# Systems Theory: Forgotten Legacy and Future Prospects 

## Brian Harney

Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, pp.112-127

## Introduction

Systems theory has long informed theoretical developments in employment relations and HRM. There is a rich and interdisciplinary underpinning to systems logic stretching back to classic research in work and organisations (Burns and Stalker, 1961), Dunlop's (1958) Industrial Relations Systems, and foundational organisation theory (Katz and Kahn, 1966). Today, systems theory is still frequently theoretically invoked, if less empirically employed. This chapter will present an overview of systems theory and its purpose before tracing its historical antecedents and key domain assumptions. The chapter will then review some valuable applications of system thinking in employment relations and HRM, before evaluating limitations and future prospects. Overall, the chapter surfaces the long standing tensions between the intuitive appeal of systems logic and difficulty surrounding its application. The chapter concludes that, despite these challenges, the changing nature of work as characterized by fragmentation, flexibility, feminisation and finacialization (Rubery, 2015) provide a strong mandate for a system theory renaissance in HRM and employment relations.

## System theory: Key purpose and characteristics

There are many variants of systems theory with multiple understandings. It is first important to distinguish system theory as a hard focus on system maximization, as found in engineering and operations management, versus a softer variant in studies of organisations and work (Emery, 1969). In essence, when it comes to exploring HRM and the dynamics of managing people at work, system theory is best understood as a conceptual construct as opposed to a physical entity (Ackoff, 1969). Von Bertalanffy (1969) made a particularly important distinction between closed and open systems. Closed system are likened to clockwork mechanics, judged as fixed, hermetically sealed entities operating in complete independence of their surrounding conditions. By contrast, open systems depend, survive and thrive as a result of their interaction and engagement with the environment. Building on the analogy of an organism von Bertalanffy articulated that "living systems are open systems, maintaining themselves in exchange of materials with the environment, and in continuous building up and breaking down of their components" (1969: 72).

System theory generally stresses two significant characteristics of organisations and organisational actors; a) that they are embedded in a broader system so that all action

[^0]is informed, shaped, and sometimes even determined, by the context in which they operate and $b$ ) interdependence between elements so that movement and change in one sphere will necessarily result in change in another (see Wright and Snell, 1991). As a result of these two general principles, systems theory brings forth a series of key concepts and characteristics of relevance to HRM/ER. Of particular significance is the interdependence between existing internal structures of an organisation and the conditions of the environment in which it operates and competes (see Wright and Snell, 1991). Appreciation of environmental interdependency allows for consideration of the numerous factors simultaneously at play in determining the management of people in organisations. In their open systems model of the appraisal process Klein et al., stressed that the concern is the co-occurrence of variables rather than isolated bivariate relationships, with this focus providing a foundation to 'capture the complexities of organisational reality' (1987: 227). A stress on organisationalenvironmental interaction, however, is not meant to imply smoothness and continuity in these relations as central to open systems accounts is an emphasis on uncertainty, indeterminacy and hence an ability to capture complexity (Thompson and McHugh, 1995). Stated differently, an organisation and its environment compose a complex interactive system (Bedian, 1990). Complexity so understood denotes "the degree of diversity in organisational activities and the environments in which the organisation is operating" (Thompson and McHugh, 1995: 63), in addition to the indeterminacy that characterises the employment relationship. From an open systems perspective organisations are understood as being in a continuous process of adaptation constantly striving for homeostasis, or a 'steady state' rather than the definitive equilibrium assumed in closed systems accounts (Koehler, 1969). Open systems theory therefore provides specific utility in capturing the notion of adaptation and more Mintzbergian conceptions of alignment as it is a dynamic model of constant environmental monitoring and internal adjustment (Wright and McMahon, 1992). It follows that HRM should not be viewed as a once off structural intervention, but as an ongoing process concerned with balancing emerging contradictions of the employment relationship.

Core to systems theory is the idea of an input-throughput-output model and the related concept of a feedback loop (especially as per open systems variants) (Cummings, 2015a). The notion of feedback loop allows for discrepancy between intended and realised outcomes, thereby bridging intent and action. This line of thinking, embedded in the 'structural antagonism' (Edwards, 1986) of the employment relationship is only finding prominence in more 'mainstream' research on HRM, albeit from a managerial perspective (Nishii, Lepak, and Schneider, 2008). Moreover, akin to the notion of path dependency introduced by cultural theories of HRM and ER, open systems theory promotes time irreversibility, acknowledging that a system can never precisely return to a previous state. In systems terms this is depicted by the term entropy. Overtime, patterns of employment relations develop their own dynamic in accommodating and understanding institutional norms. Together, these insights render rational linear thinking and the associated concepts of a mechanistic, static fit as assumed by

[^1]universalistic and matching models of HRM somewhat problematic (Paauwe and Farndale, 2017).

In terms of outcomes, rather than privileging a narrow financial quest for competitive advantage systems theorists focus on broader aspects of organisational survival, thereby drawing attention to table-stake HRM practices and the non-strategic determinants of HRM, including social legitimacy and dependency relations (Boxall and Purcell, 2008; Harney and Dundon, 2007). An early description by Ackoff captures the critical consequence for any attempt to capture best performance;

> "the criterion of best performance can be shown to depend further on our ability to find the relative value (or utility) of increments along the scales used to measure performance. For example, to a man who is destitute, the value of twenty dollars is clearly not twice that of ten dollars. If it were he would prefer a $51 \%$ chance of getting 20 dollars to the certainty of getting ten dollars" (1969:344).

Setting aside assumptions of pure rationality, the notion of the quest for an 'optima' path to manage people becomes flawed. Instead systems theorists invoke Simon's argument that organisations often "adapt well enough to 'satisfice" (1956: 129). Equally because this process is shaped by the multiple and often conflicting 'local' goals of those that constitute the organisation the 'character' of an organisation is never truly stable (Hopper and Powell, 1985; Kast and Rosenzweig, 1972). A further important open systems intervention stems from the concept of equifinality which holds that organisations may obtain the same end state from differing initial conditions and through different means (Katz and Kahn, 1966). This concept has rarely been explored in HRM research, with the exception of configurational theory (Harney, 2016). Yet appreciation of equifinality might go some way to explaining the inconsistency in studies attempting to capture the precise nature of desirable HRM practices, while also accounting for the great variety in terms of HRM practices and policies in existence.

Overall, a common undercurrent to all system theory characteristics relate to its overriding premise that the purpose of analysis is not to demonstrate fixed and invariant law like relationships (e.g. between HRM and performance) but instead to foster greater understanding. Indeed, according to systems theory any effort at demonstrating universal truths is conceptually flawed before it begins and, by definition, can only lead to disappointment and failure (Harney, 2009).

## Evolution and imprint of systems theory in ER/HRM

This section explores the historical antecedents of system theory and its legacy impact in studies of work and organisation. Notably, subsequent influence and interpretation diverges, whereby we find a strong resonance with employment relations research and a narrower agenda when deployed in the service of HRM scholarship. Systems theory has its origins in the natural sciences. With respect to general historical legacy

[^2]in the social sciences, it is clear that, even if the term was not explicitly used, the logic of systems theory has long informed research on work and organisations (Cummings, 2015b). Classic studies recognized the complexities and indeterminacies of the employment relationship and moved to explore organisations as adaptive social systems embedded in differing environmental contexts (Barnard, 1938; Gouldner, 1954). Early, and still underappreciated work, by Kenneth Boulding (1956) moved to develop a typology of differing levels of systems with implications for how the environment is conceived. These ranged from the organisation as a tightly coupled, closed system with fixed variables through to higher levels founded on more interpretative and fluid concepts whereby the organisations and their participants are capable of shaping and responding to environmental pressures. Burns and Stalker's (1961) study of innovation sought to compare the workings of organisations under external conditions of stability and change while recognizing the plurality of social systems within the organisation. Their purpose was to study "the world as a social process, instead of an anatomy frozen into 'structured immobility'" (p. 5). In so doing they distinguished between mechanistic management systems founded on stability, formal rules and procedures and more organic management systems founded on devolved decision making, informal practices and change. The conceptual basis of this distinction is echoed in more contemporary polarisations between control and empowerment in the management of workers (Walton, 1985) or exploitation and exploration in organisational learning (March, 1991).

By providing a more systematic basis for exploring organisations, systems informed thinking offered a catalyst for more cross-comparative analysis manifest in Etzioni's (1961) 'A comparative analysis of complex organizations' and Blau and Scott's (1963) 'Formal Organizations: A Comparative Approach'. Overall these early studies recognised the impact of contextual factors and were committed to developing a holistic understanding of organisations and organisational actors. Indeed, they formed a key input into the emergence of contingency theory in the late 1960s and 1970s although in this transition variables became more fixed and narrowly understood. As Wood notes "the weakness of contingency theory writings is their rather limited reading of the work in which they purport to be rooted" (1979: 354). In part this was driven by a new scientific and positivist logic which gradually colonised the remit of research, defining success as demonstrating fixed and invariant relationships between preconstituted and uncontested variables such as structure, size and formal practices (Pugh, Hickson, Hinings, and Turner, 1968). Led by the Aston group it was argued that "the major task of organisation theory is the development of more sophisticated conceptual and methodological tools particularly for dealing systematically with variations between organisations" (Pugh et al., 1968: 65). At this time the disciplinary boundaries between organisation theory and studies of work and employment became more demarcated, resulting in less naturally occurring cross-fertilisation of ideas and understanding. This dominance of positivism, and emphasis on discipline specific research and understanding, has carried through to the present day. It equally holds true within disciplines, with varying emphasis and ideological leaning found across

[^3]employment relations and HRM. This is clearly evidenced when we consider how each has interpreted system theory.

It is quite clear that those scholars with an employment relations leaning more naturally embraced and incorporated insights related to systems thinking. While this may not have always been in a deliberate or explicit fashion, the domain assumptions of emergence, interdependent relations, recognition of context resonated with requirements for a holistic understanding of the employment relationship. Much of this stemmed from early work which unpacked the workings and underlying dynamics of manufacturing. Scholars such as Joan Woodward sought to counter the universalism of scientific management by examining the impact of distinct modes of manufacturing (e.g. batch versus mass production) recognizing that "industrial firms would have to be studied as complex social systems and line staff relationships looked as part of the whole versus in isolation" (Woodward, 1965: 6). With this came a focus on technology as a control system (Woodward, 1970). In terms of personnel management there was early appreciation that "problems of responsibility and co-ordination are inevitable" (1965: 114). Others paid in-depth attention to the dynamics and diffusion of bureaucracy, or the operation of piece rate pay systems in practice. Brown's (1973) classic work on engineering firms depicted a complex set of relations between product market characteristics, management intent and error, and worker power. As a result the realities of workplace relations could not be read simply off a set of rules or policies, nor could they be understood in isolation from either the macro organisational context or internal micro-politics. This quest for holistic understanding of the employment relationship is a characteristic of employment relations, as is an appreciation of its indeterminate nature. It is argued this presents a more realist, as distinct from an idealist, interpretation of control and discipline (Edwards and Scullion, 1982) captured by the wonderful terminology of the 'structured antagonism' of workplace relations (Edwards, 1986:5). In a similar vein, there is an overlap between pluralist conceptions of the employment relationship (see chapter 3, Neo-Pluarlism, Ackers), including the role and impact of actors such as trade unions, management and legislators and the dynamic and the evolving nature of organisations and their competing interests resulting in varying outcomes as stressed by systems thinking.

When it comes to HRM, system theory does not find such a rich meaning as we have seen evident in employment relations scholarship. While systems theory has certainly been incorporated in HRM, this has been in a narrow and limited fashion, and very much on HRM's own terms. We can track and align systems thinking to the distinct waves of the development of HRM (Harney, Dundon, and Wilkinson, 2017), beginning with the differentiation of HRM from its predecessor personnel management. Here founding texts such as Beer and colleagues' Managing Human Assets stressed an understanding of HRM from a holistic viewpoint, incorporating multiple stakeholder interests, with multiple prospective outcomes, ranging from individual to societal (Beer, Spector, Lawrence, Mills, and Walton, 1984). This contrasted to a more piecemeal, reactive and specialist orientated personnel management. Yet while Beer's et al., (1984) system model including stakeholder perspectives and key determinants served

[^4]as a critical foundation it then lost favour, leaving the field bereft of its original insights (Beer, Boselie, and Brewster, 2015). The second wave of development spoke to the integration of HR practices so that they functioned in unified fashion (horizontal integration), coupled with alignment of HRM with organisational strategy (vertical integration). This understanding brought forward a holistic appreciation of HRM practices, and also a narrow form of contingency theory, manifest in the concept of 'fit' (Baird and Meshoulam, 1988). The reality was a limited application of systems understanding, echoing Wood's (1979) earlier commentary with respect to the emergence of contingency theory and its failure to leverage its rich heritage. In the third wave, the emphasis moved to demonstrating the impact of HRM practices on performance, with the term 'systems' explicitly deployed as part of this argument e.g. high performance work systems (HPWS) or high-involvement systems. The logic here is that a 'bundle' of HR practices act in a reinforcing manner to enhance performance, with the whole serving as greater than the sum of HR parts (Combs, Ketchen, Hall, and Liu, 2006; Kaifeng Jiang et al., 2012) (see HPWS Chapter 7, Boxall). An inherent part of this claim involved a universal argument, thereby ignoring external contingencies and directing the attention of HRM scholarship exclusively within the firm. A more recent stream of research has sought to more directly incorporate an employee perspective founded on the concept of social exchange theory and reciprocal relations (Bowen and Ostroff, 2004) (see Chapter X on social exchange). Here again there is little appreciation of the inherent conflict and system dynamics of the employment relationship, and instead any gaps or failures in implementation can be easily identified and remedied. Overall, it is evident that the evolution of HRM is likewise characterised by a reference to system based logic, albeit in a more selective and normative manner. Absent are more broader considerations of context, emergence or a sense of the inherent tensions of the employment relationship. This in turn reflects more general commentary as to the ideological bent and performance focus of employment relations and HRM respectively (Dundon, Harney, and Cullinane, 2010; Edwards, 1995; Harney et al., 2017).

## Systems theory: Application and value

Zedeck and Cascio argued some time ago that "HRM issues are part of open systems and research is theoretically bankrupt unless placed in the broader context of organisations" (1984: 463). It is perhaps unsurprising therefore that system theory has shown particular promise in research which has privileged context and the determinants of HRM. This is most obvious in research on international and comparative HRM and employee relations which leverages an appreciation for external context. This includes work on national business systems, systems of industrial relations and varying institutional factors across nations and cultures (Wilkinson and Wood, 2017). All of these privilege, and conceptually locate, the broader dynamics of the employment relationship. Particular value has come from the application of the System, Society and Dominance (SSD) framework as a means to animate the complex and varied diffusion of innovation or best employment practices across multi-national subsidiaries (Edwards et al., 2013; Elger and Smith, 2005). Here

[^5]system is understood to incorporate the political economy, dominant mode(s) of production and extent of convergence, society can be represented by national institutions, culture and path dependencies, whilst dominance explores power dynamics and local versus global pressures. The resulting analysis opens up a sense of the interdependencies of determinants and the dynamic diffusion, translating and filtering processes whereby employment practices gain a specific character within each society. As Edwards et al., (2013) report from their survey of best practice employment practices, this implies a pathway between understanding MNC practices as a reaction to global universal best practice on one hand, or unique national institutional contexts on the other. Importantly, in the SSD application of system theory, the role of agents (e.g. international companies) is directly incorporated into the analysis.

System theory has also been used to better appreciate the dynamics of specific contexts and the limitations of normative HRM theory in capturing same. Harney and Dundon (2006) deployed an open system model to examine the key determinants of HRM in a series of six case studies from the Republic of Ireland. SMEs were deemed to have specific characteristics likely to be better accommodated by a systems logic e.g. dynamic and informal relations, proximity to the external environment, specific determinants of HRM (e.g. influence of value chain, product markets), and a broader and relative sense of performance (e.g. succession, survival, local goals). In keeping with the SSD findings, Harney and Dundon (2006) found that size per se was not a key determinant of HRM but rather size interacted with a 'complex interplay' of external and internal factors to shape HRM. An empirical, survey based, extension of this open systems proposition for exploring HRM in smaller firms found support for a mode of analysis founded upon 'contextualizing and configuring HRM systems' (Lacoursiere, Fabi, and Raymond, 2008: 106). Researching in a hospital context, Townsend and colleagues (Townsend et al., 2013) used a holistic approach to illustrate how HRM systems interacted with sub-systems of strategic and operations management, information management, and health and safety to shape performance outcomes. They conclude that "simultaneous and interdependent influence of multiple processes should be considered when examining the influence of the effective functioning of HRM process" (Townsend et al., 2013: 3062). Typically, consideration of such interdependencies have been absent from research.

Others have used open system informed theoretical perspectives such as institutional theory and resource dependency as a lens to explore the determinants of HRM or diffusion of specific practices (Boon, Paauwe, Boselie, and Den Hartog, 2009). Specifically, institutional and political forces mean that particular HRM practices may be introduced, or imposed, not as a direct result of market forces but rather as legitimacy enhancing actions to facilitate acceptance and survival (Gooderham, Nordhaug, and Ringdal, 1999; Wright and McMahon, 1992). A central thesis of institutional theory is that HR activities may be adopted as the result of isomorphism, irrespective of their effects on performance, as evidenced in findings of 'symbolic remuneration' reported by Alles-Fernandez et al.,(2006) (see chapter X, institutional

[^6]theory). A key point is that such behaviour, which might be otherwise signalled as simply 'economically irrational, or dysfunctional is instead understood as 'sensible' conferring prestige and legitimacy (Eisenhardt, 1988; Oliver, 1991). It is on the basis of this logic that Paauwe (2004, p.: 3) argues that assessment of HRM should not just be about rationality through economic optimization but also about 'relational rationality' manifest in efforts to achieve fairness and legitimacy. Table X below highlights the key forces that may be at work in defining the environment and shaping the repertory available to any given organisation (Scott, 2005). Evidently these drivers of isomorphism are by no means mutually exclusive, while they differ in the extent to which their influence is more implicit (networks and associations) or explicit (legislation), whether it is exercised through either formal and/or informal channels as well as the extent to which the organisational response is deliberate or unintentional.

Table X Drivers of Isomorphism in Employment Relations and HRM

| Drivers of Isomorphism | HRM Examples |
| :--- | :--- |
| Coercive Forces | Political Influences: Social partners, Collective bargaining <br> agreements, labour regulations (e.g. equal opportunities/ <br> minimum wage), formal and informal pressures exerted by <br> other organisations e.g. competitors/strategic alliance partners |
| Mimetic Forces | Social Regulations/ Belief systems: Standard responses to <br> uncertainty e.g. HR Scorecard, Best Practice, Competency <br> blueprints, fashion. |
| Normative regulations | Professional Regulations/ Norms: Professional's experience, <br> education, licenses and certifications, membership of networks <br> and associations, desire to contribute to feelings and <br> expectations of fairness/equity |

Based on the seminal work of Di Maggio and Powell (1983), supplemented with HRM implications surmised from Gooderham (1999) and Paauwe (2004).

This provides a mechanism to capture issues of survivability and adaptability and the more immediate objectives of managing paid employment in the form of labour productivity, organizational flexibility and societal legitimacy (Boselie, Dietz, and Boon, 2005; Boxall and Purcell, 2008). In this sense the focus is on organisational effectiveness (Cummings, 2015b). Systems theory logic has also been usefully deployed as a means to provide a holistic view of extant knowledge about HRM practices. Schleicher et al., (2018) explore studies of performance management (PM) via a broad understanding of key components, inputs, interdependencies and feedback mechanisms. They note the 'essential' role of systems theory in distilling knowledge about PM, and question the value of isolated studies and simple lists of best practice. Instead they issue a clarion call for research which addresses "the congruence between multiple aspects of the PM system as a predictor of system effectiveness" (Schleicher et al., 2018: 2232).

Overall, it can be argued that direct empirical application of system theory is noticeable for its absence in HRM and employment relations. By contrast, much conceptual work

[^7]has provided models and frameworks very much in keeping with system theory. As noted previously, this includes the foundational work by Beer and colleagues (1984) but also a contextual view of HRM as proposed by Jackson and Schuler (1995) and Paauwe (2004). Exploring the means by which to optimize HR scalability, Dyer and Ericksen (2005) drew on the concept of complex adaptive systems. They argued that broad principles and a general sense of purpose provide a foundation for selforganisation, adaptation and adoption so organisations can keep up with changes and requirements. With this exception, change and the dynamics of re-organizing are rarely considered, especially in HRM, or limited to narrow once off occurrences, disrupting the stability which is assumed as possible and normal.

## Systems theory: Problems and Pitfalls

There are a number of factors that have hindered the application of system theory in HR/ER. Some of these relate to trends in research and others to the inherent characteristic of systems logic. In terms of the former, the dominance of positivism has resulted in external factors being (conveniently) relegated to control variables as opposed to forming the core of explanations. Moreover, the focus of HRM has been increasingly directed to more micro factors within the firm to the neglect of contextual determinants. High-performance work system research tends to use indexes to explore the sum of practices and their diffusion in an attempt to capture system dynamics. Yet while high performance work systems are referred to as 'complex organisational systems' (Jiang and Messersmith, 2017) the reality is that empirically they are not explored as such. Thus while dominant, the reading of systems in such work is conceptually narrow, and empirically deficient.

A concern for those with a more pluralist outlook of the employment relationship is that system theory is sometimes understood as implying a purely functionalist imperative, assuming the image of an organisation driven in a mechanical way by the necessity of functional tasks and environmental forces. The charge of reifying system characteristics and downplaying the political status of the agents concerned forms the crux of Silverman's (1970) celebrated critique of systems theory. However, in practice a systems approach can afford due attention to agential choice and influence. Truss and Gratton, argue that "while recognising the significance of external contextual factors, an open systems perspective means that we should be aware of the role played by organisations in influencing as well as being influenced by their environment" (1994: 674 emphasis added). In a similar vein Thompson and McHugh acknowledge that "there is a danger of constantly talking as if organisations were 'things' adapting to the environment. However, in practice, open systems theory gives a central role to management to predict and design appropriate structures and responses" (1995: 63). This becomes even more apparent as a closer of reading of Katz and Kahn finds recognition of the 'conflict dynamic' (1966: 107) at the centre of capitalist enterprises, as they elaborated

[^8]"the contrived character of organisations means that by nature they contain inbuilt sources of conflict. Many facts of organisational life can be readily understood if the model of organisations is one which views social patterns, not as fixed and rigid interrelations but as the outcome of a continuing tug of war" (Katz and Kahn, 1966:108).

Actors do not therefore have to appear as ghost like characters in systems analysis, while systems analysis does not necessarily have to divert attention away from issues of power and conflict. Of course it must be acknowledged that the perpetuation of a functional (mis)conception may align with certain ideologically informed, more unitarist, analysis (Geare et al., 2014).

A frequent critique made of systems theory is that it has a very broad appeal and sentiment, but lacks in predictive accuracy and specifics. This point has reverberated in commentary on employee relations (e.g. Blyton and Turnbull, 2004: 27). The force of a critique, however, depends on the status that the theory initially afforded itself. Early open systems accounts challenged the very concept of predictability as the basis of scientific theories, referring instead to guiding metaphors and principles to enhance understanding (Emery, 1969: 12). Systems thinking is a meta-theory resulting in a level of abstraction used to broadly frame, but not directly inform, research. In their foundational text Katz and Kahn acknowledged "open-systems theory does not pretend to the specific sequences of cause and effect; the specific hypothesis and tests of hypothesis" (1966: 452). This would explain some of the limited direct empirical application of system thinking. It follows that in many interpretations systems theory is understood as a meta or middle ground theory. In systems theory research the ultimate goal is less about a quest for empirical consistencies/regularities, and more about developing useful explanatory categories which can enhance understanding of the patterns of realised employment relations. Contextual frameworks in HRM frameworks should not be thought of as a theoretical model in the sense of a logically coherent whole of testable propositions, but rather as a heuristic device, which attempts to understand what is contextually unique and why it is so (Brewster, 1999).This is also in keeping with the spirit of Katz and Kahn's contribution as they held that;
> "theoretical progress can be best made by attempting to adapt the open system model to each genotypic category of the phenomena to which it is applied, adding specification to the meta-theoretical framework in order to maximize its explanatory power for the population category under study" (1966: 453).

[^9]In terms of specificity, echoing the criticism directed at best fit models of HRM, a systems propositions is one that can easily become lost in a chimera of contingency variables (cf Longenecker and Pringle, 1978; Purcell, 1999). As an example Gilman and Edwards take Harney and Dunson's open system analysis to task for compiling 'sets of interesting but non-comparable stories' (2008: 540). Analysis therefore needs to pay specific attention to favouring a careful rather than chaotic selection of variables based upon well-grounded criteria (Luthans and Stewart, 1978). In addition, agential capacity must form an explicit part of analysis, else long standing criticisms of determinism and the reification of systems once again find force.

## Systems theory: Prospects and potential

Based on the overview to date it is perhaps unsurprising that recent reviews have called on systems theory encouraging 'new research that embraces systems thinking' (Jackson, Schuler, and Jiang, 2014: 1). Indeed, there a number of avenues where systems theory can help advance conversation and understanding. At a macro-level, a systems based appreciation would facilitate in directing attention in HRM towards the broader system of financalialization and its impact in framing and reframing the nature of workplace relations (Cushen, 2013; Cushen and Harney, 2014). Too often the role of powerful actors, including financial capital, and the economic and social backdrops of employment relations are defined out of existence. There is much scope to explore the likes of system, society, and dominance (SSD) as a systematic means to offer insights across organisations and contexts. Moreover, while some progress has been made in exploring the blurring boundaries of work and networked organisations (Kinnie and Swart, 2012; Marchington and Vincent, 2004) interpretations risk presenting findings as unique and novel, rather than as particular manifestations of pre-existing dynamics. In the context of the gig economy and trends towards contract work it is critical to appreciate employment (both in supply and demand terms) as extended beyond the walls of the organisation. A systems approach offers potential value as it moves away from more reductionist analysis towards a concern with holism and contextualism. This potential is reflected in the rise of work drawing on ecosystems logic. For example, Baruch and Rousseau (2018) use ecosystems to bridge work on psychological contracts and careers, while incorporating multiple career agents. Further integration of systems theory would also help to address the clarion call for multi-level understanding in HRM scholarship. By way of example, recent trends at engaging with the strategy literature via the lens of human capital resources call for understanding founded on concepts such as emergence, multi-level integration of concepts and the multi-dimensional nature of performance (Nyberg, Reilly, Essman, and Rodrigues, 2017).

A further prospect stemming from systems logic is that it does not presuppose the existence of a particular form of HRM or employment relations, nor assume the nature of its impact as a predetermined given. Instead, by merely sensitising analysis to key determinants, analysis can be open to evidence of 'how things happen in practice'.

[^10]This is turn allows for seemingly conflicting evidence, aligning with the argument that the axis of HRM's focus should tilt towards explaining variances in HRM policies and practices between organisations (Godard, 2004; Kaufman, 2008). This opens up analysis away from a narrow emphasis on financial performance and the ostensive aspect of relations (e.g. formal structures) to allow for emergence, process insights, contradiction and change in employment relations trajectories, informality and the nonstrategic determinants of HRM practice. Indeed, in retaining a sensitivity to plural goals, indeterminacy and the embeddedness of the organisation in its wider environment, a systems approach may form a gateway for HRM and employment relations scholars to find more stable and comparable ground (Harney et al., 2017). Watson (2004), for example, offered a critique of the prescriptive and ideological nature of HRM literature before putting forward a multi-layered understanding of factors conditioning and enabling what actually occurs in organisations. According to Watson, this approach underlines the need to link "a micro-political study of events within firms to the 'political' economy of employment relationships" (Watson, 2004: 454). At the heart of the critical social science analysis he advocates are a number of core features, including:

- The importance of analyzing the 'actual' human resource strategy-making processes.
- The relationship between human resourcing activities and extra-organisational patterns of culture, power and inequality.
- Human resourcing activities being theorized in such a way that full weight is given to both human/managerial agency and to structural circumstances.
- The interaction between managerial agency/choice and structural constraints and opportunities in the shaping of human resourcing practice

This form of analysis resonates with system-informed understanding and moves beyond accounts which remain functionalist, normative and unitarist.

Beyond areas for the novel application of systems theory, there are is also the potential for its further conceptual development. Explorations of systems theory and how it relates HRM/ER to the surrounding environment are rare (for an exception see Mayrhofer, 2004). As documented in this chapter, there is little appreciation of the rich heritage of key system terms, and even when they are applied this is either as a superficial reference, or in a manner that offers a stinted, short-sighted and narrow application of their meaning and value (Thornton, 2009). According to Harney (2014) much theorising remains rooted in the lower levels of Boulding's (1956) system

[^11]typology and consequently to a limited model of the nature of human behaviour. Associated with this is the dominance of a model of science which emphasizes technicism, and prediction and is consumed with methodological debates. As one alternative, Niklas Luhmann's systems theory operates at the level of interpretation and meaning, offering rich insights into modes of communicative practice exploring how meaning is construed and constructed in diverse ways (La Cour, Steen, Hojlund, Thyseen, and Rennison, 2007). Another prospect relates to exploration of the formation and sustainability of HRM and of the co-evolution and interdependence of HRM and other systems (e.g. analytics and technological developments). Scholars would find a rich resource in revisiting the classic treatise of Pondy and Mitroff (1979) and their extension and elaboration of open systems theory. This includes the argument that, rather than being protected against environmental complexity, organisational systems should become embedded within it. Extensions of systems logic can also be found in complexity theory, chaos theory and by exploring organisations as complex adaptive systems.

A final area where systems analysis could find further traction comes from encouraging a more explicit consideration and critical scrutiny of the domain assumptions that underpin research and dynamics of the ecosystem shaping research. Philosophical discussion is not necessarily encouraged in mainstream HR/ER analysis. It is critical to recognize, however, that many of the assumptions and dynamics accompanying systems logic are not easily accommodated by the scientific quest for law-like relationships between fixed variables which consumes analysis and dominates the pages of peer-reviewed journals. Instead, a meta-theory like critical realism is more closely aligned with a focus on explanation versus prediction per and can readily accommodate characteristics such as emergence, indeterminacy, the difference between intended and realised practice (Fleetwood and Hesketh, 2010; Harney, 2009). Greater philosophical exploration might privilege contextual understanding over a quest for simplistic and narrow universalism.

## Summary

Overall, this chapter has demonstrated that systems theory has been incorporated into study of employment, and HRM in particular, in a very narrow fashion which does not do justice to either its historical legacy or future potential. While theoretically intuitive, and animating many of the limitations of ER/HRM theory, it is in the domain of application that open systems theory has fallen short. A recent review of theories in the domain of HRM finds only three articles applying general systems theory (Jiang and Messersmith, 2017). The advantage of systems analysis rests in its ability to relate different levels of analysis, reconciling structural and social perspectives with a mechanism that respects insights from multiple theoretical lenses (Hopper and Powell, 1985). This ability, fostering an inbuilt appreciation of context, would seem especially relevant when it comes to locating the determinants and workings of changing forms of employment and the omnipresent impact of financialization (Rubery, 2015).

[^12]Moreover, by recognizing dynamics, complexity and change system logic holds the potential to bridge important conversation across traditional employment relations and contemporary HRM for better understanding the world of work. Whether the potential of systems theory can be realised is an open question. As a conclusion consider these two quotes, some 45 years apart, which either capture the on-going hope or continued delusion of system theory:
"The extension of systems to social systems have barely begun to encompass the richness of thought exhibited in historical work. There is no reason why the serious student of management should not regard this as a challenge to join in the bridging operation" (Emery, 1969: 9).
"Looking ahead, we encourage a new a generation of strategic HRM scholars to engage in problem-centered research that addresses the significant challenges contemporary organizations face, including intense competition, rapid globalization, and environmental degradation, among others. Such work will undoubtedly reflect the open systems perspective that gave birth to the field of strategic HRM' (Jackson et al., 2014: 41-42)

[^13]
## References

Ackoff, R L. (1969). Systems, organisations, and interdisciplinary research. In F. E. Emery (Ed.), Systems thinking (pp. 330-347). Middlesex: Penguin.
Alles-Fernandez, Mariluz, Cuevas-Rodriguez, Gloria, and Valle-Cabrera. (2006). How symbolic remuneration contributes to the legitimacy of the company: An institutional explanation. Human Relations, 59(7), 961-992.
Baird, L, and Meshoulam, I. (1988). Managing two fits of strategic human resource management. Academy of Management Review, 13(1), 116-128.
Barnard, Chester. (1938). The functions of the executive. Cambridge Mass: Harvard University Press.
Baruch, Yehuda, and Rousseau, Denise M. (2018). Integrating psychological contracts and ecosystems in career studies and management. Academy of Management Annals, https://doi.org/10.5465/annals.2016.0103.
Bedian, Arthur G. (1990). Research notes and communications choice and determinism: A comment. Strategic Management Journal, 11, 571-573.
Beer, Michael, Boselie, Paul, and Brewster, Chris. (2015). Back to the future: Implications for the field of hrm of the multistakeholder perspective proposed 30 years ago. Human Resource Management, 54(3), 427-438.
Beer, Michael, Spector, Bert, Lawrence, Paul, Mills, Quinn, and Walton, Richard. (1984). Managing human assets. New York: The Free Press.
Blau, Peter M, and Scott, Richard W. (1963). Formal organizations: A comparative approach. London: Routledge and Keegan Paul.
Blyton, Paul, and Turnbull, Peter. (2004). The dynamics of employee relations (Third Edition ed.): MacMillan Business.
Boon, Corine, Paauwe, Jap, Boselie, Paul, and Den Hartog, D N. (2009). Institutional pressures and hrm: Developing institutional fit. Personnel Review, 38(5), 492-508.
Boselie, P, Dietz, Graham, and Boon, Corine. (2005). Commonalities and contradictions in hrm and performance research. Human Resource Management Journal, 15(3), 67-94.
Boulding, Kenneth E. (1956). General systems theory: The skeleton of science. Management Science, 2, 197-208.
Bowen, David, and Ostroff, Cheri. (2004). Understanding hrm-performance linkages: The role of the 'strength' of the hrm system. Academy of Management Review, 29(2), 202-222.
Boxall, Peter, and Purcell, John. (2008). Strategy and human resource management (Second ed.). London: Palgrave MacMillan.
Brown, William. (1973). Piecework bargaining. London: Heinemann Educational Books.
Burns, Tom, and Stalker, Graham. (1961). The management of innovation. London: Tavistock Publications 2nd Edition.
Combs, J G, Ketchen, David, Hall, A, and Liu, Y. (2006). Do high performance work practices matter? A meta-analysis of their effects on organisational performance. Personnel Psychology, 59, 501-528.
Cummings, Thomas G. (2015a). Open systems. In C. Cooper (Ed.), Wiley encyclopedia of management 3rd edition.
Cummings, Thomas G. (2015b). Systems theory. In C. Cooper (Ed.), Wiley encyclopedia of management 3rd edition.
Cushen, Jean. (2013). Financialization in the workplace: Hegemonic narratives, performative interventions and the angry knowledge worker. Accounting, Organizations and Society, http://dx.doi.org/10.1016/j.aos.2013.06.001.

Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects', Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

Cushen, Jean, and Harney, Brian. (2014). Broken promises: Why shrm does not always work. In B. Harney and K. Monks (Eds.), Strategic hrm: Research and practice in ireland. Dublin: Orpen.
Di Maggio, P J, and Powell, W W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. American Sociological Review, 23, 111-136.
Dundon, Tony, Harney, Brian, and Cullinane, Niall. (2010). De-collectivism and managerial ideology: Towards an understanding of trade union opposition. International Journal of Management Concepts and Philosophy, 4(3/4), 267-281.
Dunlop, John. (1958). Industrial relations systems. London: Feffer and Simons Inc.
Dyer, Lee, and Ericksen, Jeff. (2005). In pursuit of marketplace agility: Applying precepts of selforganizing systems to optimize human resource scalability. Human Resource Management, 44(2), 183-189.
Edwards, P, Sánchez-Mangas, R, Tregaskis, O, Lévesque, C, McDonnell, A, and Quintanilla, J. (2013). Human resource management practices in the multinational company: A test of system, societal, and dominance effects. ILR Review, 63(3), 588-617.
Edwards, Paul. (1986). Conflict at work: A materialist analysis of workplace relations. Oxford: Blackwell.
Edwards, Paul. (1995). From industrial relations to the employment relationship. Relations Industrielle, 50(1), 39-65.
Edwards, Paul, and Scullion, Hugh. (1982). Deviance theory and industrial praxis. Sociology, 16(3), 322-340.
Eisenhardt, Katerine M. (1988). Agency- and institutional theory explanations: The case of retail sales compensation. Academy of Management Journal, 31, 488-511.
Elger, Tony, and Smith, Chris. (2005). Assembling work: Remaking factory regimes in japanese multinationals in the uk. Oxford: Oxford University Press.
Emery, F E. (1969). Introduction. In F. E. Emery (Ed.), Systems thinking: Penguin Books.
Etzioni, Amitai. (1961). A comparative analysis of complex organizations. New York: Free Tree Press.
Fleetwood, Stephen, and Hesketh, Anthony. (2010). Explaining the performance of human resource management: Cambridge University Press.
Geare, Alan, Edgar, Fiona, McAndrew, Ian, Harney, Brian, Cafferkey, Kenneth, and Dundon, Tony. (2014). Exploring the ideological undercurrents of hrm: Workplace values and beliefs in ireland and new zealand. International Journal of Human Resource Management, 25(16), 2275-2294
Gilman, Mark, and Edwards, Paul. (2008). Testing a framework of the organisation of small firms. International Small Business Journal, 26(5), 531-558.
Godard, John. (2004). A critical assessment of the high-performance paradigm. British Journal of Industrial Relations, 42(2), 349-378.
Gooderham, Paul, Nordhaug, Odd, and Ringdal, Kristen. (1999). Institutional and rational determinants of organizational practices: Human resource management in european firms. Administrative Science Quarterly, 44, 507-531.
Gouldner, A W. (1954). Patterns of industrial bureaucracy. New York: Free Press.
Harney, B. (2016). Configurational model. In A. Wilkinson and S. Johnstone (Eds.), An Encyclopedia of Human Resource Management (pp. 64-65): Edward Elgar.
Harney, B, Dundon, T, and Wilkinson, A. (2017). Employment relations and human resource management. In A. Wilkinson, T. Dundon, J. Donaghey and A. Covin (Eds.), Routledge companion of employment relations. London: Routledge.

Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects', Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

Harney, Brian. (2009). Exploring the road less travelled in hrm-performance research: A critical realist alternative to big science. Paper presented at the Proceedings of the Labor and Employment Relations Association 61st Annual Meeting
Harney, Brian. (2014). Using skeletons from the past to flesh out a future for hrm theory and research' [ailr/lera best paper]. Paper presented at the Labour, Employment Relations Conference, Portland, Oregon.
Harney, Brian, and Dundon, Tony. (2006). Capturing complexity: Developing an integrated approach to analysing hrm in smes. Human Resource Management Journal, 16(1), 48-73.
Harney, Brian, and Dundon, Tony. (2007). An emergent theory of hrm: A theoretical and empirical exploration of determinants of hrm among irish small to medium sized enterprises. Advances in Industrial and Labor Relations, 15, 109-159.
Hopper, Trevor, and Powell, Andrew. (1985). Making sense of research into organisational and social aspects of management accounting: A review of its underlying assumptions. Journal of Management Studies, 22(5), 429-465.
Jackson, Susan E., and Schuler, Randall S. (1995). Understanding human resource management in the context of organizations and their environments. Annual Review of Psychology, 46, 237264.

Jackson, Susan E., Schuler, Randall S., and Jiang, K. (2014). An aspirational framework for strategic hrm. Academy of Management Annals, 8(1), 1-56.
Jiang, K, and Messersmith, Jake. (2017). On the shoulders of giants: A meta-review of strategic human resource management. International Journal of Human Resource Management, http://dx.doi.org/10.1080/09585192.2017.1384930.
Jiang, Kaifeng, Lepak, David, Han, Kyongji, Hong, Ying, Kim, Andrea, and Winkler, Anne-Laure. (2012). Clarifying the construct of human resource systems: Relating human resource management to employee performance. Human Resource Management Review, 22, 73-85.
Kast, Fremont, and Rosenzweig, James. (1972). General systems theory: Applications for organization and management. Academy of Management Journal, December, 447-465.
Katz, D, and Kahn, R L. (1966). The social psychology of organizations. New York: John Wiley and Sons Inc.
Kaufman, Bruce. (2008, 11th of September, 2008). A theory of the firm's demand for hrm practices. Paper presented at the CISC HPWS Workshop (under review at Academy of Management Review), NUI, Galway.
Kinnie, Nicholas, and Swart, Jani. (2012). Committed to whom? Professional knowledge worker commitment in cross-boundary organisations. Human Resource Management Journal, 22(1), 21-38.
Klein, Howard, Snell, Scott, and Wexley, Kenneth. (1987). Systems model of the performance appraisal interview process. Industrial Relations, 26(3), 267-280.
Koehler, W. (1969). Closed and open systems. In F. E. Emery (Ed.), Systems thinking (pp. 59-59). Middlesex: Penguin.
La Cour, Anders, Steen, Vallentinm, Hojlund, Holger, Thyseen, Ole, and Rennison, Betina. (2007). Opening systems theory: A note on the recent special edition of organization. Organization, 14(6), 929-938.
Lacoursiere, Richard, Fabi, Bruno, and Raymond, Louis. (2008). Configuring and contextualising hr systems: An empirical study of manufacturing smes. Management Revue, 19(1 and 2), 106125.

Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects', Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

Longenecker, Justin, and Pringle, Charles D. (1978). The illusion of contingency theory as a general theory. Academy of Management Review, July, 679-683.
Luthans, Fred, and Stewart, Todd. (1978). The reality or illusion of a general contingency theory of management: A response to the longenecker and pringle critique. Academy of Management Review, July, 683-687.
March, James G. (1991). Exploration and exploitation in organisational learning. Organization Science, 2(1), 71-87.
Marchington, Mick, and Vincent, Steve. (2004). Analysing the influence of institutional, organizational and interpersonal forces in shaping inter-organizational relations. Journal of Management Studies, 41(6), 1029-1956.
Mayrhofer, Wolfgang. (2004). Social systems theory as theoretical framework for human resource management - benediction or curse? Management Revue, 15(2), 178-191.
Nishii, Lisa, Lepak, David P, and Schneider, B. (2008). Employee attributions of the 'why' of hr practices: Their effects on employee attitudes and behaviors, and customer satisfaction. Personnel Pyschology, 61(3), 503-545.
Nyberg, A, Reilly, G, Essman, S, and Rodrigues, Jenna. (2017). Human capital resources: A call to retire settled debates and to start a few new debates. International Journal of Human Resource Management, DOI: 10.1080/09585192.2017.1381138.
Oliver, C. (1991). Strategic responses to institutional processes. Academy of Management Review, 16(1), 145-179.
Paauwe, J. (2004). Hrm and performance: Achieving long term viability. Oxford: Oxford University Press.
Paauwe, J, and Farndale, Elaine. (2017). Strategy, hrm, and performance (Second Edition ed.). Oxford: Oxford University Press.
Pondy, L R, and Mitroff, I. (1979). Beyond open systems models of organisation. In L. L. Cummins (Ed.), Research in organisation behaviour vol 1 (pp. 3-39).
Pugh, D S, Hickson, D J, Hinings, C R, and Turner, C. (1968). Dimensions of organisational structure. Administrative Science Quarterly, 14, 91-114.
Purcell, John. (1999). Best practice and best fit: Chimera or cul-de-sac? Human Resource Management Journal, 9(3), 26-41.
Rubery, Jill. (2015). Change at work: Feminisation, flexibilisation, fragmentation and financialisation. Employee Relations, 37(6), 633-644.
Schleicher, D. , Baumann, H., Sullivan, D., Levy, P. E., Hargrove, D., and Barros-Rivera, B. . (2018). Putting the system into performance management systems: A review and agenda for performance management research. Journal of Management, 44(6), 2209-2245.
Scott, Richard W. (2005). Introduction to the transaction edition: Thompson's bridge over troubled water Organizations in action: Social science bases of administrative theory. New Brunswick: Transaction.
Silverman, David. (1970). The theory of organisations: A sociological framework.
Simon, H A. (1956). Rational choice and the structure of the environment. Psychological Review, 63, 129-138.
Thompson, Paul, and McHugh, David. (1995). Work organisations: A critical introduction (Second ed.). London: MacMillan Press.
Thornton, Patricia. (2009). The value of classics. In P. Adler (Ed.), The oxford handbook of sociology and organization studies (pp. 20-36): Oxford.

Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects', Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

Townsend, K, Lawrence, S, and Wilkinson, A. (2013). The role of hospitals' hrm in shaping clinical performance: A holistic approach. International Journal of Human Resource Management, 24(16), 3062-3085.
Truss, Catherine, and Gratton, Lynda. (1994). Strategic human resource management: A conceptual approach. International Journal of Human Resource Management, 5(3), 663-686.
von Bertalanffy, L. (1969). The theory of open systems on physics and biology. In F. E. Emery (Ed.), Systems thinking (pp. 70-85). Middlesex: Penguin.
Walton, R E. (1985). From control to commitment on the workplace. Harvard Business Review, 63, 77-84.
Watson, Tony. (2004). Hrm and critical social science analysis. Journal of Management Studies, 41(3), 447-467.
Wilkinson, Adrian, and Wood, Geoff. (2017). Global trends and crises, comparative capitalism and hrm. International Journal of Human Resource Management, https://doi.org/10.1080/09585192.2017.1331624.
Wood, Stephen. (1979). A reappraisal of the contingency approach to organisation. Journal of Management Studies, 16(3), 334-354.
Woodward, Joan. (1965). Industrial organisation: Theory and practice. Oxford: Oxford University Press.
Woodward, Joan (Ed.). (1970). Industrial organization: Behviour and control: Oxford University Press.
Wright, P M, and McMahon, G C. (1992). Theoretical perspectives for human resource management. Journal of Management, 18, 295-320.
Wright, P M, and Snell, Scott. (1991). Towards an integrative view of strategic human resource management. Human Resource Management Review, 1(3), 203-205.
Zedeck, S, and Cascio, W F. (1984). Psychological issues in personnel decisions. Annual Review of Psychology, 35(461-518).

[^14]
[^0]:    Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects', Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
    Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

[^1]:    Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects', Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
    Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

[^2]:    Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects', Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
    Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

[^3]:    Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects', Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
    Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

[^4]:    Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects', Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
    Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

[^5]:    Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects', Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
    Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

[^6]:    Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects', Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
    Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

[^7]:    Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects', Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
    Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

[^8]:    Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects', Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
    Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

[^9]:    Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects', Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
    Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

[^10]:    Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects', Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
    Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

[^11]:    Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects', Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
    Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

[^12]:    Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects', Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
    Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

[^13]:    Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects’, Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
    Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

[^14]:    Citation: Harney, B. (2019) 'Systems Theory: Forgotten Legacy and Future Prospects', Chapter 8 in Townsend, K., McDermott, A., Cafferkey., K and Dundon, T. (eds) (2019) Theories of Employment Relations and HRM, Edward Elgar pp.112-127
    Funding acknowledgement: I gratefully acknowledge funding received from the European Union's Horizon 2020 Research and Innovation program under Marie Sklodowska-Curie grant agreement number 734824.

