view is far removed from the traditional voluntarist

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[115] Childress, (1989, p.98).

[116] Ibid.

[117] Harris, (1983, pp.228-229).

model and appears to condone such non-consensual taking on mere utilitarian grounds, without even seeking to add the perfunctory justificatory device of tacit consent. This model would appear to be at odds with the traditional model of the corpse as deserving of residual respect.

Others would reject this traditional model of residual respect for the corpse by differentiating between non-consensual acts aimed at the living and those aimed at the dead. Jonsen, for example, argues that the main purpose of the doctrine of consent is to protect the autonomy of the living and this purpose is no longer relevant to the corpse which has no autonomy and as a result cannot be harmed. Jonsen also recognizes that there are secondary purposes of consent which include respecting the pre-mortem wishes of the deceased and observing cultural practices in relation to burial. However, Jonsen argues that such secondary purposes:

> would seem to yield before the significant value of therapy for those suffering from serious illness... The genuine possibility of significant benefit to others overrides any secondary purposes that consent and permission might have.[118]

The views of Harris and Jonsen, while being arguably justifiable on utilitarian grounds, tend to avoid the more complex moral question of why a corpse cannot be harmed and the repercussions of this view for the consent model in general. As Childress puts it:

> [a]lthough Jonsen's approach merits careful consideration, it fails to see that people can be

[118] Jonsen, (1988, p.219).

> wronged even when they are not harmed (e.g., by having their will thwarted after their deaths), and that socio-cultural practices of disposal of the body remain very important for various communities, including the family and religious communities. Even if respect for autonomy, like all other principles is only prima facie binding, it cannot be justifiably overridden unless there is no acceptable alternative.[119]

Required Request Laws.

A different legislative response to the perceived failure of the donation or voluntarist model of organ procurement can be seen in the so-called required request laws adopted by certain states in the United States. These laws provide that hospital administrators are required to ask or designate a member or members of staff to ask next-of-kin about the possibility of organ donation when death has been pronounced.[120]

The revised Uniform Anatomical Gift Act 1987 provides for this form of organ procurement policy. Section 4(a)(2) of the Uniform Anatomical Gift Act 1987 allows the coroner to authorize the removal of organs or other tissues only after reasonable efforts have been made to notify the next-of-kin and obtain their consent for donation. This policy differs from presumed consent in that all reasonable efforts must first be made on the part of the hospital to obtain the consent of the deceased's next-of-kin. However, in practice, the policy has met with a number of obstacles.

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[119] Childress, (1989, p.98).

[120] See, Caplan, (1984, pp.981-983).

Most importantly, there appears to be a reluctance on the part of hospital administrators and physicians to implement such policies, on the basis that such a request would be perceived as pressurizing the family at an emotionally stressful time. As Caplan has noted:

> [t]here are many within the transplant community who are still committed to the notion that organ donation should be voluntary... There are others who still believe that donation is an act of heroism or supererogation and that families ought not to be forced or coerced into being heroes.[121]

<u>Routine Inquiry.</u>

Routine inquiry is another model which has been adopted in the United States in an attempt to increase the supply of transplant organs. This was a federal initiative enacted by means of the <u>Omnibus Budget Reconciliation Act</u> 1986.[122] This model provides that in order to remain eligible for Medicare or Medicaid funds, hospitals must create written protocols for the identification of potential organ donors so that the next-of-kin of potential organ donors will be aware of the possibility of consenting to the transplant of the deceased's organs.

It is thus the family and not the potential donor who make the decision in relation to the transplanting of organs. This, it has been noted, abandons the principle of

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[121] Caplan, (1989, pp.305-306). See in addition, Prottas, and Batten, (1988, pp.642-645).

[122] 42 United States Code section 1320b-8 (Supp. V 1987).

individual autonomy in favour of the more utilitarian objective of obtaining more transplant organs:

> [r]outine inquiry is thus a scheme to obtain organs from individuals who, statistically, are known to be unwilling to donate... The current system of routine familial inquiry sacrifices individual autonomy... in an attempt to obtain more cadaveric organs.[123]

Moreover, there is no conclusive proof that such a curtailment of the ideal of individual autonomy achieves its utilitarian objective.[124]

The English Model.

English Common Law.

As with all other forms of surgical procedure, the common law doctrine of consent is of relevance in determining the legality or otherwise of organ transplants. Thus, to establish the prima facie validity of organ donation in a living donor, the patient must give voluntary consent to the procedure, be aware of what he is consenting to and be competent to give that consent.[125]

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[123] Anonymous, (1990, p.1621).

[124] Ibid., where it is noted that in the aftermath of the introduction of this policy, 16,363 patients were awaiting a kidney, 1,324 were awaiting a heart, 830 were awaiting a liver, 240 a heart-lung combination, 322 a pancreas, and 94 a lung.

[125] See further, Dworkin, (1970, pp.353-355). See in addition, Skegg, (1984, p.36), who observes that:

> sometimes a procedure is performed on a person in the knowledge that it will certainly be to that person's bodily detriment. This is the case when a kidney is removed from a healthy person, for

However, in the case of the cadaver donor the consent model is not as easily applicable. As will be seen in the later discussion on the common law 'no property' rule in relation to the corpse, the law is in a far from healthy state on this issue.

Suffice it to say that the English common law does not recognize a specific right of property in the body of a deceased person or a living person for that matter.[126] However, the common law authority on the alienability or otherwise of the corpse was developed in a time when anaesthetics were barely conceived of, and when the nearest one was likely to get to the notion of organ transplantation was by reading the fiction of Mary Shelley. Given the rapid development of organ transplant technology in the latter part of the twentieth century, it was imperative that this area of medical intervention be adequately regulated by statute.

> transplantation into someone who is in need of it. The operation is a major one and is not without risks. But it is not unreasonably dangerous, and the probable benefit to the recipient far outweighs the probable detriment to the donor. Hence, if called upon to deal with a case in which a kidney had been removed from a consenting adult, for transplantation into someone in need of it, the courts may confidently be expected to take the view that the operation did not amount to the offence of battery.

[126] See the detailed discussion of the topic of the body as property in section 2.7 of this chapter, pp.140-161.

English Legislative Models.

The first legislative development in this area was the Corneal Grafting Act 1952. This Act contained a variation on the theme of presumed consent.

It provided that the person in lawful possession of the cadaver could authorize the transplant of corneal tissue in the absence of any reason to believe that either the deceased or the next-of-kin had expressed a dissent on the matter. This Act was subsequently repealed by the Human Tissue Act 1961. The introduction of the Human Tissue Act 1961 witnessed a change in policy from the quasi-presumed consent model to the reasonable enquiry model. The Human Tissue Act 1961 in section 1(1) provides that the removal of an organ shall be valid if the deceased:

> either in writing at any time or orally in the presence of two or more witnesses during his last illness, has expressed a request that his body or any specified part of his body be used after his death for therapeutic purposes or for purposes of medical education or research, the person lawfully in possession of his body after his death may, unless he has reason to believe that the request was subsequently withdrawn, authorise the removal from the body of any part or, as the case may be, the specified part, for use in accordance with the request.

However, if the deceased had not expressed a wish on the issue then the Act provided in section 1(2) that the person lawfully in possession of the body of the deceased[127] could

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[127] While the common law has refused to recognize a right of property in the corpse, it has allowed for a possessory interest in the corpse. See for example, Williams v Williams (1882) 20 Ch.D 659; R. v Fox (1841) 2 Q.B. 246 and R.v Feist (1858) Dears and Bell 590. Meyers, (1990, p.190), notes that:

authorise the removal of any part from the body for transplantation purposes or for the purposes of medical education or research if, having made such reasonable enquiry as may be practicable, he had no reason to believe either:

> (a) that the deceased had expressed an objection to his body being so dealt with after his death, and had not withdrawn it; or
> (b) that the surviving spouse or any surviving relative of the deceased objects to the body being so dealt with.

The Act while purportedly allowing the individual to control the manner in which his body shall be used after his death does not necessarily lead to such a situation in practice. As Mason and McCall-Smith observe, in the event of the next-of-kin of the deceased objecting to the donation request of the deceased:

> they could overrule any specific request made by the deceased. Even allowing for the fact that the relatives have no locus standi to object to the removal of organs under section 1(1), the doctor is in a difficult position in the event of their objections being voiced. On the one hand, he has legal justification to proceed and he may, rightly, be thinking of the potential recipients. On the other, it would be extremely hard to justify in ethical terms a decision to add further suffering to the bereaved.[128]

> [a] careful distinction needs to be drawn here between the person with right to possession of the corpse - almost certainly the surviving spouse or next-of-kin under common law - and the person in possession of the deceased's corpse - almost certainly the institution where he expires. The Act is concerned with the latter, tangible possession, which the hospital clearly has, though it may well be otherwise bound to transfer the possession to the relatives.

[128] Mason and McCall-Smith, (1991, p.308).

The ambiguous nature of the wording of the Act has led to a situation where it seems to raise more problems than it actually solves. In section 1(2) the term "reasonable enquiry as may be practicable" is not defined in the Act, nor has it been the subject of an authoritative judicial definition.[129] This oversight coupled with certain other infelicities of drafting style[130] has led the British Transplantation Society to put forward proposals for the amendment of the Act. Specifically, the Society has called for the repeal of section 1(2) of the Act and its replacement by the following wording:

> [w]ithout prejudice to the foregoing subsection, the person lawfully in possession of the body of a deceased person may authorise the removal of any part from the body for use for the said purpose if, having made such inquiry as is both reasonable and practicable in the time available, he has no reason to believe that the deceased had expressed an objection (which he was not known to have withdrawn) to his body being so dealt with after his death.
>
> Provided that authorization shall not be given under this subsection if the person lawfully in possession of the body has reason to believe that the surviving spouse or any surviving relative of the deceased objects to the body being so dealt with.[131]2

The Society also proposed the addition of a new subsection to section 1 which would clarify the position in relation to who had possession of the corpse for the purposes of the Act:

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[129] See further, Dworkin, (1970, pp.353-357).

[130] The failure in section 1 to define the person in lawful possession of the body of the deceased; the failure to define 'relative' for the purposes of the Act.

[131] British Transplantation Society, (1975), cited in Kennedy and Grubb, (1994, p.1171).

> [f]or the avoidance of doubt in the interpretation of this section, it is hereby declared:
> (a) that the hospital authority is the person in possession of the body of a deceased person lying in the hospital, and that this possession is lawful until such time as the hospital authority fails to comply with a request for possession of the body, made by the person who has the right to immediate possession of it.
> (b) That a printed but personally signed 'donor card', or other document, is 'in writing' for the purpose of subsection 1 of this section.
> (c) The 'time available', for the purpose of an inquiry under subsection 2 of this section extends only until the moment at which steps must be taken to remove the part of the body, if it is to be suitable for the therapeutic or other purpose in question.[132]

However, the proposals of the Transplantation Society were not adopted by the legislature.

As in the United States, legislation has not solved the problem of a shortfall in the number of donor organs available for transplantation. In 1987, the then Department of Health and Social Security requested the Conference of Medical Royal Colleges and their Faculties in the United Kingdom to set up a working party to investigate the reasons behind the shortage of donor organs for transplant. The Report of the working party chaired by Sir Raymond Hoffenberg did not lead to any change in legislative policy in this area.[133] Indeed, the Report displayed a certain antipathy to the introduction of either required request or presumed consent laws.

In recent years, the situation in relation to the

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[132] Ibid.

[133] Conference of Medical Royal Colleges and their Faculties in the United Kingdom, (Hoffenberg Report) (1987, pp.1-3).

under-supply of organs for transplantation in the United Kingdom has not improved. Recent figures reveal that a total of 5,700 people are awaiting an organ transplant.[134] However, the only policy response on the part of the government has been to set up a national computer register of organ donors, in an effort to increase the number of people choosing to donate their organs on death. The government has therefore decided to retain the voluntarist model, rather than adopt presumed consent or required request laws.

2.6 Beyond Consent: Suggested Solutions to the Problem of Procurement and Allocation of Scarce Organs.

Due to the apparent failure of extant methods of organ procurement, attention has been focused on more controversial means of obtaining human tissue. These organ procurement models shall now be examined in order to determine their legal and ethical validity.

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[134] See, Hunt, (1994, p.6). The article cites the following as the primary reasons for the shortage of organ donors:

> organs are usually taken only from patients who have died in intensive care units. In addition, about thirty per cent of all families asked by doctors to agree to donation of a relative's organs refuse to give their consent. The success of the seat-belt campaign has also reduced the number of organ donors; donors from fatal road accidents fell from twenty-nine per cent in 1989 to nineteen per cent in 1993. In addition, medical advances mean that more people are being kept alive to benefit from a transplant, intensifying demand further.

Compulsory Transfer of Body Parts.

John Harris has advocated a policy of compulsory transfer of body parts in order to save the lives of those who are suffering from diseased organs. However, his model involves the killing of a third party to obtain these organs:

> [w]henever doctors have two or more dying patients who could be saved by transplants, and no suitable organs have come to hand through 'natural' deaths, they can ask a central computer to supply a suitable donor. The computer will then pick the number of a suitable donor at random and he will be killed so that the lives of two or more others may be saved.[135]

This so-called 'survival lottery' would have as its aim the saving of a greater number of lives than it takes. The implications of such a scheme for individual liberty are quite far-reaching. Moreover, the scheme may not even save as many lives as was envisaged. Harris adverts to this difficulty when he writes:

> [o]ne feature of the survival lottery... makes its implementation less than attractive. This feature is the tendency of the lottery to lead to a gradual deterioration of the health of any society which operates it. This happens in two ways. The first is caused by the fact since diseased organs are no use for transplantation, the computer would select only healthy donors, thus discriminating unfairly against the healthy... and also... gradually leading to a society in which those with healthy organs... were weeded out. This would be re-enforced by the second way in which the lottery would undermine the health of a society, namely by removing the disincentives to imprudent action. For why should I curtail my smoking and drinking because they are unhealthy practices when my diseased organs can and will always be replaced... the survival

[135] Harris, (1980, p.69).

> lottery will gradually lead to a society depopulated of the prudent and populated by the imprudent. And thus to a society in which eventually it would be difficult to find suitable donors and thus both to a situation in which the lottery would cease to save many lives and also to one in which the healthy would live under virtual sentence of death.[136]

This leads Harris to amend his proposal. His refined model would confine the 'survival lottery' to the dying. This scheme would be voluntary and would take the following form:

> [w]henever two or more patients could be saved by the sacrifice of one then either straws could be drawn, or more fairly, a nation-wide scheme would be introduced to maximise the advantage. This could be a voluntary scheme and ought to prove attractive to the dying.[137]

Harris is also in favour of a scheme which would allow for the non-consensual removal of organs from cadavers and permanently unconscious patients.

Harris's model has been criticized by Rakowski[138] who argues that there is no need for a lottery in such a situation. He believes that:

> [t]he order of natural death could generally be used to determine who became a donor and who a recipient if cadaver organs were in insufficient supply... If for some reason... only live donors would serve, they could be taken in the order in which their vital signs waned irreversibly. Why not let the Fates spin the wheel? The problem cannot be that if one let nature choose the victims, the number of lives saved would not be maximized because those on their deathbeds sometimes have fewer reusable organs than more

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[136] Ibid., p.80.

[137] Ibid., p.81.

[138] Rakowski, (1993, pp.341-342).

virile patients.[139]

Rakowski in this instance would favour a voluntary scheme if this were in fact feasible. He states that:

> forcing all to face the same odds of becoming an unwilling donor would be patently unfair to those who prudently kept their chances of organ failure low and who would not have agreed to become a member of a maximizing scheme on the same terms as less careful participants...
>
> Even those who bear the same risks... might have different attitudes towards participation. Some people dying of heart disease might gladly gamble with the time remaining to them in exchange for some chance of receiving a transplant, while others might prefer to finish out their days and then sleep, rather than risk immediate death to win an indefinitely long but dreary reprieve. Some might also decline to join for religious or moral reasons... Mandatory participation by ailing patients or the population at large in an organ transplant scheme that minimized deaths would therefore be a violation of right, not its embodiment.[140]

Rakowski has nonetheless argued for a policy of non-voluntary post-mortem organ transplants and mandatory transfer of organs from living donors, which does not involve the taking of the 'donor's' life. Rakowski's view is based on a model of distributive justice which holds that nobody should have less valuable resources and opportunities available to him than anyone else, merely because of some chance happening the risk of which he did not choose to occur. For his purposes he considers human body parts to be resources because such materials are:

> something that a person needs to accomplish his ends, no different in this respect from the nutrients necessary to sustain life or the intelligence essential to prudent or productive

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[139] Ibid., p.342.

[140] Ibid., p.344.

action.[141]

Rakowski is of the opinion that, ideally, compulsory transfer of cadaver organs should be preferred over the compulsory removal of organs from the living. The fact that organ transplants carry a degree of risk for both donor and recipient and are quite expensive leads him to this conclusion.[142] He believes that:

> [r]ational persons could be expected to support a policy of compulsory cadaver donation, given the disparity between the cost to the unwilling donor and the gains to potential recipients. Or, at the very least, it seems highly unlikely that they would oppose such a policy with anything approaching unanimity, and the burden of justifying, by reference to collective consent, a modification of the rule that equality of fortune yields is on those who would change the rule. It is certainly not asking overmuch of someone (or his relatives) to relinquish his organs when he can no longer use them and to live with the knowledge that through his death he may become a greater benefactor than his will indicates.[143]

Rakowski, however, does not rule out a scheme of mandatory transfer of non-essential organs from the living to individuals in need through no fault of their own. This would only be applicable if a scheme for compulsory transfer of cadaver organs could not meet demand. Thus, under this model it would be appropriate to remove a kidney from someone with two functioning kidneys to save the life of an individual with kidney failure not brought about as the result of some risky activity in which he had

[141] Ibid., p.168.

[142] Ibid., pp.169-170.

[143] Ibid., p.170.

participated. He justifies this on the basis that:

> the loss of an organ would rarely force someone to alter his lifestyle radically and because someone denied a donation would certainly die.[144]

This conception of the compulsory transfer of body parts based on a model of distributive justice is not supported by other commentators. Thus, theorists such as Ronald Dworkin would argue that a model of distributive justice should make a distinction between the persons in that model and the resources which should be allocated to them on the basis of equality. Body parts in this conception of distributive justice would not be considered to be resources and would not be counted among the goods which may be allocated to persons within the model. Dworkin tends to the belief that the change brought about in the individual's lifestyle by the forced removal of a body part may not be as insignificant as may at first appear:

> [w]ould it be outrageous to require blood donations according to some fair lottery? Kidney donations? Eye donations? We might well wish to resist this chain of questions by adopting a prophylactic line that comes close to making the body inviolate, that is, making body parts not part of social resources at all. We might justify this by appealing to the importance of protecting the person, and the danger in adopting any line less bright. That kind of impulse contributes, I think, to our repugnance in contemplating even minor maiming as a punishment, even when a convicted criminal would prefer losing, say, a finger to a long jail sentence.[145]

Rakowski takes exception to these criticisms of a compulsory organ transfer scheme. Firstly he believes that

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[144] Ibid., p.348.

[145] Dworkin, (1983, p.39).

the cost of not going beyond Dworkin's 'prophylactic' line is the lives of individuals with kidney failure and the sight of those without functioning corneas.[146] Secondly, he argues that such transfers would not entail a profound personality change in the donor:

> [t]hose who lose their vision in one eye or the services of one of their kidneys are not normally viewed as different persons on that account, nor are those who donate an eye or a kidney voluntarily. But if the worst case is not greatly to be feared, because it is practically impossible to go too far, then empowering officials to decide when body parts should be transferred should not pose much danger of murder, assuming that a radical transformation of someone's personality should indeed be so regarded. Hence, there appears no need for a bright line making the body inviolate.[147]

This counter-argument appears to assume that nothing short of murder is serious enough to prevent unwanted interference with the body of an individual.

This notion seems to be contrary to all ideas of individual freedom and autonomy. Even allowing for the fact that the means, direct non-consensual battery, is being employed for a greater end, the restoration of sight or the saving of a life, this principle cannot be supported. It weakens the principle of the inviolability of the person without necessarily adding to the overall societal good. This model is not necessarily going to result in a more just or equal society, merely a society with many damaged and violated individuals who have been forced to give up part of their anatomy for the greater good of equal

[146] Rakowski, (1993, p.185).

[147] Ibid.

justice. Words such as trauma or frustration do not seem to enter Rakowski's vocabulary.

On Dworkin's critique based on our repugnance to the idea of maiming or disfiguring prisoners, Rakowski claims that part of our horror of maiming is perhaps its very pointlessness. In the case of the involuntary donor, at least, his maiming would have a point:

> [b]ut if it were necessary to torture a terrorist to save the lives of many innocent people, many of us would probably suppress what revulsion we still felt... and do what was necessary to rescue the blameless from harm. Perhaps forcing someone to relinquish some part of his body so that another person may live should, and in time would, be seen in a similar light. But if justice requires that such transfers be made, his resistance might be seen as more like that of an evasive taxpayer than of the intended victim of senseless violence.[148]

However, unlike the evasive taxpayer or indeed the murderer, the donor has committed no crime. Rather, he has been unfortunate enough to have been selected by lottery as an unwilling victim of societal justice.

It begs the question of why those who have been fortunate to have been born without a malady or disability should be treated as mere sources of scarce resources by virtue of their status. No ideal of distributive justice can justify the maiming of a non-consenting actor.

In practical terms is such a scheme going to work? Is it possible to achieve such societal parity? What if the donor later loses the sight in his remaining eye or suffers kidney failure when he only has one remaining kidney? Will

[148] Ibid., p.187.

he then not become the disadvantaged member of society who must receive a cornea or a kidney from another unwilling donor?

The Foetus as Transplant Donor.

The question of using the foetus as a transplant donor is one rife with controversy for the Irish doctor. Given the present non-provision of abortion in Ireland, the question appears to be moot. However, given the ethical stance of the Irish Medical Council it is unlikely that foetal material would be used in transplant surgery under any circumstances.[149] The ethical dilemma for Irish doctors is that foetal transplantation is dependant on a supply of tissue which comes in the main from induced abortions. This is so because tissue from spontaneous abortions is not considered suitable due to the high incidence of viral infections and chromosomal abnormalities.[150] Opponents of abortion link the use of foetal tissue in transplantation to the substantive issue of abortion, arguing that the two issues are not ethically separable.[151] Such commentators contend that abortion would enjoy a greater degree of acceptance if the general public associated it with the improvement in the lives of others such as the recipients of foetal tissue transplants. Secondly, opponents of the

[149] See, Medical Council, The, (1994, p.36).

[150] See, Annas and Elias, (1989, pp.1079-1082).

[151] See, Burtchaell, (1986, pp.7-11).

procedure would argue that if the mother who was unsure whether to terminate her pregnancy, saw the potential good to be derived from the use of foetal tissue in transplantation, she may be persuaded to terminate her pregnancy.

Yet, it may be possible, in a practical sense, to regulate this area of medical practice to prevent abuse and also to separate it from the issue of abortion. In the United States, the National Institutes of Health Human Foetal Tissue Transplantation Research Panel, endeavoured to keep separate the issues of abortion and foetal transplantation by recommending the following guidelines:

> (a) [t]he decision to terminate a pregnancy and the procedures of abortion should be kept independent from the retrieval and use of foetal tissue.
> (b) Payments and other forms of remuneration and compensation associated with the procurement of foetal tissue should be prohibited, except payment for reasonable expenses occasioned by the actual retrieval, storage, preparation, and transportation of the tissues.
> (c) The decision and consent to abort must precede discussion of the possible use of the foetal tissue and any request for such consent as might be required for that use.
> (d) The pregnant woman should be prohibited from designating the transplant-recipient of the foetal tissue.
> (e) Anonymity between donor and recipient should be maintained, so that the donor does not know who will receive the tissue, and the identity of the donor is concealed from the recipient and transplant team.
> (f) The timing and method of abortion should not be influenced by the potential uses of foetal tissue for transplantation or medical research.[152]

However, certain commentators go further and state

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[152] Human Foetal Tissue Transplantation Research Panel, (1988, p.50).

that the mother of an aborted foetus has no right to consent to the use of the abortus in transplantation. Thus, Bopp and Burtachell, two dissenting members of the National Institutes of Health Human Foetal Tissue Transplantation Research Panel stated:

> the very agents of someone's death are surely disqualified on the behalf or in the stead of the victim - disqualified as a man who has killed his wife is morally disqualified from acting as her executor.[153]

This argument is based on the view that the foetus has the moral status of a person and the aborting of a foetus is tantamount to the killing of a person. However, one could plausibly argue that a person is sentient, has desires and as Feinberg[154] has argued has moral interests and as a consequence has rights. The foetal brain is not sufficiently developed to allow perception of pain, until some time between twenty and twenty-four weeks gestation.[155] In relation to foetal transplants to sufferers from Parkinson's disease, tissue from the substantia nigra of the foetal midbrain is, ideally, obtained at a gestational age of approximately eight to eleven weeks, before the foetus is capable of perception.[156]

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[153] Ibid., pp.58-59.

[154] Feinberg, (1974, pp.159-184).

[155] See further, Annand and Hickey, (1987, pp.1321-1329).

[156] Sumner, (1984, pp.71-93).

The Scientific Basis for the Use of the Foetus as a Transplant Source.

One also has to have regard to the alleged benefits of foetal tissue transplantation to those who receive such donations. It has been argued that foetal brain tissue transplants are appropriate in the treatment of sufferers from Parkinson's disease.[157] However, the majority of patients treated do not show dramatic signs of improvement,[158] and one must, as a result, be cautious in regarding this procedure as an effective and valid treatment for Parkinsonism until it is supported by a substantial body of empirical evidence.[159]

Experimental evidence gathered from laboratory studies on rats reveals that the optimal age of the foetal tissue for transplantation purposes is nine weeks.[160] Normally, the method used for terminating a first trimester pregnancy is suction. However, the difficulty with this method is that the foetal brain will not remain intact and will have to be pieced together after the procedure in order to locate the <u>substantia nigra</u>. As one commentator has noted:

> [t]he retrieval of one specific portion of the brain from the tissues recovered in the course of suction termination is likely to raise substantial logistic questions about clinical

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[157] See, Lindvall, Brundin and Widner, (1990, pp.574-577) and Madrazo, Leon and Torres, (1988, p.51).

[158] See, Merz, (1989, p.2929).

[159] See further, Joynt and Gash, (1987, pp.445-446) and Sladek and Shoulson, (1988, pp.1386-1388).

[160] McCullagh, (1993, p.209).

application. Identification of substantia nigra from foetal remains has been achieved as a research procedure. However, the extent to which it could reproducibly be accomplished as a clinical routine remains questionable.[161]

An alternative solution to this problem is to alter the method of termination. This has been achieved by using limited suction under the guidance of ultrasound and by means of forceps delivery.[162]

The only large body of empirical evidence in relation to the effectiveness of foetal tissue transplants which is available relates to foetal tissue transplants in animals and not in humans. Despite the ethical propriety of animal experimentation, it does in this instance give an indication of the possible outcomes of such treatment in humans.[163] The animals used in such experiments are administered chemicals which induce states akin to Parkinson's disease. This has been achieved by, for example, injecting rats with a substance known as 6-hydroxydopamine (6-O.H.D.A.). This substance when injected into the brain causes brain lesions and acts to counter the action of the neurotransmitter dopamine. In recent years however, it has been observed that another substance M.P.T.P. may produce an even more true reproduction of Parkinson's disease in laboratory animals. The effect of M.P.T.P. in this context was discovered:

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[161] Ibid., p.210.

[162] Ibid., pp.210-211.

[163] See further, Dunnett, Bjorklund, Gage and Stenevi, (1985, pp.451-469).

> following the inadvertent self-administration by drug addicts of this substance, present as a contaminant in pethidine. A substantial number of affected individuals were observed to develop the typical features of Parkinson's disease during the following weeks. The use of M.P.T.P. in primates produces what is currently believed to be the best model of the human disease.[164]

Once the abnormality in the behaviour of the animal has been induced in this manner, the next step in the experiment is to use foetal brain cells in an attempt to improve the condition of the animal. The results produced have not been encouraging. While rats who have been subjected to this treatment have shown improvement in relation to their ability to perform certain simple functions, they have not shown a marked improvement in relation to more complex tasks:

> [t]he reliability of dopamine-rich grafts to ameliorate some functional deficits induced by dopamine-depleting lesions on the one hand, and to have no effect on other, in some senses more complex, measures has implications for the clinical potential of neural transplantation.[165]

Moreover, the task of applying this animal model to the human model is not without its difficulties. As McCullagh observes:

> [e]ven the most superficial comparison between the tests used in assessment of rats with 'experimental Parkinsonism' and the tests used in human patients with this disease indicates that the latter are much more complex and rely upon measurements for which no simple animal equivalent exists.[166]

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[164] McCullagh, (1993, p.196).

[165] Ibid., p.197, and see, Dunnett, Whishaw, Rogers and Jones, (1987, pp.63-78).

[166] McCullagh, (1993, p.198).

There are further obstacles in attempting to apply the animal model to humans. The inability of the animal to communicate its reactions to the treatment is problematic:

> [w]hen translated to experimental animals, in which the capacity to interrogate the subject about possible remission of symptoms is lacking, the means of assessing the severity of 'experimental Parkinsonism' are notably lacking in precision and reproducibility. An additional, major complication when comparing animal models for treatment, for instance, of diabetes and Parkinsonism, is that the manner in which the disease process affects normal function is well understood in diabetes but remains the subject of speculation in the case of Parkinsonism... This likely dissimilarity between experimental and clinical situations serves to introduce doubt into any inferences about human treatment of Parkinsonism drawn from animal models of treatment.[167]

Another disparity between the animal and human models of treatment is that the possibility of rejection is much less likely in animal models than in humans. This is due to the fact that in the laboratory the subjects are closely related whereas in the human model this will not necessarily be the case.[168] The survival of such tissue in laboratory rats cannot, as a result, be taken as indicative of success in the human model.[169] Indeed, as one commentator has concluded:

> it seems more likely that the long-term use of powerful immunosuppressive drugs, such as cyclosporin A with its attendant side-effects, would be required to obtain extended acceptance

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[167] Ibid., p.198.

[168] Ibid., pp.202-203.

[169] See, Geyer, Gill, Kunz and Moody, (1985, pp.244-247); Lodin, Hasek, Chutna, Sladecek and Holan, (1977, pp.275-280) and Raju and Grogan, (1977, pp.1187-1191).

of a graft.[170]

The studies which have been undertaken on human subjects have proved far from conclusive to date. Reports from England,[171] Sweden,[172] and Mexico,[173] on foetal transplants in humans have not as yet demonstrated beyond reasonable doubt the effectiveness of the procedure.

The Anencephalic Neonate as Transplant Donor.

The use of the anencephalic neonate as a source of transplant organs has yet to be considered by the Irish legislature or judiciary. The medical practitioner in this area of medical practice is thus bereft of clear legal guidelines. In the absence of statutory or judicial guidelines, the medical practitoner would normally look to professional codes for guidance on such a matter. However, to date the medical profession in Ireland has not instituted specific guidelines on this issue.

As a result, the surgeon must look to the detailed recommendations set down by the Conference of Medical Royal Colleges and their Faculties in the United Kingdom on the

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[170] McCullagh, (1993, p.203).

[171] See, Phillips, (1988, p.15).

[172] See, Lindvall, Backlund, Farde, Sedvall, Freedman, Hoffer, Nobbin, Seiger and Olsen, (1987, pp.457-468).

[173] See, Madrazo, Drucker-Colin, Diaz, Martinez-Mata, Torres and Becerril, (1987, pp.831-834).

issue.[174] The Conference of Medical Royal Colleges and their Faculties in the United Kingdom is of the view that organs for transplantation can be removed from anencephalic infants when two doctors who are not members of the transplant team agree that spontaneous respiration has ceased.[175] This, one could assume is an attempt to isolate the issue of declaring an anencephalic infant dead from the issue of organ transplantation.

It has been noted that the definition of brain death in neonates has, unlike that in adults, been connected with the issue of organ transplantation.[176] Others however disagree with this contention.[177] There are a number of factors which differentiate the definition of death in the neonate from that in the adult patient.[178]

Firstly, the occurrence of hypotension or abnormally low blood pressure is common in the neonate who has suffered from perinatal asphyxia (deprivation of oxygen during the birth process). This may lead to a depressed brain function.[179]

A second factor is the absence of an accurate history of the preceding events in utero. In the adult patient a

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[174] See, Conference of Medical Royal Colleges and their Faculties in the United Kingdom, (1988, pp.1-2).

[175] Ibid.

[176] See, Freeman and Ferry, (1988, pp.301-303).

[177] See, Bailey and Nehlsen-Cannarella, (1987, pp.878-879) and Shewmon, (1987, p.878).

[178] See, Volpe, (1987, pp.293-297).

[179] Ibid.

knowledge of the preceding medical history is important in that it allows for a confident diagnosis of a specific condition causing brain damage which in turn facilitates the diagnosis of brain death.[180]

A third factor is the need for much longer observation periods in order to diagnose brain death in the neonate, because of the frequency with which errors could be introduced by isolated observations.[181] This could prove to be an obstacle in the case of organ transplantation where available time is limited as, for example, where the organs have to be transported over a long distance. In addition it has been observed that:

> interpretation of the neonatal electroencephalogram (E.E.G.) is difficult. The E.E.G. of the normal infant younger than thirty weeks can exhibit periods of discontinuous low-amplitude activity. Following brain injury, the E.E.G. trace can be isoelectric (flat) for a prolonged period. However, this can be followed by subsequent recovery of the subject, at least to a vegetative state. Such a clinical history emphasizes the differing requirements for decisions to discontinue life support and to designate an infant as a source of organs for transplantation.[182]

Indeed, the guidelines laid down by the Medical Royal Colleges and their Faculties in the United Kingdom differ from the standards laid down for non-anencephalic patients. As McCullagh points out:

> the placement of an anencephalic infant on a respirator does not necessarily imply that spontaneous respiration has ceased... To

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[180] Ibid.

[181] Ibid.

[182] McCullagh, (1993, p.110).

designate loss of spontaneous respiration as 'death' as the Medical Royal Colleges recommended, represents a substantial shift from the existing U.K. recommendations for non-anencephalic subjects. These still require, not just suspension of spontaneous respiration, but positive recognition that irreversible cessation of brain-stem function has already occurred. The extent of the inconsistency created by selecting this standard for anencephalics will be evident if it is compared with the generally accepted attitude, that organs should not be removed from non-anencephalic neonates with beating hearts within seven days of birth even if they satisfy the brain-stem death criteria for older children and adults.[183]

While one cannot state conclusively that anencephalic neonates are being treated differently to other individuals merely because of their suitability for the purposes of organ transplantation, it is nonetheless important that any guidelines governing the use of anencephalic organs in transplantation should not err on the side of treating the anencephalic first and foremost as a potential source of spare parts. The dilemma has been well put by Ian Kennedy, writing in a different context. Nonetheless, the views expressed are equally applicable to the case of the anencephalic neonate:

> if this surgery is to become acceptable, and the voluntary supply of organs from cadavers is to be increased, every effort is needed to persuade the general public that such operations are being conducted in a responsible and humane way, that the law, in other words, is not being re-written in favour of the potential recipient and against the interests of the moribund donor.[184]

Due to the growing demand for donor organs, the anencephalic neonate has been seen as a potential source

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[183] Ibid., p.154.

[184] Kennedy, (1971, p.947).

for such organs. It is thus necessary to divorce the need for organs on one hand from the definition of death in the neonate on the other.

This is not in practice an easy task. The anencephalic neonate suffers from a condition in which the neural tube (the tube of tissue which forms the spinal cord and from which the brain develops) fails to close. As a result, the cerebellum and the cerebrum fail to develop, while the brain-stem continues to develop. In addition the vault of the skull does not develop and the brain appears as a mass of exposed tissue.

As a result of these defects the anencephalic may be stillborn or in the alternative live only for a period ranging from a day to a month.[185] The anencephalic when born alive is capable of spontaneous respiration. However as has been noted:

> [b]ecause of the lack of higher brain function, the baby's respiratory system intermittently lapses. These incidents repeat with increasing frequency until respiration ceases entirely, by which time the baby's oxygen-starved organs are so severely damaged that they are no longer suitable for transplantation.[186]

Thus, the question of obtaining salvageable organs remains present throughout the short life of the anencephalic. The question is then whether one should wait until all respiratory activity has ceased with the attendant risk of obtaining unusable organs or whether to retrieve the organs at a point where all respiratory activity has not ceased.

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[185] See, Friedman, (1990, pp.921-922).

[186] Ibid., p.924.

As anencephalics are capable of spontaneous respiration at birth they are not therefore legally dead for the purposes of the whole brain definition of death. As a result, as one commentator has noted:

> the procurement of vital organs from an independently breathing anencephalic newborn would be considered the proximate cause of the baby's death, and the physician who procured such organs would be open to homicide charges.[187]

While the above commentator was writing in the context of American criminal law, there is no reason to believe that the same conclusion would not apply in Ireland, as the fault standard for the crime of homicide would have been met in such a case. Thus in such cases, it could be stated that there was an intentional termination of the life of an individual.[188] Therefore, one cannot lawfully retrieve organs from an anencephalic until he has reached the point of whole brain death, at which point his organs may not be useable.

In an attempt to overcome this dilemma, a number of solutions have been suggested. Firstly, statutory amendments have been proposed. Secondly, alterations in medical management of anencephalic neonates have been proposed. In the United States, attempts have been made in California, New Jersey and Ohio to alter the law in this regard. In 1986, three California state senators introduced a Bill to amend sections 7180-7183 of the California Health and Safety Code which sections incorporated California's

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[187] Ibid., p.930.

[188] See further, Tomkin and Hanafin, (1995, pp.98-116).

version of the Uniform Determination of Death Act 1980. The Bill would amend Californian law on the issue in the following manner:

> 7180. (a) An individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions, or (2) irreversible cessation of all functions of the entire brain, including the brain-stem is dead. Additionally, an individual born with the condition of anencephaly is dead. A determination of death must be made in accordance with accepted medical standards.
> 7180.5 'Anencephaly' as used in this chapter, means markedly defective development of the brain, together with absence of the bones of the cranial vault and the cerebral and cerebellar hemispheres, and with only a rudimentary brain-stem and some traces of basal ganglia present.[189]

The Bill also proposed that the diagnosis of anencephaly be determined independently by another physician who was not a member of the transplant team. The Bill was the object of sustained criticism and was ultimately unsuccessful. As one critic of this move put it:

> [a]dding anencephalics to the category of dead persons would be a radical change, both in the social and medical understanding of what it means to be dead and in the social practices surrounding death. Anencephalic infants may be dying, but they are still alive and breathing. Calling them 'dead' will not change physiological reality or otherwise cause them to resemble those (cold and non-respirating) bodies that are considered appropriate for post-mortem examinations and burial.[190]

In New Jersey, a Bill was introduced in the state assembly in 1986 which attempted to amend the state's version of the Uniform Anatomical Gift Act 1968 to the

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[189] State of California Senate Bill, Number 2018 1986.

[190] Capron, (1987, p.6).

extent that organ transplantation in the case of the anencephalic would not require the death of the anencephalic:

> [a] parent of an anencephalic infant, either prior to or upon the birth of that infant, may submit to the attending physician or surgeon a written request for the donation of the body of that infant, or a part thereof, to any of the donees for any of the purposes stated in section 3 of the Uniform Anatomical Gift Act 1968... to which the attending physician or surgeon shall consent in writing if the requested donation is medically suitable of purpose... and if one of the parents does not object to the donation, regardless of whether the infant has sustained an irreversible cessation of all functions of the brain-stem.[191]

This Bill was also unsuccessful. In Ohio, a Bill was introduced in 1988 which provided that an anencephalic infant could be put on a respirator and tested for the absence of spontaneous respiration every six hours. If the neonate failed to resume spontaneous respiration on three successive occasions then he could be declared dead. This Bill also failed to win legislative approval.[192]

The second method of reform in this area came in the form of professional guidelines. Foremost amongst such initiatives were the Loma Linda protocols. In 1987, the Loma Linda Medical Centre in California produced a set of protocols in relation to the management of anencephalic neonates, which were thought to be compatible with the law in relation to the determination of death.[193] Under these

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[191] State of New Jersey Assembly Bill number 3367 1986.

[192] See, McCullagh, (1993, pp.168-169).

[193] See, Barinaga, (1987, p.592).

guidelines all anencephalic newborns would be placed on a respirator for a maximum of seven days. During that period, physicians would remove the baby from the respirator every twelve hours in order to determine if brain death had occurred. If spontaneous respiration failed to resume on three successive occasions, then the neonate would be pronounced dead and organ removal could proceed. The determination of death was to be made by two physicians independent of the transplant team.

Those babies who were not brain dead at the end of the seven day period would be disconnected from the respirator and allowed to die. This model failed to work for a number of reasons. Firstly, the protocol provided for the administration of a painkiller, Demerol, if the neonates displayed any signs of distress. The use of this drug complicated matters in that one of its side effects is that it acts as a sedative and depresses respiration. This in turn would make it more difficult to obtain a reliable diagnosis of death. To remedy this problem, the protocol provided for the use of Narcan, which works to counter the effect of Demerol. This use of drugs also raised the question of whether anencephalics could feel pain. As they are apparently missing the parts of the brain which are responsible for feeling pain why should the use of painkillers be thought appropriate? One commentator has framed the dilemma thus:

> [i]f they do feel pain, artificially prolonging the lives of these infants by hooking them up to respirators would inflict additional pain upon unconsenting subjects solely for the benefit of

> others. Since organ removal for transplantation can be accomplished painlessly under anaesthesia, the effort to comply with statutory brain death requirements via the Loma Linda protocol performed an indefensible cruelty upon its subjects that otherwise could have been avoided.[194]

In practical terms the protocols were not a success. None of the first six anencephalic infants who were treated in accordance with the protocols were used as sources of organs, as they did not display a loss of respiratory capacity within the seven day period.[195] It has been pointed out[196] that this approach to the treatment of the anencephalic neonate may well be in contravention of Article 10 of the United Nations Declaration of the Rights of Disabled Persons 1975. Article 10 states that:

> disabled persons shall be protected against all exploitation, all regulations and all treatment of a discriminatory, or abusive or degrading nature.

McCullagh[197] argues that:

> [r]emoval of organs from any incompetent individual could be argued to be exploitative. Application to anencephalics of treatment which would not be applied to any other class of individual is undoubtedly discriminatory. Infliction of life support on a patient for whom it can predictably have no benefit is certainly abusive. Presumably, the response to these charges would be that the anencephalic was not a person and was therefore outside the scope of the

[194] Friedman, (1990, pp.932-933).

[195] See, Goldsmith, (1988, pp.1671-1672).

[196] McCullagh, (1993, p.158).

[197] Ibid.

Declaration.[198]

If one were to argue that an anencephalic neonate were not a person as was the case in the legislative proposals in California and New Jersey, then one could resolve the legal difficulties presented by obtaining salvageable organs from such entities. Thus, Glanville Williams has written:

> [t]here is, indeed, some kind of legal argument that a 'monster' is not protected even under the existing law... Yet the question still remains whether it is permissible morally and legally so to define a human being as to exclude the grosser sports of nature... It seems probable... that a creature that is clearly a monster in the old-fashioned sense could lawfully be put to a merciful death. This appears to be a reasonable deduction from the rule stated by... Bracton and

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[198] Ibid. See also, Friedman, (1990, pp.958-959), where he puts the issue thus:

> the position that all products of human conception are persons is equally unprovable. Thus, the controversy surrounding anencephaly represents a classic case of ethical pluralism, similar to the debate which raged about abortion prior to Roe v Wade. In that area, decision-making by majoritarian democratic processes was considered an appropriate means of resolving the problem. Pro-choice and pro-life advocates attempted to persuade each other of the soundness of their respective positions, though at the bottom of the debate lay the reality that the 'difficult question of when life begins' is one upon which 'those trained in the respective disciplines of medicine, philosophy, and theology are unable to arrive at a consensus'... The resulting "abortion map" was a patchwork quilt of states that proscribed or permitted abortion in varying degrees. A similar approach should be valid in deciding about anencephaly. The various state legislatures should not be prevented from choosing, by majority fiat, a theory of personhood that seems most correct to its members.

> other institutional writers that a monster is not a man... The only possible objection, apart from the extreme view that even a monster is the abode of an immortal spirit, is the difficulty of drawing the line; but all moral and legal rules require a line to be drawn somewhere.[199]

Friedman has attempted to apply this idea to the contemporary debate over anencephalic organ donors. He tries to draw the line relying on ideas of consent and personhood:

> [t]he proposals to harvest vital organs from anencephalics are premised on an analysis identical to that used to justify abortion. The moral stricture against harvesting organs applies only to persons. These infants can no more satisfy even minimal criteria of personhood than can foetuses... [anencephalics] will never qualify as persons in the sense put forth by proponents of personhood theory. In view of the enormous benefits to be derived from proposed transplantation protocols, there is every reason to take advantage of such crucial sources of organs. Of course, as is the case with normal neonates, the treatment accorded these infants generates intense parental emotion. Therefore, it certainly would be immoral to remove organs from anencephalics without parental consent. But once consent is forthcoming, we must realize that no person's rights are violated by the procurement.[200]

2.7 The Body as Property?

In analyzing the question of transfer of body parts, the question of ownership of such parts must be addressed. Is there for example a property right in bodily parts which may have implications for the transplantation of organs and

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[199] Williams, (1958, p.31).

[200] Ibid., p.955.

other bodily parts?

The Corpse.

The traditional rule in relation to the human corpse and the laws of property was the 'no property' rule. As the term suggests the human body was deemed not to be the subject of property. As Skegg has noted, this rule:

> provides the legal context for the various provisions of English law relating to the use of bodies for medical education and research, and for therapeutic purposes.[201]

The origins of the 'no property' rule are shrouded in mystery. However, various rationale for the rule have been advanced. It has been asserted that the rule can be traced to medieval times and the role played by the ecclesiastical courts in burial.[202] The rule was not articulated in judicial form until the case of Exelby v Handyside[203] in 1749, more commonly referred to as Dr. Handyside's case. The case was not reported contemporaneously, but was reported some fifty-four years later by East in his Pleas of the Crown wherein it is stated:

> [i]n the case of Dr. Handyside, where trover was

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[201] Skegg, (1992, p.311).

[202] See, Palmer, (1991, p.9, footnote 35) and Skegg, (1992, p.311).

[203] (1749), 2 East P.C. (1803) 652; 1 Hawk P.C. (8th ed. 1824) 148. Matthews, (1983, p.208), has observed that this case:

> is a case remarkable for its influence being quite disproportionate to the information available about it.

> brought against him for two children that grew together; Lord C.J. Willes held that the action would not lie, as no person had any property in corpses.[204]

However, this case has not been viewed as definitive authority for the 'no property' rule and now appears to be of mere historical interest.[205]

In the case of Williams v Williams[206] the 'no property' rule was explicitly referred to in support of the decision of the court.[207] In this case a testator had given instructions in his will that upon his death his body be given to a friend thereafter to be cremated and his ashes placed in a particular vase as set out in a letter sent to the friend. The will directed that the friend be paid for the performance of this task. However, on the death of the testator, the body was not given into the charge of the friend but was instead buried in a London graveyard by the

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[204] (1749), 2 East P.C. (1803) 652.

[205] See, Matthews, (1983, pp.208-210) and Skegg, (1992, p.311).

[206] (1882) 20 Ch.D 659.

[207] Although, as Skegg, (1992, p.311) notes, the rule appears to have been accepted obiter in a number of cases prior to Williams v Williams:

> But during the latter half of the nineteenth century there were several cases in which common law judges accepted the rule. In all but one of these cases, the judge's comments were undoubtedly obiter. They were obiter in R. v Sharpe (1857) Dears and Bell 160, where Erle J. said at 163, 'Our law recognizes no property in a corpse'; in Foster v Dodd (1867) L.R. 3 Q.B. 67, where Byles J. said at 77, 'A dead body by law belongs to no one'; and in R. v Price (1884) 12 Q.B.D. 247, where Stephen J. said at 252, 'a dead body is not the subject of property'.

executors. The friend subsequently obtained the relevant permission to have the body disinterred, whereupon she brought it to Italy and had it cremated. She then claimed against the estate, the expenses incurred in carrying out the testator's instructions. The plaintiff failed in her action. Kay J. cited a number of grounds for his refusal to uphold the plaintiff's claim. Firstly he claimed that "[i]t is quite clearly the law of this country that there can be no property in the dead body of a human being".[208]

He cited in favour of this proposition the obiter statement in the case of R. v Sharpe[209] to similar effect. However, as Matthews has noted, the case of R. v Sharpe concerned an interred rather than a disinterred corpse.[210] In R. v Sharpe, the defendant was permitted to open his mother's grave in order to bury his father there. His mother had been buried in the unconsecrated burial ground of a group of dissenters. However, he removed his mother's remains and took the bodies of both his parents to be buried in consecrated ground. The defendant was charged and convicted of the offence of unlawfully, wilfully and indecently opening a grave and removing a body. In the course of his judgment, Erle J. referred obiter to the 'no property' rule, stating:

> [o]ur law recognizes no property in a corpse, and the protection of the grave at common law, as contradistinguished from ecclesiastical

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[208] Williams v Williams (1882) 20 Ch.D. 659, pp.662-663.

[209] (1857) Dears and Bell 160.

[210] Matthews, (1983, pp.211-212).

protection to consecrated ground, depends upon this form of indictment.[211]

Matthews accuses Kay J. in his decision in Williams v Williams[212] of confusing the separate issues of the 'no property' rule and the exclusive right of the executor to possession of the corpse:

> [a]part from the fact that the 'no property' statement in R. v Sharpe was obiter, Kay J. entirely fails to notice the material distinction between that case and the instant one, i.e. between a buried and an unburied corpse. This is doubly surprising in view of Kay J.'s expressly drawing attention to the executor's entitlement to possession of the corpse in the latter case, albeit for the purposes of burial. No-one has any right to possession of a buried corpse, and so the statement in R. v Sharpe is not difficult to understand. What is difficult to understand is why it must inevitably also apply to an unburied corpse, in which there are rights to possession, even if of a limited nature.[213]

For the latter proposition, Matthews cites the decision of the Supreme Court of the state of Minnesota in the case of Larson v Chase[214] wherein it was stated that:

> the mere fact that a person has exclusive rights over a body for the purposes of burial leads necessarily to the conclusion that it is his property in the broadest and most general sense of that term, viz., something over which the law accords him exclusive control.[215]

On this apparently mistaken basis Kay J. went on to conclude that in this case the plaintiff's claim should fail. The remaining reasons for his decision which were

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[211] R. v Sharpe (1857) Dears and Bell 160, p.163.

[212] (1882) 20 Ch.D. 659.

[213] Matthews, (1983, p.211).

[214] 50 N.W. 238 (1891).

[215] Ibid., p.239.

premised on his interpretation of the 'no property' rule were that a person cannot by law dispose of his dead body and that, as a result, the direction in the codicil to the executors to deliver over the corpse to the plaintiff, who was not one of the executors, was void.[216]

In analyzing these conclusions of Kay J.'s, Matthews argues that:

> [w]e must assume that in referring to 'property' Kay J. did not include the right to possession for burial, for if he did the first limb of the first proposition [to the effect that the executors have exclusive right to possession of the body for the purposes of burial] would be impossible. On the hypothesis, then, that 'property' does not include, the right to possession, it by no means follows that, if no-one has 'property', the right to possession cannot be transmitted to or created in another. On the contrary, that is exactly what Kay J. expressly averred to be the case in the first proposition. What Kay J. objected to was the transmission or creation of the right to possession <u>by the will</u>. But this is entirely the substance of the first proposition, and has nothing to do with the second.[217]

Matthews therefore concludes that the judge's reference to the 'no property' rule in this case cannot form part of the <u>ratio decidendi</u> of the case and must be regarded as a merely <u>obiter</u> statement. Skegg views the nineteenth century cases which referred to the 'no property' rule as having three points in common, none of which provided a definitive solution to the problem of proprietorial rights in the body:

> in these cases judges did not rely on Coke's statement that the 'burial of the [c]adaver... is

[216] <u>Williams v Williams</u> (1882) 20 Ch.D. 659, p.665.

[217] Matthews, (1983, p.212).

nullius in bonis' or on Dr. Handyside's case. The judges apparently regarded the 'no property' rule as well established, and not a matter of controversy or uncertainty, or requiring the citation of authority. A second characteristic of these cases was that there was no hint that the 'no property' rule was restricted to buried corpses, or that any distinction was to be drawn between corpses awaiting burial (or cremation) and those which had been buried (or cremated). Thirdly, in none of the cases was there any suggestion that the rule that human corpses are not the subject of property was linked to, or in any way dependent upon, any rule about whether living human beings could be regarded as property, or whether they own themselves or can be owned by others.[218]

Thus, even though there appears to have been a general judicial acceptance of the 'no property' rule it seems to have been the result of deference to tradition rather than as the result of rigorous legal analysis. Thus, what scant authority does exist appears not to be sufficient.

To find a more rigorous discussion of the topic one is forced to turn to the decisions of Commonwealth courts. In the Canadian case of Miner v Canadian Pacific Railway[219] the mother of a deceased youth recovered expenses from the defendant as a result of their negligent delay in delivering his body. The court recognized that in certain instances property may exist in a corpse and indeed criticised the English authorities on the subject:

> the law recognizes property in a corpse, a property, of course, which is subject, on the one hand, to the obligations... of proper care and prima facie of decent burial appropriate to its condition and the condition of the individual in his lifetime... and to the restraints upon the voluntary or involuntary disposal by law (... the

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[218] Skegg, (1992, p.312).

[219] (1910) 15 W.L.R. 161 (Alberta Sup. Ct.).

existence authorising its use for anatomical purposes) or arising out of the fact that the thing in question is a corpse (... no lien can attach: R. v Fox (1841) 2 Q.B. 246; a public exhibition contrary to public decency is not permissible...); and, on the other hand, the nature and extent of the right or obligation of next of kin, medical institute... I cannot see any ground in reason why there should not be appropriate remedies against interference with the right of property therein, subject to the obligations and restrictions which I have indicated.[220]

In the Australian case of Doodeward v Spence[221] the plaintiff worked with a travelling show and exhibited the preserved corpse of a stillborn child with two heads. The plaintiff was prosecuted for indecent exhibition of the corpse and the corpse was taken into the custody of the defendant police officer. The plaintiff sought the return of the corpse and on being refused he brought an action in detinue against the defendant. The defendant claimed that no action lay to recover the corpse because no rights of property in human tissue were recognized at common law. However, the plaintiff succeeded on appeal to the High Court of Australia. The Chief Justice, Griffith C.J. was of the opinion that:

> [i]f... there can, under some circumstances, be a continued rightful possession of a human body unburied, I think, that the law will protect that rightful possession by appropriate remedies. I do not know of any definition of property which is not wide enough to include such a right of permanent possession. By whatever name the right is called, I think it exists, and that, so far as it constitutes property, a human body, or a portion of a human body, is capable by law of becoming the subject of property. It is not

[220] Ibid., pp.168-169.

[221] (1908) 6 C.L.R. 406.

> necessary to give an exhaustive enumeration of the circumstances under which such a right may be acquired, but I entertain no doubt that, when a person has by the lawful exercise of work or skill so dealt with a human body or part of a human body in his lawful possession that it has acquired some attributes differentiating it from a mere corpse awaiting burial, he acquires a right to retain possession of it, at least as against any person not entitled to have it delivered to him for the purpose of burial.[222]

However, it has been noted that such a general statement should be read in the light of:

> the superior right of the person entitled to have the body delivered to him for burial, and to the existence of any positive law (such as burial or public health Acts) proscribing the exhibition of the corpse in the particular circumstances of the case.[223]

In addition to the specific question of property rights in the dead body, there has also been some judicial comment on rights to possession of such corpses. A coroner has a prior right to the possession of a body when it is required for the purpose of a coroner's inquiry.[224] For the purposes of medical education a right to possession may be obtained in a cadaver.[225]

Moreover, in the United Kingdom the <u>Human Tissue Act</u> 1961 provides for the authorization of the removal and use of body parts for therapeutic purposes and for the purposes

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[222] Ibid., p.415.

[223] Palmer, (1991, p.11).

[224] See, <u>R. v Bristol Coroner, Ex Parte Kerr</u> [1974] Q.B. 652. The same should be true of Ireland where coroners are vested with similar powers to call inquiries into deaths. See, the <u>Coroners Act</u> 1962 sections 17 and 18.

[225] See generally, the English <u>Anatomy Act</u> 1984.

of medical education and research.[226] A corollary of this right to possession is to be found in relation to the ashes of the deceased after cremation. In the United Kingdom, the Cremation Regulations 1930 provide that the person who has applied for the body of the deceased to be cremated shall be permitted to take possession of the ashes after the cremation.[227]

The Living Body.

The living body cannot be the subject of property rights. If this were the case then the concept of slave ownership would be quite valid and humans could be bought and sold on the open market. However this does not imply that bodily parts or bodily products cannot be the subject of ownership.

In the English case of R. v Welsh[228] the defendant

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[226] Section 1. Skegg, (1992, p.313), surmises that in this context:

> if the person lawfully in possession of a body authorizes the removal of a part so that it can be kept as a permanent exhibit in the museum of a medical school, and the part is subsequently removed for that purpose, a permanent right to possession would seem to have been acquired.

[227] Cremation Regulations 1930, SR and O. No. 1016, regulation 176 of which provides that:

> [a]fter the cremation of the remains of a deceased person the ashes shall be given into the charge of the person who applied for the cremation if he so desires.

[228] [1974] R.T.R. 478.

provided a urine sample for the police under section 9 of the Road Traffic Act 1972 and then proceeded to pour it down the sink. He was charged and convicted with the theft of urine from the police. That theft applies to 'property' would lead one to infer that this particular bodily product was capable of being construed as property.[229] In the subsequent case of R. v Rothery[230] the defendant had provided the police with a blood sample. He subsequently removed the blood from the station. As a result he was charged and convicted of the theft of the capsule containing the blood rather than the blood itself. In addition he was charged and convicted of the statutory offence of failing to supply a specimen under section 9(3) of the Road Traffic Act 1972.

The defendant appealed his conviction to the Court of Appeal. The question for resolution was whether he should have been convicted of theft or the statutory offence or both. If the theft conviction was valid then it would be tantamount to stating that blood could be the subject of property. In the Court of Appeal the conviction for the statutory offence under section 9(3) of the Road Traffic Act 1972 was quashed but the theft conviction was not. Scarman L.J. giving the judgment of the Court of Appeal stated:

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[229] In this case the definition of theft was set out in the Theft Act 1968, section 1(1) where a person is regarded as having committed theft when he appropriates the property of another. It is for the courts to decide what constitutes 'property' in any particular case.

[230] [1976] R.T.R. 550.

> [t]he appellant says: 'I did provide the [specimen] though I admit that later I stole it back; I am guilty of theft, but not guilty of the statutory offence'. The Crown says that by stealing it back the appellant ensured that no specimen was available for laboratory test; therefore, he is guilty both of the statutory offence and of theft.
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> Common sense is with the appellant, even though the merits are not. He did, when required, provide a specimen for laboratory test; when asked, he did not refuse, but agreed. And he must have provided the police officer with the specimen in the sense of putting him in possession or control of it, otherwise he could not have stolen it from him under section 5(1) of the Theft Act 1968.[231]

Effectively one can conclude from this analysis that blood can be the subject of property in certain circumstances.

In the Californian case of Moore v Regents of the University of California[232] the Supreme Court of the state of California was faced with another aspect of the ownership of bodily parts, 'gene rape'. The plaintiff had undergone treatment at the defendant hospital for leukaemia. This involved the removal of his enlarged spleen. However without the patient's knowledge or consent, his treating physician had taken samples of the white blood cells from his cancerous spleen and cultured them into a cell-line which was capable of producing blood proteins effective in treating immunosuppressive diseases.

The defendants subsequently applied for and were granted a government patent for this so-called invention. The cell-line was later sold to a biotechnology company for

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[231] Ibid., pp.552-553.

[232] 249 Cal. Rptr. 494 (Ct. App. 1988); 793 P.2d 479 (1990).

over one and a half million dollars. The market value of this cell-line has been estimated at three billion dollars.

The plaintiff brought an action in conversion against the defendants for the misappropriation of his cells. He claimed that both his cell tissue and the cell-line were his tangible personal property.

The Californian Supreme Court could locate no relevant authority imposing liability in conversion for the use of human cells in medical research and were not prepared to do so in this case. It was held that to establish a conversion, the plaintiff would have to demonstrate an actual interference with his ownership or right of possession. The Supreme Court was satisfied that Moore did not retain an ownership interest in the excised cells.

On the point as to whether the excised cells and the resultant cell-line could be the property of Moore, it was held that as the cell-line was distinct both factually and legally, from the cells taken from Moore's body, the cell-line could not be viewed as his property. Support for this view was derived from the existing law in relation to patents.

In the case of Diamond v Chakrabarty,[233] it was held that patent law permits the patenting of organisms that represent the product of human ingenuity, but does not permit the patenting of naturally occurring organisms. On this analysis the California Supreme Court in Moore v Regents of the University of California went on to hold

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[233] 447 U.S. 303 (1980).

that:

> [h]uman cell-lines are patentable because '[l]ong term adaptation and growth of human tissues and cells in culture is difficult - often considered an art'... and the probability of success is low... It is this inventive effort that patent law rewards, not the discovery of naturally occurring raw materials. Thus, Moore's allegations that he owns the cell-line and the products derived from it are inconsistent with the patent, which constitutes an authoritative determination that the cell-line is the product of invention. Since such allegations are nothing more than arguments or conclusions of law, they of course do not bind us.[234]

The Supreme Court of California considered the possibility of extending the doctrine of conversion in this case, but decided not to, for policy reasons. It was believed that such an expansion would hinder research in the area of genetics by restricting access to the requisite raw materials. It was also stated that it was for the legislature to resolve the problem and that the court was not the proper forum for the resolution of this dilemma. Thirdly, it was held that there was no need to extend the doctrine of conversion to this area as there existed adequate causes of action on which those who found themselves in a position similar to the present plaintiff could rely. The cause of action which the Supreme Court cited was the breach of a fiduciary duty to disclose facts material to the patient's consent, or in the alternative the performance of medical procedures without first having obtained the patient's informed consent.

However, the dissenting opinion of Mosk J. took issue

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[234] 793 P.2d 479 (1990), p.500.

with the majority's stance. On the point that the cell-line is factually and legally different from the cells excised from Moore's body, Mosk J. was of the opinion that there was no distinction. He explained this position in the following terms:

> The complaint alleges that Moore's cells naturally produced certain valuable proteins in larger than normal quantities; indeed that was why defendants were eager to culture them in the first place. Defendants do not claim that the cells of the Mo cell-line in fact have an abnormal number of chromosomes, at the present stage of this case we do not know if that fact has any bearing whatever on their capacity to produce proteins; yet it is in the commercial exploitation of that capacity -not simply in their number of chromosomes - that Moore seeks to assert an interest. For all that appears, therefore, the emphasized fact is a distinction without a difference.[235]

Mosk J. also disagreed with the majority's view of the patenting of the cell-line. He argued that what Moore in effect did, albeit unknowingly, was to collaborate with the researchers by donating his body tissue. While conceding that the patent in general is not granted for the cell in its natural state but for the modified biogenetic product, Mosk J. stated that:

> the uniqueness of the product that gives rise to its patentability stems from the uniqueness of the original cell. A patient's claim to share in the profits flowing from a patent would be analogous to that of an inventor whose collaboration was essential to the success of a resulting product. The patient was not a coequal, but was a necessary contributor to the cell-line.[236]

Mosk J. was of the opinion that following this line of

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[235] Ibid., p.516.

[236] Ibid., p.528.

argument the law of patents would not constitute a barrier to Moore obtaining a property interest in both his excised cells and the subsequent biogenetic product.

The dissenting opinion also questioned the majority's use of policy arguments to prevent the extension of the doctrine of conversion. Mosk J. believed that the extension of the doctrine into this area would not restrict any further access to raw materials. He claimed that the very concept of patentability restricted access to such materials. Indeed the growth of the biotechnology industry further narrowed such access according to Mosk J. Thus:

> the biotechnological and pharmaceutical companies demanded and received exclusive rights in the scientists' discoveries, and frequently placed those discoveries under trade secret protection. Trade secret protection is popular among biotechnology companies because, among other reasons, the invention need not meet the strict standards of patentability and the protection is both quickly acquired and unlimited in duration.[237]

He went further in his criticism of this aspect of the majority decision claiming that despite the policy justification for not extending the doctrine of conversion, there exist two stronger countervailing reasons for so doing.

Firstly, the general societal value of respecting the bodily integrity of the individual could be put forward as an argument for allowing certain proprietorial rights in one's own body. This individual right to bodily integrity was threatened in the past by practices such as slavery and

[237] Ibid., p.530.

indentured servitude. In the present day, according to Mosk J., this threat still exists in the form of scientists who are willing to exploit a patient's tissue soley to obtain commercial benefit.

Mosk J.'s second countervailing argument is that of the notion of fairness in dealings between members of society, based on equity's abhorrence of those who benefit from unjust enrichment. Thus, the patient from whom the raw material was harvested has no right in law to share in the benefits derived from the product of his body. This according to the dissenting judge is:

> both inequitable and immoral. As Dr Thomas H. Murray, a respected professor of ethics and public policy, testified before Congress, 'the person [who furnishes the tissue] should be justly compensated... If biotechnologists fail to make provision for a just sharing of profits with the person whose gift made it possible, the public's sense of justice will be offended and no one will be the winner.[238]

The dissenting opinion also contains criticism of the majority's second policy reason for non-extension of the conversion doctrine, that it was for the legislature to resolve the issue. Mosk J. held that such abdication of responsibility on the part of the courts would be in effect an abdication of the courts' stewardship of an area of law which more than most was a creature of the common law, that is to say, the law of torts. He then proceeded to disabuse the majority of the notion that current statutory provision did not allow the sale of bodily material:

> [a]s to organs the majority rely on the Uniform

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[238] Ibid., p.533, quoting Murray, (1986, pp.5-6).

> Anatomical Gift Act [1968]... for the proposition that a competent adult may make a post-mortem gift of any part of his body but may not receive 'valuable consideration' for the transfer. But the prohibition of the Uniform Anatomical Gift Act [1968] against the sale of a body part is much more limited than the majority recognized: by its terms... the prohibition only applies to sales for 'transplantation' or 'therapy'. Yet a different section of the Uniform Anatomical Gift Act [1968] authorizes the transfer and receipt of body parts for such additional purposes as 'medical or dental education research, or advancement of medical or dental science'... No section of the Uniform Anatomical Gift Act [1968] prohibits anyone from selling body parts for any of those additional purposes; by clear implication, therefore, such sales are legal. Indeed, the fact that the Uniform Anatomical Gift Act [1968] prohibits no sales of organs other than sales for 'transplantation' or 'therapy' raises a further implication that it is also legal for anyone to sell human tissue to a biotechnology company for research and development purposes.[239]

Likewise, Mosk J. argued that the statutes in relation to blood donation did not prohibit the sale of blood. This led him to conclude that:

> because such statutes treat both organs and blood as property that can legally be sold in a variety of circumstances, they impliedly support Moore's contention that his blood cells are likewise property for which he can and should receive compensation, and hence are protected by the law of conversion.[240]

Mosk J. also took issue with the final policy reason of the majority, that of there being an adequate cause of action for individuals who found themselves in a situation similar to that of the plaintiff.

The cause of action articulated by the majority was that of breach of a fiduciary duty to disclose to the

[239] Ibid., p.535.

[240] Ibid., p.537.

patient the fact that his cells are about to be used for economic or research purposes. Mosk J. outlined three objections to this view. Firstly, he believes that such a remedy is not practically available citing for his contention the following reasons:

> [t]here are two barriers to recovery. First, 'the patient must show that if he or she had been informed of all pertinent information, he or she would have declined to consent to the procedure in question'... As we explained in the seminal case of Cobbs v Grant 8 Cal.3d 229 (1972) at 245, 'There must be a causal relationship between the physician's failure to inform and the injury to the plaintiff. Such a causal connection arises only if it is established that had the revelation been made consent to treatment would not have been given'.
>
> The second barrier to recovery is still higher, and is erected on the first: it is not even enough for the plaintiff to prove that he personally would have refused consent to the proposed treatment if he had been fully informed; he must also prove that in the same circumstances no reasonably prudent person would have given such consent...
>
> Even in an ordinary Cobbs type action it may be difficult for a plaintiff to prove that no reasonably prudent person would have consented to the proposed treatment if the doctor had disclosed the particular risk of physical harm that ultimately caused the injury... because in many cases the potential benefits of the treatment to the plaintiff clearly outweigh the undisclosed risk of harm. But that imbalance will be even greater in the kind of nondisclosure action that the majority now contemplate: here we deal not with a risk of physical injuries such as a stroke, but with the possibility that the doctor might later use some of the patient's cast off tissue for scientific research or the development of commercial products.[241]

In addition, Mosk J. disapproves of the non-disclosure action because it fails to give the patient the right to grant consent to the use of his tissue for commercial

[241] Ibid., p.538.

purposes on the condition that he share in the proceeds of such an enterprise. In summary this failure:

> accentuates the negative and eliminates the positive: the patient can say no, but he cannot say yes and expect to share in the proceeds of his contribution... it is therefore not an adequate substitute for the conversion remedy.[242]

Finally, according to Mosk J. the non-disclosure action does not allow a potential plaintiff to gain access to all potential defendants.

Thus, for example, research assistants who participated with the attending physician in the development of the cell-line would not come within the bounds of the doctor-patient relationship for the purposes of such a form of action. Applying this model to the present case then the only defendant who Moore would be able to sue in a non-disclosure suit would be the physician who treated him. The co-defendants in the instant case were not physicians. Mosk J. concludes thus:

> [a]s to these defendants, the majority can offer Moore only a slim hope of recovery: if they are to be liable on a non-disclosure cause of action, say the majority, 'it can only be on account of [the physician's] acts and on the basis of a recognized theory of secondary liability, such as respondeat superior...
>
> To the extent that a plaintiff such as Moore is unable to plead or prove a satisfactory theory of secondary liability, the non-disclosure cause of action will thus be inadequate to reach a number of parties to the commercial exploitation of his tissue. Such parties include, for example, any physician-researcher who is not personally treating the patient, any other researcher who is not a physician, any employer of the foregoing... and any person or corporation thereafter participating in the commercial exploitation of

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[242] Ibid., p.540.

the tissue.[243]

As can be seen from the dissenting judgment in this case, there are cogent reasons for establishing a property rule in relation to bodily material such as cell tissue. This is so both for reasons of individual human rights such as the right of the individual to bodily integrity and autonomy as well as for reasons of legal certainty.

At present, in this jurisdiction as in the United States we can only rely on a number of precedents in relation to bodily materials as property which are far from authoritative on the point.[244] To arrive at a position of greater equity what is required is a clear acceptance either judicially or in statute of a property right in all bodily materials. This would allow for the protection of those who have like John Moore been 'gene-raped' and have in effect no recourse to justice. However, it may also lead to a situation where the body is a mere object to be bought and sold in the biotechnological marketplace. The symbolic acceptance of the body as property may as a result be distasteful for many. Nonetheless the current position where the body is represented as not being a commodity does not lead to an adequate protection against the inevitable exploitation which will be carried out. Neither does it prevent economically marginalized individuals from clandestinely selling their organs to willing buyers. Thus,

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[243] Ibid., p.541.

[244] See for example, R. v Welsh [1974] R.T.R. 478 and R. v Rothery [1976] R.T.R. 550.

the potential benefits of adopting a property model of human body parts and materials outweigh the perceived disadvantages of such a development.[245]

2.8 Conclusions.

The way in which death is defined is of crucial importance to medical practice. One can see that even in this seemingly uncontroversial area of clinical practice ideological debate has taken place. In developing a body of Irish jurisprudence on death in general, one must not neglect the importance of framing a statute which clearly delineates the basis on which death is to be determined. The model adopted will determine the way in which the wider area of death and dying will be viewed in policy terms.

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[245] Skegg, (1992, p.314), in speaking of the abandonment of the 'no property' rule in the context of cadavers raises the question of whether such an abandonment would lead to the commercial exploitation of corpses or parts of corpses. He frames his reply in the following terms:

> [i]n fact, the 'no property' rule has not prevented all such sales. Human skeletons continue to be purchased by medical students, and museums and others have purchased human heads and other human remains... If the sale of corpses or parts of corpses is to be prevented or regulated, this is best done by appropriate legislation (cf. Human Organ Transplants Act 1989) rather than by placing reliance on a possible effect of the 'no property' rule.

CHAPTER THREE: PREGNANCY TERMINATION - THE END OF THE BEGINNING.

> A thing would grow into a person, a tiny lump of stuff would become a human body, a human mind. The astounding process of creation was going on within her; but Marjorie was conscious only of sickness and lassitude; the mystery for her meant nothing but fatigue and ugliness and a chronic anxiety about the future, pain of the mind as well as discomfort of the body.[1]

3.0 Introduction.

This chapter reviews the legal and moral background to a topic which falls into the category of the taking of life, pregnancy termination. The aim of this analysis is to provide a practical example of how the existence of different ethical viewpoints on the right to life can have practical ramifications for the way in which this issue is dealt with by policy and legal actors. Moreover, this analysis allows one to identify the manner in which the law and policy-makers have approached this matter and to discover if any lessons may be learned from this experience in relation to how legal and policy actors should approach the related issue of euthanasia.

3.1 The Sanctity of Foetal Life Model and Pregnancy Termination.

This variant of the sanctity of life doctrine views the foetus as being of similar status to the members of the species homo sapiens who have actually been born. In other

[1] Huxley, (1994, p.2).

words, on this view, the foetus is a human being.

However, the weakness of this argument is that it presupposes that a human comes into being at a particular point which may be empirically identified. Thus, Noonan[2] concludes that the human being comes into existence from the moment that the ovum is fertilized. Noonan claims that it is at conception that human beings receive their genetic code and holds that the:

> positive argument for conception as the decisive moment of humanization is that at conception the new being receives the genetic code. It is this genetic information which determines his characteristics, which is the biological carrier of human wisdom, which makes him a self-evolving being. A being with a human genetic code is man.[3]

However, as Williams notes, the:

> idea of a moment of conception when a new human being is miraculously created is over-dramatised, and results from ignorance of modern biology. The 'moment' when the two gametes (the sperm and the ovum) fuse resolves itself under the microscope into a succession of clearly discernible stages, which may take twenty-four hours or more to complete. No one of these stages identifies itself as obviously the 'moment of conception'. However you date man's beginning, it is, like his ending, a process.[4]

Others who argue that the foetus is a human being do not adhere to the view that this humanness attaches to the foetus at conception.

Thus, Brody[5] argues that the point at which the foetus becomes human coincides with the commencement of brain

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[2] Noonan, (1970, p.57).

[3] Ibid.

[4] Williams, (1994, p.76).

[5] See, Brody, (1975, pp.1-4).

function. Nonetheless, irrespective of what boundary one draws in relation to the dawn of humanity in the fertilised ovum, one is then obliged to argue why such a being is to be accorded the same status as a living human being? The argument tends to focus on the inherent rights of the members of the species <u>homo sapiens</u> as opposed to members of any other species. One can frame the argument thus:-

(1) a human foetus is a human being from the moment of conception.

(2) It is wrong to kill a human being.

(3) Pregnancy termination entails the killing of a foetus.

(4) Therefore pregnancy termination is wrong.

However, as Glover points out, the problem with such an argument is that:

> even if we allow that the foetus is a human being, it is hard to see how, without appealing to its potential rather than its actual properties, we can use this to justify its protected status.[6]

Nonetheless one of the most vehement opponents of abortion, the Roman Catholic Church opposes the practice of abortion on the grounds that the foetus is a human being and as such has a right not to be killed. The current view of the Roman Catholic Church on the topic is that the foetus is a person from the moment of conception and has a right to life from that point onwards.[7] As Dworkin points

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[6] Glover, (1990, p.121).

[7] See, Sacred Congregation for the Doctrine of the Faith, (1987, pp.1-2).

out[8] this view differs from the traditional Thomist argument against abortion. Dworkin observes that the current official Vatican line on abortion has only existed for a century whereas for:

> substantial periods, if there was any reigning opinion within the church hierarchy it was to the contrary: that a foetus becomes a person not at conception but only at a later stage of pregnancy, later than the stage at which almost all abortions now take place.[9]

Rather than base its opposition to abortion on the basis of the inherent humanity of the foetus, the early church based this argument on a more general appeal to the sanctity of life. Thus, Thomas Aquinas held that abortion in the early weeks of pregnancy is not murder because at that stage the soul is not present. This was based on the idea that the foetus does not possess a rational soul at the time of conception but only comes to possess one at a later stage, forty days in the case of a male foetus and later in the case of a female foetus.[10] This view did not

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[8] Dworkin, (1993, pp.35-50).

[9] Ibid., p.39.

[10] Ibid, p.40, where Dworkin explains that this model of ensoulment was based on the idea of hylomorphism advocated by Aquinas. This idea:

> holds that the human soul is not some independent free-floating substance that can be combined with anything, but is logically related to the human body in the same way as the shape or form of any object is logically related to the raw material out of which it is made. No statue can have a given form unless it - the whole stone, or wood, or wax, or plaster - has that form. Even God could not bring it about that a huge unformed block of stone actually had the shape of Michelangelo's David. By the same

imply that the church viewed abortion as permissible until the foetus was ensouled. On the contrary, the practice of abortion was just as strenuously condemned in this pre-ensoulment period as it was on ensoulment, but for different reasons. Rather abortions at this stage were viewed as 'anticipated homicide' and as such not permitted.[11] This placed the act of pre-ensoulment abortion in the same category as contraception and masturbation which while not homicide interfered with the natural process of procreation. As Dworkin points out:

> [i]n the Middle Ages, the term 'homicide' was sometimes used to name any offense, including contraception, against the natural order of procreation, and thus against the sanctity of life conceived as God's divine gift. Decrees of Pope Gregory IX provided that anyone who treated a man or a woman 'so that he cannot generate, or she conceive, or offspring be born, let it be held as homicide'. This expanded conception of homicide, to include not just the killing of an actual human being but any interference with God's creative force, united the church's various concerns with procreation. Masturbation, contraception, and abortion were together seen as offences against the dignity and sanctity of

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token, nothing can embody a human soul, on this view, unless it already is a human body, which meant, for Aquinas and later Catholic doctrine, a body with the shape and organs of a human being. Aquinas therefore denied that a human soul is already instinct in the embryo that a woman and a man together create through sex. That initial embryo, he thought, is only the raw material of a human being, whose growth is directed through a series of souls, each appropriate to the stage it has reached, and each corrupted and replaced by the next, until it has finally achieved the necessary development for a distinctly human soul.

[11] Ibid., p.43.

human life itself.[12]

The traditional view was to change in 1869 when Pope Pius IX declared that early abortions were also to be punished by excommunication.[13]

This interpretation of foetal status saw the foetus as being ensouled from the moment of conception. This is the official view which now pertains. This view is more absolutist, declaring that abortion in any circumstances even in the case of rape or incest is a grave sin and therefore impermissible. The traditional Thomist view is not as hardline in nature and would allow for certain exceptions. Dworkin goes on to point out the disparity between the official view of the church and that of the lay members of the church on the issue of the sanctity of life as it relates to abortion. He cites the example of Ireland in the aftermath of the case of Attorney-General v X and Others[14] where there appeared to be a divergence between the official church line and public opinion on the issue:

> the law that resulted from the referendum plainly presupposes that a foetus is not a person from conception; if it were, a state would certainly be justified in ordering its citizens not to kill a foetus in a foreign country - indeed, it would be morally obliged to do so...
>
> So the Irish people's latest vote is further confirmation that even people who believe, on religious grounds, that the state should prohibit almost all abortions do not actually think that a foetus is a person from the moment of conception. They believe something different but more firmly grounded in Catholic tradition: that

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[12] Ibid.

[13] Ibid., p.44.

[14] [1992] 1 I.R. 1.

> abortion is a fierce and rarely justified waste of the divine gift of human life. People who oppose abortion for that reason might well find it acceptable that citizens be permitted to have an abortion abroad. Almost no one is such a moral relativist as to believe that infanticide is morally proper if done where the laws permit it, but many people do think that each nation should be permitted to decide for itself what may be done on its soil, out of respect for fundamental intrinsic values, when no one's rights are violated.[15]

Thus, Dworkin believes that religious opposition to abortion can be better understood:

> as based on the detached assumption that human life has intrinsic value rather than on the derivative idea that a foetus is a person with its own interests and rights.[16]

3.2 The Sanctity of Life Model and Pregnancy Termination.

This model does not focus exclusively on the status of the foetus, but rather on a more general idea of the value of all human life. When one hears the term sanctity of life one immediately reaches the superficial conclusion that it is an exclusively conservative doctrine. Indeed this is, only in part, true.

The traditional Thomist natural law viewpoint, as we have seen, adopts this stance. However, what is less clearly recognisable is that in many ways the liberal pro-choice model believes in a fundamental sanctity of life. This view of a sanctity of life model as being common to both pro-life and pro-choice advocates has been put forward

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[15] Dworkin, (1993, p.48).

[16] Ibid., p.50.

by Ronald Dworkin.[17] He is of the view that:

> [t]he great majority of people who have strong views about abortion - liberal as well as conservative - believe, at least intuitively, that the life of a human organism has intrinsic value in any form it takes, even in the extremely undeveloped form of a very early, just-implanted embryo. I say 'at least intuitively' because many people have not related their views about abortion or euthanasia to the idea that human life has intrinsic value.[18]

To this extent, public opinion is in agreement on the basic assumption that life is sacred. It is the degree to which individuals respect this idea of the sanctity of life which differentiates them in practice. Dworkin uses what he terms the frustration thesis to determine the common belief of both conservatives and liberals in a sanctity of life model. He outlines this thesis in the following manner:

> [w]e believe... that a successful human life has a certain natural course. It starts in mere biological development - conception, foetal development, and infancy - but it then extends into childhood, adolescence, and adult life in ways that are determined not just by biological formation but by social and individual training and choice, and that culminate in satisfying relationships and achievements of different kinds. It ends, after a normal life span, in a natural death. It is a waste of the natural and human creative investments that make up the story of a normal life when this normal progression is frustrated by premature death or in other ways. But how bad this is - how great the frustration - depends on the stage of life in which it occurs, because the frustration is greater if it takes place after rather than before the person has made a significant personal investment in his own life, and less if it occurs after any investment has been substantially fulfilled, or as substantially fulfilled as is anyway likely...
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> So the idea that we deplore the frustration of life, not its mere absence, seems adequately

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[17] Ibid., pp.68-101.

[18] Ibid., p.69.

> to fit our general convictions about life, death and tragedy. It also explains much of what we think about the particular tragedy of abortion. Both conservatives and liberals assume that in some circumstances abortion is more serious and more likely to be unjustifiable than in others. Notably, both agree that a late-term abortion is graver than an early-term one...
>
> The frustration thesis gives us a natural and compelling justification of it. Foetal development is a continuing creative process, a process that has barely begun at the instant of conception. Indeed, since genetic individuation is not yet complete at that point, we might say that the development of a unique human being has not started until approximately fourteen days later, at implantation. But after implantation, as foetal growth continues, the natural investment that would be wasted in an abortion grows steadily larger and more significant.[19]

Thus, there are points of convergence on the issue of the sanctity of life between conservative and liberal opinion. However, there is also quite a deal of disparity. Dworkin illustrates this by means of a spectrum of frustration. At either end of this spectrum is to be found radical conservative and liberal views on the issue of the taking of life. Using the frustration thesis, Dworkin creates a model of the amalgam of views which exist on the issue of abortion. These views are formed on the basis of how various groupings see abortion as frustrating the natural cycle of life.

As explained in his espousal of the frustration thesis, a normal human life is made up of two modes of creative investment in that life, the natural and the human. The relative stress which one places on the importance of each mode to the successful, normal life

[19] Ibid., pp.88-89.

determines, to a large degree, the position of the individual on the spectrum of opinion. Thus:

> [i]f you believe that the natural investment in a human life is transcendently important, that the gift of life itself is infinitely more significant than anything the person whose life it is may do for himself, important though that may be, you will also believe that a deliberate, premature death is the greatest frustration of life possible, no matter how limited or cramped or unsuccessful the continued life would be. On the other hand, if you assign much greater relative importance to the human contribution to life's creative value, then you will consider the frustration of that contribution to be a more serious evil, and will accordingly see more point in deciding that life should end before further significant human investment is doomed to frustration.[20]

It is on this model that Dworkin proposes a reshaping of the discourse on abortion and in some way to understand the real reasons why various groupings adopt conflicting stances on the issue. One can see that there is a basic commonality of opinion on the issue of the sanctity of life. It is the degree to which individuals support this abstract premise which causes division on the topic. This model of interpreting the differing ways in which individuals understand the ideal of the sanctity of life offers as Dworkin says a schema "for understanding the arguments and decisions that we and other people make in real life".[21]

This model is useful in understanding the Irish discourse on the issue of abortion. In addition it is also of use in determining how another contentious life and

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[20] Ibid., p.91.

[21] Ibid., p.100.

death issue will be dealt with in the forum of public discourse in Ireland in the years ahead. It in fact provides the conceptual bridge which unites the issues of abortion and euthanasia. By applying this model to the question of euthanasia one will be provided with a rather accurate picture of the upcoming Irish debate on the issue of death and dying.

3.3 The Privacy Model and Pregnancy Termination.

In the United States in the case of Roe v Wade[22] the problem of restricting access to abortion services was dealt with by appealing to the right of privacy. Thus, as Blackmun J. stated in his judgment in that case, the right to privacy "is broad enough to encompass a woman's decision whether or not to terminate her pregnancy".[23]

The right to privacy however is a largely undefined and perhaps indefinable right. There has been voluminous debate as to what exactly it means and whether it is a valid constitutionally protected right.[24] As Rubenfeld has written, the Supreme Court has never:

> hazarded a definitive statement of what it was supposed to protect. At the heart of the right to privacy, there has always been a conceptual vacuum.[25]

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[22] 410 U.S. 113, 93 S.Ct. 705, 35 L.Ed.2d 147 (1973).

[23] Ibid., p.153.

[24] See further, Rubenfeld, (1989, pp.737-807).

[25] Ibid., p.739.

This inability on the part of the judiciary to elucidate a theoretical principle from which the right of privacy emanates is manifest in the cases in which such a right has been articulated. The basis for a privacy right lies in the Ninth Amendment to the United States Constitution which states that "[t]he enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people". The Ninth Amendment has enabled the Supreme Court to articulate an unenumerated right to privacy which is not mentioned in the text of the Constitution. This right was described in Griswold v Connecticut[26] as being discernible in the penumbras of the First, Third, Fourth, Fifth, and Ninth amendments. In the subsequent case of Eisenstadt v Baird[27] Blackmun J. elaborated on this right in the following terms:

> [i]f the right to privacy means anything, it is the right of the individual, married or unmarried, to be free from unwarranted governmental intrusion into matters so fundamentally affecting a person as the decision to bear or beget a child.[28]

The right was further extended by the Supreme Court in Roe v Wade[29] to include within its scope the right of a woman to obtain an abortion within the first two trimesters of her pregnancy. This privacy right derived from the protection of liberty to be found in the Due Process Clause

[26] 381 U.S. 479 (1965).

[27] 405 U.S. 438 (1972).

[28] Ibid., p.453.

[29] 410 U.S. 113, 93 S.Ct. 705, 35 L.Ed.2d 147 (1973).

of the Fourteenth Amendment.

This manner of interpreting the Constitution has been referred to by Dworkin as creating a 'constitution of principle'.[30] By interpreting the Constitution in this manner, Dworkin argues, we create a model which:

> lays down general, comprehensive moral standards that government must respect but that leaves it to statesmen and judges to decide what these standards mean in concrete circumstances. What the Due Process and Equal Protection clauses actually mean, on this view of the Constitution, depends on the best, most accurate understanding of liberty and equal citizenship.[31]

However, there is a competing model of constitutional interpretation which Dworkin refers to as creating a 'constitution of detail'.[32] This has very different implications for the way in which constitutional decision-making is viewed. Thus, under this model, Dworkin observes, what is created is "a collection of independent historical views and opinions unlikely to have great unity or even complete consistency".[33] As a result one would be confined to a narrow, literalist view of the Constitution, which is far from dynamic. As Dworkin puts it, such a model would express:

> only the very specific, concrete expectations of the particular statesmen who wrote and voted for them. The Due Process and Equal Protection clauses would then have only the force that the particular people who voted for them would have

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[30] Dworkin, (1993, p.119).

[31] Ibid.

[32] Ibid.

[33] Ibid.

expected them to have.[34]

This model has gained considerable ground in the years since Roe v Wade was decided. It can be seen clearly in White J.'s majority decision in Bowers v Hardwick[35] where it was held that the right to privacy did not extend to consensual adult male homosexual activity.

The majority noted the previous areas which had been protected under the privacy right; family, marriage and procreation and saw no connection between these areas and consensual homosexual activity. Thus, it concluded that, as in this case, a state statute criminalizing consensual male homosexual acts was not unconstitutional. White J. in his opinion for the majority clearly articulated the 'constitution of detail' as identified by Dworkin. White J. claimed:

> [t]he court is most vulnerable and comes nearest to illegitimacy when it deals with judge-made constitutional law having little or no cognizable roots in the language or design of the Constitution... There should be, therefore, great resistance to expand the substantive reach of [due process], particularly if it requires redefining the category of rights deemed to be fundamental. Otherwise, the judiciary necessarily takes to itself further authority to govern the country without express constitutional authority.[36]

White J. believed that there was a danger in the continued development of unenumerated rights such as the right of privacy. He believed that it could lead to the "imposition

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[34] Ibid.

[35] 478 U.S. 286 (1986).

[36] Ibid., pp.194-195.

of the Justices' own choice of values on the states".[37]

However, the majority judgment itself was an expression of a value judgment. In this case the message which was hidden behind the judicial rhetoric was that consensual male adult homosexual acts were not to be accorded the same status as heterosexual sexual activity.

The majority based this conclusion on views of homosexuality which were traditional and very conservative. The first argument was based on tradition. Traditionally the approach of legislators in the United States to homosexual acts was that such acts should be criminalized. The majority claimed that the historical background of such legislation pointed to a general societal rejection of homosexual acts. Thus, the majority concluded:

> [a]gainst this background, to claim that a right to engage in such conduct is 'deeply rooted in this nation's history and tradition' or 'implicit in the concept of ordered liberty' is, at best, facetious.[38]

This appeal to tradition however is not without its own problems. As Stacy has noted:

> [d]epending on one's definition of 'deeply rooted tradition', one can view Hardwick as involving at least two different sets of conflicting traditions. The first involves the tradition of formal proscription of sodomy and the perhaps more recent tradition of refusal to enforce this proscription. The second set consists of the tradition of governmental non-involvement (sic) in consensual sexual intimacy generally and the competing tradition of intolerance of homosexuality. The majority did not attempt to provide the means for deciding whether any of these practices qualify as 'deeply rooted

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[37] Ibid., p.191.

[38] Ibid., p.194.

> traditions', or for resolving a conflict between them assuming they do qualify. Nor did the majority explain whether and how the Court's past privacy decisions can plausibly be viewed as emerging from deeply rooted traditions.[39]

Secondly, the majority was of the view that homosexual acts could not be distinguished for the purposes of constitutional adjudication from other forms of sexual activity to which the Supreme Court had not given constitutional recognition:

> it would be difficult, except by fiat, to limit the claimed right to homosexual conduct while leaving exposed to prosecution adultery, incest, and other sexual crimes... We are unwilling to start down that road.[40]

The majority thus claimed that they could only adhere to the previous pronouncements of the Supreme Court on privacy and as these referred only to marriage, family and procreation, they could not extend privacy protection to the area of homosexual acts. However, it is clear that in doing so the majority were displaying their distaste for the development of this right. As Rubenfeld has put it:

> [t]he device of compartmentalizing precedent is an old jurisprudential strategy for limiting unruly doctrines. The effect here is that, after Hardwick, we know that the right to privacy protects some aspects of marriage, procreation and child-rearing, but we do not know why. By identifying three disparate applications ungrounded by any unifying principle, the majority effectively severed the roots of the privacy doctrine, leaving only the branches, which will presumably in short order dry up and wither away.[41]

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[39] Stacy, (1992, pp.549-550).

[40] Bowers v Hardwick 478 U.S. 286 (1986), pp.195-196.

[41] Rubenfeld, (1989, p.749).

The privacy model however, despite the attempts of a more conservative judiciary to overturn it, remains a means of protecting individual rights against third party interference. Yet the problems of the theoretical basis of the right of privacy remain. As Henkin has noted in referring to the development of the privacy right by Douglas J. in Griswold v Connecticut[42]:

> [a]lthough it is not wholly clear, Douglas J.'s argument seems to go something like this: since the Constitution, in various 'specifics' of the Bill of Rights and in their penumbra, protects rights which partake of privacy, it protects other aspects of privacy as well, indeed it recognizes a general, complete right of privacy...
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> A logician, I suppose, might have trouble with that argument. A legal draftsman, indeed, might suggest the opposite: when the Constitution sought to protect private rights it specified them; that it explicitly protects some elements of privacy, but not others, suggests that it did not mean to protect those mentioned.[43]

The underlying weaknesses in the privacy model as a means of protecting reproductive freedom and indeed individual sexual liberty and physician-assisted suicide have prompted certain commentators to look for an alternative model.[44] This shall be the focus of the following section.

3.4 The Equality Model and Pregnancy Termination.

The abortion debate as well as incorporating views

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[42] 381 U.S. 479 (1965).

[43] Henkin, (1974, pp.1421-1422).

[44] See further, Dworkin, (1993, pp.50-60).

supportive of foetal sanctity also includes views which uphold female sanctity. No matter who articulates the message of foetal rights, male or female, the voice of this lobby is patriarchal. It is also interesting to note that the prominent voice in legal discourse in this country has been male. The prominent voice in legislative discourse has also been male. Maleness is society's public persona. Femininity has been hidden, obscured.

One puzzling factor in this account is the representation of Ireland as female. This may stem from a time when Ireland was indeed pre-patriarchal, to a time when, as in Celtic mythology the influence of women on society was significant. Or are these symbolic representations of Ireland as female merely creations of a male-dominated society inscribing woman's role as producer of offspring on the collective imagination?

Today, the issue of abortion continues to be regulated by male-dominated institutions who still speak the language of patriarchy. The idea of legal discourse being dominated by the male is well put by Finley when she observes:

> the primary linguists of law have almost exclusively been men - white, educated, economically privileged men. Men have shaped it, they have defined it, they have interpreted it and given it meaning consistent with their understandings of the world and of people 'other' than them.[45]

This male language is also the lingua franca of reproductive medicine, another male-dominated institution. As Greschner has put it:

[45] Finley, (1989, p.892).

> [t]he metaphor of production is the dominant medical metaphor to describe the process of menstruation, pregnancy and birth: women are the machines that must produce a perfect product, a healthy baby. Just as machines are separate from their products, so too are women separate from their 'products', children. Doctors, not women, 'deliver' the product and improve its quality... The medical model of production overlaps and supports the notion that birth is a 'natural' event. Women menstruate, become pregnant and give birth because that is what their bodies are designed for; women themselves are simply living through a biological process into which they have no input.[46]

This perceived imbalance in public discourse has resulted in a move amongst certain feminist thinkers to the equal treatment model of pregnancy termination.[47] This model has rather different implications for the abortion debate than the privacy model described in the previous section. Indeed for many the privacy model as applied to the question of abortion has many shortcomings.

The limitations of basing reproductive autonomy on a right to privacy have been demonstrated in a number of cases which were heard after the decision in Roe v Wade.[48] Noteworthy among such cases are Harris v McRae[49] and Maher v Roe.[50]

In Harris v McRae,[51] the Supreme Court held that a federally funded programme to subsidize medically necessary

[46] Greschner, (1990, pp.647-648).

[47] See further, Dworkin, (1993, pp.50-60).

[48] 410 U.S. 113, 93 S.Ct. 705, 35 L.Ed.2d 147 (1973).

[49] 448 U.S. 297 (1980).

[50] 432 U.S. 464 (1977).

[51] 448 U.S. 297 (1980).

services which denied funds to indigent women in order to enable them to have medically necessary abortions except in the case of rape, incest or where the life of the mother was threatened, did not unduly interfere with a woman's constitutionally protected freedom to decide whether or not to terminate her pregnancy. The Supreme Court gave the following rationale for this decision:

> [t]he financial constraints that restrict an indigent woman's ability to enjoy the full range of constitutionally protected freedom of choice are the product not of governmental restrictions on access to abortions but rather of her indigency.[52]

Similarly in Maher v Roe[53] the Supreme Court held that the withdrawal of funding for abortions coupled with full funding for childbirth did not affect the privacy rights of women. The Supreme Court was of the view that unequal subsidization of abortion in order to encourage childbirth did not prevent women from gaining access to pregnancy termination services. These practical failings of privacy protection in this area have led to the development of a new conceptual model on which to base the question of access to abortion. This model focuses on the idea of equality or equal treatment.[54]

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[52] Ibid., p.316.

[53] 432 U.S. 464 (1977).

[54] McKinnon, (1983, pp.32-34), argues that:

> [p]rivacy conceived as a right from public intervention and disclosure is the conceptual opposite of the relief McRae sought for welfare women. State intervention would have provided a choice these women did not have in private... The way the law of

The equality model unlike the privacy model does not focus on the personhood of the foetus. Indeed many who support the equality model accept that the foetus does possess a vestige of humanity. Thus, as McKinnon has observed:

> in the experience of many pregnant women, the foetus is a human form of life. It is alive... More than a body part but less than a person, where it is, is largely what it is. From the standpoint of the pregnant woman, it is both me and not me. It 'is' the pregnant woman in the sense that it is in her and of her and is hers more than anyone's. It 'is not' her in the sense that she is not all that is there.[55]

This model does not therefore rely on a conflictual relationship between the foetus and the mother, but rather sees the issue as part of a wider question of the status of the female in society. Sunstein has summed up this model in the following manner:

> [o]n this view, abortion should be seen not as

> privacy restricts intrusions into intimacy also bars change in control over that intimacy. The existing distribution of power and resources within the private sphere will be precisely what the law of privacy exists to protect... I think it is not a coincidence that the very place (the body), the very relations (heterosexual), the very activities (intercourse and reproduction), and the very feelings (intimate) that feminism has found central to the subjection form the core of privacy law's coverage. In this perspective, the legal concept of privacy can and has shielded the place of battery, marital rape, and women's exploited labour, preserved the central institutions whereby women are deprived of identity, autonomy, control, and self-definition, and protected the primary activities through which male supremacy is expressed and enforced.

[55] McKinnon, (1991, p.1316).

> murder of the foetus but instead as a refusal to continue to permit one's body to be used to provide assistance to it. The failure to see it in this way is simply a product of the perceived naturalness of the role of women as childbearers - whether they want to assume that role or not. And even if a general legal obligation of bodily assistance to the vulnerable might be constitutionally acceptable, such an obligation cannot be permitted if it is imposed solely on women. This is so especially because of the close real-world connection between selectivity of this sort and constitutionally illegitimate stereotypes about the appropriate role of women... the argument from equality is supported by four different points: (1) prohibiting abortion is a form of <u>prima facie</u> or <u>de jure</u> sex discrimination; (2) it is impermissibly selective; (3) it results from constitutionally unacceptable stereotypes; and (4) it fails sufficiently to protect foetal lives. Standing alone, any one of these points is probably insufficient. They derive force by their cumulative effect.[56]

The equality model requires a reconceptualization of the current model of society, where the hitherto repressed female voice is allowed to surface in public discourse. The first component of the argument sees public policy restrictions on abortion as a form of sex discrimination. As Sunstein points out:

> [a] statute that is explicitly addressed to women is of course a form of sex discrimination. A statute that involves a defining characteristic or a biological correlate of being female should be treated in precisely the same way. If a law said that 'no woman' may obtain an abortion, it should readily be seen as a sex-based classification. A law saying that 'no person' may obtain an abortion has the same meaning.[57]

The current model of limiting abortion is reflective of a traditional male-oriented view of the role of the

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[56] Sunstein, (1992, p.32).

[57] Ibid., pp.32-33.

female. The female has motherhood thrust upon her rather than choosing it for herself. McKinnon's idea of the foetus as of the woman is not compatible with the dominant societal model of motherhood. Rather the woman is seen as separable from the foetus in her womb. She remains the 'other' even in this most unique of relationships. At one extreme the woman is a mere foetal container, the dominated party in this relationship. Thus, as Greschner observes:

> [t]he role of the mother is obliterated... Patriarchy, through both religion and medicine, took pregnancy and subverted the process into a model of separate persons within one person imposing its way of thinking about human life on women. Unsurprisingly, the foetus is visualized as a miniature man, more precisely of late as a male astronaut inside a uterine spaceship.[58]

This dominant model has constricted female choice in the matter of motherhood. Indeed, choice is often completely absent in this as in many aspects of the lives of women. As Adrienne Rich has pointed out:

> [f]or most women actual childbirth has involved no choice whatever, and very little consciousness. Since prehistoric times, the anticipation of labour has been associated with fear, physical anguish or death, a stream of superstitions, misinformation, theological and medical theories - in short, all we have been taught we should feel, from willing victimization to ecstatic fulfilment.[59]

Thus, the idea that laws restricting abortion should be viewed as a form of unequal treatment stems from the notion of motherhood as a societally imposed construct. The absence of choice in the past does not imply that given the

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[58] Greschner, (1990, p.649).

[59] Rich, (1976, p.149).

choice a woman would not choose to become a parent. Rather the introduction of choice would allow her to do so on her own terms and in a manner in which she is viewed as more than a mere carrier of the male seed. In this view woman becomes the creator rather than just an accessory. The difference between a pregnancy that is chosen and one that is imposed has been well put by Finley:

> [i]f a pregnancy is wanted, many women may feel an ecstatic connected wholeness with the wonder of their growing body. The developing foetus is not just part of her; it is her and part of a seamless web. Whatever is done to or for it, is done to her, not just through her. If the pregnancy is unwanted, conflict with an opposed autonomous rights holder still does not encapsulate what many women feel. The feelings may be of terrifying annihilation, of invasion by and surrender of self to the pregnancy - not of a fight against a separate being. After terminating an unwanted pregnancy, a woman does not feel as though she has vanquished an enemy, but as if she has been given herself back. Overwhelming relief, a sense of autonomy restored - but sometimes a sense of part of herself lost.[60]

The second component of the equality argument as visualized by Sunstein is that the limitation on access to abortion services is unnecessarily selective. As Sunstein points out:

> [t]he basic problem is that an act of abortion is not an ordinary killing, but instead a refusal to allow one's body to be devoted to the protection of another. Government never imposes an obligation of this sort on its citizens - even when human life is uncontroversially at stake. Parents are not compelled to devote their bodies to the protection of children, even if, for example, a risk-free kidney transplant is necessary to prevent the death of their child... It seems clear that a proposal to impose duties of bodily imposition on parents or others would

[60] Finley, (1989, pp.900-901).

> be treated as a frightening and unacceptable intrusion on personal autonomy - even when life is at stake, even when death would result from refusal to carry out the relevant duty, and even when the people to be protected owe their existence and vulnerability to the people on whom the imposition would be placed... The fact that similar impositions are not made in cases in which men are involved... suggests that the prohibition of abortion is a form of impermissible selectivity. It indicates that a discriminatory purpose is ultimately at work.[61]

This again stems from an unwillingness to accept the individuality of the female in society.

To this argument that policy-makers are being needlessly selective in the limiting of access to abortion, one may find a counter-argument, Sunstein notes, in another area of public policy. She gives the example of the military draft of which men have traditionally been the subject.

Thus, it could be argued that in this instance the state imposes a peculiar burden on the body of the male. Sunstein sees this example not as confounding her argument but as confirming it. She sees the example of the draft as part of a wider notion of the relative roles of males and females in society. Thus, she claims that the:

> central point is that legal provisions ensuring that only men are drafted are part of a system of sex role stereotyping characterized by a sharp, legally produced split between the domestic and public spheres - with women occupying the first and men occupying the second... legal restrictions on abortion are an element in the legal creation of a domestic sphere in which women occupy their traditional role... Male-only drafts are part of the legal creation of a public sphere in which men occupy their traditional

[61] Sunstein, (1992, p.34).

role.[62]

The third part of the equality argument is based on the idea that the traditional model of the role of women in society is a constitutionally unacceptable stereotype. This stereotypical view of women's role is according to Sunstein responsible for the situation which currently prevails. She claims that:

> the restrictions that do or could exist in this world would in all probability have failed to pass without the involvement and support of people holding and relying on unacceptable stereotypes.[63]

The final part of the equality argument states that legal prohibitions on abortion do not in fact achieve what they purport to achieve, that is, to protect foetal life. Rather what they do in fact achieve is force women to have dangerous abortions, thus endangering the lives of women.[64]

In the context of current constitutional reality, the equality model would appear to be untenable in that the current construct of equality merely requires that women be treated in a similar manner to men insofar as they are the same as men. Thus, as men cannot currently become pregnant, laws restricting access to abortions are not looked upon as being discriminatory in this sense. However, as Sunstein argues, the current constitutional model of equality:

> turns out also to be a conception of neutrality. According to that conception, the government's duty of impartiality is violated when, and only

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[62] Ibid., p.36.

[63] Ibid., p.37.

[64] Ibid., pp.37-39.

> when, it distinguishes between those who are the same, by, for example, treating blacks differently from whites, or women differently from men. But this conception of neutrality rules out of bounds a perfectly plausible claim of inequality. It does so precisely because it embodies a controversial substantive baseline. Here the baseline is not existing distributions of wealth and opportunities; it is not as if the social <u>status quo</u>, in that sense, is taken as prepolitical and just. Something quite similar is, however, at work. Women's biological differences 'from the norm' are treated as a social given, and legal rules directed at those differences are said not to implicate equality.[65]

Thus, the equality argument while valid in theory does not seem workable in the current constitutional context. This stems from a particular societal perception of women which is patriarchal in nature. However, this current view is not entirely immutable. What is required is a shift in social perceptions in relation to gender differentiation. Thus, as Sunstein concludes:

> there is no obvious reason to ask the equality question in this way. Indeed, if we do so, we will fail to see inequality in cases where it plausibly exists... Surely a law that turns a biological capacity into a social and legal disability for a part of the population, and for only that part, should be seen as raising questions of discrimination. If a biological capacity limited to one gender is made a basis for social disadvantage through law, one might think that the relevant law creates a problem of inequality.[66]

<u>3.5 Pregnancy Termination and the Irish Constitution: The Sanctity of Autonomy?</u>

The carrying out of an abortion in Ireland, until the

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[65] Ibid., p.43.

[66] Ibid., pp.43-44.

Supreme Court decision in the case of Attorney-General v X and Others,[67] was thought to be illegal in all circumstances. This prohibition was to be found in both statutory and constitutional provisions. Sections 58 and 59 of the Offences Against the Person Act 1861 rendered the provision of abortion a criminal act.[68] Section 58 of the Civil Liability Act 1961[69] and section 10 of the Health

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[67] [1992] 1 I.R. 1.

[68] Section 58 provides:

> [e]very woman, being with child, who, with intent to procure her own miscarriage shall unlawfully administer to herself any poison or other noxious thing, or shall unlawfully use any instrument or other means whatsoever with the like intent, and whosoever, with intent to procure the miscarriage of any woman, whether she be or not with child, shall unlawfully administer to her or cause to be taken by her any poison or other noxious thing, or shall unlawfully use any instrument or other means whatsoever with the like intent, shall be guilty of felony, and on being convicted thereof shall be liable to be kept in penal servitude for life.

Section 59 provides:

> [w]hosoever shall unlawfully supply or procure any poison or other noxious thing, or any instrument or thing whatsoever, knowing that the same is intended to be unlawfully used or employed with intent to procure the miscarriage of any woman, whether she be or be not with child, shall be guilty of a misdemeanour, and being convicted thereof shall be liable to be kept in penal servitude for any period less than three years and not exceeding five years.

[69] This provides:

> [f]or the avoidance of doubt it is hereby declared that the law relating to wrongs shall apply to an unborn child for his protection in like manner as if the child

(Family Planning) Act 1979[70] contained further provisions in relation to the protection of the foetus. Article 40.3.3. of Bunreacht na hEireann 1937, inserted as the result of a referendum, appeared to guarantee the right to life of the foetus. This article provides that:

> the State (sic) acknowledges the right to life of the unborn and, with due regard to the equal right to life of the mother, guarantees in its laws to respect, and as far as practicable, to vindicate that right.

This idea of the foetus as a person with equal rights is deeply indebted to Roman Catholic moral teaching on the issue. However, it is not out of place in a constitution which is influenced by Roman Catholic thought.[71]

The Thomist formulation of natural law was in official favour at the time of the preparation of Bunreacht na hEireann 1937.[72] Aquinas contended that the civil society

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were born, provided the child is subsequently born alive.

[70] Section 10 states:

> [n]othing in this shall be construed as authorising:
> (a) the procuring of abortion,
> (b) the doing of any other thing the doing of which is prohibited by section 58 or section 59 of the Offences Against the Person Act 1861 (which sections prohibit the administering of drugs or the use of instruments to procure abortion or the supplying of drugs or instruments to procure abortion), or;
> (c) the sale, importation into the State, (sic) manufacture, advertising or display of abortifacients.

[71] See further, Clarke, (1993, pp.177-180).

[72] For a discussion of Thomist thought see section 1.2 of this thesis, pp.7-28.

follows the rules of natural law which human beings may only discover. In the words of Walsh J. in the case of McGee v Attorney-General,[73] natural law is "the law of God promulgated by reason and is the ultimate governor of all the laws of men".[74]

It was the First Vatican Council in 1869 which instituted a revival in Thomist thought. This was followed in 1879 by Pope Leo XIII's encyclical, Aeterni Patris which called for the education of the clergy to be founded on the works of Thomas Aquinas. Indeed, Canon Law was amended to this effect, with Canon 1366 stating that "Catholic theology and philosophy be taught according to the method, principles, and doctrine of the Angelic Doctor [viz Thomas Aquinas]".[75] The Thomist natural law approach was still in vogue at the time of the framing of Bunreacht na hEireann 1937. Pope Pius XII in his encyclical of 1930, Casti Connubi, stated that all Christians must be:

> guided and led in all things that touch upon faith or morals by the Holy Church of God through its Supreme Pastor the Roman Pontiff, who is himself guided by Jesus Christ our Lord.[76]

Thus, in Thomist thought, civil law is subordinate to the divine law.

The individual is thus bound by a set of principles which is derived from a particular theological viewpoint,

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[73] [1974] I.R. 284.

[74] Ibid., pp.317-318.

[75] Cited in Coughlan, (1990, p.23).

[76] Quoted in Clarke, (1984, p.61).

whether one subscribes to that viewpoint or not. The fact that Bunreacht na hEireann 1937 is based on Roman Catholic philosophy is quite evident. The preamble to the Constitution puts one in no doubt as to document's intellectual provenance. The Roman Catholic conception of God, the supreme being, is to be the scurce of all legal and political power and it is to God that "all actions both of men and States (sic) must be referred".

God makes another appearance in Article 6.1 as the supreme arbiter of all law. While acknowledging that Ireland is to be a representative democracy with all governmental powers coming from the people, it is the divine power which holds ultimate sway.

Current Roman Catholic teaching on abortion, as has been explained above in section 3.1 is a relatively new innovation and is by no means the immutable traditional viewpoint on the issue.

The constitutional provision in relation to abortion was inserted as a result of the lobbying of certain pro-life groups who were closely allied with Roman Catholicism.[77] These groups, wary of the liberal trend in the Irish Supreme Court in the nineteen sixties and early nineteen seventies, were of the opinion that the Supreme Court might focus on the question of abortion and use the fundamental rights provisions of Bunreacht na hEireann 1937 to allow for abortion in certain circumstances in a manner

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[77] See further, Girvin, (1986, pp.61-81); O'Carroll, (1991, pp.53-71) and O'Leary and Hesketh, (1988, pp.43-62).

similar to the Supreme Court of the United States in the case of Roe v Wade.[78]

It is thus necessary to investigate the decisions of the Supreme Court in a line of cases beginning with Ryan v Attorney-General[79] in 1965, which showed how judicial innovation could transform even the most reactionary of documents into a source of protection for human rights. In Ryan v Attorney-General the Supreme Court acknowledged the existence of certain fundamental rights which were not enumerated in the Constitution but were nonetheless guaranteed to every citizen. The source of such unenumerated rights according to the Supreme Court was Article 40.3 of the Constitution which then provided that:

> 1. [t]he State (sic) guarantees in its laws to respect, and, as far as practicable, by its laws to defend and vindicate the personal rights of the citizen.
>
> 2. The State (sic) shall, in particular, by its laws protect as best it may from unjust attack and, in the case of injustice done, vindicate the life, person, good name, and property rights of every citizen.

The decision in Ryan v Attorney-General provided the basis for further development of a jurisprudence of fundamental rights. The Supreme Court in McGee v Attorney-General[80] stated that the right to privacy in the context of marriage was one of the unenumerated rights under Article 40.3 of the Constitution. Henchy J. stated that:

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[78] 410 U.S. 113, 93 S.Ct. 705, 35 L.Ed.2d 147 (1973).

[79] [1965] I.R. 294.

[80] [1974] I.R. 284.

> [i]t is for the courts to decide in a particular case whether the right relied on comes within the constitutional guarantee. To do so, it must be shown that it is a right that inheres in the citizen in question by virtue of his human personality. The lack of precision in this test is reduced when subsection 1 of section 3 of Article 40 is read (as it must be) in the light of the Constitution as a whole and, in particular, in the light of what the Constitution, expressly or by necessary implication, deems to be fundamental to the personal standing of the individual in question in the context of the social order envisaged by the Constitution.[81]

However, the idea of what may be accepted as fundamental to the personal standing of the individual may differ from individual to individual and in particular may be influenced by the ethos of the Constitution.

Irish society in the nineteen seventies lacked the apparent consensus on moral issues that it possessed in the nineteen thirties when the Constitution was accepted by a majority of the population. Modern Irish society was more pluralist than heretofore and the rights of those who did not subscribe to the philosophy inherent in the Constitution had to be taken into account.

Walsh J. adverted to this state of affairs in his decision in McGee v Attorney-General[82] when he stated:

> [a]ccording to the preamble, the people gave themselves the Constitution to promote the common good with due observance of prudence, justice and charity so that the dignity and freedom of the individual might be assured. The judges must, therefore, as best they can from their training and their experience interpret these rights in accordance with their ideas of prudence, justice and charity. It is but natural that from time to

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[81] Ibid., p.325.

[82] [1974] I.R. 284.

> time the prevailing ideas of these virtues may be conditioned by the passage of time; no interpretation of the Constitution is intended to be final for all time. It is given in the light of prevailing ideas and concepts.[83]

Thus, in this case the Supreme Court was prepared to deviate from Roman Catholic teaching on a particular issue but justified such a decision as being in line with the Constitution. Therefore in spite of the Thomist nature of the Constitution, the Supreme Court has developed a means of articulating individual rights which may not be in accord with Roman Catholic teaching. The inclusion of Article 40.3.3 in the Constitution was intended by the pro-life lobby to prevent the Supreme Court developing the right to privacy guaranteed under Article 40.3 further to include a right to abortion.

However, the amendment was revealed to be of merely cosmetic affect. Irish women continue to travel to the United Kingdom to terminate their pregnancies. The moral exhortation implicit in this provision has not had any impact on the numbers travelling outside the state to obtain an abortion. Indeed in 1992 the number of women with Irish addresses having abortions in the United Kingdom was 4,247.[84] This compares with a pre-amendment figure of 3,650 in 1982.[85] Indeed the Supreme Court was ultimately to hold that Article 40.3.3 did not provide an absolute prohibition on abortion.

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[83] Ibid., p.319.

[84] See, Tomkin and Hanafin, (1995, p.183).

[85] See, Charleton, (1992, p.188).

The case which demonstrated that the constitutional prohibition on abortion was not absolute, was that of Attorney-General v X and Others.[86]

The case concerned a fourteen year old girl who had been the victim of a rape and who was pregnant as a result. The girl travelled to England, accompanied by her parents, in order to obtain an abortion. However before the abortion could take place, the defendants received notice of the fact that the Attorney-General had obtained an interim injunction restraining the girl and her parents from procuring or obtaining an abortion within or outside Ireland. A permanent injunction was granted by Costello J. in the High Court. The defendants appealed this decision to the Supreme Court. The Supreme Court held by a majority of four to one that Article 40.3.3 of Bunreacht na hEireann 1937 permitted abortion, when it was established as a matter of probability that there was a real and substantial risk to the life of the mother, if the abortion were not carried out. Thus, the medical evidence that the girl in question intended to commit suicide if she were prevented from terminating the pregnancy was sufficient to bring the case within the scope of this exception. In the words of Finlay C.J.:

> if a physical condition emanating from a pregnancy occurs in a mother, it may be that the decision to terminate the pregnancy in order to save her life can be postponed for a significant period in order to monitor the progress of the physical condition, and that there are diagnostic warning signs which can be readily relied upon

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[86] [1992] 1 I.R. 1.

during such postponement.[87]

However, Finlay C.J. went on to distinguish a case such as the present one, where the threat to the life of the mother was one which was not susceptible to such a monitoring process:

> a threat of self-destruction such as is outlined in the evidence in this case, which the psychologist clearly believes to be a very real threat, cannot be monitored in that sense and that it is almost impossible to prevent self-destruction in a young girl in the situation in which she is if she were to decide to carry out her threat of suicide.[88]

One part of the decision which would appear to support the contention that the insertion of Article 40.3.3 was of merely symbolic importance, is the judgment of O'Flaherty J. who was of the opinion that "[t]he enactment of Article [40.3.3.] in 1983 did not I believe bring about any fundamental change in our law".[89] O'Flaherty J. went on to outline the existing legislative provisions in the form of section 58 of the Offences Against the Person Act 1861 and section 58 of the Civil Liability Act 1961 which protected the foetus. In addition, he gave an example of a judicial pronouncement on the topic in the form of Walsh J.'s articulation of a right to life for the unborn in the case of G v An Bord Uchtala[90] a case decided before the

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[87] Ibid., p.55.

[88] Ibid.

[89] Ibid., p.88.

[90] [1980] I.R. 32, p.69, where Walsh J. stated:

> [[a] child] has the right to life itself and the right to be guarded against all threats

insertion of Article 40.3.3.

On this basis, one could claim that Ireland is in a substantially similar position to that of the United Kingdom when the law in that jurisdiction in relation to the topic of abortion was also governed by the Offences Against the Person Act 1861.

It is therefore of relevance to examine the English jurisprudence during the period when the law in relation to abortion was governed by the aforementioned statute. This involves examining the use of the criminal law as a means of enforcing a perceived notion of a common morality.

3.6 The Criminal Law and Pregnancy Termination: Limiting Autonomy.

The Offences Against the Person Act 1861 continues to regulate the provision of abortion services in Ireland. The Act which must now be read in the light of constitutional adjudication on the issue in the case of Attorney-General v X and Others[91] continues to apply to all those who provide pregnancy termination services in cases where the health or life of the mother are not in jeopardy.

Thus, a doctor who provided pregnancy termination

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directed to its existence whether before or after birth...

The right to life necessarily implies the right to be born, the right to preserve and defend (and to have preserved and defended) that life.

[91] [1992] 1 I.R. 1.

services would be liable in criminal law for such an act.

It is instructive to examine the situation which obtained in England in the period between the decision in R. v Bourne[92] a case with similar facts and conclusions to that of the case of Attorney-General v X and Others[93] and the eventual introduction of legislation which codified the common law on the issue in 1967.[94]

The situation is substantially similar in that the judiciary interpreted the extant legislation in a manner which apparently subverted it. As a result, the law on the books and the law in reality diverged on whether and to what extent abortion was permissible. The significant difference in the two scenarios is the existence in Ireland of a written constitution which included an express provision protecting the rights of the foetus.

In the case of R. v Bourne[95] a girl of fourteen was pregnant as the result of a rape. The defendant, a qualified surgeon, carried out an operation, terminating the pregnancy. He was subsequently charged under section 58 of the Offences Against the Person Act 1861 with unlawfully procuring an abortion. The case was of importance to the medical profession as it was the first in which a skilled surgeon was charged under that particular section. In the words of Macnaghten J. the case was one of:

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[92] [1938] 3 All E.R. 615.

[93] [1992] 1 I.R. 1.

[94] Abortion Act 1967.

[95] [1938] 3 All E.R. 615.

> first instance, first impression. So far as I know, the matter has never arisen before a jury for them to determine in circumstances such as these, and there was, it seems, even amongst counsel some doubt as to what was the proper expression of the law in such a case as this.[96]

The question which Macnaghten J. put to the jury for determination was whether the prosecution had satisfied them beyond reasonable doubt that the defendant did not terminate the pregnancy in good faith for the purpose of preserving the life of the girl. If the prosecution had succeeded in doing so, then the defendant should be found guilty. If the prosecution had not succeeded in proving this, then the defendant should be acquitted. In the event the defendant was acquitted. The significance for the medical profession of the judgment was to be found in the following statement of Macnaghten J. which outlined the circumstances in which a doctor could lawfully carry out an abortion:

> [t]here are... cases... where it is reasonably certain that a woman will not be able to deliver the child with which she is pregnant. In such a case, where the doctor expects, basing his opinion upon the experience and knowledge of the profession, that the child cannot be delivered without the death of the mother, in those circumstances the doctor is entitled and, indeed, it is his duty - to perform this operation with a view to saving the life of the mother, and in such a case it is obvious that the sooner the operation is performed the better. The law is not that the doctor has got to wait until the unfortunate woman is in peril of immediate death and then at the last moment snatch her from the jaws of death. He is not only entitled, but it is his duty, to perform the operation with a view to saving her life.[97]

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[96] Ibid., p.616.

[97] Ibid., p.618.

Indeed Macnaghten J. contended that the defence of aborting the foetus for the purpose of saving the life of the mother had always existed under section 58 of the Offences Against the Person Act 1861, and that this was implied by the inclusion in the section of the word 'unlawful'. He believed that:

> it has always been the law that the Crown have got to prove the offence beyond reasonable doubt, and it has always been the law that on a charge of procuring abortion, the Crown have got to prove that the act was not done in good faith for the purpose of preserving the life of the mother.[98]

Thus, there appeared to be a conflict between the legislative model of abortion and the common law model. However, as Keown has pointed out, section 58 of the Offences Against the Person Act 1861 may not, in fact, have been as absolutist as may have been assumed. He bases this assertion on "certain judicial and extra-judicial pronouncements"[99] which taken together demonstrate that the declaration in R. v Bourne had in fact been accepted practice within the medical profession in the period before 1938. Thus, in the case of R. v Collins[100] a case involving a medical practitioner charged with the murder of a woman upon whom he had allegedly been performing a procedure calculated to procure a miscarriage, the judge in his summing-up stated that such an act constituted a felony. However, he did add that:

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[98] Ibid., p.617.

[99] Keown, (1988, p.52).

[100] [1898] 2 Brit. Med. J. 59, 122.

> [i]t could well be understood that there were cases where it was necessary, in order to save the life of a woman, that there should be forcible miscarriage, and a properly qualified doctor had to say when that time had arrived. That was not unlawful.[101]

Although, it was stated obiter, Keown stresses the significance of this passage:

> [t]his dictum is noteworthy not only for its explicit recognition of the lawfulness of therapeutic abortion, but also for its limitation of the defence to qualified doctors and the apparent absence of any requirement that the doctor's opinion be based on reasonable grounds or be confirmed by that of a second doctor.[102]

An earlier case, that of R. v Wilhelm,[103] provided evidence of the practice adopted by the medical profession in relation to abortion. This case involved a medical practitioner who had allegedly attempted to procure a miscarriage using an instrument. The chief medical witness for the prosecution testified to the effect that in some cases of pelvic contraction it was accepted medical practice to procure abortion. However, he stated that in this particular case the instrument which the accused had used to procure the abortion was not one normally used for this purpose nor could he find any evidence of contraction in this case.

Keown notes that the trial judge in his direction to the jury stated that if a person attempted to procure an abortion without lawful cause, he would be guilty of an

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[101] Ibid., p.129, cited in Keown, (1988, p.52).

[102] Ibid.

[103] (1858) 17 Medical Times Gazette 658.

unlawful act.[104] The presence of the qualification, 'without lawful cause' would lead one to suppose that abortion was not absolutely prohibited by law. However he did not elaborate on what might constitute a lawful cause in this context.

Keown also cites the 1929 case of R. v Bell[105] as evidence of a less rigid judicial interpretation of the Offences Against the Person Act 1861. In that case, Keown notes, the trial judge in his summing up stated that not all operations to terminate pregnancy were unlawful. Such cases would include operations to save the life of the mother and, if possible, the child. In addition, the judge stated that such a procedure may be lawful in a case where the foetal sac had burst and there was a likelihood of blood poisoning if the foetus were not removed.[106]

Moreover, Keown furnishes evidence of extra-judicial pronouncements which support the thesis that abortion was not absolutely prohibited under the Offences Against the Person Act 1861. Thus, in 1895, the Royal College of Physicians sought the opinion of counsel on the question inter alia of whether the law prohibited the procurement of an abortion for therapeutic purposes, which in effect means to save the life of the mother. The opinion of counsel was that:

the law does not forbid the procurement of

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[104] Keown, (1988, pp.52-53).

[105] [1929] 1 Brit. Med. J. 1061.

[106] Keown, (1988, p.53).

> abortion during pregnancy, or the destruction of the child during labour, where such procurement or destruction is necessary to save the mother's life.[107]

Indeed, Keown concludes that this opinion does not go far enough in its view of the lawfulness of abortion under the Offences Against the Person Act 1861:

> [f]irstly, the destruction of the child during delivery was not an offence known to law and hence did not require a defence. Secondly, in relation to the destruction of the child before delivery, it is arguable that the criterion of saving the woman's life was too restrictive.[108]

Keown bases these assertions on further extra-judicial evidence of best clinical practice in this area of medical treatment. At a speech to a joint meeting of the Medico-Legal Society and the obstetrics section of the Royal Society of Medicine in 1927, Humphreys J. outlined the circumstances under which an abortion might be lawful. A contemporaneous report of the meeting provides the following explanation of the judge's view:

> the steps taken by a qualified medical man to get rid of a condition in his patient which he considered, using the best of his skill and ability, and of course honestly, on medical grounds and on medical grounds alone, to be dangerous to the safety of the patient. He used the word 'safety' advisedly, because the purely medical question was not one with which the law was concerned. No doctor who had used the best of his skill and judgment in the sole interest of his patient need imagine for a moment that the law would call him to account.[109]

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[107] Quoted in Smith, (1905, p.154), cited by Keown, (1988, p.54).

[108] Keown, (1988, p.54).

[109] Anonymous, (1927, pp.230-231), cited by Keown, (1988, p.54).

As well as betraying a certain deference to the professional knowledge of the medical 'man' the judge's views were not prompted by some overwhelming desire to identify and uphold any conception of maternal rights. He seems to have based his view of the legality of abortion in certain circumstances on the professional autonomy of the doctor rather than on any innate desire to improve the lot of women in society. Thus, as Keown adds:

> [t]he sole concern of the doctor was, he stressed, the medical rather than the social or economic welfare of his patient. The golden rule was that he was not entitled to consider the prospect of social disgrace or a diseased child, but only 'the health and future of his patient on medical grounds'. He added: '[w]hen a doctor in the exercise of his discretion had decided to induce abortion there was no question of law or ethics'. It would he continued, be an impertinence for one with no medical knowledge to express any views upon which conditions justified the induction of abortion by a doctor.[110]

Another extra-judicial opinion was given at this particular meeting. This is to be found in the summing up of the meeting by Salter L.J.. He was of the opinion that the inclusion of the word 'unlawfully' in the wording of section 58 of the Offences Against the Person Act 1861 implied that there were circumstances in which an abortion could be deemed lawful. Moreover, he believed that the circumstances in which an abortion could be lawfully performed were wider than those outlined by Humphreys J.. Thus, he was of the opinion that in the case of an inherited disease an abortion may be lawful.[111] It is

[110] Keown, (1988, p.55).

[111] Ibid.

interesting to note that such opinions were pronounced in the period before the introduction of the Infant Life (Preservation) Act 1929,[112] when English law on the issue was governed solely by the Offences Against the Person Act 1861. This fact makes the above stated opinions even more directly relevant to the current Irish situation.

It can thus be concluded that the Offences Against the Person Act 1861 allows for abortion in limited circumstances. Article 40.3.3. of Bunreacht na hEireann 1937 has, as a result of the decision of the Supreme Court in the case of Attorney-General v X and Others[113] altered the scope of such exceptions. According to the majority judgment in Attorney-General v X and Others a pregnancy termination may be regarded as lawful only when the life of the mother is in jeopardy. This is narrower than the previous English common law exceptions which would include, in addition, damage to the mother's health either physical or mental.

In Australia, where legislation similar to that to be found in section 58 of the Offences Against the Person Act 1861 governs this aspect of medical intervention, the courts have adopted a broader set of exceptions than the Irish judiciary. In R. v Davidson,[114] a case decided on

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[112] This Act in section 1(1) prohibited the destruction of a child capable of being born alive but allowed the destruction of such a child if it was necessary to preserve the life of the mother.

[113] [1992] 1 I.R. 1.

[114] [1969] V.R. 667.

legislation similar to section 58 of the Offences Against the Person Act 1861, that being, section 69 of the Crimes Act 1958[115] the implications of the word 'unlawful' were further considered. In his judgment, Mehennitt J. enumerated the criteria which must be present in order to construe an act as being unlawful. These were:

> (i) that the accused did not honestly believe on reasonable grounds that the operation was not necessary to preserve the woman from a serious danger to her life or her physical or mental health which the continuance of the pregnancy would entail; or
> (ii) that the accused did not honestly believe on reasonable grounds that the act done by him was in the circumstances proportionate to the need to preserve the woman from serious danger to her life or her physical or mental health.[116]

The decision extended the definition of danger to life in this context beyond merely the dangers normally associated with childbirth to include:

> danger to physical or mental health provided it is a serious danger not being merely the normal dangers of pregnancy and childbirth.[117]

The legal position in Ireland is more restrictive than in the similar situations outlined above. The current Irish test would appear to limit the termination of pregnancy to

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[115] Which provides:

> [w]hosoever... with intent to procure the miscarriage of any woman whether she is or is not with child administers to her or causes to be taken by her any poison or other noxious thing, or unlawfully uses any instrument or other means with like intent shall be guilty of felony and shall be liable.

[116] [1969] V.R. 667, pp.671-672.

[117] Ibid., p.671.

situations where it is carried out for the bona fide purpose of preserving the life of the mother. Such an act may not be lawful where it was carried out to preserve the physical or mental health as opposed to the life of the mother.

The need for legislation in this area is beyond doubt. The law as it presently exists is uncertain and clear legislative guidelines are required. In the absence of such legislation, the decision of the Supreme Court in Attorney-General v X and Others[118] case regulates the actions of the medical profession in this area. However, the Irish Medical Council has issued its own guidelines on the issue. These guidelines provide that:

> situations arise in medical practice where the life and/or health of the mother or of the unborn, or both, are endangered. In these situations it is imperative ethically that doctors shall endeavour to preserve life and health. This is in accordance with the International Code of Ethics where the English text states: 'A doctor must always bear in mind the obligation of preserving human life' and the Declaration of Geneva which in 1983 stated: 'I will maintain the utmost respect for human life from its beginning even under threat and I will not use my medical knowledge contrary to the laws of humanity'.[119]

These guidelines put the doctor in such a situation in an invidious position. If the doctor carries out a termination of pregnancy within the limits of the ruling in Attorney-General v X and Others then even though he acted within the law he may be subject to disciplinary sanctions from the

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[118] [1992] 1 I.R. 1.

[119] Medical Council, The, (1994, p.36).

Medical Council. If, on the other hand, he acts within the guidelines of the Medical Council and refrains from carrying out the abortion he may be subject to legal sanctions if the life of the mother is endangered as a result of his failure to intervene.[120]

In Northern Ireland the issue of abortion is governed by sections 58 and 59 of the Offences Against the Person Act 1861 and section 25 of the Criminal Justice (Northern Ireland) Act 1945 which is identical in its wording to the English Infant Life (Preservation) Act 1929. The provisions of the English Abortion Act 1967 do not apply in Northern Ireland. The potential for a case similar to R. v Bourne[121] or Attorney-General v X and Others[122] transpiring in the Northern Ireland context was not therefore beyond the bounds of probability.

In the case of Re K (A Minor) (Northern Health and Social Services Board) v F and G[123] the High Court of Northern Ireland was faced with such a scenario.

K was fourteen years old and lived in a children's home pursuant to a Fit Person Order. She was made a ward of court when she was found to be in the thirteenth week of a pregnancy which she wished to terminate. K had stated that she would commit suicide if she were forced to continue with the pregnancy.

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[120] See, Bowers, (1993, pp.1-2).

[121] [1938] 3 All E.R. 615.

[122] [1992] 1 I.R. 1.

[123] [1994] Med.L.Rev. 371.

The High Court was told by a psychiatrist that there was a substantial risk of suicide. He was of the view that the psychological sequelae of the pregnancy going to full term were more dangerous than the sequelae following termination.[124] In addition a consultant obstetrician and gynaecologist considered that termination of the pregnancy was the preferable option but stated that he was unable to do so due to uncertainty as to the state of the law on the matter in Northern Ireland.

One commentator has noted in referring to this reluctance to carry out the procedure that:

> [i]t has been suggested that the doctors were fearful of a civil action from the mother of K if they performed the termination. Given the assurances from the judge it seems unlikely that any such civil action could have been sustained. More possible, however, would be the possibility of civil action by K herself, based on the fact that she had to be taken to Liverpool whilst recovering from major surgery in order that a termination be performed which would have been lawful in Northern Ireland.[125]

Shiel J. granted an order permitting the termination of the pregnancy and in so doing stated that a termination carried out in the circumstances of the case was lawful in Northern Ireland.

Relying on the case of R. v Bourne[126] Shiel J. held that it was only a crime to act with intent to procure a miscarriage if it was unlawfully done. He was of the opinion that the word 'unlawfully' should be interpreted in

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[124] Ibid., p.372.

[125] McGleenan, (1994, p.392, footnote 15).

[126] [1939] 3 All E.R. 615.

a manner which was consistent with section 25 of the Criminal Justice (Northern Ireland) Act 1945 so that an abortion could only be performed with the object of saving the life of the mother. Sheil J. also considered that it was in K's 'best interests' that the pregnancy should be terminated.

In the subsequent case of Re A (Northern Health and Social Services Board) v AMNH, IC McC and the Official Solicitor[127] the High Court granted an order authorising a termination in the case of A, a twenty-three year old severely mentally handicapped woman. She became pregnant as the result of non-consensual sexual intercourse. The consultant gynaecologist to whom she was referred stated in evidence to the High Court that this case was one which fell within the category of a lawful abortion. Moreover, two psychiatrists who had examined A were of the view that the continuation of the pregnancy would be likely to be detrimental to her mental state.

The position in Northern Ireland remains far from clear. It would appear that abortion is available on a limited basis in the province, where the termination is for the purpose of preserving the life of the mother. Yet, it has been pointed out on the basis of anecdotal evidence that abortions are carried out in Northern Ireland on a regular basis, the majority where there is a severe foetal handicap. However, this is an instance where the mother's life is not normally in danger. Thus, as McGleenan points

[127] High Court, Unreported, 21 January 1994.

out:

> [i]f this is the case then it seems that there is one legal issue yet to be tested. That is the question of whether or not it is lawful to procure a miscarriage where the objective is not to preserve the life of the mother (or her physical or mental health), but rather is to terminate the life of a foetus which medical opinion has determined to be in some way handicapped.[128]

In Canada, the provision of pregnancy termination services was permitted in certain specific circumstances by the addition of section 251 to the Canadian Criminal Code 1892 in 1969. Section 251 delineated in a legislative sense the circumstances in which an abortion could lawfully be carried out. This altered the previous legislative position in relation to the issue whereby abortion had been classified as a form of homicide, the only defence to which was necessity in certain limited circumstances.[129]

Section 251 altered the position to the extent that, if carried out in certain prescribed circumstances abortion was to be regarded as lawful.

Section 251(4) of the Criminal Code 1892 sets out the circumstances in which an abortion will not be regarded as being contrary to the law as follows:

> (a) a qualified medical practitioner, other than a member of a therapeutic abortion committee for any hospital, who in good faith uses in an accredited or approved hospital any means for the purpose of carrying out his intention to procure

[128] McGleenan, (1994, p.394).

[129] These provisions were similar to the English Offences Against the Person Act 1861. See, An Act Respecting Offences Against the Person 1869. These provisions were subsequently incorporated into the Canadian Criminal Code 1892.

the miscarriage of a female person, or

(b) a female person who, being pregnant, permits a qualified medical practitioner to use in an accredited or approved hospital any means described in paragraph (a) for the purpose of carrying out his intention to procure her own miscarriage, if, before the use of those means, the therapeutic abortion committee for that accredited or approved hospital, by a majority of the members of the committee and at a meeting of the committee at which the case of such female person has been reviewed,

(c) has by certificate in writing stated that in its opinion the continuation of the pregnancy of such female person would or would be likely to endanger her life or health, and

(d) has caused a copy of such certificate to be given to the qualified medical practitioner.[130]

However, if an abortion were to be carried out which did not adhere to the provisions of section 251(4) of the

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[130] For the purposes of subsection (4), subsection (6) further defines the following terms:

"accredited hospital" means a hospital accredited by the Canadian Council on Hospital Accreditation in which diagnostic services and medical, surgical and obstetrical treatment are provided;

"approved hospital" means a hospital in a province approved for the purposes of this section by the Minister of Health of that province;

"qualified medical practitioner" means a person entitled to engage in the practice of medicine under the laws of the province in which the hospital referred to in subsection (4) is situated;

"therapeutic abortion committee" for any hospital means a committee, comprised of not less than three members each of whom is a qualified medical practitioner, appointed by the board of that hospital for the purpose of considering and determining questions relating to terminations of pregnancy within the hospital.

Criminal Code 1892, the person who carried out such a procedure would be liable to imprisonment for life[131] and the woman who either intended to procure her own miscarriage or permitted a third party to so do, would be liable to two years' imprisonment.[132]

Thus, in effect one could say that abortion was still a criminal offence unless it could be ascertained that it was abortion was carried out in the approved manner as set out in section 251 of the Criminal Code 1892.

For many, the criminalization of this aspect of reproductive autonomy was unacceptable. This led to a Supreme Court challenge to the legislation in 1975 in the case of Morgentaler v The Queen[133] by pro-choice groups, which proved to be unsuccessful. The Supreme Court in that case refused to interfere with the decision of Parliament as set out in the section stating that:

> [t]he values we must accept for the purposes of this appeal are those expressed by Parliament which holds the view that the desire of a woman to be relieved of her pregnancy is not, of itself, justification for performing an abortion.[134]

However, the issue was to come before the Supreme Court again eleven years later, this time with rather different results, in the case of Morgentaler, Smolling and Scott v

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[131] Section 251(1) of the Criminal Code 1892.

[132] Ibid., section 251(2).

[133] (1975) 53 D.L.R. (3d) 161.

[134] Ibid., p.203.

The Queen.[135]

By 1988, an additional factor had entered the constitutional equation, the Canadian Charter of Rights and Freedoms 1982. Section 7 of the Canadian Charter of Rights and Freedoms 1982 provides that:

> [e]veryone has the right to life, liberty and security of the person and the right not to be deprived thereof except in accordance with the principles of fundamental justice.

In Morgentaler, Smolling and Scott v The Queen,[136] section 7 of the Canadian Charter of Rights and Freedoms 1982 was employed by counsel for the appellants in arguing that section 251 of the Criminal Code 1892 was unconstitutional. In that case the appellants were qualified medical practitioners who had set up a private clinic in Toronto with the object of providing pregnancy termination services. However, the women for whom they provided this service had not obtained a certificate from a therapeutic abortion committee of an accredited or approved hospital as set out in section 251(4) of the Criminal Code 1892.

The doctors in question were opposed to the existing legislation on policy grounds and had made public statements to that effect. Both their statements and actions were a direct criticism of the constriction placed upon reproductive autonomy by section 251 of the Criminal Code 1892. The appellants had been charged with conspiracy to procure a miscarriage contrary to section 251(4) and

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[135] (1988) 44 D.L.R. (4th) 385.

[136] Ibid.

section 423(1)(d) of the Criminal Code 1892 and were acquitted at first instance. However, the Crown appealed the acquittal to the Court of Appeal and a new trial was ordered. On appeal to the Supreme Court, the accused argued that section 251 of the Criminal Code 1892 was unconstitutional on the grounds inter alia that it was incompatible with section 7 of the Canadian Charter of Rights and Freedoms 1982. The appellants' contention was that the right to 'life, liberty and security of the person' encompassed a right to control one's own life including one's reproductive functions.

The majority in the Supreme Court decision in this case was of the view that section 251 of the Criminal Code 1892 infringed the rights set out in section 7 of the Canadian Charter of Rights and Freedoms 1982. For the most part the majority opinions did not rely on arguments of a substantive nature based on reproductive autonomy but on procedural arguments. However one member of the majority, Wilson J., while concurring with the other members of the majority, also adverted, in her decision, to the broader substantial right to liberty included in section 7, which more clearly outlines the nature of reproductive autonomy. The majority decisions demonstrate a certain unwillingness to deal with the substantive issue of reproductive autonomy. In his judgment Dickson C.J.C. made it clear that he was not going to explore the broader implications of the appellants' contention that the right to life, liberty and security of the person guaranteed by section 7 of the

Canadian Charter of Rights and Freedoms 1982 was:

> a wide-ranging right to control one's own life and to promote one's individual autonomy. The right would therefore include a right to privacy and a right to make unfettered decisions about one's own life.[137]

Dickson C.J.C. based his judgment on the more narrow right to security of the person to be found in section 7 of the Canadian Charter of Rights and Freedoms 1982 and on the procedural aspect of the principles of fundamental justice alluded to in that section. Thus, for Dickson C.J.C. the manner in which the impugned section of the Criminal Code 1892 operated constituted an infringement of the security of the person as protected by section 7 of the Canadian Charter of Rights and Freedoms 1982:

> state interference with bodily integrity and serious state-imposed psychological stress, at least in the criminal law context, constitute a breach of security of the person. It is not necessary in this case to determine whether the right extends further, to protect either interests central to personal autonomy, such as the right to privacy, or interests unrelated to criminal justice.[138]

In arriving at the conclusion that section 251 operated against the security of the person Dickson C.J.C. examined the procedural effect of the section and was of the opinion that:

> [t]he evidence indicates that section 251 causes a certain amount of delay for women who are successful in meeting its criteria. In the context of abortion, any unnecessary delay can have profound consequences on the woman's

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[137] Morgentaler, Smolling and Scott v The Queen (1988) 44 D.L.R. (4th) 385, p.397.

[138] Ibid., p.401.

physical and emotional well-being.[139]

The evidence pointed to a marked inequality of access to pregnancy termination services under the legislative scheme.

One important piece of empirical evidence which was presented in argument was a 1977 Report on the operation of Canada's abortion law.[140] This Report came to the conclusion that there were significant delays in obtaining permission from the therapeutic abortion committees.

These delays had the potential to lead to both physical and emotional suffering. Thus, as Dickson C.J.C. stated:

> the implications of any delay, according to the evidence, are potentially devastating. The first factor to consider is that different medical techniques are employed to perform abortions at different stages of pregnancy. The testimony of expert doctors at trial indicated that in the first twelve weeks of pregnancy, the relatively safe and simple suction dilation and curettage method of abortion is typically used in North America. From the thirteenth to the sixteenth week, the more dangerous dilation and evacuation procedure is performed, although much less often in Canada than in the United States. From the sixteenth week of pregnancy, the instillation method is commonly employed in Canada. This method requires the intra-amniotic introduction of prostaglandin, urea or a saline solution, which causes a woman to go into labour, giving birth to a foetus which is usually dead, but not invariably so. The uncontroverted evidence showed that each method of abortion progressively increases risks to the woman.[141]

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[139] Ibid., p.402.

[140] See, Canada, Committee on the Operation of the Abortion Law, (Badgley Report) (1977).

[141] Morgentaler, Smolling and Scott v The Queen (1988) 44 D.L.R. (4th) 385, p.403.

Dickson C.J.C. went on to point out that even within the periods appropriate to each particular method of abortion, the evidence demonstrated that the earlier the termination was performed, the fewer the complications and the lower the risk of mortality.[142] He was thus able to conclude on this point that:

> [i]t is no doubt true that the over-all complication and mortality rates for women who undergo abortions are very low, but the increasing risks caused by delay are so clearly established that I have no difficulty in concluding that the delay in obtaining therapeutic abortions caused by the mandatory procedures of section 251 is an infringement of the purely physical aspect of the individual's right to security of the person.[143]

However, it is not sufficient for the purposes of section 7 of the Canadian Charter of Rights and Freedoms 1982 that the impugned piece of legislation infringed the individual's right to security of the person, it is also necessary to establish whether that infringement is accomplished in accordance with the principles of fundamental justice. If it was then section 251 of the Criminal Code 1892 could be saved under the second part of section 7 of the Canadian Charter of Rights and Freedoms 1982. In assessing whether section 251 of the Criminal Code 1892 operated in accordance with the principles of fundamental justice, Dickson C.J.C. again confined his analysis to the procedural aspects. In coming to a decision on this point he again had recourse to empirical research

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[142] Ibid.

[143] Ibid., p.404.

on the operation of section 251 of the Criminal Code 1892. He found in the Badgley Report[144] information which demonstrated:

> that many of the most serious problems with the functioning of section 251 are created by procedural and administrative requirements established in the law.[145]

As a result of the provisions of section 251(4) of the Criminal Code 1892 hospitals were required to provide three qualified physicians in order to establish a therapeutic abortion committee. There should be in addition a qualified medical practitioner available to perform the abortion who was not a member of the therapeutic abortion committee. However, as the Badgley Report observed:

> [o]f the 1,348 civilian hospitals in operation in 1976, at least 331 hospitals had less than four physicians on their medical staff. In terms of the distribution of physicians, 24.6 per cent of hospitals in Canada did not have a medical staff which was large enough to establish a therapeutic abortion committee and to perform the abortion procedure.[146]

Moreover, the additional procedural requirements of section 251 of the Criminal Code 1892 reduced the number of hospitals in which pregnancy termination services could be provided even further. Thus, as Dickson C.J.C. noted:

> [f]or the purposes of section 251, therapeutic abortions can only be performed in 'accredited' or 'approved' hospitals. As noted above, an 'approved' hospital is one which a provincial

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[144] See, Canada, Committee on the Operation of the Abortion Law, (Badgley Report) (1977).

[145] Morgentaler, Smolling and Scott v The Queen (1988) 44 D.L.R. (4th) 385, p.409.

[146] Canada, Committee on the Operation of the Abortion Law, (Badgley Report) (1977, p.102).

minister of health has designated as such for the purpose of performing therapeutic abortions. The minister is under no obligation to grant any such approval. Furthermore, an 'accredited' hospital must not only be accredited by the Canadian Council on Hospital Accreditation, it must also provide specified services. Many Canadian hospitals do not provide all of the required services, thereby being automatically disqualified from undertaking therapeutic abortions.[147]

Another difficulty with the procedural scheme under section 251(4) was the failure to provide an adequate standard for the determination of when a therapeutic abortion could be lawfully granted.

The only guidance which section 251(4) gave the therapeutic abortion committee on this matter was that it could grant a certificate when it is of the opinion that the pregnancy would endanger the life or health of the woman.

However, a critical failing in the statutory scheme is the absence of a definition of the term 'health'. This led the Badgley Report to conclude:

> [t]here has been no sustained or firm effort in Canada to develop an explicit and operational definition of health, or to apply such a concept directly to the operation of induced abortion. In the absence of such a definition, each physician and each hospital reaches an individual decision on this matter. How the concept of health is variably defined leads to considerable inequity in the distribution and the accessibility of the abortion procedure.[148]

In practice therapeutic abortion committees defined health

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[147] Morgentaler, Smolling and Scott v The Queen (1988) 44 D.L.R. (4th) 385, p.409.

[148] Canada, Committee on the Operation of the Abortion Law, (Badgley Report) (1977, p.20).

in differing ways. As Dickson C.J.C. noted:

> [f]or some committees, psychological health is a justification for therapeutic abortion; for others it is not. Some committees routinely refuse abortions to married women unless they are in physical danger, while for other committees it is possible for a married woman to show that she would suffer psychological harm if she continued with a pregnancy, thereby justifying an abortion. It is not typically possible for women to know in advance what standard of health will be applied by any given committee...
>
> When the decision of the therapeutic abortion committee is so directly laden with legal consequences, the absence of any clear legal standard to be applied by the committee in reaching its decision is a serious procedural flaw.[149]

In conclusion, Dickson C.J.C. was satisfied that the provisions of section 251 of the Criminal Code 1892 did not comport with the principles of fundamental justice observing that:

> [i]n the present case, the structure - the system regulating access to therapeutic abortions - is manifestly unfair. It contains so many potential barriers to its own operation that the defence it creates will in many circumstances be practically unavailable to women who would prima facie qualify for the defence, or at least would force such women to travel great distances at substantial expense and inconvenience in order to benefit from a defence that is held out to be generally available.[150]

It was thus on the basis of procedural argument that the majority struck down section 251 of the Criminal Code 1892. As one commentator has noted:

> Dickson C.J.C. transformed Morgentaler, Smoling and Scott from a case about substantive abortion rights into one about the procedural rights of criminal defendants. The advantage of this

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[149] Morgentaler, Smolling and Scott v The Queen (1988) 44 D.L.R. (4th) 385, pp.411-412.

[150] Ibid., p.414.

strategy for judges is that it simplifies decision-making and avoids certain questions of judicial legitimacy by enabling them to engage in policy-making behind the veneer of exercising traditional judicial functions.[151]

However, there was a member of the majority who was prepared to explore the substantive issue of reproductive autonomy.

Wilson J. in her judgment referred, in addition to the wider right to liberty in section 7 of the Canadian Charter of Rights and Freedoms 1982. She was of the view that:

> [a] consideration as to whether or not the procedural requirements for obtaining or performing an abortion comport with fundamental justice is purely academic if such requirements cannot as a constitutional matter be imposed at all. If a pregnant woman cannot, as a constitutional matter, be compelled by law to carry the foetus to term against her will, a review of the procedural requirements by which she may be compelled to do so seems pointless. Moreover, it would, in my opinion, be an exercise in futility for the legislature to expend its time and energy in attempting to remedy the defects in the procedural requirements unless it has some assurance that this process will, at the end of the day, result in the creation of a valid criminal offence.[152]

The extant legislation on pregnancy termination according to Wilson J. as well as interfering with the individual's right to security of the person under section 7 of the Canadian Charter of Rights and Freedoms 1982, also interfered with the wider right of women to liberty. Wilson J. viewed the liberty right as essentially a right to decide for oneself, to control one's destiny. She believed

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[151] Manfredi, (1993, p.118).

[152] Morgentaler, Smolling and Scott v The Queen (1988) 44 D.L.R. (4th) 385, p.483.

that section 251 of the Criminal Code 1892 deprived women of this ability by preventing them from deciding whether or not to terminate a pregnancy:

> [t]he purpose of the section is to take the decision away from the woman and give it to a committee. Furthermore, as the Chief Justice correctly points out, the committee bases its decision on 'criteria entirely unrelated to the [pregnant woman's] priorities and aspirations'. The fact that the decision whether the woman will be allowed to terminate her pregnancy is in the hands of a committee is just as great a violation of the woman's right to personal autonomy in decisions of an intimate and private nature as it would be if a committee were established to decide whether a woman should be allowed to continue her pregnancy. Both these arrangements violate the woman's right to liberty by deciding for her something that she has the right to decide for herself.[153]

It is also interesting to note that Wilson J. adverted to the substantive aspects of the principles of fundamental justice. She was of the view that a deprivation of a section 7 right which has the effect of infringing a right guaranteed elsewhere in the Canadian Charter of Rights and Freedoms 1982 cannot be in accordance with the principles of fundamental justice.[154] She alluded in particular to the rights embodied in section 2(a) of the Canadian Charter of Rights and Freedoms 1982. Section 2(a) provides that:

> 2. Everyone has the following fundamental freedoms:
>
> (a) freedom of conscience and religion.

Wilson J. gave the following rationale for stating that the deprivation of a right protected under section 7 of the

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[153] Ibid., p.491.

[154] Ibid., p.494.

Canadian Charter of Rights and Freedoms 1982 infringed freedom of conscience and religion:

> I believe that the decision whether or not to terminate a pregnancy is essentially a moral decision, a matter of conscience. I do not think there is or can be any dispute about that. The question is: whose conscience? Is the conscience of the woman to be paramount or the conscience of the state? I believe, for the reasons I gave in discussing the right to liberty, that in a free and democratic society it must be the conscience of the individual.[155]1

Indeed Wilson J. was of the opinion that freedom of conscience and religion included the right not to believe in a particular set of religious beliefs or any at all. She stated this view mindful of the preamble to the Canadian Charter of Rights and Freedoms 1982 which states that "Canada is founded upon principles that recognize the supremacy of God". However, this should not lead to a situation where individual human values were ignored:

> [i]t seems to me, therefore, that in a free and democratic society 'freedom of conscience and religion' should be broadly construed to extend to conscientiously-held beliefs, whether grounded in religion or in a secular morality. Indeed, as a matter of statutory interpretation, 'conscience' and 'religion' should not be treated as tautologous if capable of independent, although related, meaning. Accordingly, for the state to take sides on the issue of abortion, as it does in the impugned legislation by making it a criminal offence for the pregnant woman to exercise one of her options, is not only to endorse but also to enforce, on pain of a further loss of liberty through actual imprisonment, one conscientiously-held view at the expense of another. It is to deny freedom of conscience to some to treat them as a means to an end...
>
> Legislation which violates freedom of conscience in this manner cannot, in my view, be in accordance with the principles of fundamental

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[155] Ibid., p.494.

justice within the meaning of section 7.[156]

This argument may be of some relevance for the Irish debate on abortion. Surely it could be argued in the Irish context that the right to freedom of conscience and the free profession of religion as guaranteed in Article 44.2.1 of Bunreacht na hEireann 1937 also includes a right not to hold any religious views? On that basis, one could apply the above argument of Wilson J. mutatis mutandis to the Irish situation. One must also bear in mind that Wilson J. was able to come to the above conclusion within the parameters of the Canadian Charter of Rights and Freedoms 1982 which endorses a view that all positive law is subordinate to God. It should also be the case with Bunreacht na hEireann 1937 which has a similar theoretical perspective.

The Canadian Supreme Court in Morgentaler, Smolling and Scott v The Queen[157] established that section 251 of the Criminal Code 1892 infringed section 7 of the Canadian Charter of Rights and Freedoms 1982 and struck it down. It did not however provide an alternative regulatory scheme for the provision of abortion services in Canada, thus leaving a lacuna for Parliament to fill.

This lacuna had not been filled when in 1989 the case of Tremblay v Daigle[158] came before the Supreme Court for adjudication. In that case the parties, Jean-Guy Tremblay

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[156] Ibid., p.497.

[157] (1988) 44 D.L.R. (4th) 385.

[158] (1989) 62 D.L.R. (4th) 634.

and Chantal Daigle had been living together for some time. When their relationship ended, Daigle, who was, at that point, pregnant decided to have an abortion. Tremblay did not agree to this and obtained an interlocutory injunction from the Superior Court of Quebec to prevent the abortion from going ahead. Daigle appealed to the Quebec Court of Appeal but her appeal was dismissed, whereupon she appealed this decision to the Canadian Supreme Court.

Tremblay argued that under Quebec law a right to life inheres in the foetus. He grounded this view on section 1 of the Quebec Charter of Human Rights and Freedoms 1977 which states that "[e]very human being has a right to life, and to personal security, inviolability and freedom". The argument of the respondent was that:

> a foetus is an 'etre humain', in English, 'human being', and therefore has a right to life and a right to assistance when its life is in peril.[159]

The Supreme Court was not convinced of the validity of the respondent's argument noting that:

> [a] linguistic analysis cannot settle the difficult and controversial question of whether a foetus was intended by the National Assembly of Quebec to be a person under section 1. What is required are substantive legal reasons which support a conclusion that the term 'human being' has such and such a meaning. If the answer were as simple as the respondent contends, the question would not be before the court nor would it be the subject of such intense debate in our society generally... A purely linguistic argument suffers from the same flaw as a purely scientific argument: it attempts to settle a legal debate by non-legal means; in this case by resorting to the purported 'dictionary' meaning of the term 'human

[159] Ibid., p.650.

being'.[160]

The Supreme Court concluded that the Quebec Charter of Human Rights and Freedoms 1977 did not display a clear intention on the part of the framers to even consider the question of the status of the foetus. It was noted that:

> this lack of an intention to deal with a foetus' status is, in itself, a strong reason for not finding foetal rights under the Charter... One can ask why the Quebec legislature, if it had intended to accord a foetus the right to life, would have left the protection of this right in such an uncertain state... If the legislature had wished to grant foetuses the right to life, then it seems unlikely that it would have left the protection of this right to such happenstance.[161]

Thus, the Supreme Court supported Daigle's decision to have an abortion. The Supreme Court did not deem it necessary to examine the implications of section 7 of the Canadian Charter of Rights and Freedoms 1982 for this question as the instant case was a civil action between two private parties. For the Canadian Charter of Rights and Freedoms 1982 to be invoked, according to the Supreme Court, there must be some sort of state action which is being impugned.

In the wake of the case the legislative lacuna still remained to be filled. The Bill which was proposed to fill the lacuna was a compromise solution. The Bill provided for the addition of two new sections to the Canadian Criminal Code 1892 as follows:

287. (1) [e]very person who induces an abortion

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[160] Ibid., pp.650-651.

[161] Ibid., p.152.

> on a female person is guilty of an indictable offence and liable to imprisonment for a term not exceeding two years, unless the abortion is induced by or under the direction of a medical practitioner who is of the opinion that, if an abortion were not induced, the health or life of the female person would be likely to be threatened.
> (2) For the purposes of this section, 'health' includes, for greater certainty, physical, mental and psychological health;
> 'medical practitioner', in respect of an abortion induced in a province, means a person who is entitled to practise medicine under the laws of that province;
> 'opinion' means an opinion formed using generally accepted standards of the medical profession.
> (3) For the purposes of this section and section 288, inducing an abortion does not include using a drug, device or other means on a female person that is likely to prevent implantation of a fertilized ovum.
> 288. Every one who unlawfully supplies or procures a drug or other noxious thing or an instrument or thing, knowing that it is intended to be used or employed to induce an abortion on a female person, is guilty of an indictable offence and liable to imprisonment for a term not exceeding two years.[162]

The Bill was not to prove ultimately successful, as it was defeated in the Senate in 1991, with both pro-choice and pro-life senators voting against it.

3.7 Practical Implications I: Freedom of Information and Freedom to Counsel.

The objective of genetic counselling is to inform the patient of the risk of genetic disease occurring in her potential offspring and to inform her of the options available to her in the light of such risk.

In Ireland, approximately 1,000 babies are born annually with a significant genetic disorder and one person

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[162] Bill C-43, An Act Respecting Abortion 2d Sess., 34th Parl., 1989.

in fifty suffers from a genetic illness.[163]

A new genetic counselling service was introduced in July 1994, which consists of one consultant medical geneticist who provides eight sessions a week in Crumlin Hospital in Dublin and three sessions in Dublin's Temple Street children's hospital.

A neurogenetic facility has been established at the Adelaide Hospital in Dublin where predictive testing is carried out on patients of eighteen years and over, to assess the potential risk of inheriting neurological conditions.[164]

This form of non-directive counselling is based on the client-centred therapy of Carl Rogers developed in the nineteen forties.[165]

The essence of non-directive counselling is that the therapist does not directly advise the client but rather tries to draw out the client's true feelings on a particular issue. Thus, the doctor should not allow his personal views on a particular option colour the therapeutic relationship. This is especially true in relation to one of the options which is open to the patient on discovering that her child has a genetic disease. In Ireland abortion is only permissible to preserve the life

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[163] See, Holmquist, (1994, p.3).

[164] Ibid. See in addition, Tomkin and Hanafin, (1995, p.203).

[165] See, Rogers, (1942, pp.1-30) and Rogers, (1961, pp.1-8).

or health of the mother.[166]

The ruling body of the medical profession in Ireland, the Medical Council, has issued guidelines on the issue of pregnancy termination which reflect the Council's opposition to abortion.[167] In a number of cases decided before the case of Attorney-General v X and Others[168] the Irish courts held that non-directive pregnancy counselling which included the option of pregnancy termination was contrary to Irish law as it then stood.

In the case of Attorney-General (at the relation of the Society for the Protection of Unborn Children (Ireland) Ltd.) v Open Door Counselling Ltd. and Dublin Well Woman Centre Ltd.[169] an injunction was sought by the plaintiffs against the defendant pregnancy counselling service which would prevent the defendants from providing pregnant women with information on the pregnancy termination option. The Supreme Court held in favour of the plaintiffs stating that:

> [t]he performing of an abortion on a pregnant woman terminates the unborn life which she is carrying. Within the terms of Article 40 section 3 subsection 3 it is a direct destruction of the constitutionally guaranteed right to life of the unborn child.
>
> It must follow from this that there could not be an implied and unenumerated constitutional right to information about the availability of a service of abortion outside the state which, if

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[166] See the discussion in section 3.5 of this chapter, pp.202-211.

[167] Medical Council, The, (1994, p.36).

[168] [1992] 1 I.R. 1.

[169] [1988] I.R. 593.

> availed of, would have the direct consequence of destroying the expressly guaranteed constitutional life of the unborn... no right could constitutionally arise to obtain information the purpose of the obtaining of which was to defeat the constitutional right to life of the unborn child.[170]

In the subsequent case of The Society for the Protection of Unborn Children (Ireland) Ltd. v Stephen Grogan and Others[171] the plaintiffs brought proceedings against the defendants, officers of students' associations, preventing them from providing information on pregnancy termination services located outside the state. The High Court in this case decided to refer certain questions to the European Court of Justice before ruling on the issue and refused the defendant's application for an interlocutory injunction. The plaintiffs appealed this decision to the Supreme Court. The Supreme Court granted an interlocutory injunction preventing the defendants from distributing information on pregnancy termination.

However, the Supreme Court did not overturn the High Court's decision to refer the questions to the European Court of Justice.

On the question of the provision of information on pregnancy termination services, the European Court of Justice[172] held that it was not contrary to European Community law for a member state in which abortion was outlawed to prohibit the defendants from distributing

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[170] Ibid., p.625.

[171] [1989] I.R. 753.

[172] [1992] I.L.R.M. 461.

information about the provision of pregnancy termination services in clinics in other member states where the provision of such services is lawful, provided that such clinics have no involvement in the distribution of such information.

The question of freedom of expression was also relevant to this issue. Indeed, the defendants in Attorney-General (at the relation of the Society for the Protection of Unborn Children (Ireland) Ltd.) v Open Door Counselling Ltd. and Dublin Well Woman Centre Ltd.[173] appealed the decision of the Supreme Court to the European Court of Human Rights on the grounds that the prohibition on provision of information on pregnancy termination violated Article 10 of the European Convention for the Protection of Human Rights and Fundamental Freedoms 1950. Article 10 states that:

> 1. [e]veryone has the right to freedom of expression. This right shall include freedom to hold opinions and to receive and impart information and ideas without interference by public authority and regardless of frontiers. This article shall not prevent states from requiring the licensing of broadcasting, television or cinema enterprises.
>
> 2. The exercise of these freedoms, since it carries with it duties and responsibilities, may be subject to such formalities, conditions, restrictions or penalties as are prescribed by law and are necessary in a democratic society, in the interests of national security, territorial integrity or public safety, for the prevention of disorder or crime, for the protection of health or morals, for the protection of the reputation or rights or others, for preventing the disclosure of information received in confidence, or for maintaining the authority and impartiality

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[173] [1988] I.R. 593.

of the judiciary.

The European Court of Human Rights in the case of Open Door Counselling and Dublin Well Woman v Ireland[174] held that the prohibition imposed by the Supreme Court was a violation of Article 10 of the European Convention for the Protection of Human Rights and Fundamental Freedoms 1950.

The European Court of Human Rights was struck by the absolute nature of the Supreme Court's injunction on the provision of information, regardless of the woman's state of health, or her reasons for seeking counselling on pregnancy termination.

It was felt that such prohibition was too broad and disproportionate. This conclusion was supported by other facts of the case.

Firstly, the counselling, being non-directive, meant that the counsellors neither advocated nor encouraged pregnancy termination, but confined themselves to an explanation of the available options.

Secondly, information about pregnancy termination services in other countries could be obtained from other sources such as telephone directories and magazines. However, this information was not supervised by qualified counsellors and was therefore less protective of women's health. The European Court of Human Rights was of the opinion that the injunction had created a risk to the health of women who, due to the lack of proper counselling, were seeking abortions at a later stage in their

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[174] (1992) 15 E.H.R.R. 244.

pregnancies.

The subsequent Supreme Court decision in the case of Attorney-General v X and Others[175] revealed that Article 40.3.3. of Bunreacht na hEireann 1937 did not impose a blanket ban on the provision of pregnancy termination services. Instead abortion was permissible if it was established as a matter of probability that there was a real and substantial risk to the life of the mother if the abortion were not carried out.

Thus, if abortion were legal in Ireland, albeit in very limited circumstances, how could counselling which included the abortion option or the distribution of information on abortion services be considered to be repugnant to the law? What was clearly required was legislation which would give statutory force to the Supreme Court's decision in Attorney-General v X and Others.

This was not forthcoming. Instead the government of the day, as a compromise solution, held a referendum on the substantive issue of abortion and on the related rights to travel and information.[176] The wording of the proposed amendment to Article 40.3 in relation to the right to disseminate information on pregnancy termination was as follows:

> [s]ubsection 3 of this section shall not limit freedom to obtain or make available, in the state, subject of such conditions as may be laid down by law, information relating to services lawfully available in another state.

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[175] [1992] 1 I.R. 1.

[176] For a full account see, Girvin, (1994, pp.203-221).

The populace voted in favour of this amendment in the referendum which was held in November 1992. This wording thus became the Fourteenth Amendment to the Constitution.

Confusion still reigned as to the exact status of the amendment in Irish law. In the light of the case of Attorney-General v X and Others[177] and the constitutional referendums on the issue, the bodies who had been the subject of the Supreme Court injunction in Attorney-General (at the relation of the Society for the Protection of Unborn Children (Ireland) Ltd.) v Open Door Counselling Ltd. and Dublin Well Woman Centre Ltd.[178] applied to the Supreme Court to overturn the decision to prevent them from assisting pregnant women to travel abroad for abortions or from giving information on foreign abortion clinics.[179]

The Supreme Court refused the application, holding that the application should have been brought before the High Court in the first instance. Denham J. gave the only dissenting judgment in the case wherein she stated that:

> [w]hat is at issue here is whether an extant order of the Supreme Court which is contrary to the Constitution should stand. I am satisfied that it should not.[180]

Following this case the Attorney-General, in a letter to the Council for the Status of Women, stated that the order of the Supreme Court in the original case of

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[177] [1992] 1 I.R. 1.

[178] [1988] I.R. 593.

[179] See, MacDubhghaill, (1994, p.1).

[180] Ibid.

Attorney-General (at the relation of the Society for the Protection of Unborn Children (Ireland) Ltd.) v Open Door Counselling Ltd. and Dublin Well Woman Centre Ltd.[181] was correct when it was made, that is, before the decision in Attorney-General v X and Others[182] "but that it is now inconsistent with the Constitution because of the amendments".[183]

Since 12 May 1995, the position has to some degree been regularized, as is explained later in the following section of this thesis. In the context of genetic counselling it now appears that a medical geneticist is enabled to give details of the abortion option to patients, provided that such information meets the criteria laid down by the Regulation of Information (Services Outside the State for Termination of Pregnancies) Act 1995.

The New Abortion Information Act: An Overview.

As a result of the referendum on the issue of the provision of information on pregnancy termination services, the Oireachtas recently approved a Bill on this topic. However, this was referred to the Supreme Court by the President so that its constitutionality might be tested.

On 12 May, 1995 the Supreme Court, in a decision

[181] [1988] I.R. 593.

[182] [1992] 1 I.R. 1.

[183] MacDubhghaill, (1994, p.1).

briefly discussed in the conclusion of this thesis, held that the Bill was not repugnant to the Constitution.[184] The Bill was enacted later the same day. The Regulation of Information (Services Outside the State for Termination of Pregnancies) Act 1995 centres on information likely to be required by a woman contemplating termination procedures outside the jurisdiction, and those who provide these services. Such information is referred to in the Act as "Act information".

The Act limits the lawful public dissemination of foreign pregnancy termination information.

Such information may be given, if the procedures described are lawful in the country where they are carried out. The information must be truthful, objective and must not advocate or promote pregnancy termination.

If the information does not conform to these criteria, it is unlawful to disseminate anything (such as a book, magazine or pamphlet) containing such information, or to play in public, films or recordings of the information.

Counsellors (and the term in this context will have particular reference to doctors and genetic counsellors) who are asked to give information to a woman who may be, or is, pregnant, are restricted in the information that they can give.

First, the doctor must give truthful and objective information and must not advocate or promote pregnancy

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[184] Re Article 26 and the Regulation of Information (Services Outside the State for Termination of Pregnancies) Bill 1995, Supreme Court, Unreported, 12 May 1995.

termination. Secondly, the doctor must give general advice and information in relation to all the courses of action open to the patient/client.

The doctor is precluded from making any arrangements for termination of pregnancy for the patient/client.

The doctor may, however, give the patient/client originals or copies of any medical notes or records kept. Presumably the patient/client can then give them to the doctor or clinic performing the termination.

No person with an interest (including a financial interest) in any pregnancy termination company or partnership outside the state can give pregnancy termination information in the state.

No provider of pregnancy termination services can give any financial inducement to counsellors in Ireland. If either of the preceding financial elements are present, then such counsellor may not provide information on foreign pregnancy termination services in this state.

Counsellors with conscientious objections are accorded special rights: no person is obliged to give advice about pregnancy termination.

The penalty for breach of the provisions of this Act, is a fine not exceeding IR£1,500. Prosecutions may only be brought by or with the consent of the Director of Public Prosecutions. Offending material may be forfeit, and destroyed. The Gardai are given powers of search and seizure but medical, surgical, clinical or social notes are specifically excluded.

3.8 Practical Implications II: The Right to Travel.

The question of whether an individual who sought to have an abortion could freely travel outside the jurisdiction to obtain one was also raised in argument in the case of Attorney-General v X and Others.[185]

In the earlier case of The State (M) v Attorney-General[186] Finlay P., as he then was, held that the right to travel abroad derived from the Christian and democratic nature of the state. The right to travel was thus an unenumerated constitutional right. Notwithstanding this fact certain members of the Supreme Court in the decision in Attorney-General v X and Others[187] were prepared to allow that right to be overridden in a case where it conflicted with the right to life of the foetus. Thus, Finlay C.J. was of the view that the right to travel was not an absolute right:

> [n]otwithstanding the very fundamental nature of the right to travel and its particular importance in relation to the characteristics of a free society, I would be forced to conclude that if there were a stark conflict between the right of the mother of an unborn child to travel and the right to life of the unborn child, that the right to life would necessarily have to take precedence over the right to travel.[188]

Hederman J. concurred in this view, stating:

> [a] restraint upon leaving the territory of the

[185] [1992] 1 I.R. 1.

[186] [1979] I.R. 73.

[187] [1992] 1 I.R. 1.

[188] Ibid., p.57.

jurisdiction of the courts would in the ordinary way be a restraint upon the exercise of the constitutional right to travel but the competing right is the preservation of life and of the two the preservation of life must be deemed to be paramount and to be sufficient to suspend for at least the period of gestation of the unborn life the right to travel.[189]

Egan J. echoed these views in his judgment:

> [t]he right to travel can only effectively arise in reference to an intention to procure an unlawful abortion and must surely rank lower than the right to life of the unborn. It may well be that proof of an intention to commit an unlawful act cannot amount to an offence but I am dealing with the question of an unborn within the jurisdiction being removed from the jurisdiction with the stated intention of depriving it of its right to life.[190]

Surely this is not the only instance in which a conflict between a right to life and the right to travel may arise? Would it not also occur in the case of an incurably ill patient, an A.I.D.S. sufferer, for example, who wanted to leave the country to go to a state such as the Netherlands to benefit from more liberal laws in relation to active voluntary euthanasia? Might not this group of persons also be deprived of their right to travel under such a view?

McCarthy J. summed up how ridiculous such a restriction would be in practice when he observed:

> [i]f, for instance, a citizen of another state who did not at the time of her arrival in Ireland know she was pregnant, learned of her condition whilst here and wished immediately to go home in order to terminate the pregnancy, she is unlikely to inform any official authority or any interested bystander. If, however, she did so,

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[189] Ibid., p.73.

[190] Ibid., p.92.

would the courts make an order detaining her in Ireland for nine months? I think not.[191]

Following the decision in Attorney-General v X and Others a referendum was held on the issues which arose in the case, namely, the right to life of the unborn, the right to travel and the right to information. On the issue of the right to travel it was proposed that the following words be inserted as a qualifier to Article 40.3.3. of Bunreacht na hEireann 1937 "[s]ubsection 3 of this section shall not limit freedom to travel between the state and another state". This amendment was accepted by the electorate with 62.4 per cent voting in favour.

3.9 Practical Implications III: In Vitro Fertilisation.

Ireland lacks specific legislative regulation in the area of in vitro fertilisation. It is thus the case that in the absence of such specific regulation the general common law principles in relation to consensual medical treatment apply. In addition, the constitutional provisions in relation to the individual's right to privacy are of relevance here.

The dearth of legislation in this area does not imply that there exist no guidelines for the practitioner.

The Medical Council has accepted the guidelines laid down by the Institute of Obstetricians and Gynaecologists

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[191] Ibid., p.84.

of the Royal College of Physicians of Ireland.[192] These guidelines provide that the in vitro fertilisation treatment may be offered to married couples who have received appropriate counselling, understand the procedure, and have given valid consent. The guidelines stress that only sperm and eggs from the consenting couple will be used in the procedure.

All fertilised ova produced as a result of this procedure are to be replaced in the potential mother's uterus. The freezing or storage of spare embryos for experimental purposes is expressly prohibited.

However the Medical Council has recently relaxed the restriction on the freezing of embryos in the context of fertility treatment only.[193] The development of ad hoc rules in this area is bound to give rise to legal and ethical problems in the absence of adequate legislative provisions. Thus, for example, if the embryos frozen in a particular case of treatment turn out not to be required, what is the practitioner to do with the excess embryos? He cannot store them for the purposes of research as this would infringe the Medical Council's guidelines, nor can he use them on another patient as the Medical Council does not allow the donation of eggs and sperm. If, on the other hand, the doctor wanted to dispose of the embryos he may suffer the wrath of the pro-life lobby who could argue that

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[192] Medical Council, The, (1994, pp.36-37 and Appendix G, pp.62-63).

[193] See, Hegarty, (1994, p.2).

he is terminating the life of an unborn entity.

The validity of such an argument is questionable, but given the uncertain position in relation to the rights of the unborn in Irish law at present, the doctor in such a position is operating in an extremely grey area. The pro-life argument would revolve around the idea that a doctor who disposes of embryos in such circumstances would be acting illegally. The current uncertain position can only be resolved by detailed legislation which would clearly state when an abortion may be legally permissible.

In the interim, doctors have recourse to the guidelines[194] introduced by the Medical Council in the wake of the decision in the case of Attorney-General v X and Others.[195] It must be stated that these guidelines would tend to favour a view of the foetus as deserving of special protection. Thus, a doctor who carries out a termination of a pregnancy in the exceptional cases permissible under the common law as stated in Attorney-General v X and Others, may, nonetheless, be open to a charge of professional misconduct under the Medical Council's guidelines.[196] The question which must be asked in the context of in vitro fertilisation is whether the disposal of excess embryos is tantamount to the illegal taking of life? If one is to adhere to the logic of the pro-life argument then the

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[194] Medical Council, The, (1994, p.36).

[195] [1992] 1 I.R. 1.

[196] Medical Council, The, (1994, p.36).

answer is in the affirmative.[197] It would appear to be irrelevant that the embryo is not actually in the womb. As far as the anti-abortion argument is concerned life has commenced and any intervention which would intentionally lead to the termination of this life is tantamount to an illegal taking of life.[198]

Under existing law the doctor in such a position may not come within the scope of the exception outlined in the case of <u>Attorney-General v X and Others</u>[199] as there would be no possibility of raising the argument that the non-disposal of the embryo would lead to the mother's life being put at risk. The doctor is therefore in an unenviable position, for, whatever option he chooses he is open to disciplinary action.

The solution to such an absurd problem is the introduction of legislation akin to the English <u>Human Fertilisation and Embryology Act</u> 1990 which would clearly delimit the rights and duties of both patient and doctor in the context of in vitro fertilisation. In addition, clear legislative regulation is also necessary in order to allow the practitioner to operate in an atmosphere which is free from doubt and uncertainty.

It is clear from the guidelines that the Institute of Obstetricians and Gynaecologists and the Medical Council

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[197] See for example, Connery, (1977, pp.1-31).

[198] See further, section 3.1 of this chapter, pp.175-181.

[199] [1992] 1 I.R. 1.

favour the technique of in vitro fertilisation solely for the purposes of treating certain instances of infertility. The use of the technique for experimental purposes is anathema to the ideals of both bodies.

3.10 The Implications for a Right to Die.

As has been seen, the topic of abortion has been a divisive one in Irish society. The central issue, as Ronald Dworkin[200] would have it, is the extent to which people are prepared to admit of exceptions to the principle of the sanctity of life. The traditional deontological model of the Irish Constitution on the issue of the value of life has been modified somewhat by the initiation of this debate, resulting in the Supreme Court's decision in the case of Attorney-General v X and Others.[201]

However, we have to ask ourselves, how far have we actually come in embracing a different model? The provisions of the Offences Against the Person Act 1861, in relation to pregnancy termination are still extant, the constitutional protection of the foetus survives, albeit in a modified form. Moreover, women are still unable to obtain access to pregnancy termination services in Ireland, nor are doctors free to provide such services. It is still arguable as to whether the public's willingness to embrace the doctrine of the sanctity of life will admit of many, if

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[200] See, Dworkin, (1993, pp.84-101).

[201] [1992] 1 I.R. 1.

any, exceptions in areas of medical practice.

This has implications for the debate on euthanasia, which is, after all, another issue which comes within the ambit of right to life discourse. As has been noted, those who support the deontological model of the sanctity of life tend to view any practice which interferes with it as being beyond the pale. Thus, issues pertaining to ending life once it has begun may provoke similar, if not more virulent reaction from these groupings. As we shall see in the chapters which follow, the debate over the sanctity of life in Ireland is not over, and indeed will remain unfinished, until a public and legal discourse is initiated on the topic of the right to die, which has more in common with the discourse on abortion than one may care to admit.

Of turning back to help them. Don't.
What they were once was what they would not be;
Not liking what they are not is what now they are.
No one can help them; walk on, keep on walking,
And do not let your goodness self-deceive you:
It is good that they are but not that they are thus.[1]

4.0 Introduction.

Passive euthanasia consists of refraining from taking all steps necessary to keep a terminally ill patient or a patient in a persistent vegetative state alive. This would include, inter alia, the situation where a doctor discontinues the provision of life-sustaining medical treatment.

Since this thesis was submitted on 2 May 1995, two major developments have occurred which are of considerable importance in assessing the position of the law in Ireland in this area.

On 5 May, the High Court considered the problem of treatment withdrawal. In the case of Re C (Ward of Court)[2] the High Court was faced with an application by the family of a severely brain-damaged woman, for an order allowing her to die naturally.

Lynch J. was of the opinion that the test to be applied in such a case was the 'best interests' test. Thus,

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[1] Auden, (1969, p.311).

[2] High Court, Unreported, 5 May 1995, Lynch J..

it would be necessary to decide whether it would be in the 'best interests' of the woman that her life be prolonged by artificial means or whether she be allowed to die. Lynch J. concluded that in the instant case it would be in the patient's 'best interests' that artificial feeding should be terminated, allowing her to die. He so ordered.

Lynch J. took into account not only the views of the family of the ward, but also those of the institution in which she was being cared for, by further ordering that the family of the ward should be permitted to move the ward to another institution, whose moral views on treatment withdrawal in circumstances such as those in the instant case, would permit the carrying into effect of such a procedure.

This case is currently under appeal. It will be heard by the Supreme Court on 12 June 1995.

The Oireachtas has not yet deemed it necessary to introduce legislation on the issue.

The eventual Supreme Court decision in the case of Re C (Ward of Court) will make such legislation all the more important, for the eventual clear delineation of the rights of the patient.

The second important development which will indubitably influence both legislative and judicial consideration of this topic, was the decision referred to in the closing pages of Chapter Three: the decision in Re Article 26 and the Regulation of Information (Services

Outside the State for Termination of Pregnancies) Bill 1995[3] given by the Supreme Court on 12 May.

This case suggests that the Supreme Court will now extend considerable freedom to the Oireachtas to balance competing rights and interests in its legislative determinations; and that, in the instant case, it was not unconstitutional for the Oireachtas to accommodate the rights of the mother and of the unborn child in the way proposed by the Regulation of Information (Services Outside the State for Termination of Pregnancies) Bill 1995. The Supreme Court signalled that claims made in reliance on natural law or superior to positive law would (perhaps) be met with less enthusiasm than conflicting claims made on the basis of specific constitutionally accorded rights.

Such an inference may well prove of great importance in the consideration of the alternative options which surround the patient who is no longer competent.

It is in the context of these two significant developments in Irish law, that the whole topic of patient autonomy and treatment refusal is addressed.

This topic has become the subject of widespread debate in recent years. In the United States, Canada and the United Kingdom, the courts have been forced to make pronouncements on the issue.

What can be seen from the various judicial and legislative developments in the last twenty years is a general acceptance of a right not to have one's life

[3] Supreme Court, Unreported, 12 May 1995.

maintained artificially. This chapter attempts to delineate the boundaries of any future legislative intervention on this issue and to outline the options available to the judiciary in coming to a decision in this area.

4.1 The Common Law and Treatment Withdrawal.

Many would view the area of criminal omissions as the starting point of any discussion on the legal liability of the health care professional who discontinues life-sustaining treatment. The criminal law makes a distinction between positive acts and omissions. In relation to causing death by omitting to act, an individual is not deemed to be liable unless he was under a legal duty to care for the victim. The standard Irish text on criminal law states that there can be no:

> liability for manslaughter by omission unless the accused was under a duty to the victim to perform the act, the neglect of which caused death.[4]

Certain English decisions have outlined the criteria for establishing a legal duty in such circumstances. Thus, the duty has been established in relation to ties of blood, such as the parent-child relationship[5] and that of a person or persons caring for an elderly relative.[6]

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[4] Charleton, (1992, p.96).

[5] See for example, R. v Sheppard [1980] 3 All E.R. 899.

[6] See, R. v Instan [1893] 1 Q.B. 450 and R. v Stone [1977] 2 All E.R. 341.

In R.v Instan[7] the accused lived with her elderly aunt. In the days leading up to her death, the aunt developed gangrene in one of her legs and was unable to move or care for herself. The accused was the only person who was aware of the aunt's plight and consequently the only one who could seek medical assistance. This she did not do. In addition she refrained from feeding her aunt in the days before her death. Lord Coleridge C.J. affirmed the accused's conviction for manslaughter, stating that there was a common law duty on the defendant in this relationship to care for her aunt.

In the later case of R. v Stone,[8] the first defendant, Stone, was the elder brother of the deceased woman. It was discovered that Stone was of low intelligence, and was partially deaf and blind. Stone co-habited with the second defendant, Dobinson, who was described as being 'ineffectual and inadequate'. The victim came to live with the defendants in 1972. She suffered from anorexia nervosa and spent most of the time in her room. The victim's mental condition gradually deteriorated to a point where she was in urgent need of medical help.

The defendants did not however seek medical assistance until some three years after the victim's arrival. The first attempt at summoning the deceased's doctor failed as the deceased refused to tell the defendants his name. Some months later, Dobinson attempted to improve the deceased's

[7] [1893] 1 Q.B. 450.

[8] [1977] 2 All E.R. 341.

condition, by washing her with the help of a neighbour. The deceased was by this time bedridden and lying in her own excrement. She died in August 1975.

Medical reports concluded that she had been in need of urgent medical attention for days, if not for weeks. Both defendants were convicted of manslaughter, despite their mental shortcomings. In his judgment in the Court of Appeal, Geoffrey Lane L.J. explained the reasoning behind the decision thus:

> whether Fanny [the deceased] was a lodger or not, she was a blood relation of the appellant Stone; she was occupying a room in his house; the appellant Dobinson had undertaken the duty of trying to wash her, of taking such food to her as she required... the jury were entitled to find that the duty [to care] had been assumed. They were entitled to conclude that once Fanny became helplessly infirm... the appellants were, in the circumstances, obliged either to summon help or else to care for Fanny themselves.[9]

Thus, if a person is under a duty of care recognised by the criminal law, an omission to act, which causes death, is deemed to be manslaughter provided that a high degree of negligence can be proved on the part of the carer.

That the law has recognized this duty of care as existing in the context of the doctor-patient relationship can be seen in certain of the judgments in the case of Airedale N.H.S. Trust v Bland.[10] Lord Goff of Chieveley was of the opinion that a:

> doctor's conduct in discontinuing life support

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[9] Ibid., pp.345-346.

[10] [1993] 2 W.L.R. 316.

> can properly be categorised as an omission. It is true that it may be difficult to describe what the doctor actually does as an omission, for example, where he takes some positive step to bring the life support to an end. But discontinuation of life support is, for present purposes, no different from not initiating life support in the first place. In each case, the doctor is simply allowing his patient to die in the sense that he is desisting from taking a step which might, in certain circumstances, prevent his patient from dying as a result of his pre-existing condition; and as a matter of general principle an omission such as this will not be unlawful unless it constitutes a breach of duty to the patient. I also agree that the doctor's conduct is to be differentiated from that of, for example, an interloper, who maliciously switches off a life support machine because, although the interloper may perform exactly the same act as the doctor who discontinues life support, his doing so constitutes interference with the life-prolonging treatment then being administered by the doctor. Accordingly, whereas a doctor, in discontinuing life support, is simply allowing his patient to die of his pre-existing condition, the interloper is actively intervening to stop the doctor from prolonging the patient's life, and such conduct cannot possibly be categorised as an omission.
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> The distinction appears, therefore, to be useful in the present context in that it can be invoked to explain how discontinuance of life support can be differentiated from ending a patient's life by a lethal injection. But in the end the reason for that difference is that, whereas the law considers that discontinuance of life support may be consistent with the doctor's duty to care for his patient, it does not, for reasons of policy, consider that it forms any part of his duty to give his patient a lethal injection to put him out of his agony.[11]

Thus, the House of Lords in the decision in Airedale N.H.S. Trust v Bland was prepared to depart from the traditional approach to criminal omissions in the case of the medical practitioner who had participated in the discontinuance of medical treatment. The reasons for so doing were of a

[11] Ibid., p.369.

policy nature as the following passage from the judgment of Lord Browne-Wilkinson makes clear:

> if there comes a stage where the responsible doctor comes to the reasonable conclusion (which accords with the views of a responsible body of medical opinion) that further continuance of an intrusive life support system is not in the 'best interests' of the patient, he can no longer lawfully continue that life support system: to do so would constitute the crime of battery and the tort of trespass to the person. Therefore he cannot be in breach of any duty to maintain the patient's life. Therefore he is not guilty of murder by omission.[12]

Likewise in the United States, courts have tended to make an exception to the general rule in relation to a duty to act in the case of the medical practitioner and the withdrawal of life-sustaining treatment, based on the act-omission distinction. In the case of In Re Conroy,[13] the New Jersey Supreme Court was unconvinced of the usefulness of this distinction in the case of treatment withdrawal, believing that such a distinction was nebulous and elusive. It was noted that in a case such as the one before it:

> would a physician who discontinued naso-gastric feeding be actively causing [the patient's] death by removing her primary source of nutrients; or would he merely be omitting to continue the artificial form of treatment; thus passively allowing her medical condition, which includes her inability to swallow, to take its natural course?... The ambiguity inherent in this distinction is further heightened when one performs an act within an over-all plan of non-intervention, such as when a doctor writes an order not to resuscitate a patient.[14]

In effect, the act-omission distinction appears to be more

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[12] Ibid., p.385.

[13] 486 A.2d 1209 (1985).

[14] Ibid., p.1234.

of a hindrance than an aid to resolving the legal problems in this area. It is more in the way of a theoretical red herring than a positive contribution towards the resolution of the problem. As the Report of the President's Commission put it:

> merely determining whether what was done involved a fatal act or omission does not establish whether it was morally acceptable. Some actions that lead to death can be acceptable: very dangerous but potentially beneficial surgery or the use of hazardous doses of morphine for severe pain are examples. Some omissions that lead to death are very serious wrongs: deliberately failing to treat an ordinary patient's bacterial pneumonia or ignoring a bleeding patient's pleas for help would be totally unacceptable conduct for that patient's physician...
>
> Making the distinction also presupposes an unsound conception of responsibility, namely (1) that human action is an intervention in the existing course of nature, (2) that not acting is not intervening, and (3) that people are responsible for their interventions (or, at least, are much more responsible for deliberate interventions than for deliberate omissions). The weaknesses of this position include the ambiguous meaning of 'intervention' when someone takes an action as part of a plan of non-intervention (such as writing orders not to resuscitate), the inability to define clearly the 'course of nature', and the indefensibility of not holding someone responsible for states of affairs that the person could have prevented.[15]

However, the Commission was not in favour of amending policy in this area and concluded that while treatment-withdrawal was acceptable "the current interpretation of the legal prohibition of active killing should be sustained".[16]

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[15] President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, (1983, p.67).

[16] Ibid.

This statement could be interpreted as implying that the act-omission distinction is but a mere policy tool. The use of the term "current interpretation" could lead one to conclude that the whole conceptual basis is subject to changing policy driven interpretations. This view was well put in an anonymous note in the Harvard Law Review.[17] The author in arguing against distinctions between acts and omissions in the case of physician-assisted suicide and treatment refusal states:

> [b]ecause there are no inherent distinctions between letting a patient die and assisting a patient's suicide, the patient's interest in dying cannot, without implicating policy arguments, be divided into an interest in 'refusing' and an interest in 'receiving' treatment. The patient has a single, undivided interest in controlling what happens to her body. The right of self-determination, although subject to some overriding state interests, does not cease to exist at some indeterminate, imaginary line between having life-saving treatment withdrawn and receiving suicide assistance...
>
> Legal causation is a question of policy, not mechanical connection. Consider a case in which a physician disconnects a respirator that is keeping a patient alive. If the patient had expressly requested continued treatment, surely a court would find that the physician's act caused the patient's death. However, the same act would be legal if the patient had demanded cessation of treatment. In either case, the physician's act - turning off the respirator - is a cause-in-fact of the death: but for turning off the machine, the patient would be alive today. To say that the physician did not cause the death of the patient who demanded withdrawal of treatment, then, means that this act was not the legal, or 'proximate' cause of the death. Whether the physician's act is a proximate cause 'depend[s] essentially on whether the policy of the law will extend the responsibility for the conduct to the consequences which have in fact occurred'... Thus, the seemingly objective statement that would be made in the second instance, that the

[17] See, Anonymous, (1992, pp.2021-2040).

> patient's illness, not the patient or the physician, caused the death, is no more than a policy-based conclusion that the patient's and physician's actions are not prohibited.[18]

Thus, the act-omission distinction is a shaky foundation on which to build a right to die jurisprudence. It could be argued that it is an outmoded legal tool unsuited to the exigencies of high technology medicine.[19] As a result, it is submitted that other models be looked to in attempting to seek a resolution to this dilemma.

4.2 The Competent Patient and Refusal of Medical Treatment.

That treatment withdrawal may be valid in the case of the conscious rational adult may be inferred from a number of judicial pronouncements in this area. Thus, medical treatment can be refused by a competent adult even if it leads to his death. In the case of the minor patient the position is not as straightforward due to the law's conception of the child.

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[18] Ibid., pp.2029-2031.

[19] Meisel, (1989, p.78), notes:

> [t]he difficulties with the act-omission analysis - in characterizing conduct as an act or an omission, and in specifying the moral difference that such a characterization should entail - have led to its rejection by the courts in right to die cases.

The Competent Adult.

In R. v Blaue[20] an assault victim refused a blood transfusion on the grounds that the religious sect of which she was a member (the Jehovah's Witnesses) forbade such a medical intervention. As a result of refusing the blood transfusion, she died of her injuries. The perpetrator of the assault, the defendant in the instant case, argued that the victim's decision to refuse medical treatment was a form of novus actus interveniens which broke the causal link between his act and the death of the victim, and that as a result, he was no longer guilty of her manslaughter. The Court of Appeal rejected the defendant's argument and upheld his conviction for manslaughter.

In the case of Re T (Adult: Refusal of Medical Treatment),[21] the patient was a twenty year old female who had been injured in a traffic accident when she was thirty-four weeks pregnant.

T was diagnosed as having pneumonia and was prescribed large doses of pethidine, oxygen and antibiotics. She subsequently went into labour. Before the delivery, T was visited by her mother, a Jehovah's Witness. T herself was not a member of the sect. After conversations with her mother, T told the midwife that she did not want blood transfusions. The obstetrician told T that a caesarian

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[20] [1975] 3 All E.R. 446.

[21] [1992] 3 W.L.R. 782.

section did not normally require a blood transfusion. After the obstetrician had left, the midwife furnished T with a form which provided for the refusal to consent to blood transfusions. This form was required to be countersigned by the attending doctor, but in this case, the medical practitioner did not sign the document.

There followed an emergency caesarian section operation, T's condition deteriorated and the medical team was of the opinion that blood and plasma transfusions were necessary. She was placed on a ventilator and was administered sedatives. However her situation was critical and transfusions of blood and plasma were required for her survival.

T's father joined with the father of the child in applying to the court for a declaration that it would not be unlawful for the medical team to give T such transfusions without her consent. At the hearing it was adduced that T's parents were separated since T was three years old. Custody was eventually granted to her mother. The custody order prohibited the mother from rearing T as a Jehovah's Witness. However, T's mother had forced her daughter to live by the tenets of the sect. It was argued on T's behalf that her decision to forego blood transfusions had been made under undue influence from her mother, who had encouraged her to refuse blood transfusions.

At first instance, Ward J. held, that because of her medical condition, and due to the effect of the medication

which had been administered to her, she was not in a rational state when she signed the consent refusal form. An interlocutory order was granted allowing the transfusions to be given.

However, the Official Solicitor appealed this decision to the Court of Appeal. The case was important in that it would provide guidance for hospital authorities faced with such a dilemma. The Court of Appeal dismissed the appeal of the Official Solicitor. The Court of Appeal affirmed the right of the patient to decide whether or not to undergo a particular form of treatment. However, in order for this right to be upheld, it must be validly exercised. In this case, it was found, that the form signed by T was invalid as it had not been signed by a medical practitioner and because the significance of this form had not been properly explained to her.

In Canada the issue arose for decision in a slightly different form in the case of Malette v Shulman.[22] In this case the plaintiff was unconscious as the result of injuries sustained in a road traffic accident. She was rushed to the emergency ward of the Kirkland and District Hospital where she was treated by the defendant medical practitioner. Dr. Shulman was of the opinion that the plaintiff was suffering from shock caused by blood loss. He then ordered that she be given intravenous glucose and Ringer's Lactate in order to increase her blood pressure. However, at this point, one of the nurses in attendance

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[22] (1990) 67 D.L.R. (4th) 321.

discovered that Mrs. Malette was carrying a card which stated that she was a Jehovah's Witness and as such no blood or blood products were to be administered to her in any circumstances.

Dr. Shulman was thus faced with a dilemma. He was of the opinion that without blood transfusions Mrs. Malette's condition would deteriorate leading to irreversible shock and death. He was also aware that the plaintiff had not and would not consent to a blood transfusion even to save her life. Nonetheless, the defendant decided to proceed with a blood transfusion. As a result the plaintiff recovered from her injuries and survived to take a battery action against Dr. Shulman. The action was successful at first instance. However, the defendant appealed this decision to the Ontario Court of Appeal. The Court of Appeal upheld the decision stating that Dr. Shulman was not legally entitled to act as he did even though his actions had saved the life of the plaintiff. The Court of Appeal was of the opinion that:

> [a] doctor is not free to disregard a patient's advance instructions any more than he would be free to disregard instructions given at the time of the emergency. The law does not prohibit a patient from withholding consent to emergency medical treatment, nor does the law prohibit a doctor from following his patient's instructions. While the law may disregard the absence of consent in limited emergency circumstances, it otherwise supports the right of competent adults to make decisions concerning their own health care by imposing civil liability on those who perform medical treatment without consent.[23]

Thus, in this particular case the Court of Appeal was

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[23] Ibid., p.330.

satisfied that the card which Mrs. Malette was carrying:

> set forth unqualified instructions applicable to the circumstances presented by this emergency. In the absence of any evidence to the contrary, those instructions should be taken as validly representing the patient's wish not to be transfused. If, of course, there were evidence to the contrary - evidence which cast doubt on whether the card was a true expression of the patient's wishes - the doctor, in my opinion, would be entitled to proceed as he would in the usual emergency case. In this case, however, there was no such contradictory evidence.[24]

In the United States the approach of the judiciary has been less favourable to the patient in such cases. In the case of In Re Estate of Dorone[25] the patient was a twenty-two year old Jehovah's Witness. He was unconscious as he was suffering from an acute subdural haematoma. To relieve this condition an operation was required, during the course of which a blood transfusion was necessary. The patient's parents, however, refused to consent to the blood transfusion even though without the operation and the transfusion the patient would die. The Supreme Court of Pennsylvania overruled the decision of the parents stating that:

> medical intervention, which necessarily included blood transfusions, could preserve Mr. Dorone's life. When evidence of this nature is measured against third party speculation as to what an unconscious patient would want there can be no doubt that medical intervention is required. Indeed, in a situation like the present, where there is an emergency calling for an immediate decision, nothing less than a fully conscious contemporaneous decision by the patient will be sufficient to override evidence of medical

[24] Ibid.

[25] 517 Pa. 3 (1987).

necessity.[26]

In the later case of Werth v Taylor[27] the patient having given birth to twins, was found to be bleeding from the uterus. The medical practitioner in attendance believed that a dilation of the cervix and curettage of the uterine lining was required. However, the patient was a Jehovah's Witness and had previously signed a 'Refusal to Permit Blood Transfusion' form. During the procedure it transpired that a blood transfusion was necessary to preserve the patient's life. The doctor in charge of the procedure decided that nevertheless the transfusion should be given. As a result the plaintiff and her husband sued in battery.

The Michigan Court of Appeals did not uphold the plaintiffs' claim following the approach taken in In Re Estate of Dorone stating that:

> it is the patient's fully informed, contemporaneous decision which alone is sufficient to override evidence of medical necessity... [The plaintiff's] prior refusals had not been made when her life was hanging in the balance or when it appeared that death might be a possibility if a transfusion were not given. Clearly, her refusals were, therefore, not contemporaneous or informed...
>
> Without contemporaneous refusal of treatment by a fully informed, competent adult patient, no action lies for battery and summary disposition was proper.[28]

The English case of In Re C (Adult: Refusal of

[26] Ibid., p.9.

[27] 475 N.W.2d 426 (1991).

[28] Ibid., cited by Kennedy and Grubb, (1994, p.1330).

Treatment)[29] provides one with yet another variation on the general theme of treatment refusal and the consequences for the medical practitioner. In this case, the patient, though a sentient adult, was suffering from chronic paranoid schizophrenia. C had been sentenced to seven years imprisonment in 1962 for stabbing a former lover. It was discovered, during the currency of his sentence, that C was mentally ill. He was, as a result, transferred to Broadmoor. It was there that he was diagnosed as being a chronic paranoid schizophrenic, and remained institutionalized ever since. In September 1993, the surgeon at Broadmoor diagnosed C as suffering from gangrene of the foot, whereupon C was transferred to Heatherwood Hospital.

At the hospital, the consultant vascular surgeon found C's leg to be severely infected with a necrotic ulcer covering the dorsum. He was of the opinion that C would die quite shortly if the leg was not amputated below the knee. C refused to consent to the amputation, claiming that he would rather die with two feet than live with one. The surgeon then, in the light of the gravity of C's condition, tried to obtain his consent to less radical surgery. On 22 September, he succeeded in obtaining C's consent to debridement of the dead tissue under general anaesthetic.

There followed an improvement in C's condition and the risk of imminent death had been averted. Nonetheless, the patient applied for an injunction to prevent any future

[29] [1994] 1 W.L.R. 290.

attempt to amputate his leg without his consent. In applying the principles laid down in both Airedale N.H.S. Trust v Bland[30] and Re T (Adult: Refusal of Medical Treatment),[31] Thorpe J. allowed the application. The question of C's capacity to consent was discussed and it was found that C was capable of managing his own affairs and was thus not precluded from giving valid consent. Thorpe J. concluded that the correct question to be addressed in determining C's capacity was:

> whether it has been established that C's capacity is so reduced by his chronic mental illness that he does not sufficiently understand the nature, purpose and effects of the proffered amputation.[32]

Thorpe J. was satisfied that, on the evidence, C though suffering from schizophrenia:

> understood and retained the relevant treatment information [and] that in his own way he believes it, and that in the same fashion he has arrived at a clear choice.[33]

This decision, and the earlier decision in Re T (Adult: Refusal of Medical Treatment) confirm the autonomy of the patient in deciding whether or not to undergo life-saving medical treatment.

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[30] [1993] 2 W.L.R. 316.

[31] [1992] 3 W.L.R. 782.

[32] In Re C (Adult: Refusal of Treatment) [1994] 1 W.L.R. 290, p.295.

[33] Ibid.

The Minor Patient.

In the United Kingdom, the question of the minor patient and the refusal of treatment leading to the possible death of the patient has been broached in the case of Re W (A Minor) (Medical Treatment).[34] In that case, a sixteen year old girl who suffered from anorexia nervosa was the subject of an application by her local authority under section 100 (3) and (4) of the Children Act 1989 for a court order that it be free to place W in a hospital specialising in eating disorders and that she be given medical treatment without her consent if necessary.

At first instance, it was held that although W had sufficient understanding to make an informed decision, the court had inherent jurisdiction to make the order sought. W appealed the decision to the Court of Appeal. The Court of Appeal dismissed W's appeal, holding that it had an unlimited inherent jurisdiction over minors and as such could, in the child's 'best interests', override the child's wishes even where the child was capable of understanding the nature and consequences of her refusal to accept treatment where such refusal would lead to the death of the child or to severe permanent injury. However, it was noted that:

> nevertheless such a refusal is a very important consideration in making clinical judgments and for parents and the court in deciding whether themselves to give consent. Its importance

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[34] [1992] 4 All E.R. 627.

increases with the age and maturity of the minor.[35] This decision considerably narrows the freedom of action of the minor as laid down in Gillick v West Norfolk and Wisbech Area Health Authority.[36] Given the approach to the autonomy of the child in Irish law, it is likely that an Irish court faced with a question such as that raised in Re W (A Minor) (Medical Treatment) would follow the more restrictive line adopted in that case rather than the Gillick model of child autonomy in the context of medical treatment.

The more general area of the capacity of the minor to consent to medical procedures is of relevance here. The common law does not impose a particular age limit below which an individual cannot give valid consent to medical treatment. The important factor in this area is whether the child has sufficient understanding and intelligence to appreciate what is entailed in the particular treatment. The issue of consent and the minor patient was broached in the case of Gillick v West Norfolk and Wisbech Area Health Authority.[37] The case arose as a result of the issuing by the then Department of Health and Social Security of a circular which stated that a doctor consulted at a family planning clinic by a girl under the age of sixteen would not be acting unlawfully if he prescribed contraceptives for the girl, as long as he was acting in good faith to

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[35] Ibid., pp.639-640.

[36] [1985] 3 All E.R. 402.

[37] Ibid.

protect her against the harmful effects of sexual intercourse. The plaintiff, a mother of five daughters under the age of sixteen, sought an assurance from her area health authority that her daughters would not receive contraceptive advice without her consent.

The health authority refused such an assurance, whereupon the plaintiff brought an action against the health authority and the Department of Health and Social Security seeking a declaration that the advice contained in the circular was unlawful as it amounted to advice to doctors to commit the offence of causing or encouraging unlawful sexual intercourse with a girl under sixteen, contrary to section 28(1) of the Sexual Offences Act 1956, or the offence of being an accessory to unlawful sexual intercourse with a girl under sixteen, contrary to section 6(1) of the Sexual Offences Act 1956.

The plaintiff also sought a declaration against the health authority that a doctor or other professional person employed by it in its family planning service could not give advice and treatment on contraception to any child of the plaintiff below the age of sixteen without the consent of the plaintiff.

In its decision in the case, the House of Lords recognised the right of the minor to autonomy in this area. Thus, the fact that a girl was under the age of sixteen did not imply that she was incapable of consenting to such treatment and advice. The relevant factor was not the age of the individual but rather her ability to understand

fully what was proposed. This would be a question of fact based on the particular capacity of the individual in question. As a result, a doctor could engage in such treatment, once he was satisfied that the minor was of sufficient understanding and intelligence to appreciate the particular treatment, without incurring the sanction of the criminal law, or infringing the rights of the parents. Thus, in the words of Lord Scarman:

> as a matter of law, the parental right to determine whether or not their minor child below the age of sixteen will have medical treatment terminates if and when the child achieves a sufficient understanding and intelligence to enable him or her to understand fully what is proposed. It will be a question of fact whether a child seeking advice has sufficient understanding of what is involved to give a consent valid in law. Until the child achieves the capacity to consent, the parental right to make the decision continues save only in exceptional circumstances.[38]

In Ireland the issue has not, as of yet, come before the courts for decision. However, the presence in Bunreacht na hEireann 1937 of Articles 41 and 42 may constitute a barrier to a decision similar to that in the case of Gillick v West Norfolk and Wisbech Area Health Authority being arrived at in Ireland. Article 41 sets out to give explicit constitutional protection to the family and the institution of marriage. The family is seen under Article 41.1.2 as "the necessary basis of social order". Article 42.1 holds that the family is "the primary and natural educator of the child". Indeed Gavan Duffy J. in his

[38] Ibid., pp.423-424.

judgment in the case of Re Tilson[39] left one in no doubt as to the provenance of these articles:

> Articles 41 and 42, redolent as they are of the great Papal encyclical in pari materia, formulate first principles with conspicuous power and clarity... which exalt the family by proclaiming and adopting in... the Constitution... the Christian conception of the place of the family in society and in the [s]tate.[40]

Thus, even if a minor fully appreciates the nature and consequences of contraceptive treatment and advice, the constitutional supremacy of the family will invalidate this consent. The interests of the minor are thus of mere secondary importance. Supporters of this conception of the rights of the family,[41] argue that children have a right to be protected from precocious sexual activity and that the courts will protect the family against any infringement of their constitutional rights. Children are, in effect, to be protected from themselves in this area of medical treatment. In being protected from themselves, they are, effectively, allowed to remain unprotected from sexually transmitted diseases or unplanned pregnancies.

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[39] [1951] I.R. 1.

[40] Ibid., p.14.

[41] McMahon and Binchy, (1990, p.420).

4.3 Establishing a Right to Refuse Treatment.

The Constitutional Argument.

In the New Jersey Supreme Court case of In Re Quinlan[42] the right to die in the sense of refusing life-sustaining medical treatment was held to be encompassed by the constitutional right to privacy. In this case, the patient was in a chronic persistent vegetative state. On the evidence it was believed that the patient would never return to a sentient state. In its judgment in the case the New Jersey Supreme Court came to the conclusion that in certain circumstances the right to privacy could be interpreted as including a right to refuse medical treatment, leading to the death of the patient:

> [p]resumably this right is broad enough to encompass a patient's decision to decline medical treatment under certain circumstances, in much the same way as it is broad enough to encompass a woman's decision to terminate pregnancy under certain conditions.[43]

Having concluded that there existed a right to privacy that may allow the termination of treatment in certain circumstances, the Supreme Court of New Jersey then addressed the question of the possible criminal liability of those involved in withdrawing such treatment. It was held that:

> there would be no criminal homicide in the circumstances of this case. We believe, first,

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[42] 355 A.2d 647 (N.J.) (1976).

[43] Ibid., p.663.

> that the ensuing death would not be homicide but rather expiration from existing natural causes. Secondly, even if it were to be regarded as homicide, it would not be unlawful.
>
> These conclusions rest upon definitional and constitutional bases. The termination of treatment pursuant to the right to privacy is, within the limitations of this case, ipso facto lawful. Thus, a death resulting from such an act would not come within the scope of homicide statutes proscribing only the unlawful killing of another. There is a real and in this case determinative distinction between the unlawful taking of the life of another and the ending of artificial life-support systems as a matter of self-determination.[44]

The case established a right to refuse life-sustaining treatment on the part of the competent patient with a terminal[45] or incurable[46] illness, a position which has been adopted in a plethora of subsequent cases throughout the United States.

In the wake of In Re Quinlan, courts, in addition to grounding the patient's right to refuse treatment in the constitutional right to privacy, have premised this right on the common law right to self-determination as expressed in the doctrine of informed consent.[47]

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[44] Ibid., p.664.

[45] See, inter alia, Satz v Perlmutter 379 So.2d 359 (1980) and Tune v Walter Reed Army Medical Hospital 602 F.Supp. 1452 (D.D.C. 1985).

[46] See for example, Bouvia v Superior Court (Glenchur) 179 Cal. App.3d 1127 (1986), (here the patient was suffering from cerebral palsy, which is not classified as a terminal illness. The court nonetheless held that the patient should be allowed to forego artificial feeding and hydration) and Thor v Superior Court 855 P.2d 373 (Cal. 1993), (where a quadriplegic patient was allowed to refuse further medical treatment).

[47] Meisel, (1989, p.53).

Meisel,[48] in his standard text on the right to die cites the example of the New Jersey Supreme Court decision in the case of In Re Conroy[49] where it was concluded that the right to decline life-saving treatment was part of the common law right of self-determination. In the earlier case of In Re Eichner,[50] it was held at first instance that the state's interest in preserving human life was not sufficient to prevent the disconnection of a respirator attached to an eighty-three year old heart attack victim, citing as support for this conclusion the common law right to self-determination and not the right to privacy.[51] The court of first instance contended that by using the right to privacy as a justificatory basis for this decision, it would lead to unrestrained applications of the privacy right.[52] On appeal the decision of the court of first instance was upheld but it was stated that the constitutional right to privacy could be viewed as a valid means of upholding the right to treatment refusal. It was held that the right to privacy:

> encompasses the freedom of the terminally ill but competent individual to choose for himself whether or not to decline medical treatment... [and it] is virtually inconceivable that the right of privacy would not apply.[53]

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[48] Ibid.

[49] 486 A.2d 1209 (1985).

[50] 423 N.Y.S.2d 580 (1979).

[51] Ibid., pp.593-594.

[52] Ibid., p.591.

[53] 426 N.Y.S.2d 517 (1980), p.539.

On a further appeal, the New York Court of Appeals affirmed the decision of the lower court but did not broach the question of the validity of extending the privacy right to cover such a situation. This was a consolidated appeal of both the case of In Re Eichner and the case of In Re Storar[54] which concerned John Storar, a fifty-two year old mentally retarded man who had never been competent. The decision in In Re Eichner was affirmed with the appeal court relying on the common law right to self-determination.[55] However in the decision in In Re Storar, it was held that treatment could not be discontinued because the patient was not capable of making known his preferences in relation to treatment withdrawal. On the self-determination basis the right to refuse treatment could not be accorded as the patient was incapable of either refusing or accepting treatment. This, it may be argued betrays the conceptual inadequacy of the common law right to self-determination in this instance. One commentator has expressed this inadequacy in the following terms:

> [u]nder common law, the patient loses the right of self-determination if incompetent; it is a personal right that a surrogate cannot exercise on behalf of the patient without clear evidence of the patient's intent. Thus, only a competent patient may exercise the common law right of self-determination, because the common law demands clear evidence of the patient's treatment preferences.[56]

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[54] 434 N.Y.S.2d 46 (1980).

[55] 438 N.Y.S.2d 266 (1981), pp.272-273.

[56] Shaver, (1989, p.226).

The Legislative Model.

The development of a right to die jurisprudence has also had a further consequence, the widespread adoption by individual states of living will statutes which allow for competent persons to create a living will stating their wishes in relation to the discontinuance of life-sustaining treatment. In addition many states have adopted durable power of attorney legislation which allows competent persons to appoint a particular person to make a decision on their behalf in relation to treatment withdrawal in the event of their entering a state of permanent unconsciousness.[57] The generic term 'advance directive' is often used to encompass the varying forms of prospective decision-making which are of relevance to this area. As one commentator has explained:

> [t]he term 'advance directive' is used to denote several different things. First, it is sometimes used to designate the concept of anticipatory health care decision-making. At other times it is used to refer to the content of an oral or written statement made by an individual (declarant) to become effective under stated conditions. The term can also be used to refer to a vehicle for embodying such a statement, such as a living will, durable power of attorney, or other natural death act directive. (Natural death acts frequently use the terms 'directive' and 'directive to physician' as synonymous with the term 'advance directive').[58]

The development of the advance directive and the enduring power of attorney in the context of treatment

[57] For an overview of this area see, Roach, (1991, pp.161-168).

[58] Meisel, (1989, p.318).

withdrawal demonstrates an attempt on the part of the legislators to enshrine patient autonomy in public policy. However, these forms of legal instrument by their very nature can apply only to the competent adult patient. The mentally incompetent and the minor are not permitted to avail of this instrument. In addition not all once competent persons will have created an advance directive before entering a state of permanent unconsciousness. This has led to the courts adopting different decision-making standards in the case of the once competent patient who has made a directive, the once competent patient who has not made a directive, and the never competent patient, a situation which has resulted in a certain lack of uniformity.

The patient who has provided clear and convincing proof of his wish to have treatment withdrawn in the event of his entering a state of incompetence will obviously provide little difficulty. Thus it would seem that on the face of it a valid living will poses no problems.[59]

The American Model(s).

All fifty American states and the District of Columbia now have on their statute books some form of advance directive legislation.[60] In addition many states have

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[59] See, Cruzan v Director, Missouri Department of Health 110 S.Ct 2841 (1990).

[60] See, Dworkin, (1993, p.180) and Salatka, (1992, pp.155-161).

enacted health care durable power of attorney statutes.[61] Living wills are classified broadly as instruction directives. They allow the declarant (the party making the living will) to make known his wishes in relation to medical treatment in the event of a terminal or incurable illness. A health care durable power of attorney falls into the category of a proxy directive. These instruments, unlike a classic living will, do not set down specific instructions in relation to medical treatment, but rather allow the principal or grantor (as the creator of the durable power of attorney is known) to appoint a proxy or proxies to make health care decisions on his behalf in the event of his becoming incompetent.

The living will is less flexible than the health care durable power of attorney in that at the time of framing a living will one can not possibly contemplate all the treatment options that may be available if and when the directive becomes operative. With a durable power of attorney, the appointed surrogate will be able to judge the requirements of the particular situation contemporaneously.[62]

One method of overcoming this problem is to create a combination directive which combines the advantageous aspects of both living wills and proxy directives. As a leading American commentator has noted:

[a] combination directive permits the spirit of

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[61] See, Salatka, (1992, pp.159-161).

[62] See further, Meisel, (1989, pp.318-335).

> the declarant's instructions to govern, with the interstices filled in by the proxy.[63]

A major problem of the advance directive legislation in the United States is its sheer diversity and lack of uniformity. This has created a situation where the rights of the terminally ill vary from one state to the next. As one writer has stated:

> Americans are now shopping for cities or states with more sympathetic laws on many different social and medical issues, which creates a trend that will burden a handful of states with the most pressing and expensive problems.[64]

The case of In Re Busalacchi[65] demonstrates the problems which beset this area. In this case the patient lay in a persistent vegetative state in a rehabilitation institution in the state of Missouri as the result of a road traffic accident. Her father sought to transfer her to Minnesota, a state which had less stringent laws in relation to treatment withdrawal. The patient had left no clear and convincing evidence of her wishes in relation to treatment withdrawal, but even if she had it is doubtful it would have proved sufficient, as she was a minor at the time of the accident and therefore lacking the competence to decide on future medical treatment. Even though her next-of-kin wished to make a treatment decision on her behalf, this was stymied by the court in its exercise of the guardianship laws. In this case it was held that the

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[63] Ibid., p.322.

[64] Roach, (1991, p.166).

[65] 5 March 1991, No. 59582, 1991 Mo. App. LEXIS 315.

decision to move the patient was not one the parent could make without demonstrating that she was not receiving adequate care in Missouri:

> [s]pecifically, we will not permit [a] guardian to forum shop in an effort to control whether [the patient] lives or dies.[66]

It could be argued that this refusal might in some way interfere with the individual's right to travel. However, as Brilmayer has written:

> [t]he home state may be able to defeat the right to travel argument by arguing that it is not preventing the woman from exercising the right to travel, but simply holding that her guardian is not entitled to make the decision for her. Here, however, we need to take a closer look at the state's guardianship law. What decisions, exactly, is the guardian ordinarily entitled to make? Assume that the state would normally allow the guardian to move the patient from one hospital to another in order to obtain different treatment. In such circumstances the state should not be able to prohibit the guardian from moving the patient to another state on the grounds that the purpose of the move is illegal. For the purpose itself is not illegal: termination of life support would be permitted if the patient were already in that state...
>
> The only argument the state can use to prevent the death would be the contention that the guardian could not decide to move the patient regardless of the illegality of the motive. One can certainly imagine states holding such a limited view of guardianship; in such states, the guardian would be prohibited from taking the patient out of the hospital for virtually any reason.[67]

However, on appeal to the Supreme Court of Missouri, it was held that the father of the patient was entitled to remove the feeding tube.[68]

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[66] Ibid, p.17.

[67] Brilmayer, (1993, p.905).

[68] Ibid., p.874.

Nonetheless it is imperative that certainty should prevail in this area. Various attempts have been made in the past without particular success to introduce uniform laws in this area.

The Uniform Rights of the Terminally Ill Act 1985[69] is a model statute drafted by the National Commissioners on Uniform State Laws. It was adopted in 1985 and forms the basis for living will legislation in a number of states. However, it has not led to a situation of uniformity even in those states which have used it as a basis for their legislation in this area.

The Uniform Right to Refuse Treatment Act 1982 was drafted by the group Concern in Dying in 1982. This model statute provides a means by which a competent person can state how they wish to be treated in the event of their becoming incompetent and also allows them to appoint a proxy decision-maker. This act has not been adopted by any state.[70] The Medical Treatment Decision Act 1981 was drafted by the Society for the Right to Die in 1981. It has not been adopted by any state but has influenced certain provisions of the living will statutes of some states.[71] These model statutes have not created a situation of greater certainty and uniformity in this area of medical treatment.

[69] 9B Uniform Laws Annotated 609 (1987).

[70] Meisel, (1989, p.336).

[71] Ibid.

The Australian Model.

In certain states in Australia, an attempt has been made to frame legislation which would go some way towards providing a practical resolution to the dilemma posed by passive euthanasia. The Natural Death Act 1983 of South Australia is the piece of legislation which has acted as a model for subsequent legislative intervention by certain other Australian states.[72] The Natural Death Act 1983 enables the terminally ill patient in specific circumstances to forego life-sustaining treatment. In addition it provides immunity from civil and criminal liability for doctors, who, acting without negligence, follow the directions of such patients. The Natural Death Act 1983 only applies to terminally ill patients who are defined in section 3 as those people who are suffering from:

> any illness, injury or degeneration of mental or physical faculties-
>
> (a) such that death would, if extraordinary measures were not undertaken, be imminent; and
> (b) from which there is no reasonable prospect of temporary recovery, even if extraordinary measures were undertaken.
>
> The term 'extraordinary measures' is taken to mean:
>
> medical or surgical measures that prolong life, or are intended to prolong life, by supplanting or maintaining the operation of bodily functions that are temporarily or permanently incapable of

[72] See for example, the Northern Territory Natural Death Act 1988.

independent operation.[73]

This would include such measures as artificial ventilation, artificial feeding and artificial hydration.

The capacity of the patient is important in exercising this right to forego treatment under the Natural Death Act 1983. Thus, the Act will only apply to the patient who:

> is conscious and capable of exercising a rational judgment of all the various forms of treatment that may be available in his particular case so that the patient may make an informed judgment as to whether a particular form of treatment should, or should not, be undertaken.[74]

As a result, the category of patients who may avail of this right to forego life-sustaining treatment is quite narrow. In effect it is confined to the competent adult and does not make provision for the minor or the incompetent adult.

In effect the Natural Death Act 1983 allows the defined category of patients to make an advance directive detailing how the medical practitioner should proceed in the event of the patient suffering a terminal illness necessitating his being kept alive by artificial means. The Act itself does not specify when the will should be made but it would appear that it should be made before the patient succumbs to the terminal illness. This would avoid the problem of pressure being exerted on the patient by avaricious relatives when the patient is in a vulnerable state as a result of the illness. However the Act does not lay down requirements in relation to those persons who may

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[73] Natural Death Act 1983, section 3.

[74] Ibid., section 4(4).

validly witness the advance directive. This may raise the problem of the witnesses being related to the patient which would cast doubt on whether the patient freely signed the document or was badgered by relatives into doing so.

Once made, the living will becomes effective indefinitely, unless of course it is revoked. The Natural Death Act 1983 provides that such an advance directive will become effective in the event of the patient suffering from a terminal illness which would necessitate the use of life-sustaining medical intervention.[75]

The medical practitioner who acts in compliance with the wishes of the patient as expressed in the advance directive will not be deemed liable for causing the death of the patient.[76] In addition the medical practitioner who is faced with the decision as to whether:

> (a) a patient is, or is not, suffering from terminal illness;
> (b) a patient revoked, or intended to revoke, the direction not to have the extraordinary measures applied or undertaken;
> (c) a patient was, or was not, at the time of giving direction, capable of understanding the nature and consequences of the direction[77]

makes such decision in good faith and without negligence, will be deemed to be immune from criminal liability. The Act does not grant immunity in civil law for the practitioner. The Act only applies to the withdrawal of life-sustaining measures and does not provide immunity in

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[75] Ibid., section 4(1).

[76] Ibid., section 6.

[77] Ibid., section 5(3).

cases where the doctor performs an act which:

> causes or accelerates death, as distinct from an act that permits the dying process to take its natural course.[78]

In the Australian state of Victoria, the Medical Treatment Act 1988 as amended by the Medical Treatment (Enduring Power of Attorney) Act 1990 and by the Medical Treatment (Agents) Act 1992 allows a competent adult to refuse consent to treatment for a condition from which he is currently suffering.

The major impetus for the Medical Treatment Act 1988 was the decision of the coroner in the inquest into the death of a former water-skiing champion, John McEwan, who suffered from quadriplegia as a result of a diving accident.[79] In a document drawn up by his solicitor, he had expressed a wish to die, and not to be revived if he became unconscious. Having refused to take all food and medication, he was certified under the Victorian Mental Health Act 1958 on the grounds that he was not capable of making a rational decision due to his suffering from severe depression. He eventually agreed to take food and medication and the certification was revoked. He was discharged from hospital, whereupon he discontinued taking anti-depressant medication. His respirator was disconnected in April 1986. At the inquest, the coroner found that death was not due to the disconnection of the respirator but was

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[78] See, Parliament of South Australia, (1983). See also, Natural Death Act 1983, section 6(1).

[79] See Lanham and Woodford, (1992, pp.659-675).

caused by heart failure resulting from the diving accident. This decision provoked public debate on the issue and it was thought that the current legislation did not adequately uphold the patient's right to die. The Victorian Parliament commissioned two reports into the issue[80] before enacting the <u>Medical Treatment Act</u> 1988.

The <u>Medical Treatment Act</u> 1988 provided for procedures for the drawing up of refusal of treatment certificates on the part of patients and also created a statutory offence of medical trespass for those who do not comply with the wishes of the patient as expressed in the refusal of treatment certificate.

The patient in question must be an adult of sound mind who has understood the information on the nature of his condition and has voluntarily expressed a wish to forego life-sustaining treatment for a current condition.[81] The refusal of treatment certificate must be signed by two witnesses, one of whom must be a medical practitioner. The Act does not provide a definition of 'sound mind' for the purposes of refusing medical treatment. For guidance on who may be deemed to be competent for the purposes of creating a valid refusal of treatment certificate, one may look to the Victorian Parliament's final Report wherein an incompetent patient is defined as:

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[80] See, Social Development Committee upon the Inquiry into Options for Dying with Dignity, (1986, pp.1-5) and Social Development Committee Upon the Inquiry into Options for Dying with Dignity, (1987, pp.2-4).

[81] <u>Medical Treatment Act</u> 1988, section 5(1).

> a patient who is not capable of understanding the nature, consequences and risks of the proposed medical treatment and the consequences of non-treatment, and who is thus incapable of consenting to, or refusing, medical treatment.[82]

In opposition to the Natural Death Act 1983 in South Australia, the Medical Treatment Act 1988 includes within its scope any patient of sound mind who suffers from an illness requiring treatment, regardless of whether the illness is terminal. Those who fail to adhere to the refusal of treatment certificate under the Medical Treatment Act 1988 will be guilty of the criminal offence of medical trespass. This is a summary offence which attracts a maximum fine of A$500. In addition, the patient whose wishes have not been complied with, may sue the doctor in the tort of trespass or may lodge a complaint with the Medical Board of Victoria.

The approach of the various state legislatures in Australia to the issue of the autonomy of the dying patient whilst not free from imperfection, certainly shows a willingness on the part of government to provide practical solutions to complex medical dilemmas. These developments also give societal recognition to the right of the patient to die with dignity. The advantage of a legislative solution to such issues is that it allows the interests of all parties involved to be represented. In addition, it should allow those involved to be provided with clear guidelines as to their respective rights and duties in such

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[82] Social Development Committee upon the Inquiry into Options for Dying with Dignity, (1987, p.174).

a situation.

4.4 Autonomy, Personal Identity and the Living Will.

Certain commentators have questioned the concept of treating the now incompetent patient as competent based on his wishes expressed in an advance directive.[83] In other words, can the expression of the wishes of the patient as set down while in a competent state actually reflect his current view on the question? Has his opinion changed in the interim? Those who argue that advance directives can never be conclusive proof of the now incompetent patient's choice argue that the self of today is not necessarily the self of yore, that in effect identity and opinion change over time.

This view is derived from a view of the self which sees the person in a persistent vegetative state as lacking a psychological continuity with the person when competent, thus making this person different for moral purposes from the previous self. Even though this person is physically continuous with the competent self he is not necessarily psychologically continuous with his competent self. Foremost amongst those who advocate the concept of personal identity as being based on psychological continuity is Derek Parfit. Parfit gives the following example to demonstrate his thesis:

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[83] See further, Buchanan, (1988, pp.277-302); Morgan, (1994, pp.411-442) and Rhoden, (1988, pp.410-419).

> [o]n this way of thinking, the word 'I' can be used to imply the greatest degree of psychological connectedness. When the connections are reduced, when there has been any marked change of character or style of life, or any marked loss of memory, our imagined beings would say, 'It was not I who did that, but an earlier self'...
>
> If I say, 'It will not be me but one of my future selves'; I do not imply that I will be that future self. He is one of my later selves, and I am one of his earlier selves. There is no underlying person who we both are.[84]

Applying this type of argument to the issue of advance directives, Dresser has contended that if:

> little or no psychological connectedness and continuity exist between the individual at the two points in time, then there is no particular reason why the past person, as opposed to any other person, should determine the present person's fate.[85]

Arguing against this conception of the self, Dworkin[86] claims that the failure to respect the right of the individual when competent to determine how he shall be treated when no longer competent, amounts to an infringement of the individual's right to, what he terms, precedent autonomy.[87] Thus, Dworkin would hold that:

> [a] competent person's right to autonomy requires that his past decisions, about how he is to be treated if he becomes demented be respected even if they contradict at that later point.[88]

A further argument against the psychological continuity basis of personal identity in this context has been

[84] Parfit, (1971, p.25).

[85] Dresser, (1986, pp.380-381).

[86] Dworkin, (1993, pp.218-241).

[87] Ibid., pp.226-229.

[88] Ibid., p.228.

proffered by Rhoden. Rhoden argues that:

> living wills are the expressions of values which we should assume are the relevant values of the patient, viewed as someone with a past. This view is appropriate because the values expressed in living wills are paradigmatically future-oriented (avoiding future treatment one considers dehumanizing) or other-directed (reducing relatives' suffering, or preserving their inheritance). Moral analyses are, after all, about human relationships, and most persons do not believe that these relationships lose all meaning when a person is no longer conscious or aware of a betrayal.[89]

In legal reality, the advance directive would appear to be quite valid. Thus, the legal validity of such instruments may be grounded in legislation. In the wake of In Re Quinlan[90] states began to adopt legislative solutions to the dilemma of treatment withdrawal.

These solutions came in the form of natural death or living will statutes. The first state to introduce such a measure was California. The effect of the California Natural Death Act 1976[91] was to give a legal basis to the concept of an advance directive. Other states gradually followed California's lead, leading to the situation today where all fifty states and the District of Columbia now have some form of legislation giving legal effect to the advance directive in one or other of its many forms.[92]

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[89] Rhoden, (1988, pp.415-416).

[90] 355 A.2d 647 (N.J.) (1976).

[91] California Health and Safety Code sections 7185-7195 (1976).

[92] For a review of the varying types of statutes in existence see, King, (1992, pp.1-20).

4.5 The Incompetent Patient: Judicial Criteria.

For varying reasons many competent persons will not make advance directives. This has forced courts to adopt a decision-making strategy in relation to the now incompetent but previously competent patient. Moreover, in many cases the permanently unconscious patient may, even when conscious have been legally incompetent, as, for example, in the case of the minor or the mentally incapacitated individual. This has led the courts to engage in a process of surrogate decision-making and the development of a number of different tests applicable to separate groups of individuals. Courts have developed two principal tests in relation to treatment refusal and the unconscious patient; the 'substituted judgement'[93] (sic) test and the 'best interests' test.

'Substituted Judgement'.

The 'substituted judgement' test allows the surrogate to choose the course which most closely approximates to the patient's own wishes based on such factors as the probable effects of continued treatment, the likelihood of a cure, the patient's views, if any, on life-sustaining treatment

[93] For the sake of clarity these tests are here reproduced with the spelling derived from the U.S. cases.

expressed while competent.[94] This test has been defined judicially in the following terms:

> [t]he doctrine of 'substituted judgement'... was utilized to authorize a gift from the estate of an incompetent person to an individual when the incompetent owed no duty of support. The English court accomplished this purpose by substituting itself as nearly as possible for the incompetent, and acting on the same motives and considerations as would have moved him... In essence, the doctrine in its original inception called on the court to 'don the mantle of the incompetent'.[95]

The test as originallly articulated was applicable only to the distribution of funds from the estates of lunatics by the court of chancery exercising its <u>parens patriae</u> jurisdiction. However, it was adapted for use in a most inappropriate manner by the New Jersey Supreme Court in the case of <u>In Re Quinlan</u>.[96]

It is arguable whether the 'substituted judgement' doctrine is entirely appropriate in the case of a patient in a permanently unconscious state who has never expressed a preference in relation to treatment withdrawal, as the surrogate cannot really base his decision on the presumed preferences of such a patient. As one commentator has noted in highlighting the inadequacy of this standard in cases of treatment withdrawal:

> [t]he English common law would not have had a name for Karen Quinlan. Certainly she was not an

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[94] The origins of the doctrine of 'substituted judgement' lie in the decision of Lord Eldon in the case of <u>Ex Parte Whitbread</u> (1816) 2 Meriv. 99, 35 Eng. Rep. 878 Ch..

[95] <u>In Re Eichner</u> 426 N.Y.S.2d 517 (1980), p.548. For a further detailed critique of the doctrine see, Buchanan and Brock, (1989, pp.112-122).

[96] 355 A.2d 647 (N.J.) (1976).

> idiot. While her condition was now static, she had not come into the world with a deficient mental apparatus; there was a past period of competency to hark back to. But neither was she a lunatic. Although she had once been competent, there was no waxing and waning of her intellect. Indeed there was no longer any intellect at all. Karen Quinlan's deficit was more profound than the lunatic's. His was a failure of reason alone; hers was a failure of consciousness. The closest legal category that the common law had to describe her status was 'decedent', but the persistence of her lower brain function and the presence of her warm body made her not dead - not dead, not alive, not an idiot, not a lunatic. There was a lacuna in the language of the law, so she was thrown into the general class of incompetents. There was no fine-tuning as to who was in that class - just individuals who were presently [sic] incompetent, regardless of how they came to be that way.[97]

However, despite such criticisms, the 'substituted judgement' doctrine has become the norm in judicial decision-making on behalf of the incompetent patient in the United States.[98]

However inadequate the 'substituted judgement' standard may be in determining whether a once competent patient should continue to receive life-sustaining medical treatment, it would seem beyond question that it is completely inappropriate in the case of the never competent unconscious patient. Nonetheless the 'substituted judgement' standard has been applied by certain courts in cases involving never competent patients.

Thus, in the case of Superintendent of Belchertown

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[97] Harmon, (1990, pp.37-38).

[98] See for example, Brophy v New England Sinai Hospital, Inc. 497 N.E.2d 626 (1986); In Re Spring 405 N.E. 2d 115 (1980) and Superintendent of Belchertown State School v Saikewicz 370 N.E.2d 417 (1977).

State School v Saikewicz[99] the Massachusetts Supreme Court applied the 'substituted judgement' standard to the case of an elderly, profoundly mentally handicapped male inmate of a state psychiatric institution. In this case, the patient was suffering from leukaemia and required chemotherapy. The patient's guardian ad litem was of the opinion that allowing Mr. Saikewicz to undergo a course of chemotherapy would not be in his 'best interests'.

The New Jersey Probate Court agreed that such a course of treatment would not be in the patient's 'best interests' listing the following factors in favour of such a decision; the side effects; the patient's age; the low chance of producing remission; the suffering which would be brought about as a result of the treatment; the inability of the patient to cooperate with the treatment and the quality of life possible for him even if the treatment brought about remission.[100] The Massachusetts Supreme Judicial Court came to a similar conclusion and justified it on the following grounds:

> [i]n short, the decision in cases such as this should be that which would be made by the incompetent person, if that person were competent, but taking into account the present and future incompetency of the individual as one of the factors which would necessarily enter into the decision-making process of the competent person.[101]

By any standards this seems to be a most peculiar decision

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[99] 370 N.E.2d 417 (1977).

[100] Ibid., p.422.

[101] Ibid., p.431.

and shows up the utter inadequacy of this standard in the case of the never competent patient. The contradictory nature of allocating presumed preferences to a person who was never competent to hold such preferences is all too obvious. As Harmon has put it: "[f]inally Lord Eldon's legal fiction had hit the jackpot: here was a generic, reasonable idiot prone to giving his life away".[102]

The issue was to surface again in the New York Court of Appeals decision in the case of In Re Eichner.[103] However, in this case a rather different approach was taken. The appeal dealt with the applications for the withdrawal of a respirator from a patient in a persistent vegetative state[104] and for the discontinuance of blood transfusions from a patient suffering from cancer of the bladder.[105]

In the case of In Re Eichner[106] an eighty-three year old Roman Catholic cleric, Brother Fox, was on a respirator in a persistent vegetative state following a cardiac arrest during surgery for a hernia. A friend, Father Eichner, was appointed Brother Fox's guardian. While competent, Brother Fox had expressed the view that if he were to enter a vegetative state his life should not be artificially

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[102] Harmon, (1990, p.41).

[103] 438 N.Y.S.2d 266 (1981).

[104] In Re Eichner 423 N.Y.S.2d 580 (1979).

[105] In Re Storar 434 N.Y.S.2d 46 (1980).

[106] 423 N.Y.S.2d 580 (1979).

maintained.[107] At first instance, the application to withdraw life support was granted. On appeal to the New York Court of Appeals this order was upheld. It was held that clear and convincing evidence of the patient's wishes in relation to termination of life-sustaining treatment would have to be provided in such cases. In this case, such an evidentiary standard was met in that the patient had expressed on several occasions his desire not to be kept alive in such circumstances.

In <u>In Re Storar</u>,[108] the patient was a profoundly mentally handicapped adult suffering from cancer of the bladder leading to a continuous loss of blood. As a result he required frequent blood transfusions. The cancer later spread to his lungs giving him a life expectancy of approximately six months. His mother as guardian applied for the termination of the blood transfusions. At first instance her application was granted. On appeal, the New York Court of Appeals could find no clear and convincing evidence of the patient's intent. In this instance the approach of the New York Court of Appeals differed sharply from the approach of the Massachusetts court in <u>Superintendent of Belchertown State School v Saikewicz</u>[109] and refused to extend the 'substituted judgement' test to the patient who was never competent. The New York court summed up its position thus:

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[107] Ibid., p.586.

[108] 434 N.Y.S.2d 46 (1980).

[109] 370 N.E.2d 417 (1977).

> [Storar] was always totally incapable of understanding or making a reasoned decision about medical treatment. Thus it is unrealistic to attempt to determine whether he would want to continue potentially life prolonging treatment if he were competent. As one of the experts testified at the hearing, that would be similar to asking whether 'if it snowed all summer would it then be winter?'[110]

As a result the treatment was ordered to be continued. This application of the 'substituted judgement' test has also been criticised, on the grounds that the evidentiary burden is too great as opposed to being too lax.

It has been argued that the approach of the New York Court of Appeals to the problem presented by Mr. Storar and in the subsequent case of In Re Westchester County Medical Center (O'Connor)[111] may lead to a situation where many incompetent patients may be forced to: "endure intrusive, unbeneficial treatment that a similarly situated competent patient would not choose".[112]

The application of the 'substituted judgement' test in the case of the never competent is comparatively rare, but when it is applied in such cases it raises questions about the validity of using legal tools for purposes for which

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[110] 438 N.Y.S.2d 266 (1981), pp.274-275. See also, In Re Westchester County Medical Center (O'Connor) 531 N.E.2d 607 (1988). But see contra, Shaver, (1989, p.229), who believes that the Storar decision:

> denied the rights of any incompetent patient who did not have the forethought, or was unable, to make an explicit statement of his or her treatment preferences.

[111] 531 N.E.2d 607 (1988).

[112] Anonymous, (1990, p.1647).

they were not intended.[113] In this instance the 'substituted judgement' test is arguably not the standard which should be applied. In such cases it may be more logical to apply the 'best interests' standard.[114]

'Best Interests'.

It could be suggested that at first sight the 'best interests' standard may be more objective in nature, in that it does not focus on how the patient would have chosen, if capable of so doing, but rather on the decision which is most in keeping with the welfare of the patient. The 'best interests' test as applied to treatment withdrawal has been defined as follows:

> [i]n assessing whether a procedure or course of treatment would be in a patient's 'best interests', the surrogate must take into account such factors as the relief of suffering, the preservation or restoration of functioning, and the quality as well as the extent of life

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[113] Meisel, (1989, pp.275-277), notes that the use of the 'substituted judgement' test in such circumstances appears to be confined to the Massachusetts courts.

A further example of the penchant of the Massachusetts courts for the 'substituted judgement' standard in inappropriate cases is the case of <u>In Re Spring</u> 405 N.E.2d 115 (1980). In this case the patient was an elderly man who suffered from senile dementia and was in addition the victim of total kidney failure. It was established that if he continued with kidney dialysis treatment he would live for a further five years. His wife and son applied to the Massachusetts Probate Court for an order to terminate dialysis. The issue finally reached the Appeals Court which held, applying the 'substituted judgement' standard, that the patient if competent would not desire continued treatment, basing this decision on very vague and indeed lax evidentiary standards to the effect that his quality of life had considerably diminished.

[114] See further, Anonymous, (1990, pp.1649-1651).

sustained.[115]

The 'best interests' standard has its origins in the equitable jurisdiction to oversee the estates of incompetents.[116] The application of this standard to the field of medical decision-making is well established. Thus, it is used to justify decisions to treat individuals who may not be capable to consent to such treatment, such as children[117] and the mentally handicapped.[118] However, in the United States the 'best interests' standard has not been applied very frequently in the area of treatment withdrawal. As one commentator has noted:

> [i]n right to die cases, however, the courts have generally concluded that medical treatment does not always advance a person's interests. This is evidenced by the fact that competent patients sometimes refuse treatment, even life-sustaining treatment and, when there are no countervailing state interests of a compelling nature, that refusal is to be accorded the same respect that a patient's consent to treatment is accorded.[119]

Certain courts have, however, applied the 'best interests' test in such cases. Thus, in the California Court of Appeal decision in In Re Conservatorship of

[115] President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, (1983, p.135).

[116] Meisel, (1989, p.264).

[117] See further, Gaylin and Macklin, (1982, pp.20-39) and Goldstein, Freud and Solnit, (1973, pp.12-22).

[118] See further, Re F (Mental Patient: Sterilisation) [1989] 2 All E.R. 545.

[119] Meisel, (1989, p.266).

Drabnick[120] it was held that a statutorily-appointed conservator should decide the issue of treatment withdrawal in the case of an incompetent patient who had not made a formal advance directive, on the basis of the 'best interests' standard. In the Minnesota case of In Re Torres[121] the 'best interests' test was also applied. It was noted in that case that one factor that should be taken into account was the welfare of the surviving family. However, it has been argued that this standard strays too far away from the ideal of patient autonomy and that indeed one may be confusing other interests with the 'best interests' of the patient:

> [t]o the extent that most patients have an interest in the well-being of their family, advancing the interests of their family benefits them as well. Importing such considerations into the 'best interests' analysis, however, invites the conflicts of interest that plague the 'substituted judgement' standard and risks shifting the focus of inquiry to the 'best interests' of the family.[122]

The 'best interests' test has fared rather more successfully in other jurisdictions in relation to treatment withdrawal. In the United Kingdom the judiciary was faced with the problem of how to decide for the incompetent patient in the case of Airedale N.H.S. Trust v Bland.[123] The case concerned one Tony Bland, who at the age of seventeen, was seriously injured in the Hillsborough

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[120] 109 S.Ct. 399 (1988).

[121] 357 N.W.2d 332 (Minn. 1984).

[122] Anonymous, (1990, p.1653).

[123] [1993] 2 W.L.R. 316.

football disaster in 1989. He suffered brain damage which left him in a persistent vegetative state. The condition was described thus by Sir Thomas Bingham M.R. in his judgment in the Court of Appeal decision on the case:

> the brain-stem remains alive and functioning while the cortex of the brain loses its function and activity. Thus the P.V.S. (sic) patient continues to breathe unaided and his digestion continues to function. But although his eyes are open, he cannot see. He cannot hear. Although capable of reflex movement, particularly in response to painful stimuli, the patient is incapable of voluntary movement and can feel no pain. He cannot taste or smell. He cannot speak or communicate in any way. He has no cognitive function and can thus feel no emotion, whether pleasure or distress. The absence of cerebral function is not a matter of surmise; it can be scientifically demonstrated. The space which the brain should occupy is full of watery fluid.[124]

The manner in which the House of Lords addressed the problem at issue is reflective of the 'best interests' approach. Indeed, the 'substituted judgement' approach as developed by the American courts in the case of the incompetent and non-sentient patient was explicitly rejected by Lord Mustill in his judgment in Airedale N.H.S. Trust v Bland in the following trenchant terms:

> [t]his process may perhaps have some justification where the patient is sentient but unable to communicate a choice, but it breaks down totally in a case such as the present. To postulate a patient who is in such a condition that he cannot know that there is a choice to be made, or indeed know anything at all, and then ask whether he would have chosen to terminate his life because that condition made it no longer worth living is surely meaningless, as is very clearly shown by the lengths to which the court was driven in Superintendent of Belchertown State School v Saikewicz 370 N.E.2d 417 (1977). The

[124] Ibid., p.333.

> idea is simply a fiction, which I would not be willing to adopt even if there were in the case of Anthony Bland any materials upon which a surrogate could act, which as far as I can see there are not.[125]

In referring to the 'best interests' test as previously applied by the House of Lords in the case of Re F (Mental Patient: Sterilisation)[126] and applying it to the instant case Their Lordships came to the conclusion that the 'best interests' of the patient dictated termination of life-sustaining medical treatment.[127] In the words of Lord Browne-Wilkinson the correct manner in which the dilemma in such cases should be posed is as follows:

> [t]he critical decision to be made is whether it is in the 'best interests' of Anthony Bland to continue the invasive medical care involved in artificial feeding. That question is not the same as, 'Is it in Anthony Bland's 'best interests' that he should die?' The latter question assumes that it is lawful to perpetuate the patient's life: but such perpetuation of life can only be achieved if it is lawful to continue to invade

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[125] Ibid., p.396. See also the speech of Lord Goff, pp.374-375, where he stated that the 'substituted judgement' test formed no part of English law on this topic:

> I do not consider that any such test forms part of English law in relation to incompetent adults, on whose behalf nobody has power to give consent to medical treatment. Certainly, in Re F (Mental Patient: Sterilisation) [1989] 2 All E.R. 545 your Lordships' House adopted a straightforward test based on the 'best interests' of the patient; and I myself do not see why the same test should not be applied in the case of P.V.S. (sic) patients, where the question is whether life-prolonging treatment should be withheld.

[126] [1989] 2 All E.R. 545.

[127] Airedale N.H.S. Trust v Bland [1993] 2 W.L.R. 316, p.371.

> the bodily integrity of the patient by invasive medical care. Unless the doctor has reached the affirmative conclusion that it is in the patient's best interest to continue the invasive care, such care must cease.[128]

Lord Mustill also framed the question in such terms when he stated that the focus of inquiry should be placed on the "interests of the patient, not in the termination of life but in the continuation of his treatment".[129] Lord Mustill went on to delineate the boundaries of the 'best interests' test in such a case as follows:

> (i) [t]he cessation of nourishment and hydration is an omission not an act. (ii) Accordingly, the cessation will not be a criminal act unless the doctors are under a present duty to continue the regime. (iii) At the time when Anthony Bland came into the care of the doctors decisions had to be made about his care which he was unable to make for himself. In accordance with Re F (Mental Patient: Sterilisation) [1989] 2 All E.R. 545 these decisions were to be made in his 'best interests'. Since the possibility that he might recover still existed his 'best interests' required that he should be supported in the hope that this would happen. These 'best interests' justified the application of the necessary regime without his consent. (iv) All hope of recovery has now been abandoned. Thus, although the termination of his life is not in the 'best interests' of Anthony Bland, his 'best interests' in being kept alive have also disappeared, taking with them the justification for the non-consensual regime and the co-relative duty to be kept in being. (v) Since there is no longer a duty to provide nourishment and hydration a failure to do so cannot be a criminal offence.[130]

The 'best interests' test, conversely to the United States, is thus the favoured test in English treatment

[128] Ibid., pp.385-386.

[129] Ibid., p.398.

[130] Ibid.

withdrawal cases. However, Ian Kennedy and Andrew Grubb[131] do not necessarily share the opinion that the 'substituted judgement' test is not applicable in such cases. They claim that the 'substituted judgement' test is a better protector of individual self-determination, whereas the 'best interests' test does not place as high a value on the concept of self-determination. In their opinion:

> [i]t is not clear whether Lord Mustill intended to banish the 'substituted judgement' test from English law completely. He suggested that it could be applied where the patient is sentient but unable to communicate and hence is incompetent to make a decision. If this is correct, he contradicts himself. For, if the test is applicable to that case, it is applicable even though it is a 'fiction'. In principle, the decision-maker cannot know any more than in a case where the patient is unconscious. In both cases the decision-maker is required to ask himself 'what would the patient want?'. The patient cannot help him any more than if he were unconscious. Thus, in both cases all will turn on the extent to which the patient has made his wishes known.
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> In our view, it is still open for English law to adopt his more sophisticated approach of seeking to apply 'substituted judgement' before having recourse to 'best interests' where it is appropriate. The form the law would take would be that the doctor's duty is first to consider what he believes would be the patient's decision and only secondly, in default of that, to fall back on the 'best interests' test.[132]

In the later case of Frenchay Healthcare N.H.S. Trust v S[133] the Court of Appeal confirmed the 'best interests' approach as taken in Airedale N.H.S. Trust v Bland.[134] S

[131] Kennedy and Grubb, (1993, pp.359-370).

[132] Ibid., pp.362-363.

[133] [1994] 2 All E.R. 403.

[134] [1993] 2 W.L.R. 316.

was suffering from severe brain damage as a result of a drug overdose. Like Tony Bland, he was in a persistent vegetative state. He was fed by means of a gastronomy tube which was inserted through his stomach wall.

In January 1994, it was discovered that the gastronomy tube had become detached from his body. The medical team felt that it was not medically practicable to reinsert the tube. The surgeon in charge of S's case was of the opinion that it was in S's 'best interests' that the medical team should refrain from intervening in S's case and to allow him to die naturally. The surgeon in question felt that the option of reinserting the gastronomy tube would not be beneficial to S, stating that:

> [t]o reinsert the tube now that we have such certainty about the state of his brain, his function and prospects would, in my opinion be a criminal act as it would be being done against the 'best interests' of S.[135]

In this case the Court of Appeal further elaborated on the role of the courts in this area of medical decision-making. Sir Thomas Bingham M.R. stated that:

> [i]t is, I think, important that there should not be a belief that what the doctor says is the patient's best interest is the patient's best interest. For my part I would certainly reserve to the court the ultimate power and duty to review the doctor's decision in the light of all the facts.[136]

This statement demonstrates how the law presumes to interpose itself between the doctor and the patient in his care. The doctor can no longer decide independently on how

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[135] [1994] 2 All E.R. 403, pp.406-407.

[136] Ibid., p.411.

he should treat such a patient but must defer to the judiciary for the ultimate decision.

This however may not be as great an erosion of medical autonomy as it might at first sight seem. This can be seen from the judgment of Lord Goff of Chieveley in Airedale N.H.S. Trust v Bland[137] where he offered a thoughtful contribution on the relationship between the law and the medical profession in relation to clinical decision-making:

> [t]he truth is that, in the course of their work, doctors frequently have to make decisions which may affect the continued survival of their patients, and are in reality far more experienced in matters of this kind than are the judges. It is nevertheless the function of the judges to state the legal principles upon which the lawfulness of the actions of doctors depend; but in the end the decisions to be made in individual cases must rest with the doctors themselves. In these circumstances, what is required is a sensitive understanding by both the judges and the doctors of each other's respective functions, and in particular a determination by the judges not merely to understand the problems facing the medical profession in cases of this kind, but also to regard their professional standards with respect. Mutual understanding between the doctors and the judges is the best way to ensure the evolution of a sensitive and sensible legal framework for the treatment and care of patients, with a sound ethical base, in the interest of the patients themselves.[138]

This is an important contribution to the debate on the resolution of medico-legal dilemmas, as it takes cognisance of the importance of professional autonomy, the need for a sound framework for the resolution of such disputes and perhaps most importantly of all, the interests of the patient. How such good intentions can be transformed into

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[137] [1993] 2 W.L.R. 316.

[138] Ibid., p.374.

a workable mechanism remains to be seen, but at least it gives rise to a certain degree of optimism that such intractable moral dilemmas are not only receiving judicial attention, but are being dealt with in a humane and equitable manner.

As a result of the decisions in Airedale N.H.S. Trust v Bland and Frenchay Healthcare N.H.S. Trust v S a Practice Note[139] was issued by the Official Solicitor in March 1994 which laid down the correct procedures to be followed in relation to terminating the artificial feeding and hydration of patients in a persistent vegetative state. Briefly the Practice Note upholds the approach taken in both of the aforementioned cases, to the effect that such termination of care will require the prior sanction of a High Court judge. In diagnosing persistent vegetative state, doctors should pay heed to the guidelines laid down on the issue by the British Medical Association.[140] Thus, such a diagnosis should not be considered confirmed until the patient has been insentient for at least twelve months. The proper forum for the hearing of such applications is the Family Division of the High Court. In addition the court should consider carefully the previously expressed views of the patient, if any, on the issue of continuing life-sustaining treatment in the event of his entering a persistent vegetative state.

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[139] [1994] 2 All E.R. 413.

[140] See, British Medical Association Medical Ethics Committee, (1994, pp.1-5).

However, this is not to say that the 'substituted judgement' test has never been used by English courts in matters of this nature. One area in which this test has been adopted is in relation to treatment withdrawal and the severely handicapped neonate. The approach of the English courts to the dilemma posed by the severely handicapped neonate has not been uniform. In general, it would be true to say that a 'best interests' standard has been applied.

However, there was a notable exception in the case of Re J (A Minor) (Wardship: Medical Treatment).[141] J was a premature baby. However at birth he suffered severe brain damage. He was as a result epileptic and the medical evidence proffered at trial predicted that he was likely to be blind and deaf and that he would develop spastic quadriplegia. Moreover, it was likely that he would never be able to speak or develop intellectually. He would, however, be likely to feel pain. He was expected to survive no longer than his adolescence at the very most. On a number of occasions, J ceased breathing and had to be placed on a ventilator in order to keep him alive. He was now in a stable condition and was breathing independently. The medical opinion was that if J were to cease breathing again it would be fatal unless of course, he were ventilated again. The question which arose for the courts was whether it was in the 'best interests' of J that he should be ventilated on the occurrence of such an eventuality or whether he should be allowed to die.

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[141] [1990] 3 All E.R. 930.

At first instance, Scott-Baker J. made an order which was in accord with the opinion of Dr. W, one of the consultants charged with the care and treatment of J, as expressed in a report compiled by Dr. W on 4 October 1990. Thus, the court ordered the hospital to proceed as follows:

> it would not be in [J's] 'best interests' to re-ventilate him in the event of his stopping breathing, unless to do so seems appropriate to the doctors caring for him given the prevailing clinical situation.[142]

This decision was appealed by the Official Solicitor. In the Court of Appeal the appeal was dismissed. In his judgment, Lord Donaldson M.R. adopted the 'substituted judgement' approach to this question when he stated:

> [w]e know that the instinct and desire for survival is very strong. We all believe in and assert the sanctity of human life... this formulation takes account of this and also underlines the need to avoid looking at the problem from the point of view of the decider, but requires him to look at it from the assumed point of view of the patient. This gives effect, as it should, to the fact that even very severely handicapped people find a quality of life rewarding which to the unhandicapped may seem manifestly intolerable.[143]

This approach is also adopted by Taylor L.J.:

> I consider that the correct approach is for the court to judge the quality of life the child would have to endure if given the treatment and decide whether in all the circumstances such a life would be so afflicted as to be intolerable to that child. I say 'to that child' because the test should not be whether the life would be tolerable to the decider. The test must be whether the child in question, if capable of exercising sound judgment, would consider the

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[142] Ibid., p.933.

[143] Ibid., p.938.

life tolerable.[144]

However this approach is not necessarily the correct one to adopt when the patient involved was never competent as in this case.

The approach of the court was influenced by the decision of the Supreme Court of British Columbia in Re Superintendent of Family and Child Service, and Dawson.[145] In that case the patient, Stephen Dawson, was a severely retarded six year old. This was the result of brain damage suffered at birth. At the age of five months Stephen was fitted with a shunt or plastic tube to drain excess cerebrospinal fluid from the head to another part of the body from where it was expelled. Without such an implant Stephen would die.

The hearing arose as a result of the shunt becoming blocked. The question to be answered was whether if the shunt became blocked remedial surgery should be carried out or whether Stephen should be allowed to die. The court in this case was of the opinion that life-sustaining treatment should not be withheld from Stephen. McKenzie J. was of the view that:

> [i]f it is to be decided that 'it is in the 'best interests' of Stephen Dawson that his existence cease', then it must be decided that, for him, non-existence is the better alternative. This would mean regarding the life of a handicapped child as not only less valuable than the life of a normal child, but so much less valuable that it is not worth preserving. I tremble at contemplating the consequences if the lives of

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[144] Ibid., p.945.

[145] (1983) 145 D.L.R. (3d) 610.

> disabled persons are dependent upon such judgments.[146]

The 'substituted judgement' approach is to be witnessed in the following statement of McKenzie J.:

> I do not think that it lies within the prerogative of any parent or of this court to look down upon a disadvantaged person and judge the quality of that person's life to be so low as not to be deserving of continuance.
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> The matter was well put in an American decision - (Re Weberlist 360 N.Y.S.2d 783 (1974) at 787), where Justice Asch said: 'There is a strident cry in America to terminate the lives of other people - deemed physically or mentally defective... Assuredly, one test of a civilization is its concern with the lives of the 'unfittest', a reversal of Darwin's formulation... In this case, the court must decide what its ward would choose, if he were in a position to make a sound judgment'. This last sentence puts it right. It is not appropriate for an external decision-maker to apply his standards of what constitutes a liveable life and exercise the right to impose death if that standard is not met in his estimation. The decision can only be made in the context of the disabled person viewing the worthwhileness or otherwise of his life in its own context as a disabled person - and in that context he would not compare his life with that of a person enjoying normal advantages. He would know nothing of a normal person's life having never experienced it.[147]

This passage was quoted with approval by Lord Donaldson M.R. in Re J (A Minor) (Wardship: Medical Treatment).[148] in arriving at his decision in that case. Yet, even though he employed the reasoning of the Canadian court, the ultimate decision at which the Court of Appeal arrived was at variance with that of the former.

It was, it could be submitted, less dogmatic, and

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[146] Ibid., p.623.

[147] Ibid., pp.620-621.

[148] [1990] 3 All E.R. 930, p.938.

allowed more scope for professional discretion. However, in adopting such an approach, the right of the neonate to continue to live despite having a quality of life which when compared to the healthy child was very low, may have been infringed upon.

While recognising the concept of the sanctity of life in the medical context, Lord Donaldson M.R., nonetheless states that in certain circumstances:

> there will be cases in which the answer must be that it is not in the interests of the child to subject it to treatment which will cause increased suffering and produce no commensurate benefit, giving the fullest possible weight to the child's, and mankind's desire to survive.[149]

This may be so, but why should a severely handicapped infant be treated differently from a person whose quality of life is viewed as being appreciably greater? Take, for example, the case of a competent adult who undergoes a kidney transplant. The surgical procedure and its aftermath will, of necessity, cause increased suffering both physical and psychological to the patient and there is no certainty of a commensurate benefit being achieved, with the risk of rejection of the new organ being high. Indeed, one could take the analogy further, and state that there is no point in continuing dialysis on the part of the patient suffering from kidney failure as the discomfort suffered by the patient in having to attend a renal dialysis unit three times per week may not be commensurate with the result produced. Is not such a person's quality of life greatly

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[149] Ibid.

reduced also when one compares him to the average healthy adult?

Thus, the judiciary must, in employing such terms as quality of life, pay heed to the fact that such a term is not universally applicable. Viewed from the vantage point of a middle-class professional the quality of life of a member of the travelling community may be intolerable. However, the individual traveller may baulk at having to live the restricted life of the average suburbanite. In trying to apply universality to humanity a court can never achieve a satisfactory answer. However, what it may do is impose however innocently or unintentionally a norm or yardstick by which all are judged. Anyone who deviates from this norm may be viewed as being of less value than those who attain the norm. This, to borrow from McKenzie J. in Re Superintendent of Family and Child Service, and Dawson[150] is enough to make one 'tremble'.

In the first reported English case in which the question of whether an handicapped neonate should continue to receive life-sustaining medical treatment was explicitly broached, a slightly different approach was taken. In the case of Re B (A Minor) (Wardship: Medical Treatment),[151] B was a mentally handicapped child with an intestinal blockage. Unless she was operated on to relieve this blockage, B would die. The parents of this child decided

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[150] (1983) 145 D.L.R. (3d) 610.

[151] [1981] 1 W.L.R. 1421 and reported in [1990] 3 All E.R. 927.

that it would be in her 'best interests' that she not be operated on and be allowed to die. However, the doctors in charge of her treatment sought and obtained the permission of the local authority for B to be made a ward of court. The local authority then applied for a court order directing the operation to be carried out. This order was granted.

The operation was to be carried out in another hospital. When the surgeon in that institution who was to carry out the operation discovered that the parents had initially refused to consent to the procedure, he refused to carry out the operation. In the Court of Appeal, it was held that the operation should go ahead. Templeman L.J. provided the following rationale for the decision:

> [i]n the present case the choice which lies before the court is this: whether to allow an operation to take place which may result in the child living for twenty to thirty years as a mongoloid or whether (and I think this must be brutally the result) to terminate the life of a mongoloid child because she also has an intestinal complaint. Faced with that choice I have no doubt that it is the duty of this court to decide that the child must live... if the operation takes place and is successful then the child may live the normal span of a mongoloid child with the handicaps and defects and life of a mongol child, and it is not for this court to say that life of that description ought to be extinguished.[152]

In the subsequent case of Re C (A Minor) (Wardship: Medical Treatment)[153] the issue was further explored. Here C was a sixteen week old hydrocephalic infant. She had

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[152] [1990] 3 All E.R. 927, p.929.

[153] [1989] 2 All E.R. 782.

previously been the subject of a court order directing that a shunt be inserted to relieve pressure on her brain. The next question to be decided was whether intensive medical treatment should be given to C to sustain her life.

The local authority applied to the High Court for directions as to how to proceed. The Official Solicitor on behalf of the child requested a paediatric report on C's condition. The report recommended that the objective of those treating C should be to ease her suffering rather than to prolong her life by a short period, but did not rule out the administration of antibiotics, naso-gastric feeding or intravenous fusions, if these would achieve this objective. The High Court agreed with this recommendation and directed that the medical professionals involved treat the infant:

> in such a way that she may end her life and die peacefully with the greatest dignity and the least of pain, suffering and distress.[154]

However, Ward J. in the High Court also directed that:

> it shall not be necessary either, (a) to prescribe and administer antibiotics to treat any serious infection which the minor might contract; or (b) to set up intravenous fusions or nasal gastric feeding regimes for the minor.[155]

This order was not entirely consistent with the recommendations in the paediatric report as these interventions were not entirely ruled out therein. Rather it was left to the medical staff to decide whether such a course of action was correct in the circumstances. The

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[154] Ibid., p.787.

[155] Ibid., p.788.

Official Solicitor appealed against the terms of the order of the High Court. The Court of Appeal upheld the Official Solicitor's appeal to the extent that the High Court judge's direction to the effect that antibiotics, nasal gastric feeding or intravenous fusions were not necessary, be deleted from the order. Thus, the medical personnel would be allowed to treat C in the way in which they felt was correct without the court stepping into their zone of clinical independence.

In the later case of Re J (A Minor) (Wardship: Medical Treatment)[156] the Court of Appeal had to decide on a similar situation. Here, J was sixteen months old and was handicapped both mentally and physically as a result of an accident at the age of one month. One of the medical practitioners who was responsible for J's treatment was of the opinion that it would be cruel to subject him to intensive care to maintain his life artificially in the event of his ceasing to breathe of his own volition.

The local authority, in whose care J was, applied to the High Court in order to obtain an answer to the question of whether J should be artificially ventilated or subjected to other life-saving medical intervention in the event of a life-threatening event. The High Court made an order to the effect that the health authority use intensive therapeutic measures for so long as it would prolong J's life.

This decision was appealed to the Court of Appeal by

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[156] [1992] 4 All E.R. 614.

the health authority. The Court of Appeal upheld the appeal and dismissed the order. Lord Donaldson M.R. stated that the crucial issue of the appeal was the clinical autonomy of the doctor in deciding the 'best interests' of the patient:

> [t]he fundamental issue in this appeal is whether the court in the exercise of its inherent power to protect the interests of minors should ever require a medical practitioner or health authority acting by a medical practitioner to adopt a course of treatment which in the bona fide clinical judgment of the practitioner concerned as not being in the 'best interests' of the patient.[157]

Lord Donaldson M.R. stressed that the decision did not imply that the court was ordering the non-application of life-sustaining measures for J but that the court was endeavouring to provide a framework within which both professional and patient autonomy could as far as practicably possible be protected:

> [t]his does not mean that we thought, and still less required, that in no circumstances should J be subjected to mechanical ventilation... What we are saying is that so long as those with parental responsibilities consent to J being treated by the medical staff of the health authority, he must be treated in accordance with their clinical judgment.[158]

Nonetheless, the question of the equal rights of the severely handicapped individual seems to have been evaded again in this case. Indeed, the consequences of this are to be seen in the judgment of Balcombe L.J. where he speaks of the rationing of scarce health resources. Thus, those who

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[157] Ibid., p.622.

[158] Ibid., p.624.

are seen as not living up to the norm may be pushed to the back of the queue, which may for them imply death. This brings up the very distasteful scenario of having to choose between lives. However distasteful this may be it becomes even more so when those between whom one chooses are not regarded as being of equal value. Judicial recognition of this inequality, no matter how unintentional, is not to be desired. Yet Balcombe L.J. states:

> I would also stress the absolute undesirability of the court making an order which may have the effect of compelling a doctor or health authority to make available resources (both human and material) to a particular child, without knowing whether or not there are other patients to whom those resources might more advantageously be devoted.[159]

This is an issue which should be resolved by firstly recognising the humanity of the severely handicapped individual. The use by the judiciary of universal value judgments is not a welcome innovation. The right of all persons to medical treatment should be recognised rather than trying to argue that all are in theory entitled to treatment but in practice only the able few may receive it.

In New Zealand the 'best interests' test has been the preferred option of the courts in decision-making in relation to the incompetent patient and treatment withdrawal. In the case of Auckland Area Health Board v Attorney-General[160] the patient in question was suffering from Guillain-Barre's Syndrome. As a result of this disease

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[159] Ibid., p.625.

[160] [1993] 1 N.Z.L.R. 235.

the patient, although not brain dead,[161] was unable to interact in any way with his surroundings. He was in the medical sense 'locked in' and 'locked out' in that he was unable to receive any sensory input from his surroundings and could not respond to his surroundings. The disease had affected his nervous system to such a degree that his brain was in effect no longer connected to any part of his body. The patient relied entirely on artificial respiration to stay alive.

His doctors believed that his condition was irreversible and that there was no prospect of recovery. Moreover, they believed that artificial ventilation was of no further therapeutic benefit and therefore sought to terminate this treatment.

The health board sought a declaration from the High Court to the effect that the withdrawal of the artificial respiration was not contrary to sections 151 and 164 of the New Zealand Crimes Act 1961 and that such an act would not constitute culpable homicide. Section 151 of the Crimes Act 1961 imposes a legal duty on carers to supply those under their care with the 'necessaries of life'. Section 164 of the Crimes Act 1961 imposes liability for causing death by inflicting bodily injury which hastens death. Culpable

[161] The leading New Zealand case on the definition of death is Joe v Joe (1985) 3 N.Z.F.L.R. 675. In that case the court proposed that a person will be considered dead for legal purposes when there is an irreversible cessation of brain-stem function so that the person is in a state of permanent and irreversible unconsciousness and when respiration and circulation can only be sustained artificially.

homicide is defined in section 160(2) of the Crimes Act 1961 as killing any person by an unlawful act or omission without lawful excuse to perform a legal duty.

In his decision, Thomas J. held that the withdrawal of artificial respiration from the patient would not constitute culpable homicide under the Crimes Act 1961 if the following criteria were fulfilled.

First, the doctors responsible for the care of the patient, taking into account a responsible body of medical opinion, concluded that there was no reasonable possibility of his recovery.

Second, there was no therapeutic or medical benefit to be gained by continuing to maintain the patient on artificial ventilatory support, and to withdraw that support accorded with good medical practice as recognized and approved within the medical profession.

Third, the patient's wife and the Ethics Committee of the Auckland Area Health Board concurred with the decision to withdraw the artificial ventilatory support.

In this case these criteria were fulfilled and the patient's life-support system was withdrawn shortly afterwards. In relation to the criminal liability of doctors in such situations Thomas J. held that artificial ventilation was not a 'necessary of life' within the meaning of section 151 of the Crimes Act 1961 because there was no possibility of an improvement in the patient's condition, and this form of treatment was therefore of no therapeutic value. Moreover, even if artificial ventilation

could be construed as a 'necessary of life', the doctors in this case would be legally justified in withdrawing treatment as they would be acting with lawful excuse. In such a situation where the life of the patient is being sustained without any therapeutic benefit, medical practitioners are under no duty to prolong life at all costs. Thus, if they believe as a matter of medical judgment that the correct medical practice would be to cease treatment and that such a course of action would be in the 'best interests' of the patient then they are justified in so doing, provided they take careful steps to avoid error. Such steps would include consulting with the medical professional regulatory body, consulting with other medical specialists and obtaining the informed consent of the patient's family or guardian.

In relation to the offence of inflicting bodily injury which causes death under section 164 of the Crimes Act 1961 Thomas J. was of the opinion that at least one of two conditions must be met before withdrawal of life support can be said not to constitute a cause of death.

These are (1) the medical practitioners in question are not under a duty to provide artificial ventilation as a 'necessary of life'; and/or (2) the medical practitioners have a lawful excuse for not providing artificial ventilation. In this case the doctors concerned had met both of these requirements and as a result their termination of ventilatory support could not constitute an offence under section 164 of the Crimes Act 1961. The 'best

interests' approach of the High Court in this case was cited with approval by both Lord Goff[162] and Lord Mustill[163] in the House of Lords' decision in the case of Airedale N.H.S. Trust v Bland.

A Hybrid Standard.

In the United States an effort was made by the New Jersey Supreme Court to remedy the problems in the extant decision-making standards, in the case of In Re Conroy.[164] In this case the patient was an elderly incompetent patient who had once been competent. She was confined to her bed in a nursing home suffering from Alzheimer's Disease and diabetes and was not capable of interacting with others, of speaking or feeding herself. She was not in a persistent vegetative state but was hardly conscious.

In In Re Conroy the New Jersey Supreme Court developed a three-stage test which combined elements of the 'substituted judgement' and 'best interests' tests. In this case the patient had not made an advance directive. It was stated that the 'subjective judgement' test should first be used by the surrogate decision-maker. This test equated broadly with what other courts had defined as the 'substituted judgement' test. However, if there was not enough evidence of the patient's wishes in this regard, the

162 [1993] 2 W.L.R. 316, p.375.

163 Ibid., p.397.

164 486 A.2d 1209 (1985).

surrogate should then proceed to decide on the basis of the 'best interests' test.

Under the test in In Re Conroy the surrogate could choose from either of two versions of the 'best interests' or 'objective' test. Firstly, one could decide on the basis of the 'limited-objective' test which could be used in a situation where there is some evidence of the patient's past wishes but not enough to satisfy the 'substituted judgement' or 'subjective' test. Secondly, one could decide on the basis of the 'pure-objective' test, where there is no evidence whatsoever of the patient's desires in this area. As Meisel has stated, the court in In Re Conroy:

> [r]ather than viewing the 'subjective' and 'best interests' tests as polar opposites... envisions them as points on a continuum in which the 'subjective' standard is but a particularized application of the 'best interests' standard, the meaning of which comes from the patient's own subjective preferences.[165]

However, the court in In Re Conroy limited the decision in the case to patients who were in a similar fact situation to Ms. Conroy:

> an elderly nursing home resident... who is suffering from serious mental and physical impairments, who will probably die within approximately one year even with the treatment, and who, though formerly competent, is now incompetent to make decisions about her life-sustaining treatment and is unlikely to regain such competence.[166]

In the subsequent New Jersey Supreme Court case of In

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[165] Meisel, (1989, p.279).

[166] 486 A.2d 1209 (1985), p.1219.

Re Peter[167] the patient was also an elderly nursing home patient but in this case she was in a persistent vegetative state and was capable of surviving in this condition with the aid of artificial feeding and hydration for many decades. On this basis it was held that the standard in In Re Conroy was not applicable to the facts of this case, justifying the decision in the following terms:

> [w]hile a benefits-burden analysis is difficult with marginally competent patients like Claire Conroy, it is essentially impossible with patients in a persistent vegetative state. By definition such patients, like Ms. Peter, do not experience any of the benefits or burdens that the Conroy balancing tests are intended or able to appraise. Therefore, we hold that these tests should not be applied to patients in the persistent vegetative state.[168]

The New Jersey Supreme Court in this instance instead chose to apply the 'substituted judgement' standard. In another New Jersey case decided in the wake of In Re Conroy the court again demonstrated that the decision in In Re Conroy was limited to its facts. In the case of In Re Jobes[169] the patient was an incompetent patient in a nursing home. However in this case the patient was thirty-one years of age and was in a persistent vegetative state. Thus, the test In Re Conroy was deemed by the court not to be applicable in this particular case. However the court in In Re Jobes did lay down judicial safeguards for non-elderly institutionalized patients.

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[167] 529 A.2d 419 (1987).

[168] Ibid., p.425.

[169] 529 A.2d 434 (1987).

Thus, there must be confirmation of the patient's being in a persistent vegetative state by at least two independent medical practitioners knowledgeable in neurology and supplemented by the patient's attending doctor if there is one.[170] Thus, the decision in In Re Conroy while attempting judicially to avoid the previously outlined problems with both the 'substituted judgement' and 'best interests' tests has not been successfully applied to cases which did not adhere to the particular fact situation in that case.

The standard laid down in In Re Conroy has much to recommend it, as it tries to avoid the absurdities brought about in cases such as Superintendent of Belchertown State School v Saikewicz[171] but the main problem lies in the balancing requirement in both versions of the 'objective' test. Thus, if the burdens of continued treatment outweigh the benefits for the patient of continued treatment then and only then can treatment be withdrawn.

In In Re Conroy itself it was held that the burdens of continuing the treatment did not outweigh the benefits of continued treatment and as a result the court refused to order discontinuance of treatment. The types of burdens which are typically taken into consideration in such cases would include pain, indignity and the nebulous term 'quality of life'. In In Re Conroy the burden which was given greatest consideration was pain. Thus, under the

[170] 529 A.2d 424 (1987), p.448.

[171] 370 N.E.2d 417 (1977).

'objective' tests as enunciated in that case it will be quite difficult to justify treatment withdrawal in many cases. As Meisel has pointed out:

> [t]he Conroy objective standards place too much weight on pain as a criterion for decision-making. The equation of burden with pain requires that treatment be administered even when it accomplishes little or nothing more than prolonging the process of dying, precisely what the Conroy court seemed otherwise to have been intent on preventing. Some patients experience no actual pain because they are not suffering from a painful terminal illness, are in a persistent vegetative state, or are receiving strong analgesic medications. Even if a patient is able to experience pain, the judicious use of analgesic medications can usually control it to the extent to which a patient perceives pain may be difficult even if the patient is not comatose. Thus, pain should not be the sole, or even the central, criterion in determining the burdens that treatment imposes.[172]

Thus, while being a welcome judicial innovation in this complex field, the test laid down in In Re Conroy is not free from difficulties and has been of limited application. The court in adopting the test was influenced by the recommendations put forward by the Report of the President's Commission on the topic of treatment withdrawal. This recommended a two-tiered test in relation to decision-making which was broadly similar to the standard laid down in In Re Conroy but without the two-limbed 'best interests' test. The Commission proposed that when possible the 'substituted judgement' standard should be used but when that was not possible then the surrogate should have recourse to the 'best interests' test and in so doing:

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[172] Meisel, (1989, pp.291-292).

> choose a course that will promote the patient's well-being as it would probably be conceived by a reasonable person in the patient's circumstances.[173]

The English Law Commission seems to be taking a similar approach to decision-making in this area. The model which was recommended in a recent Report[174] also strives to overcome the difficulties which beset both the 'substituted judgement' and 'best interests' tests by proposing a hybrid standard.

4.6 Proposals for Change in England and Wales.

A more general difference in approach to the question of decision-making for the incurably or terminally ill incompetent patient between the United States model and the English model is the noticeable lack of specific legislation in this field in England.

Absent are the multifarious living will and health care durable power of attorney statutes which exist in the United States. Instead it has fallen to the courts to decide in these matters.

While the case of Airedale N.H.S. Trust v Bland[175] and subsequent cases in this area have given rise to a greater amount of certainty as to how to proceed in the case of the

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[173] President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, (1983, p.136).

[174] See, Law Commission, The, (1995, paragraphs 5.1-5.39).

[175] [1993] 2 W.L.R. 316.

patient in a persistent vegetative state, it is obviously only a temporary measure and cannot provide the comprehensive response to the many questions which this area of medical treatment raises. It is clear from the speeches of Lord Browne-Wilkinson and Lord Mustill in Airedale N.H.S. Trust v Bland that the only satisfactory solution to dilemmas of this kind is the introduction of legislation. Lord Browne-Wilkinson offered a convincing argument for a legislative solution to this dilemma:

> [w]here a case raises wholly new moral and social issues, in my judgment it is not for the judges to seek to develop new, all embracing principles, of law in a way which reflects the individual judge's moral stance when society as a whole is substantially divided on the relevant moral issues. Moreover, it is not legitimate for a judge in reaching a view as to what is for the benefit of the one individual whose life is in issue to take into account the wider practical issues as to the allocation of limited financial resources or the impact on third parties of altering the time at which death occurs.
>
> For these reasons, it seems to me imperative that the moral, social and legal issues raised by this case should be considered by Parliament. The judge's function in this area of the law should be to apply the principles which society, through the democratic process, adopts, not to impose their standards on society. If Parliament fails to act, then judge-made law will of necessity through a gradual and uncertain process provide a legal answer to each new question as it arises. But in my judgment that is not the best way to proceed...
>
> It is for Parliament to address the wider problems which the case raises and lay down principles of law generally applicable to the withdrawal of life support systems.[176]

These concerns were echoed by Lord Mustill in his speech in Airedale N.H.S. Trust v Bland. He was of the opinion that:

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[176] Ibid., p.382.

adversarial proceedings, even with the help of an amicus curiae, are not the right vehicle for the discussion of this broad and highly contentious moral issue, nor do I believe that the judges are best fitted to carry it out...

The whole matter cries out for exploration in depth by Parliament and then for the establishment by legislation not only of a new set of ethically and intellectually consistent rules, distinct from the general criminal law, but also of a sound procedural framework within which the rules can be applied to individual cases. The rapid advance of medical technology makes this an ever more urgent task, and I venture to hope that Parliament will soon take it in hand.[177]

In the wake of Airedale N.H.S. Trust v Bland, a number of proposals for reform have been put forward in this area of medical treatment. These shall now be examined.

The House Of Lords' Select Committee Model for Treatment Withdrawal.

Following the decision in Airedale N.H.S. Trust v Bland, a House of Lords' Select Committee was established to examine the legal and policy issues which arise in this area of medical practice. The terms of reference of the Select Committee were to examine:

> the ethical, legal and clinical implications of a person's right to withhold consent to life-prolonging treatment, and the position of persons who are no longer able to give or withhold consent; and to consider whether and in what circumstances actions that have as their intention or a likely consequence the shortening of another person's life may be justified on the grounds that they accord with that person's wishes or with that person's 'best interests'; and in all the foregoing considerations to pay regard to the likely effects of changes in law or

[177] Ibid., p.392.

medical practice on society as a whole.[178]

The response of the House of Lords' Select Committee was far from satisfactory. In its Report which was published in January 1994, the Select Committee did not recommend the introduction of specific legislation on the question of treatment withdrawal and the incompetent patient. In the place of recommending much-needed legislative guidelines in this area, the Select Committee concluded that the development of the idea that some treatments may be inappropriate and need not be given, should make it unnecessary in future to consider the withdrawal of life-sustaining treatment, except where the administration of such treatment is burdensome to the patient.[179] This is unsatisfactory. Indeed it is, in effect, a non-conclusion. As the Select Committee admitted:

> [t]his question has caused us great difficulty, with some members of the Committee taking one view and some another, and we have not been able to reach a conclusion. But where we agreed is in judging that the question need not, indeed should not, usually be asked. In the case of Tony Bland, it might well have been decided long before application was made to the court that treatment with antibiotics was inappropriate, given that recovery from the inevitable complications of infection could add nothing to his well-being.[180]

This conclusion is of very little worth in that it presumes to speak of a hypothetical ideal situation, what the practice ought to be rather than what the practice is.

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[178] Select Committee on Medical Ethics, The, (1994, p.7).

[179] Ibid., paragraph 257.

[180] Ibid.

Thus, in the wake of Airedale N.H.S. Trust v Bland[181] the courts have been faced with many similar applications in relation to treatment withdrawal.[182] This call from the Select Committee for a medical treatment idyll frankly defies explanation and does not even attempt to resolve the problem.

The Select Committee, while welcoming the idea of the advance directive, thought it unnecessary that legislation should be introduced on the subject.[183] This again is a flawed conclusion given the lack of guidance which obtains at present as to the validity or otherwise of such instruments. Instead, the Select Committee has thrown the issue back into the hands of the courts in the great tradition of policy hot potatoes. The risible justification supplied by the Select Committee for this stance went as follows:

> [w]e suggest that it could well be impossible to give advance directives in general greater legal force without depriving patients of the benefit of the doctor's professional expertise and of new treatments and procedures which may have become available since the advance directive was signed.[184]

Without appropriate statutory guidance the situation will remain far from clear. However, it is arguable that at

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[181] [1993] 2 W.L.R. 316.

[182] See for example, Frenchay Healthcare N.H.S. Trust v S [1994] 2 All E.R. 403 and Swindon and Marlborough N.H.S. Trust v S (1994) The Guardian, 10 December, p.7.

[183] Select Committee on Medical Ethics, The, (1994, paragraphs 263 and 264).

[184] Ibid., paragraph 264.

present an advance directive may be valid at common law. This point was made by the Law Commission in a recent Consultation Paper when it stated that:

> [f]ollowing the dicta of the House of Lords in Airedale N.H.S. Trust v Bland it appears that it may be possible to make an advance directive which is legally binding.[185]

Thus, Lord Goff was of the view in his judgment in Airedale N.H.S. Trust v Bland that:

> it is established that the principle of self-determination requires that respect must be given to the wishes of the patient, so that if an adult patient of sound mind refuses, however unreasonably, to consent to treatment or care by which his life would or might be prolonged, the doctors responsible for his care might give effect to his wishes, even though they do not consider it to be in his 'best interests' to do so... To this extent, the principle of the sanctity of human life must yield to the principle of self-determination... and for present purposes... the doctor's duty to act in the 'best interests' of his patient must likewise be qualified... Moreover, the same principle applies where the patient's refusal to give his consent has been expressed at an earlier date, before he became unconscious or otherwise incapable of communicating it, though in such circumstances especial care may be necessary to ensure that the prior refusal of consent is still properly to be regarded as applicable in the circumstances which have subsequently occurred.[186]

In the earlier case of Re T (Adult: Refusal of Medical Treatment),[187] Lord Donaldson M.R. was of the view that anticipatory refusals of medical treatment will be binding provided that: (i) when the patient made such a declaration

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[185] Law Commission, The, (1993, paragraph 264).

[186] [1993] 2 W.L.R. 316, p.367 and see the judgment of Lord Keith, pp.360-361.

[187] [1992] 3 W.L.R. 782.

he was competent to consent to or to refuse treatment; (ii) that the declaration is applicable in the circumstances under review and (iii) the declaration must not have come about as a result of undue influence.[188] The Law Commission concluded that:

> [i]n England and Wales, the dicta in Re T (Adult: Refusal of Medical Treatment), together with those in Airedale N.H.S. Trust v Bland in both the Court of Appeal and the House of Lords indicate that an anticipatory decision which is 'clearly established' and 'applicable in the circumstances' may be as effective as the current decision of a capable adult.[189]

However, the Law Commission did not share the same faith in the existing common law guidance as the House of Lords' Select Committee, and suggested the introduction of legislation which would clarify the issues involved.[190]

The Select Committee proposed the development of a code of practice on advance directives.[191] This was also the Select Committee's response to the problems posed by the patient in a persistent vegetative state. The Report stated that a definition of persistent vegetative state and a code of practice in relation to its management should be developed.[192]

This is not necessarily going to make a great impact on the immediate problem of treatment withdrawal in the

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[188] Ibid., p.798.

[189] Law Commission, The, (1993, paragraph 3.7).

[190] Ibid., paragraphs 3.11-3.20.

[191] Select Committee on Medical Ethics, The, (1994, paragraphs 265-267).

[192] Ibid., paragraph 258.

case of the permanently unconscious patient. It merely leads to the setting up of yet another committee to debate the definition of persistent vegetative state without necessarily coming to a satisfactory or indeed any solution, and is again a means of avoiding tackling the core issues.

The Law Commission's Model for Treatment Withdrawal.

A more balanced and thoughtful response to the problem came in the Law Commission's Consultation Paper[193] which was published in March 1993 and in the Report which followed it in March 1995.[194] The overall policy aims of the Law Commission in this area were set out in a previous Consultation Paper,[195] in the following terms:

> (i) that people should be enabled and encouraged to take for themselves those decisions which they are able to take;
>
> (ii) that where it is necessary in their own interests or for the protection of others that someone else should take decisions on their behalf, the intervention should be as limited as possible and concerned to achieve what the person himself would have wanted; and
>
> (iii) that proper safeguards should be provided against exploitation, neglect, and physical, sexual or psychological abuse.[196]

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[193] See, Law Commission, The, (1993, paragraph 3.11).

[194] See, Law Commission, The, (1995, paragraphs 5.1-5.39).

[195] See, Law Commission, The, (1991, paragraph 4.27).

[196] Ibid.

In the Report[197] the Commission modified the position in relation to point (ii), stating that:

> there is no place in the scheme we recommend in this Report for the making of decisions which would protect other persons but would not be in the 'best interests' of the person without capacity.[198]

The Law Commission's proposals in relation to advance directives are quite straightforward. They give a statutory footing to the current common law principles in this area as developed in the cases of Re T (Adult: Refusal of Medical Treatment),[199] Airedale N.H.S. Trust v Bland,[200] and In Re C (Adult: Refusal of Treatment).[201]

The Commission wished to codify the existing case-law and set out clearly for all concerned the law's stance on such anticipatory decisions. The Commission defined an advance refusal of treatment in the following terms for the purposes of the Draft Bill on Mental Incapacity which accompanied the Report:

> an 'advance refusal of treatment' should be defined as a refusal made by a person aged eighteen or over with the necessary capacity of any medical, surgical or dental treatment or other procedure and intended to have effect at any subsequent time when he or she may be without capacity to give or refuse consent.[202]

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[197] Law Commission, The, (1995, paragraph 2.46).

[198] Ibid.

[199] [1992] 3 W.L.R. 782.

[200] [1993] 2 W.L.R. 316.

[201] [1994] 1 W.L.R. 290.

[202] Law Commission, The, (1995, paragraph 5.16 and Clause 9(1) of the Draft Bill on Mental Incapacity).

The Commission did recommend however, that an advance refusal of treatment as defined in the Draft Bill on Mental Incapacity should not preclude the provision of basic care. Basic care was defined by the Commission as:

> care to maintain bodily cleanliness and to alleviate severe pain, as well as the provision of direct oral nutrition and hydration.[203]

Moreover, an advance refusal of treatment would not be applicable in the case of a pregnant woman where in such a case it endangers the life of the foetus unless the woman has previously indicated to the contrary.[204]

This sub-clause was included as a reaction to the case of Re S (Adult: Refusal of Medical Treatment)[205] where it was held that it was lawful for doctors to perform a caesarean section without the consent of the woman in question. This decision appears to go against the grain of treatment refusal cases such as In Re C (Adult: Refusal of Treatment).[206] Indeed one commentator has stated that the decision in Re S (Adult: Refusal of Medical Treatment) seems to:

> ignore what seemed to be a settled requirement for consent to medical treatment when the individual is conscious and mentally competent. Not only does the decision appear to ignore this, it also appears to run counter to the view that the foetus in English law does not have a legal personality until it is born alive. A belief in

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[203] Ibid., paragraph 5.36 and Draft Bill on Mental Incapacity clause 9(7)(a) and (8).

[204] Ibid., paragraph 5.26 and Draft Bill on Mental Incapacity, clause 9(3).

[205] [1992] 4 All E.R. 671.

[206] [1994] 1 W.L.R. 290.

> the foetus having an independent legal personality seems implicit in Sir Stephen Brown P.'s view that S's refusal of consent could be ignored; how else may an individual's rights be negated other than through the assertion, or protection, of the rights of others?[207]

The Law Commission's response, while attempting to strike a balance between the rights of the mother and those of the foetus tends to give greater regard to those of the foetus. The Commission provided the following rationale for this position:

> [w]e do not... accept that a woman's right to determine the sorts of treatment which she will tolerate somehow evaporates as soon as she becomes pregnant. There can, on the other hand, be no objection to acknowledging that many women do in fact alter their views as to the interventions they find acceptable as a direct result of the fact that they are carrying a child. By analogy with cases where life might be needlessly shortened or lost, it appears that a refusal which did not mention the possibility that the life of a foetus might be endangered would be likely to be found not to apply in circumstances where a treatment intended to save the life of the foetus was proposed. Women of child-bearing age should therefore be aware that they should address their minds to this possibility if they wish to make advance refusals of treatment.[208]

However, it could be argued that this could still lead to a situation where a woman, who, for example, had neglected to state specifically her wishes in this regard, may be subjected to treatment to which she would not, if competent, consent.

Moreover, in Re S (Adult: Refusal of Medical

[207] Thomson, (1994, p.130).

[208] Law Commission, The, (1995, paragraph 5.25).

Treatment)[209] the foetus in question was viable, but in the Draft Bill on Mental Incapacity the Law Commission does not specify that a woman's refusal of life-saving treatment shall be overridden only in a situation where the foetus is viable. It merely mentions the 'life of the foetus', without more. It is to be assumed that if the foetus were not viable then efforts to save it would not be initiated. However, as Derek Morgan argues:

> while acknowledging that Re S concerned the decision of a woman with a viable foetus, no such limitation is imposed on the presumption to be introduced into the new statutory provision. Thus in line with this proposal, an unconscious pregnant woman who presents with a birth plan or advance directive which refuses active treatment in the event of, say, catastrophic brain insult, could be ventilated for the supposed benefit of an eighteen, seventeen, sixteen week or even more immature foetus.[210]

The Law Commission also recommended that medical practitioners who withhold treatment as the result of the patient's previously stated wishes shall not be held liable for the consequences. Thus, clause 9(4) of the Draft Bill on Mental Incapacity provides that:

> [n]o person shall incur any liability -
> (a) for the consequences of withholding any treatment or procedure if he has reasonable grounds for believing that an advance refusal of treatment by the person concerned applies to that treatment or procedure; or
> (b) for carrying out any treatment or procedure to which an advance refusal of treatment by the person concerned applies unless he knows, or has reasonable grounds for believing, that an advance refusal of treatment by the person concerned applies to the treatment or procedure.

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209 [1992] 4 All E.R. 671.

210 Morgan, (1995, p.352).

The Commission also took note of those patients who may not have created an advance directive and those patients who were incapable of ever creating an advance directive due to infancy or mental incompetence. At present, the legal test applied in such cases is that stated in cases such as Re F (Mental Patient: Sterilisation).[211] According to this test a doctor will not be liable when he treats a patient without that patient's consent where he acted in the 'best interests' of the patient and if his actions were in accordance with those adopted by a responsible body of medical opinion skilled in that particular field of diagnosis and treatment. The Commission favoured a more patient-centred approach. While not exactly adopting a 'substituted judgement' test in such circumstances the Commission favoured taking the patient's personality into account as far as possible. Thus, in the Consultation Paper the Commission put it in the following terms:

> a person who has never had the capacity to make decisions, or even the ability to express views, is still an individual and his unique reactions to the world may be identifiable. We consider that in determining the 'best interests' of an incapacitated adult it is appropriate to attempt to consider the consequences of a decision from the patient's point of view as far as possible.[212]

The Commission's Report on Mental Incapacity concluded that in relation to the never competent patient or the patient who had not created an advance directive before his

[211] [1989] 2 All E.R. 545.

[212] Law Commission, The, (1993, paragraph 3.50).

incapacity, a medical practitioner should be given a statutory authority to treat provided it is reasonable in all the circumstances to safeguard the 'best interests' of an incapacitated person.[213]

In deciding whether a particular course of medical treatment is in the 'best interests' of an incapacitated patient one should take into account the following criteria:

> (1) the ascertainable past and present wishes and feelings of the person, and the factors he or she would consider,
>
> (2) the need to permit and encourage the person to participate,
>
> (3) the views of other appropriate people, and
>
> (4) the availability of an effective less restrictive option.[214]

This new statutory 'best interests' test thus combines elements of both the 'best interests' and 'substituted judgement' tests as understood in United States law.

In addressing the question of the form which such advance directives should take, the Law Commission did not stipulate that they should be in writing. However, the Commission did add that there were advantages in expressing such anticipatory decisions in writing as such a step would:

> be likely to furnish some definite proof that the refusal was made by the patient and intended to

[213] Draft Bill on Mental Incapacity, clauses 4(1) and 3(1).

[214] Law Commission, The, (1995, paragraph 5.7).

have effect in the future.[215]

However, the Commissioners did go on to state that:

> a rebuttable presumption is the best way to balance the need for flexibility and the desirability of formal writing. It would not, of course, answer the questions the doctor must ask as to whether (1) the patient had capacity to make the refusal and whether (2) the refusal applies to the treatment now proposed and in the circumstances which now exist.[216]

In order to further clarify the issue, the Commission recommended that a code of practice in relation to advance directives be prepared. This, the Commission argued, would fill the procedural interstices which legislation could not hope to do.

While it may be considered laudable that the Commission decided to respect the spirit of the patient's wishes without constricting these wishes in evidentiary requirements, the absence of legislative guidelines on the form of an advance statement may lead to the patient's wishes not being enforced.

Indeed, it could be argued that the Commission does not succeed in striking the balance between flexibility and the need for a formal written document. While claiming that a written refusal is not required, the Commission then states that a written refusal would be likely to provide 'some definite proof'. This begs the question of what sort of proof an oral refusal would provide.

Moreover, the guidelines which the Commission gives in

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[215] Ibid., paragraph 5.29.

[216] Ibid., paragraph 5.30.

relation to written advance statements are quite vague. The Commission states that such statements should be signed and witnessed but does not specify the number of witnesses nor does it state whether relatives of the patient should be excluded from being witnesses.

In addition to this legislative framework, the Commission has recommended a new judicial forum within which to adjudicate on such treatment decisions. The new jurisdiction would have a statutory basis. The rationale for this was stated in the following terms in the earlier Consultation Paper:

> [t]his would overcome the limitations of the common law, by providing a range of flexible orders in addition to a jurisdiction to make declarations. We envisage that the statutory jurisdiction would have several conceptually distinct functions. First, orders might be made approving or disapproving a particular decision made on behalf of an incapacitated person, or appointing someone to make decisions on the person's behalf. Secondly, the judicial forum would exercise a declaratory jurisdiction. This would not be concerned with making decisions for the incapacitated person but with establishing and declaring the facts, for example whether a person was incapacitated, or whether an anticipatory decision was 'clearly established' and 'applicable to the circumstances'.[217]

The Law Commission also made provision for a new model power of attorney called a continuing power of attorney.[218] This model is an enhanced form of the traditional power of attorney which would allow an individual (the donor) to give legal authority to a person of his choosing (the

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[217] Law Commission, The, (1993, paragraph 4.4).

[218] Law Commission, The, (1995, Draft Bill on Mental Incapacity clause 12(1) and (2)).

donee) to make and implement decisions on behalf of the donor when he is no longer capable through mental incapacity of making such decisions for himself.

The continuing power of attorney would apply _inter alia_ to health care decisions.[219] At present in England and Wales the power of attorney does not extend to matters other than financial affairs and property.[220]

The British Medical Association's Code of Practice on Advance Statements.

The British Medical Association has recently produced a _Code of Practice_ on the subject of advance statements. This initiative came about in response to the call by the House of Lords' Select Committee on Medical Ethics for a code of practice in relation to advance directives for health professionals.

The British Medical Association while taking a non-directive approach in relation to advance statements, nonetheless is of the view that:

> carefully discussed advance statements have an important place in the development of a genuinely more balanced partnership between patients and health professionals.[221]

The _Code of Practice_ does not purport to be definitive or binding in this area of medical treatment. It is merely

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[219] Draft Bill on Mental Incapacity, clause 16(1).

[220] See section 3(1) of the _Enduring Powers of Attorney Act_ 1985.

[221] British Medical Association, (1995, p.1.)

an example of greater 'dialogue' between parties to the therapeutic relationship. The Code of Practice, while welcome, also demonstrates the difficulty of allocating to professional bodies the task which should have been completed by the Law Commission, that is to say, the provision of a detailed and definitive guide to 'best practice' in this area of medical treatment. The Code of Practice is the result of a consultation process between the different groups and individuals with an interest in this area. It is thus, of necessity, an exercise in compromise.

Indeed, rather than fill the gaps in the Law Commission's recommendations, it seems to cause new difficulties. In relation to the question of drafting an advance statement the Code of Practice states in a similar vein to the Law Commission that:

> [a]lthough oral statements are equally valid if supported by appropriate evidence, there are advantages to recording one's general views and firm decisions in writing. Advance statements should be understood as an aid to, rather than a substitute for, open dialogue between patients and health professionals.[222]

However, like the Law Commission, the Code of Practice does not propose a sufficiently detailed scheme for the formalities to be followed in the drawing up of such a document. It states simply that:

> [w]ritten statements should use clear and unambiguous language. They should be signed by the individual and a witness. Model forms are available but clear statements in any format

[222] Ibid., paragraph 6.1.

command respect.[223]

Thus, while being welcome in according symbolic importance to a balanced dialogue between patient and treatment provider, and in recognising the concept of patient autonomy in this area, the Code of Practice contains certain practical shortcomings.

4.7 Treatment Withdrawal in Ireland - A Proposal.

In Ireland, although there exists no legislation on the issue of refusal of life-sustaining medical treatment, it is possible that such a right may be derived from the constitutional right to privacy. Article 40.3.1 of Bunreacht na hEireann 1937 provides that the state: "guarantees in its laws to respect, and, as far as practicable, by its laws to defend and vindicate the personal rights of the citizen". From this general statement, the Supreme Court has derived a number of unennumerated rights which though not listed in Bunreacht na hEireann 1937, nonetheless exist and are protected by it. Thus, the Irish Supreme Court has held, in common with the United States' Supreme Court, that a right to privacy exists in certain specified circumstances.[224] Also of relevance to this area of medical practice is the judicial recognition of a right to bodily integrity. In the case of

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[223] Ibid., paragraph 6.2.

[224] See, McGee v Attorney-General [1974] I.R. 284 and the discussion on the topic of personal rights in Casey, (1992, pp.309-358).

Ryan v Attorney-General[225] the Supreme Court stated that in upholding this right, the state had:

> the duty of protecting the citizens from dangers to health in a manner not incompatible or inconsistent with the rights of those citizens as human persons.[226]

Professor Casey, in his analysis of this statement, believes that:

> neither the [s]tate nor anyone else may insist upon a person undergoing medical treatment that he/she wishes to decline - even if death may result. To do so would surely trench impermissibly upon the right of privacy.[227]

This may be quite straightforward in the case of a conscious, competent adult patient, but the lines become increasingly blurred if the patient in question is an incompetent incurably ill patient.

Presumably if the patient had made an advance directive before he entered his present state of incompetence, one may obviously be able to discover his wishes in relation to treatment withdrawal.

However, in Ireland at present there is no legislation on the issue of advance directives. As this is the case, courts will have to look to other legal sources for the resolution of such a dilemma.

One could look at the relevant common law in relation to advance directives. However as there is none in this jurisdiction, courts will be forced to look at the

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[225] [1965] I.R. 294.

[226] Ibid., p.348.

[227] Casey, (1992, pp.334-335).

decisions of the courts of other states. Irish courts will probably look to English precedent in this regard. In doing so they would discover that at common law an advance directive is prima facie valid.

In the case of Re T (Adult: Refusal of Medical Treatment),[228] Lord Donaldson M.R. was of the view that anticipatory refusals of medical treatment will be binding provided that: (i) when the patient made such a declaration he was competent to consent to or to refuse treatment; (ii) that the declaration is applicable in the circumstances under review and (iii) the declaration must not have come about as a result of undue influence.[229] Moreover the Irish courts may decide to look for guidance to Airedale N.H.S. Trust v Bland[230] for a common law means of justifying treatment withdrawal. However, Irish courts are not limited to the common law in their decision-making on this topic. They may also have recourse to Bunreacht na hEireann 1937. Thus, the principal argument supporting treatment withdrawal in such cases would be based on the right to privacy as encapsulated by Article 40. This argument would be similar to that put forward by the New Jersey Supreme Court in the case of In Re Quinlan.[231]

One commentator who has elaborated on this argument in the context of Irish law is Costello J. now President of

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[228] [1992] 3 W.L.R. 782.

[229] Ibid., p.798.

[230] [1993] 2 W.L.R. 316.

[231] 355 A.2d 647 (N.J.) (1976).

the Irish High Court, in an article on the issue of refusal of medical treatment.[232] Costello J. argued that:

> the dignity and autonomy of the human person (as constitutionally predicated) require the [s]tate to recognise that decisions relating to life and death are, generally speaking, ones which a competent adult should be free to make without outside restraint and that this freedom should be regarded as an aspect of the right to privacy which should be protected as a 'personal' right by Article 40.3.1.[233]

However, Costello J. goes on to state that such a right is not absolute. Thus, he states that if one is to define a right to die as a:

> 'right' to procure death by his or her [the patient's] hand or by means of someone else, then it cannot be said that there is a constitutionally protected 'right to die', for it is a reasonable conclusion from the nature of man as envisaged in the Constitution that he may not kill himself or ask others to assist him to do so.[234]

Nonetheless, he states that one can make a distinction between the above conception of the right to die and the concept of allowing the patient to die by discontinuing life-sustaining treatment. Costello J. provides the following rationale for this position:

> [i]n the case of the competent patient discontinuance would be in response to a request which the patient was constitutionally entitled to make, and no 'unlawful' act would occur. In the case of the incompetent patient discontinuance in the proper discharge of a duty of care would likewise involve no legal fault and the patient's death could not be an 'unlawful'

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[232] See, Costello, (1986, pp.35-46).

[233] Ibid., p.42.

[234] Ibid.

homicide.[235]

This argument is yet another example of that nebulous act-omission distinction which has less to do with an adherence to logic than with a casuistical argument based on a particular philosophical perspective.

There are those who contend that such a distinction is chimeric and that there is indeed no moral distinction between killing and letting die. James Rachels[236] argues against this distinction. He claims that:

> [t]he bare difference between killing and letting die does not, in itself, make a moral difference. If a doctor lets a patient die for humane reasons, he is in the same moral position as if he had given the patient a lethal injection for humane reasons. If his decision was wrong - if, for example, the patient's illness was in fact curable - the decision would be equally regrettable no matter which method was used to carry it out. And if the doctor's decision was the right one, the method used was not in itself important.[237]

In arguing in this fashion Rachels attempts to arrive at the conclusion that if one is to justify killing in one instance, such as in the case of treatment withdrawal, then one should logically justify killing in the case of active euthanasia. He goes on to cite the typical argument against such a stance, an argument substantially similar to that of Costello J.:

> [t]he important difference between active and passive euthanasia is that, in passive euthanasia, the doctor does not do anything to bring about the patient's death. The doctor does

[235] Ibid., p.44.

[236] See, Rachels, (1975, pp.78-80).

[237] Ibid., p.79.

> nothing, and the patient dies of whatever ills already afflict him. In active euthanasia, however, the doctor does something to bring about the patient's death: he kills him. The doctor who gives the patient with cancer a lethal injection has himself caused his patient's death; whereas if he merely ceases treatment, the cancer is the cause of death.[238]

Rachels argues that such a distinction carries no moral weight. He argues that a decision to withdraw treatment:

> is subject to moral appraisal in the same way that a decision to kill... would be subject to moral appraisal: it may be assessed as wise or unwise, compassionate or sadistic, right or wrong. If a doctor deliberately lets a patient die who was suffering from a routinely curable illness, the doctor would certainly be to blame for what he had done, just as he would be to blame if he had needlessly killed the patient.[239]

Thus, if it is possible to state that there is no difference between killing and letting die and that in effect what one is doing in both cases is 'killing', why do commentators such as Costello J. argue so vehemently in favour of treatment withdrawal and so vehemently against active euthanasia? Is there a basis other than logic upon which they base their arguments? To discover the motivation of such arguments one must examine the foundations of the act-omission distinction.

Feinberg has placed such arguments into the category of the 'moral significance claim'.[240] The 'moral significance claim' simply put attempts to demonstrate that

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[238] Ibid., p.80.

[239] Ibid.

[240] Feinberg, (1984b, pp.165-185).

there is a difference between causing something to happen and merely allowing that thing to happen and that this difference is morally significant. Significant enough, Feinberg adds:

> to warrant imposing criminal liability for those who intentionally cause certain harms while withholding criminal liability from those who merely fail to prevent those harms when they can.[241]

This in effect is what Costello is claiming.

Can such a claim be justified? Rachels in his argument would answer in the negative. There is no significant moral difference between killing and letting die. Others have argued that there is no significant moral difference between such cases. Jonathan Bennett claims that the distinction between act and omission is without moral significance by citing a number of thought experiments to support that claim.[242]

His first example is that of the impoverished village.[243] In this example, one is threatened with a ten per cent loss of income but can recover this sum by pressing one's claim against a trust fund. If one does not press one's claim, the fund will be used to save the lives of the inhabitants of a remote and impoverished village. One presses one's claim. Bennett views this as a positive act or a killing rather than an omission and thus refuses to accept a morally significant difference between acts and

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[241] Ibid., p.166.

[242] See, Bennett, (1981, pp.89-91).

[243] Ibid., p.89.

omissions.

He goes further by citing another example which he refers to as Impoverished Village 2. In this example, if one were to donate ten per cent of one's income one could save the same number of lives in the same village. One does not do this.[244]

Thus, Bennett contends, since in the first example the actor acts positively or, as he terms it, in a 'positively instrumental' fashion to bring about the result, while in the second example the actor is what he terms 'negatively instrumental' in bringing about the outcome, then there should be a morally significant difference between the two examples. However, he concludes that there is no morally significant difference between these cases.

To consolidate his argument he cites the example of Impoverished Village 3 where, having given one's accountant full power of attorney, one learns that because of a misunderstanding he is preparing to sign away ten per cent of one's income to be sent to the village. One phones to instruct him not to do it.[245] Similarly he can detect no sign of a morally significant difference between Impoverished Village 2, an example of so-called 'negative instrumentality' and Impoverished Village 3, a further example of 'positive instrumentality', thus concluding that there is no morally significant difference between acts and omissions.

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[244] Ibid.

[245] Ibid., p.91.

Arguing for a similar conclusion, Thomas Grey cites the example of an individual, B, who has a heart attack and reaches for a bottle of life-saving medicine. Grey then asks whether there is a significant difference between a case where another individual, A, pushes the bottle out of B's reach or where the bottle is just out of B's reach and A could easily give it to him but he does not.[246] Grey draws the following conclusion:

> [a]re not the morally relevant features of the situation A's state of mind and the consequences? Yet in both versions these are the same: A wants B dead, and he dies. The only difference is that in version (i) a slight movement would be required of A to avert B's death while in (ii) A can achieve his desires without moving a muscle. Is this a morally relevant difference?[247]

Brock[248] cites two principal reasons why those who support the act-omission distinction may do so. Firstly he states that, for many, killing within medicine is often viewed as an unjustified causing of death. On the other hand it is increasingly being accepted that a doctor is ethically justified in withdrawing life support in certain cases.[249] What Brock believes is mistaken in the act-omission distinction is:

> the assumption that all killings are unjustified causings of death. Instead, some killings are ethically justified, including many instances of stopping life support.[250]

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[246] Grey, (1983, p.159).

[247] Ibid.

[248] See, Brock, (1993, pp.210-212).

[249] Ibid., p.210.

[250] Ibid.

The second reason often cited for maintaining the act-omission distinction, according to Brock, is that many in medical circles would regard equating treatment withdrawal with killing as psychologically uncomfortable. He claims that:

> [t]he characterization as allowing to die is meant to shift felt responsibility away from the agent - the physician - and to the lethal disease process. Other language common in death and dying contexts plays a similar role; 'letting nature take its course' or 'stopping prolonging the dying process' both seem to shift responsibility from the physician who stops life support to the fatal disease process. However psychologically helpful these conceptualizations may be in making the difficult responsibility of a physician's role in the patient's death bearable, they nevertheless are confusions. Both physicians and family members can instead be helped to understand that it is the patient's decision and consent to stopping treatment that limits their responsibility for the patient's death and that shifts the responsibility to the patient.[251]

To further illustrate the moral evasiveness which takes place in such cases, Brock gives the example of a gravely ill patient who begins to develop respiratory failure.

In Case 1 a seriously ill patient is brought to a hospital emergency room and sent to the intensive care unit. The patient begins to develop respiratory difficulties and is likely to require intubation very soon.

At that point the patient's family and long-standing physician arrive at the intensive care unit and inform the staff that there had been intensive discussion with the patient when he was competent. Given his terminal illness, as well as his state of debilitation, the patient had

[251] Ibid., p.211.

firmly rejected being placed on a respirator under any circumstances, and the family and the physician produce the patient's advance directive to that effect. The staff in the intensive care unit do not intubate the patient, who dies of respiratory failure.[252]

The second example is similar to the first except that the family and the physician are delayed in traffic on the way to the hospital and arrive shortly after the patient has been placed on the respirator. The staff in the intensive care unit extubate the patient, who dies of respiratory failure. Again the question to be asked is, is there a morally significant difference between the first case and the second? Brock comes to the following conclusion:

> [i]n Case 1 the patient is allowed to die, in Case 2 he is killed, but it is hard to see why what is done in Case 2 is significantly different morally than what is done in Case 1. It must be other factors that make most killings worse than most allowings to die, and, if so, euthanasia cannot be wrong simply because it is killing instead of allowing to die.[253]

These other factors would include the view that individuals have a right to life or a right not to be killed and religious views about the sanctity of life.[254]

In the Irish context the act-omission distinction in itself may not be morally significant, rather what is of significance for those like Costello J. who put forward

[252] Ibid., p.212.

[253] Ibid.

[254] The different views on a right to life are explored in greater detail in Chapter One of this thesis, pp.7-42.

such an argument are exactly these other factors which Brock cites. Thus, for example, given the specific symbolic, cultural and legal significance given to the right to life in Ireland, it would not be fallacious to infer that in the context of treatment withdrawal the distinction is being used as a casuistical tool to prevent one from conflicting with the ideal of the sanctity of life. Thus, while on the face of it Costello J.'s argument may seem almost radical in the Irish context, it is nothing of the sort. Rather, it is a pseudo-liberalism which sits perfectly with the current constitutional paradigm. By stating that the withdrawal of treatment is less morally reprehensible than killing he manages to stay within the boundaries of the sanctity of life argument and the current constitutional framework. If Costello J. were to do otherwise he would leave the door wide open for the justification of active euthanasia, a far greater evil than mere treatment withdrawal under his model. Rather, this concession to patient autonomy is a mere strategic ploy, a battle lost in order to win the war for the sanctity of life.

If one then accepts the view that there is no morally significant difference between killing and letting die, that they are, in fact, both species of killing then one has to ask the entirely separate question, in what circumstances is killing justifiable? This allows one to look at the individual cases free of the haze of moral certitude. It also entails radically altering perceived

societal beliefs in relation to the concept of killing. This will require an adjustment to the traditional sanctity of life model, by moving to a less absolutist position on the right to life.

There are those who would argue against the stance taken by those like Rachels who attempt to disentangle the issue from the knots of casuistical sophistry. Daniel Callahan[255] believes that Rachels makes three errors in coming to his conclusion. Firstly, Callahan claims, killing and letting die are causally different. He restates here the argument that in the case of treatment withdrawal it is the disease and not the doctor which causes the patient's death.[256] In support of his argument, he cites the following example:

> '[l]etting die' is only physically possible if there is some underlying disease that will serve as the cause of death. Put me on a respirator now, when I am in good health, and nothing whatever will happen if it is turned off. I cannot be 'allowed' to die by having a respirator turned off if I have healthy lungs. It is wholly different, however, if a doctor gives me a muscle-relaxing injection that will paralyse my lungs... That is what it means to 'kill' someone as distinguished from 'letting' someone die.[257]

This is a little disingenuous of Callahan, to say the least. It avoids the real issue. Callahan claims that in the second case: "[n]othing but the action of the doctor giving the lethal injection is necessary to bring about the

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[255] Callahan, (1993, pp.77-83).

[256] Ibid., p.77.

[257] Ibid.

death".[258]

Thus, in all cases of treatment withdrawal, the doctor does not kill the patient, the disease does. What then of the case of a patient in a persistent vegetative state? Does the withdrawal of artificial feeding and hydration not lead to his death? There is no underlying fatal pathology in such cases. But for the withdrawal of the artificial feeding and hydration the patient would have lived for a further thirty years. Or is one then to state that in such a case it was not the withdrawal of the artificial support which caused the patient's death but starvation and dehydration: that, in effect, he died from natural causes. Callahan would view the withdrawal of artificial hydration and feeding in similar terms to the withdrawal of a respirator. He rationalises this claim in the following manner:

> [i]f an inability to take food and water by mouth is the ordinary concomitant of a terminal illness - as it has been since time immemorial - that should be understood as a symptom (not always certain, of course) of a terminal condition, one way the dying body shuts down its key systems. That circumstance was never, until recently, described as a patient's 'starving' to death, which connotes a violent, painful death. The cause of death was understood to be the underlying disease, and the inability to take nourishment by mouth a symptomatic way the deadly disease manifested itself. Indeed, the inability to take food and water itself helped to induce the final, usually gentle, coma. It led to a peaceful, not a violent, death.[259]

Callahan blames the thinking which associates letting

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[258] Ibid.

[259] Ibid., p.81.

nature take its course with culpability on what he terms 'technological monism' which he defines as follows: "the compulsion to use technology out of a fear that failure to use it makes us responsible for the ensuing death".[260] This is hardly the case. The point is rather that objectively one can label an act of withdrawing life support on the one hand and an act of injecting a consenting patient with an overdose of painkillers on the other hand as acts of killing which are justifiable. The very fact that the act is called a killing should not automatically lead to a conclusion that the actor is morally and legally culpable. As Brock has written in adverting to this point:

> many physicians and others use the concept of killing as a normative concept to refer to unjustified actions causing death. In this view, killing may occur in medicine accidentally or negligently, but physicians do not knowingly and deliberately kill their patients. Yet, of course, physicians do stop life support... and believe, quite rightly, that they can be justified in doing so... It is a mistake to suppose that all killing must be unjustified, either morally or in the law. Killing in self-defense is an example outside of medicine, and stopping life-support appears to be one within medicine.[261]

Secondly, Callahan argues that Rachels makes the mistake of assuming that the intention in letting die is the same as in killing. He claims that:

> [s]ince death is biologically inevitable sooner or later, not a consequence of our actions but outside of them, we can hardly be said to 'intend' death when we admit we can no longer stop it. Since mortality is our fate, biologically given, at some point treatment must no longer work to keep us alive... That a doctor

[260] Ibid., p.83.

[261] Brock, (1993, p.164).

> may keep a patient going for another day or so, but thinks that it is pointless to prolong the process, does not amount to 'intending' death either. The only intention is to stop a pointless action, and, put positively, to affirm the ultimate power of nature, over which we have limited control. Doctors treat patients in the first place because they want to help them, to make them well again. They ordinarily stop treating them when nothing more of value can be done, not because they want or intend them to be dead.[262]

This argument appears to combine elements of the doctrine of double effect and the ordinary and extraordinary treatment distinction. Firstly, Callahan claims that the only intention is to stop a pointless action. However in stopping this pointless action does not the doctor also set in train a chain of events which ultimately lead to the patient's death? But for the doctor's action, the patient would not have died in such a manner and at such a point in time. Callahan also claims that doctors cease to treat patients when nothing more of value can be done. This argument could be equated with the distinction often drawn between ordinary and extraordinary treatment. This distinction has its origins in Roman Catholic teaching where such a distinction was:

> used to mark the difference between obligatory and non-obligatory care - ordinary care being obligatory for the patient to accept and others to provide, and extraordinary care being optional.[263]

However, as the President's Commission concluded:

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[262] Callahan, (1993, pp.78-79).

[263] President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, (1983, p.82).

> [d]espite its long history of frequent use, the distinction between ordinary and extraordinary treatments has now become so confused that its continued use in the formulation of public policy is no longer desirable. Although those who share a common understanding of its meaning may still find it helpful in counselling situations, the Commission believes that it is better for those involved in the difficult task of establishing policies and guidelines in the area of treatment decisions to avoid employing these phrases.[264]

Thirdly, Callahan claims that Rachels is incorrect in thinking that the method by which a doctor brings about a patient's death is not in itself important. Again Callahan argues along similar lines pointing out the killing and letting die distinction and the particular normative significance of such terms in the medical context. He believes that such a shift in thinking:

> erases the long-established moral rule against killing by doctors, and also introduces a new justification for killing, that of relieving suffering. Even if one agrees with such a change, can it really be characterized as 'not in itself important'? Nothing less than the meaning and goals of medicine is at stake.[265]

This appears to be a reiteration of his previous points. He then goes on to further justify his argument by stating that doctors who withdraw life-support from the terminally ill do not literally kill the patient. Rather what has happened in such a case, according to Callahan, is that we have placed a moral overlay over the natural process of dying which has confused the natural process of death with our moral conception of death. Thus, it is possible to

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[264] Ibid., pp.88-89.

[265] Callahan, (1993, p.79).

state that a doctor killed a patient:

> by his negligent failure to put a suffocating patient on a respirator in a timely fashion. But this way of speaking reflects a moral convention superimposed upon nature, a function of the fact that a moral rule has been developed over time that would hold doctors responsible for certain omissions on their part, those that we judge to be wrongful omissions. As long as we understand that it is the created moral rule about a physician's obligations, not some judgment on the natural state of affairs, that leads us to speak as if it is the doctor's omission that 'kills' the patient, there is no problem. We go wrong, however, when we think that the physician literally caused the death. The death results from the underlying disease, which is the only reason, the doctor's omission would make any difference in the outcome. It is only our historically created, humanly devised moral rule about the moral responsibility of physicians that allows us to speak of a doctor's 'killing' a patient.[266]

Later in his book,[267] one discovers the reason for Callahan's need to emphasise that treatment withdrawal is not killing per se.

Like others who have tried to underline the difference between acts and omissions in the context of medical treatment, he goes on to argue against active euthanasia and physician-assisted suicide. He differentiates between the natural process of dying in the case of treatment withdrawal, that is, the patient dies from the underlying disease, and the physician induced death in cases of active euthanasia.

He then coins the phrase 'technological monism' to give strength to his argument. This phrase is used to

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[266] Ibid., p.82.

[267] Ibid., pp.91-112.

convey an idea of technology taking over the role of nature. Thus, he argues, technology becomes the new regulator of life and death. That we have come to believe that the withdrawal of this technological support is the cause of death and not the underlying disease. He can then claim:

> [t]he ultimate evil of death lies in its manifestation of our human limits and finitude. It is a mistake to think that such finitude is fought by an embrace of medical progress and the forestalling of death. The enlistment of that progress in an unlimited struggle against death from disease is a basic error. If it is of our nature as biological creatures to die, one manifestation of our finitude... then it is foolish to think death can be overcome by medical science. It is even more misguided to believe that we do honour to life, or express our distaste for the phenomenon of death, by always seeing death as the enemy. It is an enemy, but not the enemy. The enemy is our finitude, our ultimately unrequited longing for more than we have. We resist death because it stands as a consummate nasty symbol, and the great wrenching finale, of a life that is endlessly marked by limits, boundaries, fences, and contradictions.[268]

Callahan in arguing in this fashion tries to shift the locus of the debate from the concept of individual self-determination to the idea of a human fixation with mastery of nature. The question thus focuses not primarily on the rights of the patient but on the more general battle which humanity is waging against mortality. This allows him when addressing the issue of active euthanasia to argue that this is in fact killing according to his model, and should not be condoned. Callahan believes that:

> we should as a society reject, and decisively so,

[268] Ibid., pp.84-85.

> euthanasia and assisted suicide. If a death marked by pain or suffering is a nasty death, a natural biological evil of a supreme kind, euthanasia and assisted suicide are wrong and harmful responses to that evil. To kill another person directly - in the name of mercy and that person's self-determination (as I will define 'euthanasia' here) or to assist another to commit suicide (logically little different from euthanasia) would add still another to a society already burdened with man-made evils.[269]

This formulation is not too far removed from the more traditional arguments in favour of the act-omission distinction in the area of euthanasia. However this form of argumentation does little to resolve the dilemma in practical terms. It merely maintains the status quo.

By adopting the formulation advanced by commentators such as Rachels, we actually confront the problem rather than slide across it on a thin layer of casuistry. One can then accept that both treatment withdrawal and more active means of hastening death are not morally separable, that they are both acts of killing. However we can then progress to the next plane of argument and state that even though these acts may be classified as killing they are not necessarily without justification. We do not have to proceed to place a moral overlay on such acts and condemn them as absolutely evil and beyond the pale of human behaviour.

Thus Costello J.'s argument is not as clear-cut as it would appear at first glance. His analysis of the right to die while moving towards a situation where the patient is treated as an autonomous agent is not, however, an ideal

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[269] Ibid., p.103.

solution. The individual patient may only exercise his right to die in limited circumstances, that is, only when no active measures are used to hasten the patient's death. This is arguably not a right to die in the true sense of the word but a conditional right to die. One cannot choose the manner of one's death without restriction. This type of argumentation is loaded with contradiction. One has a right to die but only if there is no 'active' intervention by a third party or assistance from a third party which could constitute aiding, abetting, counselling or procuring a suicide. If one is in constant pain and has the lack of good fortune not to be on an artificial respirator then one cannot choose to hasten one's end. Thus, self-determination in this instance is only to be afforded to those who cannot exercise it, whereas those who can, may not, due to their wishes interfering with the 'natural order' of things.

A Legislative Solution.

Rather than wait for the Supreme Court to be faced with resolving this question, while many patients are prevented from exercising their right to self-determination in the intervening period, the government could decide to take some responsibility in this field and introduce a programme of legislation which would put the concept of treatment withdrawal on a statutory footing. As demonstrated above, this approach has been taken by many other common law jurisdictions without the fabric of

society being irreparably damaged.

The first step would be to introduce legislation which would allow for the making of advance directives. This would allow those who are now competent to create a testamentary document which would set out their wishes in relation to medical treatment should they ever enter a state of incapacity.

The principal problem with this method is that those who now lack legal capacity such as the mentally incompetent and minors will be unable to avail of this instrument. However, given legal conceptions of rationality and competence this problem is likely to remain.[270] On the positive side, such an initiative would at last give legal recognition to individual autonomy in this area of medical treatment, thus bringing it into line with the consent model as is understood in the case of the conscious adult and medical treatment. This, it could be argued, is merely an extension of the general right to refuse medical treatment to the area of treatment at the end of life.

The patient's wishes could still be ascertained through the medium of the advance directive. An important

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[270] See, Law Commission, The, (1995, paragraph 5.18), where it is stated that:

> [t]here would be little point in our recommending that an anticipatory refusal of treatment can be made by persons under the age of eighteen since it is now settled if controversial law that the court in exercise of its statutory and/or inherent jurisdiction (and possibly also any person who has parental responsibility) may overrule the refusal of a minor, competent or not, to accept medical treatment.

contribution to the debate on the introduction of legislation in this regard has been the Report of the English Law Commission[271] discussed above.

The Law Commission proposed a number of key legislative initiatives in this Report in relation to the question of anticipatory decision-making. As part of a wider remit which addressed the treatment of the mentally incapacitated in all areas of law, the Law Commission recommended that the law in relation to advance directives be put on a statutory footing.

It is submitted that the Irish legislature should take a similar approach to the one outlined by the Law Commission in this area of medical practice.

As our legislative canon is quite heavily influenced by English legislative conventions, this would not be a radical departure in procedural terms. The recommendations are based on a similar common law tradition and such legislation would not prove difficult to weave into our current statutory framework. What could prove to be a difficulty would be the traditional Irish antipathy to pioneering social legislation which aims to afford greater protection to individual autonomy over cultural conventions. One need only look to the current stalemate over proposed legislation in another field of medical controversy - pregnancy termination to satisfy oneself that

[271] See, Law Commission, The, (1995, paragraphs 5.1-5.39).

this would indeed be the case.[272]

In addition it is submitted that the Irish Medical Council should take note of the recent initiative undertaken by the British Medical Association in producing a Code of Practice in relation to advance statements about health care, and perhaps establish a steering group on the lines of the British Medical Association to study the issue and to produce professional guidelines on advance directives. This on its own is of little value, however, if Parliament does not act by introducing legislation which would give legal validity to the concept of the advance directive.

A complementary form of legislation which could also be introduced is the idea of a health care enduring power of attorney. This could be an adaptation of the American or Australian models already discussed, or perhaps it could be based on the model suggested by the Law Commission.[273]

In Ireland the law in relation to powers of attorney has changed little since it was put on a statutory footing in the nineteenth century. It is to be found in Part XI of the Conveyancing Act 1881 and sections 8 and 9 of the Conveyancing Act 1882.

The principal obstacle to the legal recognition of a health care power of attorney in the case of a patient who, for example, enters a permanent state of unconsciousness is

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[272] See the discussion in Chapter Three of this thesis, pp.212-242.

[273] Law Commission, The, (1995, paragraphs 7.1-7.63).

that the power of attorney as currently conceived in Ireland ends on the donor's becoming mentally incapacitated. Moreover, such a power extends to matters of property only and does not take within its ambit issues such as health care decisions. The Irish government has not yet seen fit to amend the existing legislation to take account of these shortcomings. In England and Wales, the Conveyancing Act 1881 and the Conveyancing Act 1882 have been replaced by the Powers of Attorney Act 1971 and the Enduring Powers of Attorney Act 1985. The Enduring Powers of Attorney Act 1985 Act was innovatory in that it amended the traditional concept of the power of attorney by creating a new form of power of attorney which as the title suggests endures after the donor becomes mentally incapacitated. The continuing power of attorney as proposed by the Law Commission[274] would allow areas of an individual's life other than property and affairs to become the subject of a power of attorney. Thus, it is theoretically possible to introduce legislation in relation to anticipatory health care decisions by way of amendment to, or replacement of, existing legislation.

4.8 Postscript.

The recent High Court decision in the case of Re C (Ward of Court)[275] has demonstrated that there indeed

[274] Ibid.

[275] High Court, Unreported, 5 May 1995, Lynch J..

exists a right to refuse life-sustaining medical treatment in Ireland. In this case C was a severely brain-damaged woman. She was in a condition which Lynch J. described as "nearly, but not quite, what in modern times has become known as persistent or permanent vegetative state".[276] C is unable to communicate. She has minimal capacity to recognise nursing staff and to react to strangers by showing signs of distress. She is able to follow people with her eyes in a reflex manner. C's family was of the opinion that it was in her 'best interests' that she be allowed to die naturally. Accordingly, the family applied to the High Court for an order directing artificial nutrition and hydration to cease. The institution in which C resided objected to such an order, claiming that it was contrary to its ethical code.

Lynch J. was of the opinion that in the case of an incompetent, incurably ill patient, the health care provider in question, may, subject to the acquiesence of the next-of-kin, lawfully withdraw life-sustaining medical treatment or refrain from providing such treatment. In this case the health care providers objected to this withdrawal of treatment. Lynch J. held that in such a case the test to be applied is whether it is in the 'best interests' of the patient that her life should be prolonged by artificial means. Lynch J. also took into account what would be the patient's own wishes if she could be granted a momentary lucid period, a rather unhelpful entry into the twilight

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[276] Ibid., p.2.

zone of 'substituted judgement'. The judge concluded that the courts in such cases should "approach the matter from the standpoint of a prudent, good and loving parent in deciding what course should be adopted".[277] On this basis Lynch J. ordered the discontinuance of artificial nutrition and hydration in the instant case. The decision is currently under appeal to the Supreme Court.

[277] Ibid., p.25.

CHAPTER FIVE: ACTIVE INTERVENTION TO END LIFE I: ACTIVE EUTHANASIA.

> And when Man bursts his mortal bounds,
> is not the Boundless revealed that moment?[1]

5.0 Introduction.

The medical professional is generally perceived as playing the role of life preserver, in effect, the nemesis of death, the villain of the piece.

However, in one aspect of medical practice, the care of the dying or incurably ill patient, the roles tend to be reversed and the medical practitioner becomes the pariah, seemingly abandoning his Hippocratic responsibilities and siding with vengeful death.

Thus, the doctor who departs from the Hippocratic injunction: "[t]o please no one will I prescribe a deadly drug, nor give advice which may cause his death",[2] would seem to be departing from a fundamental tenet of the medical profession.

However, as in most medical dilemmas, the situation is not as easily resolved as this. One must look to the reasons which prompt a doctor to take such a course of action and to the wishes of the patient involved if he is competent or in the case of the incompetent patient, the wishes of the next-of-kin or the previously expressed

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[1] Tagore, (1989, p.220).

[2] See, Mason and McCall-Smith, (1991, Appendix A, p.439).

wishes of the patient when he was in a competent state.

Central to this issue is the way in which death and life are perceived in a given society, the perception of the role of the doctor in society and the value given to the autonomy of the individual.

These values tend to be reflected in the approach of both the legislature and the judiciary to the question of allowing or inducing the death of a patient. Thus, the way in which this dilemma is resolved or not will be looked at in the context of a number of different societies in order to demonstrate the influence of attitudes and values on legislative and judicial policy in this area.

5.1 Defining the Problem.

Active euthanasia occurs when a doctor carries out a positive act which results in the death of a patient. This may take the form of the doctor administering a lethal injection to the patient. This act may be carried out at the request of the patient, in which case it is termed voluntary active euthanasia. Alternatively, the patient may not be capable of consenting to his death, in which case such medical intervention is termed non-voluntary active euthanasia. Passive euthanasia comprises of omitting to perform a life-saving medical procedure or withdrawing medical treatment which is preserving the patient's life and forms the basis of Chapter Four.

5.2 The Current Legal Model.

Active euthanasia is not lawful in Ireland. Thus, a doctor who gives his patient a lethal dose of a drug with the intention of accelerating the patient's end would arguably be charged with murder. There have been no Irish cases specifically on this issue nor does there exist specific legislation on the point. However, Irish courts may look for guidance to the English precedents in this area. The intention of the doctor in this regard would appear to be of vital importance. Thus, in the case of R. v Adams,[3] Devlin J. stated the law as follows:

> [i]f the acts done intended to kill and did, in fact, kill, it did not matter if a life were cut short by weeks or months, it was just as much murder as if it were cut short by years.[4]

In that case, the defendant doctor was alleged to have treated an incurable patient with large doses of heroin and morphia. On the death of the patient, Dr. Adams was charged with her murder. Here the accused was acquitted as the intention required was not present. In his summing up to the jury, Devlin J. stated "[t]he doctor is entitled to relieve pain and suffering even if the measures he takes may incidentally shorten life".[5]

One may detect here an argument similar to that of the principle of double effect. This concept holds that an

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[3] [1957] Criminal Law Review 365.

[4] Ibid., p.375.

[5] Ibid.

action which is performed with the intention of doing good is permissible even though the goal may only be achieved by the occurrence of a coincident harmful act. Thus, in this context, the intention of a doctor may be to ease pain and not to kill. However, if death occurs it is merely incidental to the main purpose of the act. Peter Charleton, writing in the Irish context, also proffers this argument when he states that a doctor "will have no criminal liability if he acts without criminal negligence and without intent to kill or cause serious injuries".[6] He goes on to argue that a doctor who prescribes:

> a treatment to ease terminal suffering may realise that a risk of an earlier death is thereby created. His purpose is not to kill but to comfort his patient. That cannot be murder.[7]

The doctrine of double effect has its origins in Thomistic natural law philosophy and has been closely associated with Roman Catholic ethical theory.[8]

In the case of R. v Cox[9] the defendant was unable to avail of the double effect argument as it was his intention to cause the death of the patient in question. In that case, Dr. Cox had been treating the deceased, Mrs. Lillian Boyes, for some three years. She suffered from rheumatoid arthritis and was reported to have been in severe pain as her condition deteriorated. The accused prescribed

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[6] See, Charleton, (1992, p.23).

[7] Ibid.

[8] See in addition, Grisez, (1970, pp.64-96) and Mangan, (1949, pp.41-61).

[9] High Court, Unreported, 18 September 1992, Ognall J..

increasing doses of morphine-based drugs until the patient expressed her wish to die. As a result, Dr. Cox injected the patient with a lethal dose of potassium chloride which brought about her death. Dr. Cox was charged with attempted murder rather than murder. This, the prosecution claimed, was due to an inability to prove conclusively that the cause of death was the injection of potassium chloride, as the body had been promptly cremated. However, the prosecution may have been trying to avoid a repetition of the verdict in R.v Adams.

Dr. Cox was found guilty and given a suspended prison sentence of one year. Had Dr. Cox administered an analgesic cocktail, which has the secondary effect of hastening death, he might have escaped liability by arguing that his primary intention was to relieve pain. By using potassium chloride, which is a poison with no therapeutic qualities, he could not avail of the double effect argument.

In the case of R. v Lodwig,[10] the accused was cleared of murdering a patient when the prosecution offered no evidence. The patient was suffering from terminal pancreatic cancer and was in continuous pain. His death was imminent. The patient's family asked Dr. Lodwig to do something to relieve the pain. Dr. Lodwig injected the patient with a lethal dose of potassium chloride and lignocaine. Dr. Lodwig claimed that it was his intention to kill the pain and not the patient, stating that the

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[10] (1990) Medico-Legal Journal, Volume 58, Part 2, p.116.

combination of drugs which he used had been the subject of experiments conducted at St. Bartholemew's Hospital, London. The object of these experiments had been to mix potassium chloride with painkillers to accelerate their analgesic effect.

From the foregoing, it would appear that if such a case came to be decided in Ireland a substantially similar approach would be taken. The only guidelines which are available to the doctor at present are extra-legal and these come in the form of the statement on euthanasia by the Medical Council which provides:

> [w]here death is imminent, it is the doctor's responsibility to take care that a patient dies with dignity and with as little suffering as possible. Euthanasia, which involves deliberately causing the death of a patient, is professional misconduct and is illegal in Ireland.[11]

5.3 An Alternative Approach: The Dutch Model.

The law governing active voluntary euthanasia in the Netherlands has recently been amended to allow doctors in clearly defined circumstances to act to end the life of a terminally ill patient without suffering the full rigour of the criminal law.[12] The new regulations provide that doctors who carry out active euthanasia after the patient has requested it or does so without the request of the patient, should report the fact to the local coroner, who

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[11] Medical Council, The, (1994, p.38).

[12] See, Fenigsen, (1993, pp.167-173).

in turn will inform the district attorney. The district attorney will not proceed further with the matter if it can be shown that the doctor acted within the guidelines laid down by the Justice Ministry protocols on the issue of euthanasia.[13]

The practice of active voluntary euthanasia is not thereby legalized but the legislation, in effect, gives explicit legislative recognition to such a practice. This change in policy came about as a result of a growing debate on the topic of euthanasia within both medical and legal circles in the previous two decades. The importance of this debate was recognized when in 1990, the Dutch government established a committee under the chairmanship of Professor Remmelink, Procurator-General of the Dutch Supreme Court, which was to report in 1991.[14]

Background to the Dutch Euthanasia Debate.

Article 293 of the Dutch Penal Code 1891 provides that it shall be an offence to kill another at that other's request. This offence is punishable upon successful prosecution by imprisonment for a maximum period of twelve

[13] Regelen met Betrekking tot de Hulpverlening door een Geneeskudige die zich Beroept op Overmacht bij Levensbeeindiging op Uitdrukkelijk en Ernstig Verlangen van een Patient. [Rules Concerning Assistance Rendered by a Physician who pleads Higher Necessity when Terminating Life of a Patient upon his Explicit and Serious Request.], Tweede Kamer der Staten-Generaal, Vergaderjaar 1987-1988, numbers 1-2, 20 383, pp.1-3.

[14] See, Maas, van der, Delden, van and Pijnenborg, (1991).

years or by a fine. This particular criminal offence covers the act of active voluntary euthanasia. In addition, Article 294 of the Penal Code 1891 provides that any person who assists in the suicide of another shall be guilty of an offence and liable to up to three years' imprisonment or to a fine. Thus, the concept of physician-assisted suicide is, in theory, deemed to be a criminal offence.

However, in practice, a defence was afforded to those who were charged with such offences. In the 1984 Supreme Court decision in the case of Office of Public Prosecutions v Leendert,[15] a doctor, who had ended the life of a terminally ill, elderly patient, successfully pleaded the defence of necessity.[16] The Supreme Court judgment noted that the following considerations should be taken into account when deciding the guilt or otherwise of the accused in such cases:

> whether and to what extent according to professional medical judgment an increasing disfigurement of the patient's personality and/or further deterioration of her already unbearable suffering were to be expected; whether it could

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[15] Nederlandse Jurisprudentie (1985) No. 106, 451.

[16] The defence of necessity in Dutch law is to be found in Article 40 of the Penal Code 1891. This defence provides that a person who has committed an offence due to either necessity or irresistible compulsion shall not be liable for that offence. The defence takes either of two forms. The act may have been committed as a result of psychological compulsion or it may have been perpetrated as the result of an emergency where the accused breaks the law in the interests of what he considers to be a greater or higher good. In the case of Office of Public Prosecutions v Leendert, the latter form of the defence was accepted by the Supreme Court. In that case the doctor was of the opinion that a greater good would be served by terminating the patient's life, that is to say, ending her pain and suffering.

> be expected that soon she would no longer be able to die with dignity under circumstances worthy of a human being; whether there were still opportunities to alleviate her suffering.[17]

The Supreme Court referred the matter back to the Court of Appeal, requiring that the latter determine, on the facts of the instant case, whether the act of the accused in terminating the patient's life could be construed "from an objective medical perspective" as "an action justified in a situation of necessity."[18]

The Court of Appeal answered in the affirmative, and the accused was acquitted. The Court of Appeal did however alter slightly the terms of the question posed by the Supreme Court by replacing the word 'objective' with the word 'reasonable'.

The criterion thus used to determine whether the act fell within the scope of the necessity defence was whether it could be justified when measured against the standards of reasonable medical opinion.

The courts were enabled to give further guidance on the issue of active voluntary euthanasia soon after the decision in the case of Office of Public Prosecutions v Leendert. Keown[19] adverts to a case involving the prosecution of a doctor, who terminated the life of an elderly neighbour who suffered from chronic multiple sclerosis, after receiving many requests from the latter to

[17] Nederlandse Jurisprudentie (1985) No. 106, 451, p.453.

[18] Ibid.

[19] Keown, (1992, p.55).

so do, the Supreme Court ruled that the lower courts had failed to consider a number of defences in convicting the accused. These defences were: first, that the doctor had acted as a result of the extreme distress of the patient, and, secondly, that as a result of witnessing this distress and suffering on the part of the patient, the doctor herself found that she was under duress and could not act in a manner which differed from the manner in which she had acted.

The Supreme Court referred to this state of affairs as acting out of psychological necessity. The case was referred back to the Court of Appeal for further determination of the issues. The Court of Appeal in this case convicted the doctor. Perhaps the reasons for this decision may be seen in the factual differences in this case. Firstly, the victim in this case was not actually a patient of the accused. This brought the relationship outside the realm of the normal doctor-patient relationship. Secondly, the accused acted independently, without seeking further medical opinion.[20]

In the recent case of Office of Public Prosecutions v Chabot,[21] Dr. Chabot had assisted in the suicide of a healthy and competent woman who had expressed her wish to die since the tragic deaths of her two sons.

The offence under article 294 of the Penal Code 1891 covered this act of physician-assisted suicide. However,

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[20] See further, Leenen, (1989, pp.517-526).

[21] Nederlandse Jurisprudentie (1994) No. 656, 3142.

the Supreme Court was satisfied, that the accused had, in so acting, followed the guidelines laid down by the Royal Dutch Medical Association.

The Supreme Court was of the opinion that Dr. Chabot had established that his patient was competent to decide, was suffering unbearably, and had a voluntary, considered and long-standing wish to die.

In addition, it was adduced that he had consulted fellow practitioners about the case and had also advised his patient of other options that were open to her.

However, the Supreme Court did not accept that Doctor Chabot had acted in an emergency and was thus not afforded a defence under article 40 of the Penal Code 1891, and the accused was as a result found guilty. This was due to the fact that the practitioners whom the accused consulted did not see and examine the patient. Notwithstanding the fact that the accused was found guilty, the Supreme Court declined to punish him, due to the personality of the accused, as well as the circumstances in which the act took place.

It is now clear, following the decision of the Supreme Court, that, in addition to physical suffering, psychological suffering may form the basis of a patient's request to terminate his life. In addition, the Supreme Court has made it clear that those requesting euthanasia do not necessarily have to be suffering from a terminal illness and that doctors who give second opinions in such cases must first examine the patient in question.

The Impact of Medical Opinion and Practice on the Euthanasia Debate.

This judicial recognition of the practice of euthanasia echoed the custom of the medical profession itself in relation to the issue of active euthanasia. The Royal Dutch Medical Association had in the decade prior to the judicial pronouncements on the issue articulated a stance on the issue, stating that while the offence enunciated in the Penal Code 1891 should remain operative, there should be some form of defence or immunity from prosecution for the doctor who ended the life of an incurable patient on the latter's request.[22]

As a result of the judicial developments in this field, the Royal Dutch Medical Association established firm guidelines on the issue.[23] The Guidelines for Euthanasia set out the criteria required to be fulfilled so that a doctor may be afforded a defence having euthanized a patient.

Firstly, the request to have one's life terminated must come freely and voluntarily from the patient. Secondly, the request must come from a patient who has based such request solely on a fully informed knowledge of his condition and that such a request is based solely on the wish to end the suffering caused to the patient by that condition and not on peripheral issues such as being a

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[22] See, Keown, (1992, pp.57-61).

[23] Royal Dutch Medical Association, The, (1988, pp.429-431).

burden on one's family. Thirdly, the decision to die must not be based on a temporary whim or depression but must be a continuing wish on his part. Fourthly, the patient must experience his suffering as persistent, unbearable and hopeless. Fifthly, the doctor must consult with other medical practitioners before terminating a patient's life.

The procedures for reporting cases of active voluntary euthanasia were set out in a protocol issued by the Justice Ministry in 1990.[24] Under the protocol, medical practitioners were obliged to inform the coroner of all cases of active voluntary euthanasia. In addition procedures for the conduct of investigations into such deaths were outlined. The protocol directed that prosecutors on receipt of the coroner's report should instigate a police investigation only if they were satisfied in the light of the facts of the case, that the required guidelines had not been followed.

Thus, the crime of killing another at that other's request remains on the statute books, but those doctors who adhere to the procedures to be followed in the case of medical euthanasia shall be afforded a defence against prosecution.

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[24] Regelen met Betrekking tot de Hulpverlening door een Geneeskudige die zich Beroept op Overmacht bij Levensbeeindiging op Uitdrukkelijk en Ernstig Verlangen van een Patient. [Rules Concerning Assistance Rendered by a Physician who pleads Higher Necessity when Terminating Life of a Patient upon his Explicit and Serious Request.], Tweede Kamer der Staten-Generaal, Vergaderjaar 1987-1988, numbers 1-2, 20 383, pp.1-3.

5.4 Active Euthanasia and the Slippery Slope.

Opponents of the Dutch model have based their opposition on arguments of the slippery slope variety.[25] In the context of active euthanasia, the advocates of this form of argumentation would hold that by allowing active euthanasia based on the patient's consent today, in the future more invidious forms of the practice may be allowed.

Thus, for example, the practice of involuntary active euthanasia may in the future gain societal acceptance as a result of the practice of active euthanasia <u>per se</u> being accepted in medical and legal codes. The following is a typical application of the slippery slope argument to the issue of active euthanasia:

> [h]owever well any legislation is hedged about with guidelines and protections against abuse, the slippery slope predicts an inevitable extension of these practices to other, more vulnerable, groups, such as those who are demented, mentally ill, chronically disabled, frail, dependent and elderly - and perhaps even simply unhappy.[26]

The argument is also referred to as the wedge argument. The English writer Francis Cornford articulated the wedge principle in the following terms:

> you should not act justly now for fear of raising expectations that you act still more justly in the future - expectations which you are afraid you will not have the courage to satisfy. A little reflection will make it evident that the wedge argument implies the admission that the persons who use it cannot prove that the action

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[25] See for example, Fenigsen, (1993, pp.167-173) and Ogilvie and Potts, (1994, pp.492-493).

[26] Ogilvie and Potts, (1994, p.493).

> is not just. If they could, that would be the sole and sufficient reason for not doing it, and this argument would be superfluous.[27]

In the judicial context the principle has been articulated in the form of the maxim _obsta principis_.[28] An oft-cited example is that of its use in the judgment of the United States Supreme Court in the case of _Boyd v United States_[29] wherein Bradley J. stated, in the context of a search and seizure case, that:

> it may be that it is the obnoxious thing in its mildest and least repulsive form; but illegitimate and unconstitutional practices get their first footing in that way, namely, by silent approaches and slight deviations from legal modes of procedure... [The court's] motto should be _obsta principis_.[30]

The classic articulation of the slippery slope argument in the context of euthanasia is to be found in the writings of the American legal academic, Professor Yale Kamisar.[31] Kamisar[32] has argued against the introduction of laws permitting euthanasia.

He raises two main objections to the introduction of legalized euthanasia.

The first is based on the wedge argument. He is of the opinion that the legalization of voluntary euthanasia would

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[27] Cornford, (1966, p.23).

[28] See further, LaFave, (1986, pp.291-310).

[29] 116 U.S. 616 (1886).

[30] Ibid., p.635.

[31] See, Kamisar, (1958, pp.969-998) and Kamisar, (1991, pp.1203-1242).

[32] See, Kamisar, (1958, pp.969-998).

lead ineluctably to the legalization of involuntary euthanasia. This is based on the premise that it is not possible to draw a rational distinction between those patients who wish to die because they are a burden to themselves and those who are euthanized because they are a burden to others.[33]

Kamisar's second objection to the legal recognition of euthanasia is the possibility of abuse or mistake. He believes that various pressures may be brought to bear on the patient by either family members or members of the medical team in whose charge the patient is, which would raise a doubt as to the validity of the patient's consent to the procedure. The interests of the patient may, as a result, be overlooked.[34]

In addition to the potential for abuse, the potential is also there for mistake on the part of the medical practitioner. Thus, for example, a doctor may incorrectly diagnose a patient as being terminally ill. Kamisar, as a result, finds that the risk of such abuses and mistakes outweighs the competing claim of that group in society who wish to terminate their lives through euthanasia. He believes that because the class of persons who require euthanasia is so numerically insignificant that its desires should not overshadow the enormity of the potential hazards of this practice.

These arguments were countered by Glanville Williams

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[33] Ibid., p.987.

[34] Ibid., p.997.

in a 1958 article.[35] In reply to Kamisar's objection based on the wedge argument, Williams states that it would be possible for courts to establish guidelines that struck a balance between, on the one hand, the autonomy of the patient who wished to die, and, on the other, the need to prevent abuse of the kind Kamisar feared. In an earlier book, Williams outlined in detail his views on the issue of euthanasia.[36] It was this original argument which prompted Kamisar's article on euthanasia. Williams, in his book, believed that:

> it is good that men should feel a horror of taking human life, but in rational judgment the quality of the life must be considered. The absolute interdiction of suicide and euthanasia involves the impossible assertion that every life, no matter what its quality or circumstances, is worth living and obligatory to be lived. This assertion of the value of mere existence, in the absence of all activities that give meaning to life, and in face of the disintegration of personality that so often follows from prolonged agony, will not stand scrutiny. On any rationally acceptable philosophy there is no ethical value in living any sort of life: the only life that is worth living is the good life.[37]

The focus is thus placed on the needs of the individual patient and his circumstances rather than on the more general approach of anti-euthanasia theorists who view life per se as a good in itself without regard to the quality of that life. Indeed, Glanville Williams proceeded to propose his own solution to this dilemma in the form of

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[35] See, Williams, (1958b, pp.1-15).

[36] Williams, (1958a, pp.277-312).

[37] Ibid., pp.281-282.

the following points of principle:

> 1. [f]or the avoidance of doubt, it is hereby declared that it shall be lawful for a physician whose patient is seriously ill -
> (a) to administer to the patient drugs lawfully made and sold for the purpose of keeping patients insensitive to pain or of inducing sleep or unconsciousness, and to increase the doses of such drugs to the extent necessary to compensate for the establishment of the patient's tolerance thereof; and
> (b) to refrain from taking steps to prolong the patient's life by medical means;
> Provided that the defence given by this section shall not apply if it is not proved that the act was not done, or the omission was not made, in good faith for the purpose of saving the patient from severe pain in an illness believed to be of an incurable and fatal character.
> 2. It shall be lawful for a physician, after consultation with another physician, to accelerate by any merciful means the death of a patient who is seriously ill, unless it is proved that the act was not done in good faith with the consent of the patient and for the purpose of saving him from severe pain in an illness believed to be of an incurable and fatal character.
>
> There should be included a section defining 'physician' as any person licensed (or registered) for the practice of medicine in the state concerned.[38]

This model statute which Williams freely adapted from an original draft proposed by the Humanitarian Society of Connecticut, allows for the acceptance of patient autonomy over the competing and more generalized interest in the sanctity of life. This would allow a patient to exercise his choice to die in such circumstances without the interposition of the criminal law between him and his dying wish.

However, a question which must be asked in the Irish context is even if it were to be accepted by the

[38] Ibid., p.308.

legislature or the judiciary that a right to die either in statutory or constitutional law existed would it be exercisable, given the conservative ethos of the medical profession? Even if certain hospitals allowed such procedures to take place what of the patient who through no fault of his own finds himself in a hospital which is governed by the ethical principles of the Roman Catholic church? Is such a patient to be deprived of such a right merely through force of circumstances? That this is a sensitive issue in the Irish context is already obvious from the decision of Lynch J. in Re C (Ward of Court).[39] In making an order to permit the ward to be transferred to another institution for the purpose of treatment withdrawal, is Lynch J. not drawing attention to the serious legislative *lacuna* which now exists in a state which guarantees medical treatment for all citizens, but is silent as to treatment withdrawal?

[39] High Court, Unreported, 5 May 1995, Lynch J..

CHAPTER SIX: ACTIVE INTERVENTION TO END LIFE II: SUICIDE AND ASSISTED SUICIDE.

> 'But the worst of all', Mr. Power said, 'is the man who takes his own life'. Martin Cunningham drew out his watch briskly, coughed and put it back.
> 'The greatest disgrace to have in the family', Mr. Power added.
> 'Temporary insanity, of course', Martin Cunningham said decisively.
> 'We must take a charitable view of it'.
> 'They say a man who does it is a coward', Mr. Daedalus said.
> 'It is not for us to judge', Martin Cunningham said.[1]

6.0 Introduction.

This passage from Joyce encapsulates the traditionally ambivalent attitude to suicide in Ireland. The suicide is seen as either a coward who has abdicated all responsibility, or as someone who is no longer responsible for his actions, through insanity, and is to be pitied rather than scorned.

The societal attitude to suicide in Ireland today continues to reflect, to a large degree this former state of affairs. The individual actor must be either mad or a coward. Rarely is it accepted that the suicide may have acted for reasons other than moral cowardice or insanity, but as the result of a rational choice, as an exercise in free-will.

These societal attitudes have been reflected in legislation and social policy in this area, and in many

[1] Joyce, (1986, p.79).

instances persist to the present day, despite the decriminalization of suicide per se.

Indeed, not only in Ireland can one witness this schizophrenic approach to the topic of suicide. The problem of suicide is a universal one. The issue of suicide has long provoked controversy, between on the one hand, those who uphold the concept of the sanctity of life and those who, on the other hand, see suicide as the ultimate expression of individual freedom. As will be demonstrated later in the chapter, the attitude in relation to the topic of suicide per se is reflected in a marked reluctance on the part of policy actors to adopt proposals on the issue of physician-assisted suicide.

6.1 Suicide in Ethical Theory.

The question of suicide has been the source of moral debate since earliest times. References to the practice of suicide can be traced to biblical times. However, the moral question attached to the act of suicide does not appear to have been broached by the biblical writers.[2] In Greece the

[2] Alvarez, (1971, pp.45-46), points out:

> [t]here are four suicides recorded in the Old Testament - Samson, Saul, Abimelech and Achitophel - and none of them earns adverse comment. In fact they are scarcely commented on at all. In the New Testament, the suicide of even the greatest criminal, Judas Iscariot, is recorded as blankly; instead of being added to his crimes, it seems a measure of his repentance. Only much later did the theologians reverse the implicit judgment of Saint Matthew and suggest that

philosophical discussion of the act of suicide tended towards the rejection of suicide. This conclusion was based on the idea that life was in the hands of the gods and it was for them to take it and not for mere mortals to usurp their power. In the Phaedo,[3] Plato spoke of man as being the property of the gods. Just as man is angered at the theft of his property, so are the gods angered at the theft of the life of a mortal, their property.[4]

Aristotle used a modified version of this argument, stating that suicide was an offence against the state, in that it deprived it of an economically useful citizen and left a moral taint in its wake.[5]

Plato, however, allowed for a number of exceptions to the prohibition on suicide. These included the onset of a painful illness.

In Athens, suicide was by no means ruled out in practice. Indeed, the practice was legitimated in the political structure of the time. As Alvarez reports, each would-be suicide was first obliged to plead his case before the senate. The principles were stated in the following terms by Libanius:

> [w]hoever no longer wishes to live shall state his reasons to the Senate, and after having received permission shall abandon life. If your existence is hateful to you, die; if you are

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Judas was more damned by his suicide than by his betrayal of Christ.

[3] See, Plato, (1975).

[4] See further, Alvarez, (1971, p.52).

[5] Ibid.

> overwhelmed by fate, drink the hemlock. If you are bowed with grief, abandon life. Let the unhappy man recount his misfortune, let the magistrate supply him with the remedy, and his wretchedness will come to an end.[6]

The issue of suicide in Ancient Greece appears to be one of individual will rather than an overtly medicalized problem.

In Rome the issue was dealt with in a similar fashion. As Alvarez puts it:

> [t]he advanced Stoicism of the later Roman Empire was a further development of Plato; the argument was essentially the same but now the circumstances were internalized. When the inner compulsion became intolerable the question was no longer whether or not one should kill oneself, but how to do so with the greatest dignity, bravery and style.[7]

This practicality was mirrored in the attitude of Roman Law to suicide. In certain instances, suicide was not viewed as a crime. Thus, the suicide of a private citizen was not deemed to be a crime if it came about as the result of "impatience of pain or sickness, or by another cause... [or by]... weariness of life... lunacy, or fear of dishonour".[8] There were, however, exceptions to this general rule. Thus if the suicide in question was a slave or soldier, then the act was deemed to be contrary to law. This exception was justified by the fact that such individuals were the property of their masters and by the act of suicide were depriving these masters of their property.[9] In addition, if

[6] Quoted by Alvarez, (1971, pp.53-54).

[7] Ibid., p.54.

[8] Silving, (1957, p.80).

[9] Ibid.

there was no apparent cause for the act of suicide then the act was deemed illegal because a person who would not value his own life without due cause would much less value the lives of others.[10] Moreover, if suicide was committed to escape trial for a crime then punishment would ensue, but as Silving points out "in this instance the sanction was imposed upon that crime rather than upon the suicide".[11]

In the early medieval period the institutional Church introduced a prohibition on suicide, a stance which diverged from the neutral position of the earlier biblical writers. In 452 A.D. the Church introduced this diktat at the Council of Arles. The rationale for such prohibition was given in the following terms: "whoever kills himself, thereby killing an innocent person, commits homicide".[12]

At the Council of Toledo in 693 A.D. it was decreed that all life comes from God and only he can take it. Thus, all those who appropriated this title transgressed the Canon law and were to be punished by excommunication and by being denied a Christian burial.

Both Saint Augustine and Thomas Aquinas were unequivocal on the topic of suicide. Augustine based his argument against suicide firstly on the sixth commandment: "[t]hou shalt not kill". This was an absolute divine law

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[10] Ibid., p.81.

[11] Ibid., p.80. For an analysis of this aspect of Roman law see, Griffin, (1986a, pp.64-77) and Griffin, (1986b, pp.192-202).

[12] Cited by Silving, (1957, p.80).

which could not be transgressed.[13] Secondly, he adapted Plato's argument to the effect that life was the property of God and it was for him to decide when it ended. Thus, suicide was seen as a mortal sin against God.[14] In the philosophy of Thomas Aquinas, suicide was seen as a transgression of the natural law and could not be countenanced. It was a mortal sin against God, the ultimate source of life, and also against the principles of justice and charity.[15] Aquinas posits three principal reasons against the act of suicide:

> [f]irst, everything naturally loves itself, and it is for this reason that everything naturally seeks to keep itself in being and to resist hostile forces. So suicide runs counter to one's natural inclination, and also to that charity by which one ought to cherish oneself... Second, every part belongs to the whole in virtue of what it is. But every man is part of the community, so

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[13] Silving, (1957, pp.81-82), notes that it was this argument which influenced the attitude of common law to suicide:

> [u]p to this day, we do not know what crime suicide constituted, whether a crime sui generis or a particular instance of murder, the better view being that it was the latter. Another interesting feature of that crime is the manner in which it was formulated. In the case of all other offences, the common law defines the crime itself ('larceny is the felonious taking'; 'murder is the unlawful killing'). But in suicide, not the crime but the criminal is defined: 'felo de se is he who kills'. Obviously, as was Christian doctrine, so was the common law struggling with the dilemma of a crime in which the aggressor and the object of aggression are united in one person.

[14] See further, Augustine, (1972, pp.26-39).

[15] See, Aquinas, (1975, question 64, article 5, pp.31-37).

> that he belongs to the community in virtue of what he is. Suicide therefore involves damaging the community... Third, life is a gift made to man by God... Therefore a person who takes his own life sins against God.[16]

This view of suicide was to be challenged in David Hume's important essay on the topic.[17] Hume argues that the religious critique of suicide is inadequate. The essay opens in the following sceptical tone:

> [o]ne considerable advantage that arises from philosophy consists in the sovereign antidote which it affords to superstition and false religion. All other remedies against that pestilent distemper are vain, or at least uncertain. Plain good sense, and the practice of the world, which alone serve most purposes of life, are here found ineffectual.[18]

Hume proceeds to address the Thomistic critique of suicide.[19] Hume claims that even if one accepts the

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[16] Aquinas, (1975, question 64, article 5, p.33).

[17] See, Hume, (1965b, p.151). "On Suicide" was first published in English in 1777. For a fuller account of the historical circumstances surrounding the publication of the essay, see, MacDonald and Murphy, (1990, pp.160-164).

[18] Hume,. (1965b, p.151).

[19] It is to be noted that nowhere in his essay does Hume mention Aquinas. However, as has been observed by Beauchamp, (1976, pp.75-76):

> the arguments he attacks are recognizably [Thomistic]... My evidence that Hume's essay is a point by point response to Aquinas is entirely internal and uncomplicated: (1) Hume individually attacks the three arguments advanced by Aquinas and only those three arguments; and (2) no other historical source known to me uses these three and only these three arguments against suicide. For example, Augustine relies on arguments from the commandment 'Thou shalt not kill', from the fact that suicide removes the possibility of repentance, and from cowardice. Overlapping arguments are used by Locke and by Hume's clerical enemy, William

existence of a monotheistic deity, this, in itself, does not impose a duty not to take one's own life. He writes:

> [i]n order to govern the material world, the almighty Creator has established general and immutable laws, by which all bodies... are maintained in their proper sphere and function. To govern the animal world, he has endowed all living creatures with bodily and mental powers... by which they are impelled or regulated in that course of life to which they are destined. These two distinct principles of the material and animal world continually encroach upon each other, and mutually retard or forward each other's operation. The powers of men and of all other animals are restrained and directed by the nature and qualities of the surrounding bodies, and the modifications and actions of these bodies are incessantly altered by the operation of all animals.[20]

Hume advances the thesis that since whatever occurs in the world is determined by God, then if a human being commits suicide, this is God acting through that person. If one is to accept the view that God can do no wrong then that act of suicide cannot be wrong as it is ultimately determined by God. As Hume states:

> [t]he providence of the Deity appears not immediately in any operation, but governs everything by those general and immutable laws which have been established from the beginning of time. All events, in one sense, must be pronounced the action of the Almighty; they all proceed from those powers with which he has endowed his creatures.[21]

The Thomistic view that life belongs to God alone and it is for Him to take it is challenged by Hume in the

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Warburton - as well as by numerous other philosophical and theological figures. But only Aquinas uses the set of arguments attacked by Hume and only those arguments.

[20] Hume, (1965b, p.153).

[21] Ibid.

following terms:

> [s]hall we assert that the Almighty has reserved to himself... the disposal of the lives of men, and has not submitted that event, in common with others, to the general laws by which the universe is governed? This is plainly false: the lives of men depend upon the same laws as the lives of all other animals.[22]

Here Hume is stating that humans tend to die of natural causes which are distinct from the intervention of a divine power. As Beauchamp explains, Hume appears to be saying that:

> since persons die of natural causes - as in the cases of being poisoned or swept away by a flood - it is gratuitous to maintain that there is an additional, non-natural divine cause.[23]

Hume then proceeds to attack the contention that in committing suicide one is diverting the course of nature. He argues inter alia that:

> it would be equally criminal to act for the preservation of human life as for its destruction. If I turn aside a stone which is falling on my head, I alter the course of nature.[24]

In like vein, he states:

> [i]t would be no crime in me to divert the Nile or Danube from its course, were I able to effect such purposes. Where then is the crime of shedding a few ounces of blood from their natural channel?[25]

However, some commentators on Hume's essay are of the opinion that he is not entirely successful in demonstrating

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[22] Ibid., p.154.

[23] Beauchamp, (1976, p.77).

[24] Hume, (1965b, p.155).

[25] Ibid.

that suicide is not morally wrong. As MacDonald and Murphy state:

> [h]is arguments cannot be said to constitute a coherent defence of suicide. They are instead a series of answers to objections that were commonplace in the early eighteenth century.[26]

Yandell in his study on Hume's attitude to religion sums up the argument on suicide thus:

> [n]othing in Hume's essay has shown suicide not to be wrong. Nor are the only alternatives that suicide be always forbidden and suicide be sometimes a duty. Suppose that suicide is wrong unless one knows upon competent medical testimony confirmed by a second and independent opinion, that one's life is going to be short and what is left of it will be filled with agonizing pain too powerful to be much mitigated by drugs. It might then be that suicide was permissible but not obligatory. Hume's argument regarding suicide as a duty requires that only <u>being a duty to</u> and <u>being a duty not to</u> are possible moral situations, and <u>being permissible to</u> and <u>being permissible not to</u> is an impossible moral situation.[27]

Hume, however, does not lack supporters. Beauchamp after a thorough analysis of the essay concludes that Hume's argument, taken as an argument against Aquinas, is a valid one. However, Beauchamp notes that even though Aquinas offers:

> no conceptual analysis of the term 'suicide', it is not implausible to suppose that for him this and related concepts contain an irreducible moral component: an act qualifies as suicide only if it is an instance of unjustified killing where the agent deliberately aims at taking his own life. Hume, however, makes no similar conceptual

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[26] MacDonald and Murphy, (1990, p.161). For an analysis of the debate on suicide in the eighteenth century see, Crocker, (1952, pp.47-72). It would be far from fair to claim that Hume's argument is universally rejected. For a modern variant see, Brandt, (1975, pp.61-76).

[27] Yandell, (1990, p.293).

> assumption. Suicide for him is intentional killing of the self and may or may not be morally justified. Since their understandings of suicide differ, it might be argued that Hume and Aquinas have only a conceptual dispute, and not a moral one, because cases of justified self-killing for Hume are extensionally equivalent with cases of justified self-killing for Aquinas. It might be argued by a Thomist for example, that Hume's case of the pliable spy, and indeed all of his convincing cases of justified suicide involve persons who lay down their lives for the sake of others, in which case Aquinas would not regard the act as suicide, strictly speaking. Since the suicide's motive is other-regarding rather than self-regarding, and so does not aim at the taking of his own life, his act is morally acceptable. It therefore could not as a matter of logic be a case of suicide. If this is a correct interpretation... then Hume arguably does not refute him; rather Hume simply adopts a different (and stipulative) use of the term 'suicide'.[28]

In another sense, Hume was adding another dimension to the debate on suicide. As well as arguing against the Thomistic spiritual argument against suicide, he was also arguing against the criminality of the act.

As well as being invalid to view suicide as being morally wrong, it was also incorrect to condemn the act as being criminal. He was thus following in a tradition of Enlightenment writers who had encouraged a more secular debate on the topic.

Foremost amongst such writers were Montesquieu,[29] and Voltaire.[30] Indeed, as Seidler notes, the arguments of such writers influenced the official attitude towards suicide leading to its eventual decriminalization in 1790 by the

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[28] Beauchamp, (1976, p.91).

[29] Montesquieu, Baron de la Brede et de, (1973, Lettres 76 and 77, pp.191-193).

[30] Voltaire, (Arouet, F-M.), (1878, p.95).

French National Assembly.[31] As Silving[32] has noted, Napoleon's Penal Code 1810 makes no mention of suicide, consolidating the earlier resolution of the National Assembly.

This shift of the debate to a more rational and secular plane, did not lead to an overwhelming consensus in favour of suicide. One of the most important opponents of suicide was Immanuel Kant. Kant's argument was an adaptation and refinement of the earlier natural law arguments against suicide. As Seidler has observed:

> Kant transformed the weaker, more hypothetical natural law argumentation into a stronger individualism focusing on personal freedom and reason as the autonomous source of morality.[33]

In this model, the act of suicide is seen to be wrong because as Kant argued:

> it fails to respect the self-legislating moral subject who is the most valuable entity in the world, and whose individual conduct helps to constitute that very moral order within which ethical questions about suicide can initially be raised.[34]

Kant, in essence, believed that the individual had a duty to himself. This duty encompassed the duty not to take his own life. Kant[35] was of the view that:

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[31] See, Seidler, (1983, p.439, footnote 37). For a full account see, Crocker, (1952, pp.47-72).

[32] Silving, (1957, p.84).

[33] Seidler, (1983, p.443).

[34] Ibid.

[35] See, Kant, (1972, pp.91-92). See for further commentary, Ross, (1978, pp.10-28) and Wolff, (1986, pp.2-14).

> the man who contemplates suicide will ask 'Can my action be compatible with the idea of humanity as an end in itself?' If he does away with himself in order to escape from a painful situation, he is making use of a person merely as a means to maintain a tolerable state of affairs till the end of his life. But man is not a thing - not something to be used merely as a means: he must always in all his actions be regarded as an end in himself. Hence I cannot dispose of man in my person by maiming, spoiling, or killing.[36]

As a natural being, according to Kant, man's first duty is that of self-preservation. To commit suicide, therefore, is to eliminate the very condition for the existence of the self. It is, in effect, treating life as a means rather than an end in itself. Kant developed a form of morality which was apparently internal and at the same time universal. He saw autonomy or free-will as a major component of existence. If one kills oneself then one, by implication, is no longer able to exercise free-will. As Kant notes:

> [b]ut in taking his life he does not preserve his person; he disposes of his person... he robs himself of his person. This is contrary to the highest duty we have towards ourselves, for it annuls the condition of all other duties; it goes beyond the limits of the use of free-will, for this use is possible only through the existence of the subject.[37]

Feinberg refers to this form of autonomy thus:

> [w]e are enjoined by Kant to respect, not the deliberate choices of persons whatever they may be, but the 'humanity' in each person; not the voluntariness of decisions as such, but their 'rationality'; not a uniquely concrete being, but some abstraction within him; not a personal dignity, but the alien dignity of some extra-personal source. Kant's language implies that we

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[36] Kant, (1972, pp.91-92).

[37] Kant, (1930, p.149).

> must cherish and protect a person's choice, not because it is his, simply, but because of something within him, quite independent of his will, a kind of internal Vatican City not subject to his sovereign control.[38]

The practical implications of Kant's model of autonomy in the field of thanatology is that acts such as assisted suicide or active euthanasia would be ruled out as being antithetical to the Kantian model of autonomy. This argument could be employed independently of Thomistic natural law arguments against these practices.[39]

6.2 The Legal Formalization of Suicide.

The earliest references to suicide in the context of the common law are to be found in the writings of de Bracton in the thirteenth century.[40] As Silving points out, the influence of Roman law on the early common law approach to suicide was clear. She asserts that:

> the common law crime of suicide developed from the Roman rule providing for the punishment of suicide committed to avoid trial or conviction... punishment was originally imposed not upon the act of suicide itself but rather upon another capital crime to which the suicide was related. Since in both laws, a man accused of a capital crime would not forfeit his estate until judgment was rendered, an accused or convicted person could save his estate for his heirs by committing suicide. Hence the frequency of suicides in cases of conviction and the introduction into the law of a rebuttable presumption that suicide implies confession of the crime charged, carrying with

[38] Feinberg, (1986, p.94).

[39] For a critique of the Kantian model see, Feinberg, (1986, pp.94-97).

[40] See, Bracton, de, (1968, pp.423-424).

> it, - in the absence of rebuttal - confiscation of property.[41]

However, de Bracton did include an exemption from punishment in the case of those who were found to be non compos mentis.[42] He set out in the following terms the legal consequences of the act of suicide:

> [t]he land should never return to the lord, unless there has been a conviction of felony in some way or other, as if he be hung or outlawed, or has acknowledged the felony and has abjured the realm, and such like. But if he has died before a conviction of felony, in whatever manner, the inheritance shall descend to his heirs, unless it should happen, that conscious of his crime and afraid of being hanged or of some other punishment, he has slain himself, and the inheritance shall be an escheat of the lord's. But if he has through phrensy or impatience of grief or by misadventure, it shall be otherwise.[43]

Mikell, in his study of this aspect of the criminal law, has concluded that Bracton obtained more than a little help from Roman law.[44]

Indeed the only aspect of de Bracton's model which departed from the practice in Roman law was the holding that those who committed suicide through what he termed "weariness of life or impatience of sickness" would be subject to forfeiture of their goods. In Roman law this type of suicide escaped punishment. Later the law on suicide was widened to include within its scope the actual

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[41] Silving, (1957, p.81).

[42] See Bracton, de, (1968, pp.423-424).

[43] The above extract is to be found cited in Mikell, (1903, p.379).

[44] Ibid.

act of suicide rather than the crime which the suicide had tried to escape through killing himself.[45]

In addition to the forfeiture of property, another form of punishment was exacted on the body of the suicide. The body of the suicide was to be deprived of a Christian burial and was instead to be buried at a crossroads upon the order of the presiding coroner with a stake to be driven through his body.[46] This idea of punishing the cadaver of a suicide can be found even in ancient Greece. Thus, it was the practice in Athens to chop off the hand of a suicide, preferably the one with which he had committed

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[45] See further, Pollock and Maitland, (1968, p.488).

[46] Forbes, (1971, pp.164-165), cites the following extract from a coroner's inquest held in St. Botolph's Church in 1590, which includes the form of the burial of a suicide:

> she had cast a cord abowte a beam in her sayd chamber Fastninge it to the sayd beame and puttinge the same with slydinge knott abowte her neck as it appeared standinge upon a three Footed stoole which with one of her feete she had thrust from her and so hanged her selfe her feet standinge Bent upon the flower or borde of the sayd chamber and being fownde by the Jurie of Crowners quest that she Fallinge from god had hanged or murthered her selfe, Where opon Judgment was given... by the sayd crowner that she should be carried from her sayd house to cross way near the townes end and theare that should ha[ve a] stake dreven thorowgh her brest and so be buried with the stake to be seene for a memoryall that otheres goinge by seeinge the same myght take heede from comittinge the lyke faite. And the sayd Amy Stokes was so buried in the crossway Beyond sparrowes corner neare to the place wheare the owld cross ded stand the sayd vijth Day of September ano 1590 abowte the owere of viij or ix of the clocke at nyght she was abowte three skore yeares owld.

the act.

Under the Roman pontifical law of the Pontifex Maximus those who committed suicide by hanging were denied burial. Forbes has noted the origins of the burial of suicides at a crossroads as follows:

> [t]he early Teutonic tribes performed human sacrifices on altars that many times were built at crossroads. Often the victims were criminals; their remains were buried on the spot. From this grew the practice of public executions at crossroads and of the burial of the criminals and the equally abhorred suicides at the site... Such a triple branching or fork constituted the ancient Latin trivium, the three ways. Hecate, the mysterious goddess of darkness, terror and witchcraft, haunted graveyards and crossroads.[47]

MacDonald and Murphy point out that even though such punishments were available in theory, in practice the medieval coroner and the coroner's jury tended to be lax in their execution of these procedures. They claim that "juries very seldom returned verdicts of felo de se prior to 1500".[48]

They attribute this phenomenon, in large measure, to a sense of community solidarity and feeling, towards both the suicide and the suicide's family. Indeed, even on those rare occasions when a verdict of felo de se was returned:

> medieval juries seem often to have undervalued the goods of self-murderers, as they did those of other felons. Enforcement of the law was thus left largely in the hands of a local official and a jury of local men. However much they may have abhorred suicide itself, they usually preferred to acquit self-killers, rather than to deprive

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[47] Ibid., pp.167-168.

[48] MacDonald and Murphy, (1990, p.23).

their heirs, possibly impoverishing a family.[49]

However, the law and practice in relation to suicide was to become increasingly harsh. The problem of the lax coroner was to be rectified by the Coroners Act 1487. This statute provided for the holding of an inquest into every violent or suspicious death in the coroner's district. In addition, it provided a regulatory framework for the performance of the duties of coroner. This regulatory framework was consolidated by the Coroners Act 1509, whereby a regular procedure for the returning of inquisitions to the court of King's Bench and a recording of their verdicts was established. This legislative reform provided for the payment of the coroner. Moreover, the coroner was obliged to return copies of his inquests at the meetings of the assizes in his county. The clerk of the assize then returned them to the court of King's Bench for review. The court of King's Bench thus acted as a form of

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[49] Ibid. For further detailed analysis of this aspect of legal history see Hanawalt, (1979, pp.101-104) and Hunnisett, (1961, pp.1-20). It is also interesting to note that there was often a tension between the Crown and the local community in relation to the outcome of inquests into alleged suicides. The interest of the Crown was obviously in obtaining a verdict of felo de se as the property of the suicide would then go to the Crown on escheat. This conflicted with the interest of the community in preventing the impoverishment of the suicide's family. MacDonald and Murphy, (1990, p.22), note that:

> [r]oyal interest in felo de se deepened in the fourteenth century, when the Crown realized that it could yield windfalls that were an attractive kind of patronage. Richard II gave part of the property of a number of suicides to courtiers, and like other medieval monarchs he also granted away the rights to the goods of felons of themselves to noblemen and lesser landlords.

watchdog over the activities of the coroner.

The official into whose hands the chattels of the suicide were delivered was the king's almoner who was usually a cleric. The almoner in addition to recourse to the court of King's Bench was also enabled to sue in the court of Star Chamber.[50] This provided for a further monitoring of the activities of the coroner and as MacDonald and Murphy note, it:

> served as the ultimate deterrent to evasion and fraud, a blunderbuss the almoner could point in the direction of anyone bold enough or clever enough to defy King's Bench.[51]

The law continued to require that the suicide be buried in the public highway and that a stake be driven through his heart until 1823. By a law entitled An Act to Alter and Amend the Law Relating to the Internment of the Remains of any Person Found Felo de Se 1823, the suicide was no longer to be buried in such a manner, but it was to remain the case that a suicide was to be denied a Christian burial. The Burial Act 1880 and the Internments (Felo de Se) Act 1882 provided for the performance of a religious service at the burial of a suicide.[52]

Suicide, however, remained a crime until 1961 in England and Wales. By the Suicide Act 1961, the act of

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[50] It appears that he obtained this right to sue in the court of Star Chamber in or about 1540. See further, Guy, (1985) and MacDonald and Murphy, (1990, pp.25-26).

[51] Ibid., p.26.

[52] For a fuller account of the background to this reform see, Anderson, (1987, pp.263-311).

suicide was decriminalized.[53] Notwithstanding this reform, it continued to be a crime punishable by a maximum sentence of fourteen years imprisonment to aid, abet, counsel or procure the suicide of another.[54] It is this aspect of the modern law in relation to assisted suicide which prevents the practice of physician-assisted suicide.

6.3 Assisting Suicide.

In the case of Attorney-General v Able,[55] Woolf J. stated that it was not necessary to allege that the defendant had done any one of the four activities (aid, abet, counsel or procure). Rather, the words were to be "seen as a whole".[56] The case involved the distribution by the Voluntary Euthanasia Society of a booklet entitled A Guide to Self-deliverance. The booklet purported to overcome the fear of dying and to reduce the incidence of unsuccessful suicides. Methods of successfully committing suicide were set out in the booklet.

The Attorney-General, in making the application, believed that the distribution of such a booklet amounted to an offence under section 2(1) of the Suicide Act 1961. However, he did not wish to prosecute the members of the Voluntary Euthanasia Society's executive committee as he

[53] Section 1.

[54] Section 2(1).

[55] [1984] 1 All E.R. 277.

[56] Ibid., p.285.

believed them to be respectable persons who had issued the booklet out of genuine and strongly-held beliefs. Instead, he applied in civil proceedings for declarations that the future supply of the booklet to persons who were known to be, or were likely to be, considering or intending to commit suicide constituted the offence of aiding, abetting, counselling or procuring the suicide of another, contrary to section 2(1) of the Suicide Act 1961, if after reading the booklet such a person committed or attempted to commit suicide. In addition, the Attorney-General contended that it constituted an attempt to commit an offence under section 2(1) of the Suicide Act 1961, where a person with such inclinations, after reading the booklet, did not commit or attempt to commit suicide.

In his judgment, Woolf J. stated in relation to section 2(1) of the Suicide Act 1961, that to aid, abet, counsel or procure the suicide of another, or an attempt to commit suicide can be an offence even if the person concerned does not attempt to commit suicide.[57] In addition those who aid, abet, counsel or procure the suicide of another are to retain the liability of an accessory at or before the fact at common law.[58] Woolf J. summarized the issue for decision in the following terms:

> the issue can be confined to considering whether distributing the booklet to someone who commits suicide or attempts to commit suicide makes the distributor 'an accessory before the fact' to the

[57] Referring to the case of R v McShane (1977) 66 Cr. App. R. 97 and section 3 of the Criminal Attempts Act 1981.

[58] [1984] 1 All E.R. 277, p.285.

> suicide or attempted suicide, the position so far as the distributor is concerned being exactly the same as it would be if either suicide or attempted suicide was still a criminal offence.[59]

Having referred to the historical origins of the phrases aid, abet, counsel and procure,[60] Woolf J. came to the conclusion that in deciding whether or not an offence has been committed, it is preferable to consider 'aids, abets, counsels or procures' as a whole.[61] Woolf J. then proceeded to outline the test to be applied in such cases. Thus, to be regarded as an accessory before the fact, three criteria must be fulfilled.

The actions of the alleged accessory should indicate three things. First, that he knew that the act in question was contemplated. Second, that he assented to such act. Third, that his attitude in respect of the act encouraged the principal to perform or attempt to perform the act.[62] In applying this test to the instant case, Woolf J. found that the recipients fulfilled these criteria.

However, Woolf J. then added that if, for example, the person seeking the booklet did not specify to the distributor the purpose for which he required the booklet, so that it might be required for research or general information rather than to commit suicide, or where the booklet was unconnected to the person's subsequent suicide

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[59] Ibid.

[60] Ibid., and see further, Smith, (1991, pp.30-34).

[61] [1984] 1 All E.R. 277, p.285.

[62] Ibid.

or suicide attempt, because it may have occurred a long time after he received the booklet, the distributor would then lack the necessary intent to commit the offence under section 2(1) of the Suicide Act 1961. As a result the declaration sought by the Attorney-General was refused.

Authority on this issue is scant in Ireland. Given the fact that the wording of the equivalent section in the Irish Criminal Law (Suicide) Act 1993 is almost identical it would appear that a similar stance may be taken by Irish courts on the issue. Section 2(2) of the Criminal Law (Suicide) Act 1993 states that:

> [a] person who aids, abets, counsels or procures the suicide of another, or an attempt by another to commit suicide, shall be guilty of an offence and shall be liable on conviction on indictment to imprisonment for a term not exceeding fourteen years.

This wording almost mirrors that found in the English Suicide Act 1961 except that the English statute does not contain the words "shall be guilty of an offence and". Given this similarity, it would be logical to assume that the interpretation of the section by Irish courts would be similar to that of previous English decisions in this area. However, the area remains uncertain even in English law. In the absence of an authoritative statement of the law on this issue, uncertainty persists as to who may be successfully prosecuted, and in what circumstances. As K.J.M. Smith has remarked in commenting on the case of Attorney-General v Able[63]:

[63] [1984] 1 All E.R. 277.

> [w]hether sleeping dogs will be allowed to lie for any length of time before a prosecution is brought will turn partly on the Attorney-General's interpretation of Able and on the general social view of the activities of those who assist suicide. The underlying difficulty is that the potential range of motivation of such parties is, of course, almost infinite, running from the deeply humane and laudable to the avaricious and strongly repellent. In particular, it was concern over imaginable cases of impatiently rapacious heirs and manipulable relatives which was in good measure responsible for the continuation of criminal liability for complicity in another's suicide.[64]

Thus, the legislative solution to this dilemma both in Ireland and England was to view both the humane and repellent acts similarly. This is hardly an equitable solution. To treat, for example, a doctor who has aided a patient in the final stages of a terminal illness to commit suicide in the same manner as an avaricious relative is quite absurd. The most equitable solution is to introduce legislation which would allow doctors to comply with the wishes of seriously ill patients without being branded as criminals as a result. In recent years, such an approach has been mooted in a number of American states with varying degrees of success. These developments shall now be examined in order to provide a model for future Irish legislative intervention in this area of medical practice.

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[64] Smith, (1983, p.586).

6.4 Physician-Assisted Suicide.

Introduction.

To begin with, one must distinguish between the term physician-assisted suicide and the term active euthanasia. This is an important, if obvious, requirement, as the two distinct concepts are often fused.[65] In the case of physician-assisted suicide, the doctor furnishes the patient with the means to terminate his life but does not act positively to terminate that patient's life, for example, when he writes a prescription for a lethal dose of barbiturates, or, as in the case of Dr. Jack Kevorkian, when he sets up a suicide machine in a patient's home, leaving the patient to carry out the act of releasing the lethal gas fumes which will bring about his death. Rather, it is the patient who brings about his own death by purchasing those pills and ingesting them or by bringing about the emission of lethal gas. Active euthanasia

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[65] However, some commentators insist that there is essentially no difference between the two concepts. See for example, Fletcher, (1954, p.176), where he claims that it is not possible to separate the issue of active voluntary euthanasia from suicide and goes so far as to say that it is a form of suicide. Barrington, (1969, p.162), argues as follows "that voluntary euthanasia is in fact assisted suicide is no doubt clear to most people". Gillon, (1969, pp.173-174), claims that "voluntary euthanasia is in fact a form of suicide, involving the assistance of others". Rachels, (1986, pp.86-87), contends that:

> the permissibility of euthanasia follows from the permissibility of suicide - a result that probably will not surprise any thoughtful person.

involves the doctor in supplying the means of death and acting as the agent who brings about the patient's death, as for example in the case of a doctor who administers a lethal dose of a pain-killing injection to a patient who has given valid consent. Quill, Cassel and Meier have pointed out the more democratic nature of the former as a means of giving legal validity to a right to die:

> the balance of power between doctor and patient is more nearly equal in physician-assisted suicide than in euthanasia. The physician is counsellor and witness and makes the means available, but ultimately the patient must be the one to act or not. In voluntary euthanasia, the physician both provides the means and carries out the final act, with greatly amplified power over the patient and an increased risk of error, coercion or abuse.[66]

This approach neatly counters the twin pillars of the traditional anti-euthanasia argument, namely, the slippery slope and abuse arguments, and respects both the individual autonomy of the patient and the doctor's professional integrity. Perhaps it is this model which Irish legislators should consider when the hoary old issue of euthanasia comes on to the constitutional and policy agenda, which is ineluctable given both demographic and health policy trends. It is, therefore, appropriate to examine the varying legal models which would give legal effect to the act of physician-assisted suicide.

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[66] Quill, Cassel and Meier, (1994, pp.190-191).

Legislative Initiatives.

Washington and Initiative 119.

Washington is one of almost twenty-five American states which provide for the introduction of legislation by direct vote on an initiative petition. In 1991 the Hemlock Society put forward an initiative petition relating to physician-assisted suicide. Initiative 119, as it was called provided for what was termed 'physician aid in dying' by means of an amendment to Washington's Natural Death Act 1979.[67] The framers of the initiative defined the term 'physician aid in dying' as:

> a medical service, provided in person by a physician, that will end the life of a conscious and mentally competent qualified patient in a dignified, painless and humane manner, when requested voluntarily by the patient through a written directive.[68]

The difficulty with such wording was that it did not adequately distinguish between the practice of physician-assisted suicide and the practice of active euthanasia. The voters were, as a result, unsure of the exact nature of the practice for which they were voting, and were easily swayed by the hyperbole of anti-euthanasia campaigners. The initiative was defeated with fifty-four per cent of those who voted, voting against the initiative, and forty-six per cent voting for the initiative.

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[67] Revised Code of Washington Annotated sections 70.122.100 - .905 (1992).

[68] Quoted in Annas, (1994, p.1240).

As a result of this experience a pressure group, Compassion in Dying, which provides support and counselling for mentally competent, terminally ill adults considering suicide, initiated a legal challenge to Washington's law prohibiting physician-assisted suicide in the case of terminally ill persons.[69] This law provides that those who assist another to commit suicide shall be guilty of a felony. This offence is punishable by imprisonment for a maximum of five years and a fine of up to ten thousand dollars.

The pressure group was joined in the action by three terminally ill patients and four physicians who are involved in the care of the terminally ill. The three patients wanted to be enabled to obtain prescriptions for lethal doses of drugs from their doctors, arguing that they had a constitutionally protected interest guaranteed by the Fourteenth Amendment to the Constitution to commit suicide with the aid of a doctor. The physicians also alleged that the Fourteenth Amendment protects their right to practice medicine consistent with their best professional judgment, including the right to assist competent, terminally ill adult patients to hasten death, by prescribing suitable medication for self-administration by the patient. Compassion in Dying for their part, claimed that competent, terminally ill adults have the right to request assistance from its staff members, which would include both

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[69] Compassion in Dying v Washington 850 F.Supp. 1454 (D.C. Wash.) (1994).

counselling and the delivering or mixing of the drugs to be used.

Lawyers on behalf of the state argued that laws outlawing assisted suicide were required in order to protect vulnerable members of society who, through undue influence, may be persuaded to commit suicide. Moreover, the state argued, if the practice of physician-assisted suicide were to be legalized, those other than the terminally ill may be persuaded to avail of it, another variant on the slippery slope argument.

It was held by the Washington Federal District Court judge that the statute was unconstitutional, as it denied equal protection under the law to competent terminally ill patients who had no life-sustaining treatment to refuse. This was due to the provisions in Washington's Natural Death Act 1979 which allowed terminally ill patients to use advance directives to order the withholding or withdrawal of treatment in the case of terminal illness or in the case of their entering a state of permanent unconsciousness. This could be seen as treating different classes of persons in an unequal manner.

In speaking of the constitutionally protected liberty interest, Rothstein J. referred to previous Supreme Court jurisprudence on the issue. In particular, she referred to the case of Planned Parenthood v Casey.[70] In Planned Parenthood v Casey the liberty interest involved was a woman's right to choose abortion. Rothstein J., while

[70] 112 S.Ct 2791 (1992).

stating that the decision in Planned Parenthood v Casey was different in substance from the instant case, found the reasoning in that case to be of particular relevance. She stated that even though Planned Parenthood v Casey:

> involved a woman's right to choose abortion, and thus did not address the question of what liberty interest may inhere in a terminally ill person's choice to commit suicide... this court finds the reasoning in Casey highly instructive and almost prescriptive on the latter issue. Like the abortion decision, the decision of a terminally ill person to end his or her life 'involves the most intimate and personal choices a person may make in a lifetime' and constitutes a 'choice central to personal dignity and autonomy'.[71]

The judge then compared the issues of abortion and physician-assisted suicide in terms of the moral divisiveness engendered by both issues. She stressed the need to avoid imposing moral standards on such issues in the place of legal analysis. She cited the following passage from Planned Parenthood v Casey as a basis for her analysis of the issue:

> [o]ur obligation is to define the liberty of all, not to mandate our own moral code. The underlying constitutional issue is whether the [s]tate can resolve these philosophic questions in such a definitive way that a woman lacks all choice in the matter.[72]

In applying the reasoning in Planned Parenthood v Casey to the instant case, Rothstein J. was of the opinion that:

> the suffering of a terminally ill person cannot be deemed any less intimate or personal, or any less deserving of protection from unwarranted governmental interference, than that of a

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[71] Compassion in Dying v Washington 850 F.Supp. 1454 (D.C. Wash.) (1994), pp.1459-1460.

[72] Planned Parenthood v Casey 112 S.Ct. 2791 (1992), p.2806.

> pregnant woman, Thus, consonant with the reasoning in Casey, such an intimate personal decision falls within the realm of the liberties constitutionally protected under the Fourteenth Amendment.[73]

Rothstein J. also adverted to the Supreme Court decision in Cruzan v Director, Missouri Department of Health[74] in her judgment. Cruzan v Director, Missouri Department of Health was concerned with the related but distinct issue of refusal of life-sustaining medical treatment.[75] In Cruzan v Director, Missouri Department of Health the Supreme Court was of the opinion that a competent person has a constitutionally protected right to refuse artificial hydration and nutrition. Rothstein J. in the instant case was confident that:

> squarely faced with the issue, the Supreme Court would reaffirm Rehnquist J.'s tentative conclusion in Cruzan that a competent person has a protected liberty interest in refusing unwanted medical treatment, even when that treatment is life-sustaining and refusal or withdrawal of the treatment would mean certain death. The question then becomes whether a constitutional distinction can be drawn between refusal or withdrawal of medical treatment which results in death, and the situation in this case involving competent, terminally ill individuals who wish to hasten death by self-administering drugs prescribed by a physician.[76]

Rothstein J. was of the opinion that there was no appreciable difference between the liberty interest protected in both instances. She stated that the liberty

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[73] 850 F.Supp. 1454 (D.C. Wash.) (1994), p.1460.

[74] 110 S.Ct. 2841 (1990).

[75] For an analysis of this issue see Chapter Four of this thesis, pp.273-296.

[76] 850 F.Supp. 1454 (D.C. Wash.) (1994), p.1461.

interest protected by the Fourteenth Amendment:

> is the freedom to make choices according to one's individual conscience about those matters which are essential to personal autonomy and basic human dignity. There is no more profoundly personal decision, nor one which is closer to the heart of personal liberty, than the choice which a terminally ill person makes to end his or her suffering and hasten an inevitable death. From a constitutional perspective, the court does not believe that a distinction can be drawn between refusing life-sustaining medical treatment and physician-assisted suicide by an uncoerced, mentally competent, terminally ill adult.[77]

On the question of equal protection, Rothstein J. supported the plaintiffs' contention that the statute in question violated the Equal Protection Clause of the Fourteenth Amendment.

The Equal Protection Clause provides that all those who are similarly situated should be treated alike. When a state law is found to violate the constitutionally protected rights of certain individuals but not of others in a similar situation then such a law may be subjected to what is termed 'strict scrutiny' and will only be upheld if it can be demonstrated that such a state of affairs serves a compelling state interest.[78]

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[77] Ibid.

[78] The Fourteenth Amendment to the Constitution was ratified in 1868. The Equal Protection Clause is to be found in Section 1 of the Fourteenth Amendment. It provides that no state shall "deny to any person within its jurisdiction the equal protection of the laws".

The traditional test used by the courts in analyzing statutes which appeared to treat similarly situated groups differently was the so-called 'rational basis' test. This test was first articulated by the Supreme Court in the case of Gulf, C., and S.F.R. Co. v Ellis 165 U.S. 150 (1897). Under this test, it must be demonstrated that the purpose of the challenged discrimination is a legitimate state objective and that the means employed by the state are

In this case, the two similarly situated groups were, on the one hand, mentally competent, terminally ill adults whose condition involves the use of life-sustaining equipment and who may lawfully obtain medical assistance in terminating such treatment and, on the other hand, mentally competent, terminally ill adults whose treatment does not involve the use of life support systems and who are denied the opportunity of hastening death with medical assistance.

On the point of the unequal treatment afforded both groups, the judge recognized the governmental interest in preventing suicide as being a compelling state interest, but observed that both the Washington Natural Death Act 1979 and Washington case-law had created an exception for terminally ill patients and those in a permanent unconscious state wishing to terminate life support.[79]

Rothstein J. was thus of the view that the state had already recognized that its interest in preventing suicide did not require an absolute ban. She went on to state that:

> Washington law, by creating an exception for those patients on life support, yet not permitting competent, terminally ill adult patients such as plaintiffs the equivalent option of exercising their rights to hasten their deaths with medical assistance, creates a situation in

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rationally related to the achievement of its objective. The doctrine of 'strict scrutiny' later emerged in cases such as Hirabayashi v United States 320 U.S. 81 (1943) and Korematsu v United States 323 U.S. 214 (1944). This test holds that certain forms of discrimination are suspect and must be subjected to strict judicial scrutiny. Thus, the state must demonstrate that such statutes are necessary to the achievement of a compelling interest.

[79] See for example, In Re Guardianship of Bowman 617 P.2d 731 (1980); Re Grant 747 P.2d 445 (1987) and Re Hamlin 689 P.2d 1372 (1984).

> which the fundamental rights of one group are burdened while those of a similarly situated group are not. Therefore, this court finds that [the Washington statute forbidding assisted suicide] violates the equal protection guarantee of the Fourteenth Amendment.[80]

As regards the standard of review to be applied in the instant case, Rothstein J. was of the opinion that the standard laid down in Planned Parenthood v Casey should be applicable. In Planned Parenthood v Casey the Supreme Court held that, in order to demonstrate the unconstitutionality of a state statute, the plaintiffs had to show that it would operate as a substantial obstacle to the exercise of a constitutional right, and would, as a result, constitute an undue burden.[81] In applying this standard to the instant case, Rothstein J. first looked at the interests of the state in upholding the statute.

The interests were twofold. Firstly, the statute purported to further the interest of preventing suicide, and secondly, it purported to protect those at risk of suicide from undue influence from others who would aid them in that act. In answer to the first contention, it was held that:

> [t]he state's interest in preventing suicide by prohibiting any manner of assisted suicide in actuality arises out of its apprehension of the 'slippery slope' problem. The [s]tate is concerned that allowing any exception to a total ban will encourage the gradual development of a more permissive attitude toward suicide... However, that is not a sufficient excuse for precluding entirely the exercise of a constitutional right. The court has no doubt that

[80] 850 F.Supp. 1454 (D.C. Wash.) (1994), pp.1466-1467.

[81] 112 S.Ct. 2791 (1992), p.2830.

> the legislature can devise regulations which will define the appropriate boundaries of physician-assisted suicide for terminally ill individuals, and at the same time give due recognition to the important public policy concerns regarding the prevention of suicide.[82]

In relation to the state's contention pertaining to undue influence and duress in assisted suicide cases, it was held that:

> it is undisputed that plaintiffs in this case are mentally competent individuals who have reached a decision to commit physician-assisted suicide free of any undue influence. Thus, the plaintiffs and others who make knowing and voluntary choices to commit physician-assisted suicide by definition fall outside the realm of the [s]tate's concern.[83]

Moreover, the judge observed that Washington law already permitted an individual to refuse life-sustaining treatment, in the event of terminal illness or entering a state of permanent unconsciousness. In those cases, the judge pointed out, the potential risk of abuse was also present. Rothstein J. concluded that it would be possible for the legislature to:

> devise regulations which would set up a mechanism for ensuring that people who decide to commit physician-assisted suicide are not acting pursuant to abuse, coercion or undue influence from third parties.[84]

The decision of the Washington Federal District Court is currently under appeal.

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[82] 850 F.Supp. 1454 (D.C. Wash.) (1994), p.1465.

[83] Ibid.

[84] Ibid., p.1466.

<u>California and Proposition 161.</u>

In 1992, the group Californians against Human Suffering sponsored an initiative measure known as Proposition 161. This proposed statute included a clearer definition of the term 'aid-in-dying' which encompassed both active euthanasia and physician-assisted suicide. The term was defined as referring to:

> a medical procedure that will terminate the life of the qualified patient in a painless, humane, and dignified manner whether administered by the physician at the patient's choice or direction or whether the physician provides means to the patient for self-administration.[85]

The term 'qualified patient' is defined in the initiative statute as:

> a mentally competent adult patient who has voluntarily executed a currently valid revocable Directive as defined in this section, who has been diagnosed and certified in writing by two physicians to be afflicted with a terminal condition, and who has requested an enduring request for aid-in-dying. One of said physicians shall be the attending physician as defined in subdivision (a). Both physicians shall have personally examined the patient.[86]

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[85] <u>California Proposition 161: Physician-Assisted Death - Terminal Condition - Initiative Statute</u> 1992 section 2525.2 (k).

[86] Ibid., section 2525.2 (h). The valid revocable Directive referred to in subsection (h) is defined in section 2525.2 (b) as:

> a revocable written document voluntarily executed by the declarant in accordance with the requirements of section 2525.3 in substantially the form set forth in section 2525.24.

Section 2525.3 sets out the safeguards in relation to the making of the Directive as follows:

This initiative statute applied only to terminally ill patients who, in the opinion of two certifying physicians exercising reasonable medical judgment, had six months or less to live.[87] Moreover, patients in skilled nursing facilities were given additional protection from abuse of the statute because as the initiative statute stated:

> some patients in skilled nursing facilities may be so insulated from a voluntary decision-making role, by virtue of the custodial nature of their care, as to require special assurance that they are capable of willingly and voluntarily executing a Directive.[88]

It was therefore stipulated in the initiative statute that

> [t]he Directive shall be signed by the declarant and witnessed by two adults who at the time of witnessing, meet the following requirements:
> (a) [a]re not related to the declarant by blood or marriage, or adoption;
> (b) [a]re not entitled to any portion of the estate of the declarant upon his or her death under any will of the declarant or codicil thereto then existing, or, at the time of the Directive, by operation of law then existing;
> (c) [h]ave no creditor's claim against the declarant, or anticipate making such claim against any portion of the estate of the declarant upon his or her death;
> (d) [a]re not the attending physician, an employee of the attending physician, a health care provider, or an employee of a health care provider;
> (e) [a]re not the operator of a community care facility or an employee of a community care facility.

The term 'attending physician' as referred to in subdivision (h) is defined in subdivision (a) as:

> the physician selected by, or assigned to, the patient who has primary responsibility for the treatment and care of the patient.

[87] Section 2525.2 (h) and (k).

[88] Section 2525.4.

a Directive executed by such a patient would be deemed invalid unless one of the witnesses to the Directive was a Patient Advocate or Ombudsman appointed by the Department of Aging.

A further safeguard built into the statute was the requirement that hospitals and other health care providers keep records of the number of such 'aid-in-dying' cases and report them on an annual basis to the State Department of Health Services.[89]

Moreover, those health care professionals who acted in accordance with the provisions of the 'aid-in-dying' statute were to be immune from civil, criminal and administrative liability.[90] Section 2525.8 provided that no physician or health care professional would be required to participate in administering 'aid-in-dying' if he was opposed to the practice on religious, ethical or moral grounds. Similarly, this section provided that privately owned hospitals would not be required to administer 'aid-in dying', if the ethos of such an institution precluded it on moral, religious or ethical grounds from so doing.

Despite the various safeguards and limitations included in the initiative statute, the Californian electorate rejected it by a vote of fifty-four per cent to forty-six per cent.

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[89] Section 2525.21.

[90] Section 2525.9.

Oregon and Ballot Measure 16.

In November 1994, the voters of the state of Oregon came to decide on a death with dignity initiative statute, Ballot Measure 16.[91] This initiative was less ambiguously worded than either the Washington or California proposals. The Oregon measure stated clearly that it was only the practice of physician-assisted suicide which would be legalized if voted for by the electorate. The aim of the statute was phrased in the following terms:

> [a]n adult who is capable, is a resident of Oregon, and has been determined by the attending physician and consulting physician to be suffering from a terminal disease, and has voluntarily expressed his or her wish to die, may make a written request for medication for the purpose of ending his or her life in a humane and dignified manner in accordance with this act.[92]

For the procedure to be valid the statute requires that the patient make two oral requests to terminate his or her life. The second request must come no less than fifteen days after the first. Only then can the required written request by the patient for a drug prescription be accepted. The actual prescription may not be furnished less than forty-eight hours after the written request.

The familiar safeguards are also present in this statute. Thus, the request must be signed in the presence of two independent witnesses. The patient must be referred to a psychiatrist or psychologist if a psychiatric or

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[91] Ballot Measure 16: Death with Dignity Act - Initiative Statute 1994.

[92] Cited in Annas, (1994, p.1241).

psychological disorder is suspected. In addition, records of each case must be maintained by the health care provider, and such records are to be examined annually by the Health Division of the state of Oregon.

A pre-emptive strike was made against this proposed statute in the form of a court challenge to the wording of the initiative measure in the case of Kane v Kulongoski.[93] The court rejected the challenge to the wording of the initiative statute, allowing the referendum on the issue to proceed. On this occasion, the death with dignity lobby was successful. The Oregon electorate voted in favour of the measure by a margin of fifty-three per cent to forty-seven per cent. Ballot Measure 16 was due to become law on 8 December 1994, but the constitutionality of this statute has been challenged in the courts. This challenge is pending.

Physician-Assisted Suicide in Michigan.

The peculiar history of physician-assisted suicide in the state of Michigan is dominated by one particular character, Dr. Jack Kevorkian. Pessimists among us who believe that individuals cannot influence legal policy to any material degree need look no further than the case of Dr. Kevorkian to be confounded.

It was Dr. Kevorkian's belief that the laws of Michigan contained no restrictions on the practice of

[93] 318 Ore. 593 (1994).

assisted suicide which led him to undertake his 'medicide' campaign.[94] Kevorkian's belief was grounded in his interpretation of two Michigan court decisions dating from 1920 and 1983 respectively.

In the first case, People v Roberts,[95] the defendant was accused of murder for killing his terminally ill wife. His wife suffered from multiple sclerosis and was unable to live a rewarding life. As a result, she asked her husband to aid her in hastening her death. He did this by preparing a drink, which contained an arsenic based poison called Paris green. He then placed the drink within reach of his wife and she drank it of her own accord. At trial, the defendant pleaded guilty to murder and was sentenced to life imprisonment.

However, Roberts subsequently appealed, on the basis that, since suicide was not considered to be a crime in Michigan, there could be no crime of being an accessory before the fact to suicide. On appeal, the Supreme Court of the state of Michigan held that if there is no crime of suicide then there can be no crime of being an accessory to suicide. However, this did not aid the appellant in this particular case, as he had been charged with murder, to which he had pleaded guilty, and not with being an accessory to suicide. As a result, Roberts was unsuccessful in his appeal. The Michigan Supreme Court was satisfied that the facts of the case supported a finding of guilty of

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[94] See, Kevorkian, (1991, pp.1-10).

[95] 178 N.W. 690 (1920).

murder by poison.

The second case on which Kevorkian based his argument was that of People v Campbell.[96] Campbell was charged with murder in connection with the suicide of Kevin Basnaw. On the night of his suicide Basnaw had been drinking with the defendant. Basnaw talked about committing suicide but said that he did not have a gun, whereupon the defendant offered to sell him one. Two weeks prior to this meeting, the defendant had discovered his wife and Basnaw in flagrante delicto, which must have driven a wedge between their friendship, and perhaps contributed to Basnaw's state of mind. At the end of the night's drinking, the men drove to the home of the parents of the defendant in order to collect a gun. After doing so, the defendant drove Basnaw home. The following morning Basnaw was found dead with an apparently self-inflicted bullet wound to the head. The prosecution relied on the decision in People v Roberts to support a charge of murder in the first degree against the defendant. The Michigan Court of Appeals held that the instant case could not be distinguished from People v Roberts but that People v Roberts was no longer good law. The Court of Appeals found that the term suicide excludes, by definition, a homicide and that in this case the defendant did not kill another person.

The defendant's indictment on the murder charge was as a result dismissed. The Court of Appeals went on to invite the Michigan legislature to pass a statute against the type

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[96] 335 N.W.2d 27 (Mich. App. 1983).

of conduct which was the basis of this case.

Kevorkian first employed his 'suicide machine' in the case of Janet Adkins in June 1990. The 'suicide machine' consists of three bottles which are connected to an intravenous line. When the line is connected to the first bottle, it delivers a saline solution. The patient who desires to hasten his death pushes a button which releases the contents of the second bottle, the sedative thiopental. This, in turn, leads to the third bottle, filled with potassium chloride, being activated automatically at a later point, by means of a timer, eventually resulting in the patient's death.

After the death of Janet Adkins, Kevorkian was charged with her murder. In the subsequent trial, the judge ruled, relying on the previous decision in People v Campbell, that Janet Adkins had caused her own death, and that, in fact, there was no specific piece of legislation in Michigan which criminalized assisted suicide.[97] In 1991 a permanent injunction was issued against the use of the 'suicide machine'. This was soon to be followed by the revocation of Kevorkian's licence to practise medicine in both Michigan and California. This, however, did not force Kevorkian to cease to assist in the suicides of the terminally ill.

Kevorkian continued to assist those patients who requested his particular service. However, his modus operandi changed. Instead of relying on his by now infamous

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[97] For further commentary on this case see, Annas, (1991, pp.33-35).

'suicide machine', he turned to the use of carbon monoxide gas. Under this method, Kevorkian connects the supply of the gas to the patient by means of a gas mask. It is the patient who initiates the flow of the gas.

As a result of Kevorkian's activities, the Michigan legislature introduced legislation which had as its objects the establishment of a state-wide Commission on Death and Dying, and the creation of a new crime of criminal assistance to suicide.[98] The Act defined as felonious the act of an individual who:

> (a) [p]rovides the physical means by which the other person attempts or commits suicide.
> (b) Participates in a physical act by which the other person attempts or commits suicide.[99]

The Commission on Death and Dying was made up of twenty-two members who were nominated by twenty-two separate interest groups ranging from the Hemlock Society, through medical bodies to right to life groups. The Commission was given a period of fifteen months in which to produce legislative recommendations in relation to the question of assisted suicide. The criminal sanctions contained in the Act were temporary in nature and would be automatically repealed six months after the Commission on Death and Dying made its recommendations to the Michigan legislature. Ironically, when the Commission reported in May 1994, it recommended, by a majority of nine votes to seven, that Michigan should legalize physician-assisted

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[98] Act of 25 February 1993, Public Act 3 of 1993, Michigan Compiled Laws section 752.1027 (1993).

[99] Ibid., section 7.

suicide. The Commission included certain criteria for such legislation. Those eligible must be eighteen years of age or over, and suffer from a terminal condition likely to cause death within six months. Moreover, the patient should be in a state of "subjectively unbearable and unacceptable suffering". In addition, before the assisted suicide can take place the individual must be examined by an independent panel made up of a medical practitioner, a psychiatrist, a pain specialist, a psychologist and a social worker.[100]

On 10 May 1994, the Michigan Court of Appeals gave its ruling on the constitutionality of the Michigan statute on physician-assisted suicide.[101] This decision came at the end of the consolidated appeals in three separate cases. The first case was an appeal in relation to a previous decision of Wayne County Court in a suit brought by the American Civil Liberties Union on behalf of two terminally ill patients.[102] The lower court had ruled that the statute was unconstitutional, in that it violated Article 4 of the Constitution of the State of Michigan 1963. The second case related to a previous ruling of the Wayne County Court in

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[100] See, Horton, (1994, p.1153).

[101] Hobbins v Attorney-General and Michigan Catholic Conference, Wayne County Prosecutor, Michigan Right to Life and Certain Members of Michigan Legislature, Amici Curiae 518 N.W.2d 487 (1994).

[102] Hobbins v Attorney General and Michigan Catholic Conference, Wayne County Prosecutor, Michigan Right to Life and Certain Members of Michigan Legislature, Amici Curiae No.93-306-178 CZ (Michigan Circuit Court, Wayne County) (1993).

December 1993 in which Kaufman J. held that a ban on assisted suicide is over-broad, because, in some instances, a person has a constitutional right to commit suicide.[103] This litigation related to one of Dr. Kevorkian's cases of assisted suicide. As a result, in this case the charge of assisted suicide against Kevorkian was dismissed.

The third appeal related to the order of an Oakland County Circuit Court judge of January 1994 to the effect that the criminal provision contained in the Michigan assisted suicide statute was unconstitutional for violating Article 4 of the Constitution of the State of Michigan 1963, thus allowing for the dismissal of the charges against Kevorkian in that case also.[104]

In the first and third cases, the plaintiffs contended that the Michigan assisted suicide statute was unconstitutional as being in violation of Article 4 of the Constitution of the State of Michigan 1963. Article 4 states that "[n]o law shall embrace more than one object, which shall be expressed in its title".

The origins of the assisted suicide statute lay in House Bill number 4501 which was first introduced on 7 March, 1991. The objective of this Bill was to create a statute to establish a Commission on Death and Dying.[105]

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[103] People v Kevorkian No. 93-11482 (Michigan Circuit Court, Wayne County) (1993).

[104] People v Kevorkian No. 94-172399 (Michigan Circuit Court, Oakland County) (1994).

[105] The Bill had the following title:

A Bill to create the Michigan Commission on

At the time of its introduction, two separate bills were pending before the House Judiciary Committee.

These bills, Senate Bill number 32 and House Bill number 4038, related to the amendment of Michigan law to prohibit the practice of assisting suicide. The provisions of House Bill number 4501 were amended after the second reading to include the substance of Senate Bill number 32 in relation to the criminalizing of the practice of assisted suicide.

It was this amended Bill which was to become the Michigan statute on assisted suicide. Thus, the Act as it stood appeared to contain two distinct objectives which on the face of it violated the Constitution of the State of Michigan 1963. The Michigan Court of Appeals agreed that this indeed was the case, stating that:

> [t]he one-object provision may not be circumvented by creating a title that includes different legislative objects. We find, therefore, that [the statute] as enacted has two distinct objects that, although encompassing the same 'subject',are not germane to each other, are directed toward different purposes and, when grouped together in one act, offend the constitutional one-object provision.[106]

The Court of Appeals also addressed the argument raised by counsel for Ms. Hobbins, that the Michigan assisted suicide legislation interfered with a constitutional liberty interest protected by the Due

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Death and Dying; to prescribe its membership, powers, and duties; and to provide for the development of legislative recommendations concerning certain issues related to death and dying.

[106] 518 N.W.2d 487 (1994), p.491.

Process Clause of the Fourteenth Amendment to the United States Constitution.[107] The assertion on the part of Ms. Hobbins was that the protection of the Constitution extended to a right to commit suicide. However, in reviewing the constitutional jurisprudence on the issue of individual liberty, the Court of Appeals could find no support for this contention.[108] The majority opinion, delivered by Fitzgerald J., viewed the issue in the following terms:

> [t]he scope of rights encompassed by the concept of ordered liberty does not include the right to commit suicide, much less the right to assisted suicide. The 'guarantee of personal privacy' has been extended to activities relating to marriage, procreation, contraception, family relationships, and child rearing and education. Judicial discovery of a right to terminate one's life is not a logical extension of this catalogue of rights. Liberty and justice will not cease to exist if a right to suicide is not recognized.[109]

However, the dissenting judgment of Shelton J. in this appeal provides another possible interpretation of the liberty interests protected by the Constitution. In his analysis of the constitutional jurisprudence on the issue, Shelton J. came to quite a different conclusion. He concentrated on the anomaly whereby courts have found it constitutionally permissible to refrain from accepting

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[107] The Due Process clause provides "nor shall any State deprive any person of life, liberty or property, without due process of law".

[108] See, Cruzan v Director, Missouri Department of Health 110 S.Ct. 2841 (1990); Planned Parenthood v Casey 112 S.Ct. 2791 (1992) and Roe v Wade 410 U.S. 113, 93 S.Ct. 705, 35 L.Ed.2d 147 (1973).

[109] 518 N.W.2d 487 (1994), p.493.

life-sustaining medical treatment, but not to take positive steps to end one's life:

> [i]f a terminally ill person can lawfully end her life by disconnecting a life-sustaining machine (Cruzan), why cannot she end that same life by connecting a life-ending machine? If a healthy woman can lawfully terminate a healthy foetus (Roe, Casey), does not that same woman who is later terminally and painfully ill have a right to terminate her own life? Does that state have a right to totally prevent a terminally ill person from ending her life by charging the doctor who assists her with a felony punishable by four years' imprisonment, or even with murder? If a doctor... can lawfully end a patient's life by disconnecting a life-sustaining machine (Cruzan), why cannot a doctor do the same by connecting a life-ending machine? If a healthy woman has a right to have a doctor assist (and indeed can only use a doctor to assist) to lawfully terminate a healthy foetus (Roe, Casey), does not that same woman who is later terminally and painfully ill have a right to have a doctor assist to terminate her own life?[110]

Shelton J. noted the similar conclusion arrived at in the case of Compassion in Dying v Washington[111] where the Washington Federal District Court recognized a constitutionally protected right to die in cases of assisted suicide. Moreover, Shelton J. queried the majority's use of the Cruzan v Director, Missouri Department of Health[112] decision to draw a distinction between the active and passive nature of the assistance which makes one intervention lawful and another not. He relied on a passage from Scalia J.'s concurrence in Cruzan v Director, Missouri Department of Health which referred to

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[110] Ibid., p.499.

[111] 850 F.Supp. 1454 (D.C. Wash.) (1994).

[112] 110 S.Ct. 2841 (1990).

this distinction:

> [s]uicide, it is said, consists of an affirmative act to end one's life; refusing treatment is not an affirmative act 'causing' death, but merely a passive acceptance of the natural process of dying... It would not make much sense to say that one may not kill oneself by walking into the sea, but may sit on the beach until submerged by the incoming tide; or that one may not intentionally lock oneself into a cold storage locker, but may refrain from coming indoors when the temperature drops below freezing... Starving oneself to death is no different from putting a gun to one's temple as far as the common-law definition of suicide is concerned; the cause of death in both cases is the suicide's conscious decision to 'put an end to his own existence'.[113]

Shelton J. concluded, on this basis, that if the active-passive distinction were to have any meaning, then it would not be in situations such as was the subject of the instant appeal. He reasoned that:

> [t]he third person who turns off the life-supporting machine must perforce affirmatively do so. Here the assistant [that is to say, Kevorkian] places the means within the control of the patient and allows the patient to take the final active step.[114]

"Individualized Decision-Making" - The Case of Dr. Timothy Quill.

In a 1991 article, Dr. Timothy Quill, a New York oncologist, related how he had assisted a patient to commit suicide.[115] The patient was terminally ill and wished to hasten her death to prevent further suffering.

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[113] Ibid., pp.296-297.

[114] 518 N.W.2d 487 (1994), p.501.

[115] See, Quill, (1991, pp.691-694).

After discussing the matter with her family and agreeing to meet with Dr. Quill prior to taking an overdose of barbiturates, he agreed to write a prescription for barbiturates. She eventually arrived at a point where she wished to end her life. She discussed the matter with her family and with Dr. Quill, after which she took an overdose of barbiturates and died. As a result of this 'confession' Dr. Quill became the subject of a criminal investigation.

This resulted from the fact that assisted suicide is deemed to be a felony in New York. Section 125.15(3) of the New York Penal Law 1881[116] provides that a person shall be guilty of manslaughter in the second degree if he intentionally aids another person to commit suicide. In addition, section 120.30 provides that a person shall be guilty of promoting a suicide attempt when he intentionally aids another person to attempt suicide. Dr. Quill was obliged to appear before a grand jury but the grand jury did not indict.

Subsequently, Dr. Quill attempted to seek a preliminary injunction in a New York District Court against the enforcement of sections 125.15(3) and 120.30 of the New York Penal Law 1881 to the extent that they apply to physicians who give the kind of assistance that Dr. Quill gave to his patient.[117] This was based on the argument that such statutory provisions violated the rights of the terminally ill and physicians under the Due Process and

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[116] Consolidated Laws of New York Annotated (1967).

[117] Quill v Koppel 870 F.Supp. 78 (1994).

Equal Protection Clauses of the Fourteenth Amendment to the Constitution. The New York District Court did not accept this argument and refused to grant the preliminary injunction.

The uncertainty raised by the fact that three separate state courts, one in Washington, one in Michigan, and one in New York have given antithetical rulings on the substantive issue of a right to die in the case of assisted suicide needs to be resolved, both from the point of view of personal autonomy and legal certainty. As in previous issues pertaining to individual liberty, this issue will ineluctably come before the United States Supreme Court for adjudication. The question one must now answer is how is the Supreme Court, in the light of previous cases, likely to rule on the issue?

6.5 The Constitutional Dimension of Physician-Assisted Suicide in the United States.

Currently the constitutional right to die extends only to cases of withholding or withdrawing life-sustaining treatment.[118] The right has not yet been extended to the practice of physician-assisted suicide, as can be seen from the cases on the issue to date, with the exception of

[118] See for example, Bartling v Superior Court 209 Cal. Rptr. 220 (1984); Cruzan v Director, Missouri Department of Health 110 S.Ct. 2841 (1990); In Re Farrell 529 A.2d 404 (1987); In Re Quinlan 355 A.2d 647 (N.J.) (1976) and Satz v Perlmutter 379 So.2d 359 (1980). See further, the detailed discussion of this aspect of the right to die in Chapter Four of this thesis, pp.272-298.

Compassion in Dying v Washington.[119]

Initially, the courts supported a right to die in cases of treatment withdrawal on the basis of the constitutional right to privacy. This was first expressly stated in the case of In Re Quinlan[120] where the Supreme Court of New Jersey held that the right of privacy as enunciated by the Supreme Court of the United States[121] was:

> broad enough to encompass a patient's decision to decline medical treatment under certain circumstances, in much the same way as it is broad enough to encompass a woman's decision to terminate pregnancy.[122]

Since the decision in In Re Quinlan, numerous state courts have relied on the constitutional right to privacy as the basis for allowing the refusal of life-sustaining treatment.[123]

More often than not, courts have relied on the privacy basis in tandem with the common law right to autonomy as

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[119] 850 F.Supp. 1454 (D.C. Wash.) (1994).

[120] 355 A.2d 647 (N.J.) (1976).

[121] See, Eisenstadt v Baird 405 U.S. 438 (1972); Griswold v Connecticut 381 U.S. 479 (1965) and Roe v Wade 410 U.S. 113, 93 S.Ct. 705, 35 L.Ed.2d 147 (1973).

[122] 355 A.2d 647 (N.J.) (1976), p.663.

[123] See, for example, Bartling v Superior Court 209 Cal.Rptr. 220 (1984); Corbett v D'Alessandro 487 So.2d 368 (1986); Foody v Manchester Memorial Hospital 482 A.2d 713 (1984); Gray v Romero 697 F.Supp. 580 (DRI) (1988); Rasmussen v Fleming 741 P.2d 674 (1987) and Satz v Perlmutter 379 So.2d 359 (1980).

expressed in the doctrine of informed consent.[124] However, as Meisel has observed, this trend has fallen out of favour in later cases. He contends that the reliance on the right to privacy is lessening, and states that courts have moved to a position of:

> relying either exclusively on the common law right of autonomy or on that right with additional references to the constitutional right of privacy. A recent and significant convert to this position is the New Jersey Supreme Court, which based its Quinlan decision on a constitutional right to privacy but declined to do so in In Re Conroy [486 A.2d 1209 (1985)] '... since the right to decline medical treatment is, in any event, embraced within the common law right to self-determination'.[125]

The right to die issue did not present itself to the Supreme Court of the United States until 1990 when the case of Cruzan v Director, Missouri Department of Health[126] came to be decided. Unfortunately, the decision in Cruzan v Director, Missouri Department of Health was not a definitive one and leaves many questions unanswered in relation to the scope of the right to die. Evidence of this lack of clarity can be found in the conflicting judgments which have been handed down in the above discussed cases on physician-assisted suicide.

The subject of this case, Nancy Cruzan, was in a persistent vegetative state. It had been established that there was no prospect of recovery and a return to a

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[124] See for example, Bouvia v Superior Court (Glenchur) 179 Cal.App.3d 1127 (1986) and Brophy v New England Sinai Hospital, Inc. 497 N.E.2d 626 (1986).

[125] Meisel, (1989, p.53).

[126] 110 S.Ct. 2841 (1990).

'normal' life.[127] Cruzan's parents had requested that treatment be discontinued and that she be allowed to die. However, the hospital refused this request, whereupon the parents sought a court order directing cessation of the treatment. This order was granted at first instance but was reversed on appeal to the Missouri State Supreme Court.[128] On appeal to the Supreme Court of the United States, the decision of the Missouri Supreme Court was upheld by a majority of five to four.

The Supreme Court was of the opinion that Nancy Cruzan's constitutional liberty interest did not encompass the cessation of her treatment. In the majority opinion delivered by Rehnquist C.J., the Supreme Court acknowledged, but did not overtly hold, that a competent patient could have a constitutional right to refuse life-saving treatment. This can be seen in Rehnquist C.J.'s observation that the:

> principle that a competent person has a constitutionally protected liberty interest in refusing unwanted medical treatment may be inferred from our prior decisions.[129]

However, this general liberty interest was not absolute and was to be subject to qualification:

> the dramatic consequences involved in refusal of such treatment would inform the inquiry as to whether the deprivation of that interest is

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[127] Cruzan suffered from anoxia of the brain leaving her quadriplegic and unaware of her surroundings. However, her life could be maintained for at least another thirty years with the aid of artificial hydration and nutrition.

[128] Cruzan v Harmon 760 S.W.2d 408 (Mo.) (1988).

[129] 110 S.Ct. 2841 (1990), p.2851.

> constitutionally permissible. But for the purposes of this case, we assume that the United States Constitution would grant a competent person a constitutionally protected right to refuse lifesaving hydration and nutrition.[130]

In this case, the patient was not competent and therefore not capable of refusing or accepting such treatment. As a result, the decision would have to be made by a surrogate. The law in the state of Missouri in relation to surrogate decision-making required that before a surrogate could exercise the right to refuse continuance of life-saving treatment, clear and convincing proof of the patient's desire, while competent, to refuse life-saving treatment in such circumstances be supplied.[131] This evidence was not forthcoming in the instant case.

The case raises the wider question of if, albeit obliquely, the Supreme Court acknowledged that a competent person may refuse life-saving treatment in specified circumstances, is it possible to extend this constitutional protection to the competent patient who wishes to end his or her life through assisted suicide? In other words is there a rational basis for allowing a patient to choose his death by treatment refusal and not allowing a similarly situated patient to choose his death by assisted suicide? If the Supreme Court were to decide this issue how would it decide? Would it, as in Cruzan v Director, Missouri Department of Health, reach a decision which was less than

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[130] Ibid., p.2852.

[131] Under the Missouri Uniform Rights of the Terminally Ill Act 1986, Missouri Revised Statutes section 459.010(3) (1986).

definitive, and betrayed the ideological tension which simmers below the surface of Supreme Court decision-making on such life and death issues,[132] or, would it extend the boundaries of the right to die as the Washington Federal District Court did in the case of Compassion in Dying v Washington?[133]

The reasons why the Supreme Court might decline to extend the right to die further are twofold. Firstly, it might choose to rely on the distinction which is accorded in law to acts and omissions. Secondly, the extension of constitutional protection to the act of physician-assisted suicide might be rejected on wider policy grounds in that the Supreme Court might be seen as accepting the active intervention of one party to cause the death of another.

Indeed, it may not be too far-fetched to view the second argument as a subset of the first. In other words, in trying to further a particular policy agenda, in this case a global prohibition on killing, a tenuous distinction is advanced to cloak such an agenda in the apparent objectivity of legal rhetoric. Is there any identifiable difference between the act of removing a nutrition or hydration tube from the body of a patient in a persistent vegetative state leading inexorably to his death and the act of prescribing a lethal dose of barbiturates for a terminally ill patient leading inexorably to his death? The

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[132] As to which see the discussion in Chapter Three of this thesis, pp.185-191.

[133] 850 F.Supp. 1454 (D.C. Wash.) (1994).

absurdity of such a distinction was drawn by one of the concurring justices in Cruzan v Director, Missouri Department of Health, Scalia J. when he stated, albeit with a deep sense of irony:

> [i]t would not make much sense to say that one may not kill oneself by walking into the sea, but may sit on the beach until submerged by the incoming tide; or that one may not intentionally lock oneself into a cold storage locker, but may refrain from coming indoors when the temperature drops below freezing... Starving oneself to death is no different from putting a gun to one's temple as far as the common law definition of suicide is concerned; the cause of death in both cases is the suicide's conscious decision to 'put an end to his own existence'...
>
> It is not surprising, therefore, that the early cases considering the claimed right to refuse medical treatment dismissed as specious the nice distinction between passively submitting to death and actively seeking it. The distinction may be merely verbal, as it would be if an adult sought death by starvation instead of a drug.[134]

Indeed, in the case of Satz v Perlmutter[135] the Florida District Appeals Court in discussing the distinction between withholding treatment and withdrawing treatment found that the withdrawal of treatment "appears more drastic because affirmatively, a mechanical device must be disconnected, as distinct from mere inaction".[136]

The right to die with assistance is increasingly being premised on equal treatment arguments. This is evident in the decisions of the various state courts on the issue. However, to date as has been seen, only one court has actually accepted this argument. What is the constitutional

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[134] 110 S.Ct. 2841 (1990), p.2861.

[135] 379 So.2d 359 (1980).

[136] Ibid., p.163.

basis of this argument? Is it valid? Could it be upheld by the Supreme Court?

Equality and the Constitution.

The equality provisions in American constitutional law are to be found in the Fourteenth Amendment to the Constitution. The amendment was ratified in 1868 and was originally inserted to provide equality of treatment for the newly liberated African-American slaves. However, the wording is broad enough to apply to all groups in society.

A distinction is made between the various protections afforded under the Fourteenth Amendment. Different forms of protection are afforded by the Privileges and Immunities Clause,[137] the Due Process Clause[138] and the Equal Protection Clause. It is the Equal Protection Clause which is of relevance to the constitutional debate in relation to

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[137] See, for example, The Slaughterhouse Cases 83 U.S. 394 (1873). The phrase "privileges and immunities" also appears in Article 4, section 2 of the Constitution in the following terms:"[t]he [c]itizens of each [s]tate shall be entitled to all privileges and immunities of citizens in the several states".

Simply put, the provision in Article 4 section 2 required that the privileges and immunities enjoyed by the citizens of a particular state should be accorded to the citizens of other states in equal measure. In The Slaughterhouse Cases the Supreme Court held the provisions in Article 4 and in the Fourteenth Amendment to have distinct meanings. Thus, the Privileges and Immunities Clause in the Fourteenth Amendment was deemed not to have changed the fact that fundamental rights were still primarily a matter of state jurisdiction and only became a matter for national jurisdiction when states failed to meet their responsibilities.

[138] See further, Wilkinson, (1992, pp.235-251).

the issue of physician-assisted suicide. The Equal Protection Clause states that no state shall "deny to any person within its jurisdiction the equal protection of the laws".

The Equal Protection Clause addresses the actions of state governments only. Thus, it is only applicable if some policy or legislative initiative of a state government leads to a situation in which a particular group is prevented from exercising a right which similarly situated groups are free to exercise. Initially, the Equal Protection Clause of the Fourteenth Amendment was aimed at guaranteeing equality for all ethnic groupings, but has gradually been extended to cover inequality of treatment in areas other than race.[139]

This expansion of the protections afforded by the Equal Protection Clause has led to the development of a multi-layered approach to its interpretation. Traditionally, the test used by the courts in determining whether a challenged piece of legislation was constitutional, was the 'rational basis' test.[140]

Under this test, the state in question merely has to demonstrate that the purpose of the challenged discriminatory provision in the legislation is a legitimate state objective and that the means used by the state are

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[139] See for example, Mississippi University for Women v Hogan 458 U.S. 718 (1982) and Shapiro v Thompson 394 U.S. 618 (1969).

[140] See, Gulf, C., and S.F.R. Co. v Ellis 165 U.S. 150 (1897).

rationally related to the achievement of this objective.

However, in the nineteen sixties the Supreme Court was to develop a two-tiered approach to the question of equal protection. The first tier was similar to the previous 'rational basis' test and was applied particularly to questions of economic regulation. This lower tier required that the state involved only had to prove that the discriminatory provisions in the challenged legislation were rational. The second and higher tier of scrutiny was referred to as the 'strict scrutiny test'. Under this test, the discriminatory legislative provision would be struck down unless it could be justified on the basis of a compelling state interest.

This tier was, in turn, divided into two separate parts. First, certain forms of discrimination were considered to be 'suspect' and were therefore to be subjected to strict judicial scrutiny. Race is seen as falling into this 'suspect' class.[141] Secondly, there were those cases where the discriminatory provisions of a piece of legislation were seen to come into conflict with a fundamental constitutional right.[142]

In terms of equality the answer seems clear. A competent terminally ill patient who has expressed a desire to accelerate his death cannot do so because the means to

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[141] See, Brown v Board of Education 347 U.S. 483 (1954) and Green v County School Board 391 U.S. 430 (1954).

[142] Such fundamental rights included the right to vote in Reynolds v Sims 377 U.S. 533 (1964), and the right of interstate travel in Shapiro v Thompson 394 U.S. 618 (1969).

be employed in bringing about this death are active. However, an incurable patient in a persistent vegetative state who has left clear and convincing evidence of his wish to refuse life-sustaining treatment is allowed to exercise this wish because the means used to bring about the death are passive rather than active, that is to say, it is the underlying condition, not the doctor which causes the death.

This is a palpable case of treating similarly situated individuals differently. However, it is unlikely that the Supreme Court will follow the enlightened opinion of Rothstein J. in Compassion in Dying v Washington,[143] for policy reasons. By doing so, the Supreme Court would endorse an exception to the principle of the sanctity of life which would create even more controversy than the decision in Roe v Wade.[144] Indeed, the likelihood is that in broaching this topic an approach similar to that taken by the Canadian Supreme Court in the case of Re Rodriguez and Attorney-General of British Columbia et al.; British Columbia Coalition of People with Disabilities et al.; Interveners[145] would be adopted by the United States Supreme Court.

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[143] 850 F.Supp. 1454 (D.C. Wash.) (1994).

[144] 410 U.S. 113, 93 S.Ct. 705, 35 L.Ed.2d 147 (1973).

[145] (1994) 107 D.L.R. (4th) 342.

6.6 Physician-Assisted Suicide and the Common Law Principle of Self-Determination.

As Meisel has noted, it is not unknown for courts to base decisions in the area of treatment withdrawal on the common law right to self-determination, as expressed in the doctrine of informed consent, rather than on the constitutional right of privacy.[146] He cites as authority for this assertion the decision of the New Jersey Supreme Court in the case of In Re Conroy[147] where it was concluded that the right to decline life-saving treatment was part of the common law right of self-determination. In the earlier case of In Re Eichner[148] at first instance,[149] it was held that the state's interest in preserving human life was not sufficient to prevent the disconnection of a respirator attached to an eighty-three year old victim of a cardiac arrest, citing as support for this conclusion the common law right to self-determination and not the right to privacy.[150] The court contended that by using the right to privacy as a justificatory basis for its decision, it would lead to unrestrained applications of the privacy right.[151]

On appeal, the decision of the court of first instance

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[146] Meisel, (1989, p.53).

[147] 486 A.2d 1209 (1985).

[148] 423 N.Y.S.2d 580 (1979); 426 N.Y.S.2d 517 (1980); 438 N.Y.S.2d 266 (1981).

[149] 423 N.Y.S.2d 580 (1979).

[150] Ibid., pp.593-594.

[151] Ibid., p.591.

was upheld but the appellate court added that the constitutional right to privacy could be viewed as a valid means of upholding the right to treatment refusal. It was of the opinion that the right to privacy:

> encompasses the freedom of the terminally ill but competent individual to choose for himself whether or not to decline medical treatment... [and it] is virtually inconceivable that the right of privacy would not apply.[152]

On a further appeal, the New York Court of Appeals affirmed the decision of the lower court but did not broach the question of the validity of extending the privacy right to cover such a situation. This was a consolidated appeal of both the case of In Re Eichner and the case of In Re Storar[153] which concerned John Storar, a fifty-two year old mentally retarded man who had never been competent. The decision in In Re Eichner was affirmed with the New York Court of Appeals relying on the common law right to self-determination.[154]

However in the the case of Mr. Storar, it was held that treatment could not be discontinued because the patient was not capable of making known his preferences in relation to treatment withdrawal. On the self-determination basis the right to refuse treatment could not be accorded as the patient was incapable of either refusing or accepting treatment. This, it may be argued betrays the conceptual inadequacy of the common law right to self-

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[152] 426 N.Y.S.2d 517 (1980), p.539.

[153] 434 N.Y.S.2d 46 (1980).

[154] 438 N.Y.S.2d 266 (1981), pp.272-273.

determination in this instance.

For the purposes of physician-assisted suicide, this flaw may not be relevant, as the patient who wishes to seek assistance in dying is competent and therefore it would not be possible to utilise such an argument. Again the arguments advanced in opposition to such a right would be of the act-omission variety, the slippery slope argument and the risk of abuse argument.

6.7 Assisted Suicide and the Irish Constitution.

In Ireland, the practice of assisted suicide is prohibited by section 2(2) of the Criminal Law (Suicide) Act 1993 which states that:

> A person who aids, abets, counsels or procures the suicide of another, or an attempt by another to commit suicide, shall be guilty of an offence and shall be liable on conviction on indictment to imprisonment for a term not exceeding fourteen years.

Thus, the physician in Ireland who felt compelled to act in a manner similar to either Jack Kevorkian or Timothy Quill would satisfy the requirements for such an offence.

However, the question must be asked, as it was in America, whether one could successfully argue that the prohibition of physician-assisted suicide violated an individual's constitutional rights, particularly the right to privacy and the right to equal treatment. As the Supreme Court of the United States has not yet decided on the constitutionality of physician-assisted suicide, guidance may be had from a jurisdiction quite similar in many

respects to ours and with a constitutional document at its legal apex: that jurisdiction is Canada.

The Canadian Model.

In Canada, the right to physician-assisted suicide is impeded by the presence in the Canadian Criminal Code 1892 of section 241(b) which prohibits the aiding and abetting of suicide. Section 241 provides that anyone who counsels, aids or abets another to commit suicide shall be guilty of an indictable offence and is liable to imprisonment for a term not exceeding fourteen years.

This provision is similar to the provision to be found in section 2(2) of the Irish Criminal Law (Suicide) Act 1993, which provides that any person who aids, abets, counsels or procures the suicide of another shall be liable on conviction on indictment for a term not exceeding fourteen years.

It is interesting therefore, to examine the law in relation to physician-assisted suicide in Canada, a country with a comparable common law and constitutional tradition, with a view to predicting the likely alternatives open to the Irish judiciary and legislature in this area.

In 1982, the Law Reform Commission of Canada tried to rationalise the presence of the section 241 prohibition on aiding suicide in the following terms:

> [w]hat of the person who takes advantage of another's depressed state to encourage him to commit suicide, for his own financial benefit? What of the person who, knowing an adolescent's

suicidal tendencies, provides him with large enough quantities of drugs to kill him? The 'accomplice' in these cases cannot be morally blameless. Nor can one conclude that the criminal law should not punish such conduct. To decriminalize completely the act of aiding, abetting or counselling suicide would therefore not be a valid legislative policy.[155]

The Commission went on to consider the question of assisted suicide for the terminally ill:

> [t]he probable reason why legislation has not made an exception for the terminally ill is the fear of the excesses or abuses to which liberalization of the existing law could lead. As in the case of 'compassionate murder', decriminalization of aiding suicide would be based on the humanitarian nature of the motive leading the person to provide such aid, counsel or encouragement. As in the case of compassionate murder, moreover, the law may legitimately fear the difficulties involved in determining the true motivation of the person committing the act.
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> Aiding or counselling a person to commit suicide, on the one hand, and homicide, on the other, are sometimes extremely closely related. Consider, for example, the doctor who holds the glass of poison and pours the contents into the patient's mouth. Is he aiding him to commit suicide? Or is he committing homicide, since the victim's willingness to die is legally immaterial? There is reason to fear that homicide of the terminally ill for ignoble motives may readily be disguised as aiding suicide.[156]

In the Report[157] which followed the Working Paper, the Law Reform Commission rejected the idea of decriminalizing or legalizing active voluntary euthanasia.

The aforementioned provisions of the Criminal Code 1892 were later to be challenged on constitutional grounds in the case of Re Rodriguez and Attorney-General of British

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[155] Law Reform Commission of Canada, The, (1982, p.53).

[156] Ibid., p.54.

[157] See, Law Reform Commission of Canada, The, (1983, pp.29-35).

Columbia et al.; British Columbia Coalition of People with Disabilities et al.; Interveners.[158] In this case the appellant was a forty-two year old woman who suffered from Lou Gehrig's disease.[159]

The appellant, knowing of the prognosis, had expressed a wish to die, when, as a result of the disease, the quality of her life substantially deteriorated. At that point, she would be unable to end her own life and would require the assistance of a medical practitioner to do so. Mrs. Rodriguez, therefore, applied to the Supreme Court of British Columbia for an order stating that section 241(b) of the Criminal Code 1892 be declared invalid, pursuant to section 24(1) of the Canadian Charter of Rights and Freedoms 1982, on the basis that it violated the rights enunciated in sections 7, 12 and 15(1) of the Canadian Charter of Rights and Freedoms 1982.[160]

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[158] (1994) 107 D.L.R. (4th) 342.

[159] A condition also known as amyotrophic lateral sclerosis, which leaves the sufferer unable to speak, swallow, walk or move her body without assistance. In the later stages of the disease, the sufferer loses the ability to breathe without the aid of a respirator or to eat without the aid of a gastronomy tube.

[160] Section 7 provides:

> [e]veryone has the right to life, liberty and security of the person and the right not to be deprived thereof except in accordance with the principles of fundamental justice.

Section 12 provides:

> [e]veryone has the right not to be subjected to any cruel and unusual treatment or punishment.

Section 15(1) provides:

The Supreme Court of British Columbia refused to grant the order sought by the appellant. Melvin J. was of the opinion that the appellant's:

> fundamental decisions concerning her life are not restricted by the state. Her illness may restrict her ability to implement her decisions but, in my opinion, that does not amount to an infringement of a right to life, liberty or security of the person by the state. The interests she seeks to protect pursuant to section 7 are not those which determine the means by which she may be brought before or within the justice system.[161]

The trial judge believed that to interpret section 7 of the Canadian Charter of Rights and Freedoms 1982:

> so as to include a constitutionally guaranteed right to take one's own life as an exercise in freedom of choice is inconsistent, in my opinion, with life, liberty and the security of the person.[162]

The argument based on section 12 of the Canadian Charter of Rights and Freedoms 1982 was rejected on the grounds that it was the illness from which the appellant suffered, and not the state justice system, which had prevented her from determining the time and manner of her death. The appellant also argued that because it is not unlawful to refuse life-saving or life-prolonging medical treatment, or to commit suicide, or to accelerate death through therapeutic doses of pain relievers, to make physician-assisted suicide

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> [e]very individual is equal before and under the law and has the right to the equal protection and equal benefit of the law without discrimination and, in particular, without discrimination based on race, national or ethnic origin, colour, religion, sex, age or mental or physical disability.

[161] (1994) 107 D.L.R. (4th) 342, p.351.

[162] Ibid.

unlawful discriminates against physically disabled people. This argument was also rejected:

> section 241 does not, in my opinion, single out the physically disabled. It is designed to protect, not discriminate; consequently, in my opinion, there has been no violation of that section of the Charter.[163]

The decision was appealed to the British Columbia Court of Appeals, which court dismissed the appeal by a majority of two to one. Hollinrake J.A. for the majority held that:

> [w]hile there may be only a fine line between physician-assisted suicide and palliative care from the viewpoint of medicine (not necessarily the profession as opposed to the science) I think that from a historical and philosophical viewpoint, the difference between palliative care and physician-assisted suicide is a marked and significant one.[164]

The Court of Appeals was also of the opinion that the proper forum to address a matter of such moral and social complexity was Parliament. In the words of Proudfoot J.A. for the majority:

> the broad religious, ethical, moral and social issues implicit in the merits of this case are not suited to resolution by a court on affidavit evidence at the instance of a single individual. On the material available to us, we are in no position to assess the consensus in Canada with respect to assisted suicide... I would leave to Parliament the responsibility of taking the pulse of the nation.[165]

The appellant, as a result, decided to appeal the decision to the Canadian Supreme Court. The constitutional

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[163] Ibid., p.352.

[164] Ibid.

[165] Ibid., p.356.

questions were stated as follows:

> 1. [d]oes section 241(b) of the Criminal Code of Canada infringe or deny, in whole or in part, the rights and freedoms guaranteed by sections 7, 12 and 15(1) of the Canadian Charter of Rights and Freedoms?
>
> 2. If so, is it justified by section 1 of the Canadian Charter of Rights and Freedoms and therefore not inconsistent with the Constitution Act 1982?[166]

The appeal was dismissed by a majority of five to four in the Supreme Court. The majority was of the opinion that, despite section 241(b) of the Criminal Code 1892 having the effect of interfering with the appellant's autonomy over her person, causing her physical pain and psychological stress in a manner which impinged on the security of her person, it was neither arbitrary nor unfair and was grounded in the state interest in protecting life.

Thus, respect for the sanctity of life was the justification for limiting personal autonomy in this instance. In the words of Sopinka J. for the majority:

> [t]o the extent that there is a consensus, it is that human life must be respected and we must be careful not to undermine the institutions that protect it.
>
> This consensus finds legal expression in our legal system which prohibits capital punishment. This prohibition is supported, in part, on the basis that allowing the state to kill will cheapen the value of human life and thus the state will serve in a sense as a role model for individuals in society. The prohibition against assisted suicide serves a similar purpose. In upholding the respect for life, it may discourage those who consider that life is unbearable at a particular moment, or who perceive themselves to be a burden upon others, from committing suicide. To permit a physician to lawfully participate in taking life would send a signal that there are

[166] Ibid., p.358.

circumstances in which the state approves of suicide...

Given the concerns about abuse that have been expressed and the great difficulty in creating appropriate safeguards to prevent these, it cannot be said that the blanket prohibition on assisted suicide is arbitrary or unfair, or that it is not reflective of fundamental values at play in our society. I am thus unable to find that any principle of fundamental justice is violated by section 241(b).[167]

Despite this defence of the value which is to be placed on life as a moral good, the Supreme Court did not appear to object to the practice of treatment withdrawal or passive euthanasia, which is legally permissible in Canada.[168] Sopinka J. for the majority provided the following rationale for the differential treatment of active intervention to end life and treatment withdrawal:

[w]hether or not one agrees that the active versus passive distinction is maintainable, however, the fact remains that under our common law, the physician has no choice but to accept the patient's instructions to discontinue treatment. To continue to treat the patient when the patient has withdrawn consent to that treatment constitutes battery... The doctor is, therefore, not required to make a choice which will result in the patient's death as he would if he chose to assist a suicide or to perform active euthanasia.[169]

However, is this sufficient justification for restricting the autonomy of the patient who wishes to die by active means? It could be argued that the legislative and judicial framework which is imposed on the relationship

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[167] Ibid., p.406.

[168] See, <u>Ciarlariello v Schacter</u> (1993) 100 D.L.R. (4th) 609; <u>Malette v Shulman</u> (1990) 67 D.L.R. (4th) 321 and <u>Nancy B v Hotel-Dieu de Quebec</u> (1992) 86 D.L.R. (4th) 285.

[169] (1994) 107 D.L.R. (4th) 342, p.405.

between individual actors in such a situation is yet another example of legal rhetoric restricting individual rights. Is not the law in relation to murder but a social and cultural construct which merely reflects a particular idea of social reality and organisation? Such a view is manifest in the classical theory of natural law.[170] This deontological view sees acts as being either good or evil in a very general sense regardless of the surrounding circumstances and the motivations of the individual actors.

Thus, killing is deemed to be wrong except in certain specified circumstances, such as, for example, in time of war or in the case of capital punishment.[171] Applying this model to the particular fact situation of taking life, the act is looked at in an entirely objective sense, that is A acts with the intention of bringing about B's death and in fact brings about the death of B. This is killing, and killing is wrong. The surrounding circumstances of the case are not examined. A may represent a bank robber who kills B, a bank assistant, in the course of a robbery or A may be a doctor who wants to ease the suffering of B, a cancer-ridden patient who consents to this intervention. The question must be asked, is the criminal law too blunt an instrument to be used in such cases? As Silving has noted:

> the use of legal technicalities in [the] acquittal of [mercy killers] tends to give laymen the impression that the law is a magic formula rather than an honest tool for meting out

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[170] See for example, Grisez, (1970, pp.64-96).

[171] See further discussion of this topic in Chapter One of this thesis, pp.7-29.

> justice. Public confidence in the administration of criminal justice is hardly strengthened when moral issues are shifted instead of being solved, or when the law relegates to juries the function of correcting its inequities.[172]

Thus, the legal fiction of creating a legally significant difference between acts of commission and acts of omission places a barrier in the way of justice rather than contributing towards a system of criminal justice which is fair to all. In this instance, the rules of the criminal law tend to cause injustice in the sense of unfairness, in that the doctor who actively intervenes to ease the suffering of the patient with the patient's consent is deemed to be both morally and legally culpable whereas the doctor who indirectly brings about the death of the patient through, for example, the disconnecting of a life-support machine is not similarly treated under the rhetoric of criminal justice. How is one to square this anomaly with the aspiration of equal justice for all?

Moreover, the autonomy of the patient who voluntarily requests that the doctor administer a lethal dose of a drug is not respected. Thus, Sue Rodriguez who was unable to end her own suffering due to the physical barrier caused by her illness was to be denied her right to decide her own fate. In the words of Steven Wolhandler:

> [i]t is legally inconsistent to honour a terminal patient's request that life support equipment be removed, but to deny a similarly situated patient's request for an immediate and painless end merely because a second party's active assistance is needed to implement the latter request. Prohibiting a second party from helping

[172] Silving, (1954, p.354).

> a patient commit self-euthanasia by imposing legal sanctions on that party is effectively equivalent to denying the patient the right to make that decision in the first place.[173]

The dissenting judges in Re Rodriguez and Attorney-General of British Columbia et al.; British Columbia Coalition of People with Disabilities et al.; Interveners tended to a broadly similar view. McLachlin J. was of the opinion that section 241(b) of the Canadian Criminal Code 1892 interfered with the appellant's right to privacy under section 7 of the Canadian Charter of Rights and Freedoms 1982 in that it denied her the choice of ending her life because she was physically unable to do so. McLachlin J. continued:

> the law draws a distinction between suicide and assisted suicide. The latter is criminal, the former is not. The effect of the distinction is to prevent people like Sue Rodriguez from exercising the autonomy over their bodies available to other people. The distinction... is arbitrary. The objective that motivates the legislative scheme that Parliament has enacted to treat suicide is not reflected in its treatment of assisted suicide. It follows that the section 241(b) prohibition violates the fundamental principles of justice and that section 7 is breached.[174]

Lamer C.J.C. in his dissenting judgment emphasised the discriminatory element of legislation which prevented a certain class of persons from exercising their autonomy. He believed that section 241(b) of the Criminal Code 1892 was repugnant to the equality provisions contained in section 15(1) of the Canadian Charter of Rights and Freedoms 1982.

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[173] Wolhandler, (1984, p.369).

[174] (1994) 107 D.L.R. (4th) 342, p.420.

Lamer C.J.C. stated that section 241(b) of the Criminal Code 1892 infringes the principle of equality, in that it prevents, those who are physically disabled, from choosing suicide, when that option is in principle available to other members of the public. This inequality is imposed on persons unable to end their lives unassisted, solely because of a physical disability, a personal characteristic which is one of the grounds of discrimination listed in section 15(1) of the Canadian Charter of Rights and Freedoms 1982. Moreover, the minority was also of the opinion that the violations of the rights of privacy and equality brought about by section 241(b) of the Criminal Code 1892 could not be justified under section 1 of the Canadian Charter of Rights and Freedoms 1982. Section 1 of the Canadian Charter of Rights and Freedoms 1982 provides a mechanism whereby a law which appears to be repugnant to the Canadian Charter of Rights and Freedoms 1982 may be saved if it can be proven that the infringement is demonstrably justified in a free and democratic country. The criteria which must be satisfied to discharge this onus are twofold.

These criteria were articulated in the case of R. v Oakes.[175] The first part of the test considers the validity of the legislative objective and the second part considers the validity of the means chosen to achieve that objective. Lamer C.J.C. was satisfied that section 241(b) satisfied the first branch of the test in R. v Oakes, stating that:

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[175] (1986) 26 D.L.R. (4th) 200.

> the objective of section 241(b) of the Code may properly be characterized as the protection of vulnerable people, whether they are consenting or not, from the intervention of others in decisions respecting the planning and commission of the act of suicide. Underlying this legislative purpose is the principle of preservation of life. Section 241(b) has, therefore a clearly pressing and substantial legislative objective.[176]

However, he was not of the opinion that section 241(b) of the Criminal Code 1892 satisfied the second branch of the test in R. v Oakes. The second branch of the test considers whether a reasonable balance has been struck between the legislative objective and the means chosen to achieve that objective. This branch of the test is made up of three components.

Firstly, the means chosen to achieve the objective must be rational and fair and not arbitrary. Lamer C.J.C. found that the prohibition of assisted suicide was rationally connected to the objective of protecting vulnerable persons who may be contemplating taking their own life.

The second component of the test requires that the means impair as minimally as is reasonably possible the right in question.

Lamer C.J.C. found that section 241(b) of the Criminal Code 1892 did not comply with this requirement, in that speculation that subtle and overt pressures may be brought to bear on vulnerable persons, if assisted suicide is decriminalized, is not sufficient to justify depriving a disadvantaged group of the right to equality. He stated

[176] (1994) 107 D.L.R. (4th) 342, p.378.

that an absolute prohibition that is indifferent to the individual or the circumstances in question cannot satisfy the constitutional duty on the government to impair the rights of persons with physical disabilities as little as is reasonably possible. The third component of this branch of the test in R. v Oakes requires the assessment of whether the infringement on the right is sufficiently proportional to the importance of the objective that is sought to be achieved. In the view of Lamer C.J.C., the fact that section 241(b) of the Criminal Code 1892 failed the second component of the second branch of the test in R. v Oakes, meant that there was no need for him to proceed to the third component of the test. Thus, he found that the infringement of the equality provisions of section 15 of the Canadian Charter of Rights and Freedoms 1982 by the impugned section of the Criminal Code 1892 could not be saved under section 1 of the Canadian Charter of Rights and Freedoms 1982.

Lamer C.J.C. then considered the question of the most appropriate remedy for this infringement. He was of the opinion that the most appropriate remedy in the circumstances was a declaration of invalidity of the impugned section. However, that declaration should be suspended for a period of one year "so as to allow Parliament to address this most difficult issue".[177]

During this period, however, those such as the appellant would be entitled to a personal remedy in the

[177] Ibid.

form of a constitutional exemption. Lamer C.J.C. laid down the boundaries within which this constitutional exemption would operate:

> (1) the constitutional exemption may only be sought by application to a superior court;
>
> (2) the applicant must be certified by a treating physician and independent psychiatrist, in the manner and at the time suggested by McEachern C.J.B.C.,[178] to be competent to make the decision to end her own life, and the physicians must certify that the applicant's decision has been made freely and voluntarily, and at least one of the physicians must be present with the applicant at the time the applicant commits assisted suicide;
>
> (3) the physicians must also certify:
> (i) that the applicant is or will become physically incapable of committing suicide unassisted, and
> (ii) that they have informed him or her, and that he or she understands, that he or she has a continuing right to change his or her mind about terminating his or her life;
>
> (4) notice and access must be given to the Regional Coroner at the time and in the manner described by McEachern C.J.B.C.;[179]
>
> (5) the applicant must be examined daily by one of the certifying physicians at the time and in

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[178] McEachern C.J.B.C. (dissenting) in the hearing of the case before the Court of Appeals of British Columbia, (1994) 107 D.L.R. (4th) 342, p.355, stated that:

> competence must be certified in writing by a treating physician and by an independent psychiatrist who has examined her not more than twenty-four hours before arrangements are put in place which will permit the appellant to actually terminate her life.

[179] Not less than three clear days before any psychiatrist examines the appellant for the purposes of the aforesaid, notice must be given to the regional coroner. ((1994) 107 D.L.R. (4th) 342, p.355).

the manner outlined by MacEachern C.J.B.C.;[180]

> (6) the constitutional exemption will expire according to the time limits set by McEachern C.J.B.C.;[181] and
>
> (7) the act causing the death of the applicant must be that of the applicant him or herself, and not of anyone else.[182]

This proposed solution to the problem, whilst far from ideal, at least recognises the autonomy of a patient in the appellant's position as well as the dilemma in which the criminalization of assisted suicide places the medical practitioner. The fear remains that the minority approach was an example of judicial law-making by any other name. John Keown, commenting on the case claimed that the minority's reasoning was:

> misconceived, their assessment of the risks of abuse complacent and their 'guidelines' vague. Yet they almost established a constitutional right to physician-assisted suicide; a right arguably going beyond, in the words of Sopinka J. 'any serious proposal for reform in the western world', and a right whose extension to able bodied euthanasia consistency would inexorably have required.[183]

This argument is typical of the slippery slope

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[180] One of the physicians giving any certificate as aforesaid, must re-examine the appellant each day after the above-mentioned arrangements are put in place to ensure that she does not evidence any change in her intention to end her life. ((1994) 107 D.L.R. (4th) 342, p.356).

[181] No one may assist the appellant to attempt to commit suicide or to commit suicide after the expiration of thirty one days from the date of the first-mentioned certificate, and, upon the expiration of that period, any arrangements made to assist the appellant to end her life must immediately be made inoperative and discontinued. ((1994) 107 D.L.R. (4th) 342, p.356).

[182] (1994) 107 D.L.R. (4th) 342, pp.384-385.

[183] See, Keown, (1994, pp.234-236).

argument. The two pillars of the argument are represented here; firstly, the risk of abuse of the practice and secondly, the danger of its extension to other groups in society. Keown goes on to state that the decision of the minority in Re Rodriguez and Attorney-General of British Columbia et al.; British Columbia Coalition of People with Disabilities et al.; Interveners and the decision of the majority of the Canadian Supreme Court in the case of Morgentaler, Smolling and Scott v The Queen[184] to the effect that laws restricting access to pregnancy termination services infringed individual rights under section 7 of the Canadian Charter of Rights and Freedoms 1982 raise "profound questions about the role of the judiciary in a democratic society".[185]

This statement raises yet again the question of the compatibility of the power of an unelected judiciary to engage in the review and modification of the policies of democratically elected bodies.[186]

However, one must look to the opposing view of judicial power as a break on the untrammelled power of the executive. Is it any more democratic to have a constitutional arrangement where the executive has sole and unimpeded power than to have an arrangement as one has in

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[184] (1988) 44 D.L.R. (4th) 385 and see discussion of this case in Chapter Three of this thesis, pp.215-229.

[185] Keown, (1994, p.236).

[186] See generally, Cox, (1987, pp.2-12); Ely, (1980, pp.1-14); Monahan, (1987, pp.5-20); Wolfe, (1986, pp.6-17) and see the discussion of this issue in Chapter Three of this thesis, pp.172-178.

the United States, Canada, or Ireland, for example, where checks may be placed on government power by the judiciary in the interests of individual rights?

As Dworkin has noted, a state which allows judges to check legislative power in the interests of the rights of the citizens:

> is not undemocratic. On the contrary, it is a precondition of legitimate democracy that government is required to treat individual citizens as equals, and to respect their fundamental liberties and dignity. Unless those conditions are met, there can be no genuine democracy, because unless they are met, the majority has no legitimate title to govern.[187]

Implications for the Irish Model.

Before we in Ireland can argue that the criminalization of physician-assisted suicide is contrary to the equality provisions of the Constitution, it must first be clearly established either at common law or by the legislature that a right to refuse treatment leading to death exists. In Chapter Four the thesis argued that at common law the right arguably exists based on the English precedents of Airedale N.H.S. Trust v Bland[188] and Re T (Adult: Refusal of Medical Treatment).[189] That such an argument was well founded appears from the decision in Re

[187] Dworkin, (1993, p.123).

[188] [1993] 2 W.L.R. 316.

[189] [1992] 3 W.L.R. 782.

C (Ward of Court)[190] discussed in that chapter.

Given the cautious manner in which both the courts and the legislature operate in the area of issues affecting the sanctity of life, it is submitted that the Irish Supreme Court would, if presented with such a case as that of Sue Rodriguez, adopt a similar position to that of the majority in that case. As for the argument based on the right of privacy, the assumption is that the Irish Supreme Court would not depart radically from its previous decisions in this area and declare that there is indeed a right to die by assistance. Such a radical departure would not be in accord with the way in which the right to life is currently conceptualized in Irish constitutional discourse. The reluctance of the Supreme Court to erode the value of life coupled with the argument which Costello J.[191] has made in distinguishing explicitly between active and passive euthanasia would seem to preclude such a development. Moreover, the impact of such a move would affect the extant criminal legislation in relation to assisted suicide, which again for policy reasons a Supreme Court would be loath to do.

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[190] High Court, Unreported, 5 May 1995, Lynch J..

[191] See, Costello, (1986, pp.35-46).

CHAPTER SEVEN: REVIEW AND CONCLUSIONS.

> Each man is master of his own death, and all that we can do when the time comes is to help him die without fear of pain.[1]

7.0 Introduction.

In this chapter, the thesis analyzes the arguments made in the previous chapters. It examines whether the traditional constitutional model of the right to life may be sucessfully applied to complex fact situations in the medical context. The thesis then investigates alternative legal models of the right to life and suggests possible areas of reform.

7.1 Review.

As the title of the thesis suggests, albeit obliquely, there is a choice to be made as to the model which will form the basis for the potential right to die jurisprudence in Ireland. On the one hand, one can choose the model of the natural death. This model is rooted in deontological ideas about the intrinsic value of life as an abstract ideal. The natural death model is the offspring of the sanctity of life model and is thus absolutist and impersonal. The sanctity of life model has been the dominant model in Irish legal discourse on the topic of the

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[1] Garcia Marquez, (1988, p.14).

right to life to date. This model rather than being a flexible one, adapting to the needs of an evolving societal framework, is absolutist and literalist. In other words, it fits into Ronald Dworkin's model of the 'constitution of detail'.[2] This model is hardly the model which would fit very easily into the medical law context. Medical law is concerned with often quite complex fact situations involving, inter alia, important questions of personal autonomy. As a result, the wishes and desires of the individual patient must be taken into account, not in a perfunctory manner, but in a manner which best serves the autonomy of the patient, while not forgetting the interests of the health care provider. Applying a deontological model to this scenario may serve the purpose of upholding the ideal of the sanctity of life, but it does not uphold the equally important ideal of patient autonomy.

That this model poorly serves individual autonomy can be seen in the manner in which both the courts and the legislature have dealt with issues in the sphere of medical practice. Thus, the issue of abortion clearly demonstrated the important practical ramifications of applying a deontological model to a question of individual autonomy. The patient and doctor, the central actors in this therapeutic relationship have, within this model been relegated to the status of mere bit-players, performing roles which are neither respectful of individual autonomy nor dignity of the person.

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[2] Dworkin, (1993, p.119).

In recent years, this deontological model has been subject to challenge from another model which appears to offer more in terms of respecting individual autonomy. Thus, having witnessed the case of Attorney-General v X and Others[3] and its aftermath, one could argue that Irish law in the zone of individual rights, may be commencing to question the previous paradigm of the sanctity of life in more vehement terms than heretofore.

Like Irish society, Irish law in this zone, it could be argued, is undergoing a difficult metamorphosis from the paradigm of the natural to that of the post-natural. What the post-natural phase of Irish individual rights jurisprudence holds will be dependent on individuals rather than on the moral collectivity. It is to be hoped that the transition will lead to a new autonomy, this time personal rather than political.

What then is this alternative model which I have referred to rather grandiloquently as the death of the natural. It is a model which has much in common with the rights model as defined by Dworkin[4] and interpreted by Brock[5] in the medical context. In constitutional terms this model would fit into Dworkin's model of the 'constitution of principle'.[6] This model, it is submitted, leads in practical terms to a more equitable resolution of the

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[3] [1992] 1 I.R. 1.

[4] Dworkin, (1984, p.171).

[5] Brock, (1993, pp.95-122).

[6] Dworkin, (1993, p.119).

dilemmas in the area of thanatology.

That it is important to identify a model which will underpin any future Irish jurisprudence on death has been demonstrated in the body of the thesis.

Chapter One outlined the phenomenon of the legal appropriation of death, a societal reality from which Ireland is not immune. In the face of the very real policy and personal ramifications of the issues which arise from this phenomenon, how have legal and policy actors in Ireland reacted? It has to be said not very well. The country has, in effect, no policy framework within which to resolve the complex dilemmas in this area of medical practice.

The basis of a legislative framework in this area, a determination of death statute is absent from our statute books. Without such a statute we are ill-equipped, as Chapter Two demonstrated, to deal with the connected issues of organ transplantation and the treatment of the permanently unconscious. Chapter Three analyzed the difficulties posed for future development in the field of medical treatment of retaining the traditional model, by demonstrating the inadequacy of such a model in terms of personal autonomy in the case of abortion.

Chapter Four explained the need for a legislative response to the question of treatment withdrawal, by examining the all too real legal and ethical dilemmas which arise in this aspect of medical practice. The reactions of other common law jurisdictions to this issue were examined

in an effort to discover a workable model for Irish law in this area. That policy of some sort is urgently required will become all too real when Irish courts are faced with a scenario such as that presented in Airedale N.H.S. Trust v Bland[7] or Cruzan v Director, Missouri Department of Health.[8] Guidance on the issue is crucial, both for the patient and for the health care professional who is daily faced with such dilemmas.

Chapters Five and Six discussed an even more controversial topic, active intervention to end life in the medical context. This issue seems for many to be beyond the pale. The sanctity of life or natural model would not allow of such a development. However, the Netherlands has accepted as part of medical practice active euthanasia and physician-assisted suicide. This is reflective of an alternative conception of the sanctity of life which accepts that a time will come in the lives of many when the greatest respect which can be accorded them is to respect their wish to die, "to help them die without fear of pain".

7.2 Conclusions.

Irish medical jurisprudence is currently in a developmental phase. The way in which those who shape policy confront this topic will affect all parties to the

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[7] [1993] 2 W.L.R. 316.

[8] 110 S.Ct. 2841 (1990).

therapeutic relationship. If we choose to do nothing, and wait until the dilemmas present themselves before the courts, then the result is uncertainty, both for the patient who is unaware of his rights in the therapeutic relationship and for the doctor who is unsure of the limits of his duties. The most logical and, indeed, equitable solution to this problem is to provide a legislative solution. This would clearly delineate the rights and responsibilities of all parties to the relationship.

How is such legislation to be informed? Is it to be informed by a deontological natural model which would hardly accommodate patient or professional autonomy, or is it to informed by a model based on individual rights? The most equitable basis for such legislation is a rights model. This model would respect the autonomy of both doctor and patient. Moreover, unlike the deontological model it is unhindered by the difficulty of imposing absolutist models on rapidly advancing and complex fact situations.

The alternative model would facilitate a shift from a societal paradigm, where, as Outram has explained:

> the body appears... as a place where the ability to control is overwhelmingly made manifest. Such a control - until very recently - has made attitudes to the body a touchstone of social conformity.[9]

to a paradigm where policy would uphold:

> the dignity and identity of all human beings and guarantee everyone, without discrimination, respect for their integrity and other rights and fundamental freedoms with regard to the

[9] Outram, (1986, p.47).

application of biology and medicine.[10]

7.3 Envoi.

The decision of the Supreme Court in Re Article 26 and the Regulation of Information (Services Outside the State for Termination of Pregnancies) Bill, 1995[11] was delivered on 12 May 1995. Though this case was heard after this thesis was submitted, it must be said that it exemplifies the shift in the attitude with which the work is concerned.

In this case, the Supreme Court refused to accept that natural law is anterior and superordinate to the provisions of the Constitution. The Supreme Court decided that the Bill in question was not repugnant to the Constitution, and in reaching this decision held that:

> [t]he Court in interpreting the Constitution and in ascertaining and declaring what are the personal rights which are guaranteed by the Constitution and in determining, where necessary, the rights which are imprescriptible or inalienable, must act in accordance with the aforesaid guidelines as laid down in the Constitution and must interpret them in accordance with their ideas of prudence, justice and charity.[12]

In so finding, the Supreme Court has given recognition to the development of a stream of authority, commencing

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[10] Council of Europe, Draft Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine: Bioethics Convention 1994, Strasbourg: Council of Europe Directorate of Legal of Affairs, Article 1.

[11] Supreme Court, Unreported, 12 May 1995.

[12] Ibid.

with Byrne v Ireland.[13] In the ground-breaking decision of McGee v Attorney-General[14] Walsh J. held that:

> [i]n a pluralist society such as ours, the Courts cannot (sic) as a matter of constitutional law be asked to choose between the differing views, where they exist, of experts on the interpretation by the religious denominations of either the nature or extent of these natural rights as they are to be found in the natural law. The same considerations apply also to the question of ascertaining the nature and extent of the duties which flow from natural law... in this country it falls to the judges finally to interpret the Constitution and in so doing to determine, where necessary, the rights which are superior or antecedent to positive law or which are imprescriptible or inalienable... The judges must, therefore, as best they can from their training and their experience interpret these rights in accordance with their ideas of prudence, justice and charity... the prevailing ideas of these virtues may be conditioned by the passage of time: no interpretation of the Constitution is intended to be final for all time. It is given in the light of prevailing ideas and concepts.[15]

This passage was approved by O'Higgins C.J. in the course of his judgment in The State (Healy) v Donoghue,[16] and impliedly by Finlay C.J. in his judgment in Attorney-General v X and Others.[17]

This stream of authority has culminated in the decision in Re Article 26 and the Regulation of Information (Services Outside the State for Termination of Pregnancies)

[13] [1972] I.R. 241.

[14] [1974] I.R. 284.

[15] Ibid., p.318.

[16] [1976] I.R. 326.

[17] [1992] 1 I.R. 1.

Bill, 1995.[18] Hamilton C.J. stated at page 58 of the unapproved judgment that:

> [t]he Courts, as they were and are bound to, recognise the Constitution as the fundamental law of the State to which the organs of the State were subject and at no stage recognised the provisions of the natural law as superior to the Constitution.

In holding that the Bill was not repugnant to the Constitution, the Supreme Court acknowledged that the Oireachtas is entitled to balance the interests of the unborn against the interests of the woman seeking information on pregnancy termination services and in its allocation of legislatively protected rights, was acting within its Constitutional remit. This is despite the fact that the net effect of this judgment is to permit women in Ireland to have access to information about pregnancy terminations available in jurisdictions where these are not prohibited by law.

The judgment does not recognise any incompatibility between the proscription of abortion in Ireland, and the right to information about abortions available outside the state in jurisdictions where such procedures are legal.

Until an approved version of this judgment is circulated, it may be unwise to attempt to define the precise gradation of the shift described in this thesis. All that can be said, is that insofar as this thesis has described a shift, the recent decision appears to confirm that the researcher is indeed correct.

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[18] Supreme Court, Unreported, 12 May 1995.