



Full Length Article

“Their lives don’t matter to politicians”: The necropolitical ecology of Thailand’s dangerous and unequal roads

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ABSTRACT

Thailand is consistently ranked as having the worst road safety record in Asia, and one of the worst globally. Most deaths are of the rural poor, a function of necropolitical ecology. A primary factor is the materiality and design of the road system, built to increase mobility rather than improve safety, and lacking a hierarchical structure. Highways are poorly integrated into both rural areas and Thai cities, and ignore the needs of motorcycle drivers, who comprise most road users and victims. Traffic regulations are not enforced by poorly paid police officers, without adequate resources or ability to enforce traffic fines, and who engage in corrupt practices. This is compounded by inadequate driving education. These factors are complicated and caused by Thailand’s fragmented and weak governance. A plethora of agencies do not cooperate and have overlapping mandates. No lead agency has been given sufficient power to improve governance of the system. The public blame drivers rather than the state. Political leadership, in favour of quick results, has attached little importance to this issue and consequently devoted insufficient resources to address it, an inaction, ignorance and urban bias that have contributed to unnecessarily high levels of rural injuries and mortality.

1. Introduction

Road traffic mortalities (RTMs) are one of the top ten causes of death globally, estimated at 1.25 million people annually, and are predicted to rise from ninth to seventh in global rankings by 2030 (Seresirikachorn et al., 2022). These numbers exclude premature deaths caused by air pollution, climate change, the ecological degradation from roads as well as non-human animal deaths (Truscillo, 2020). Around 90% of RTMs occur in low- and middle-income countries where motorcyclists, pedestrians, and cyclists are the majority of those affected. Although two of the Sustainable Development Goals (SDGs) recognise the need to improve road safety and reduce mortality and injury rates, particularly for vulnerable groups (Wales, 2017), little academic attention has been attached to the socioeconomic context and political ecology of RTMs. Several Asian countries have exceptionally high RTM rates, notably Malaysia, Vietnam and Cambodia (Kitamura et al., 2018); this analysis focuses on Thailand, which has the highest rate in the ASEAN region.

Thailand ranks worst for RTMs per person in Asia. Typical of the decade, over 22,000 people died in 2019 (decreasing afterwards during COVID-related lockdowns). Most RTMs are poor, young, and rural men

who ride motorcycles: 75–80% of deaths are motorcycle riders or passengers, whereas only 12% involve car occupants (Beech, 2019). A motorcyclist in Thailand dies approximately every 35 min; 80% are male, resulting in RTMs being the leading cause of death of Thais aged 10–29 years old (WHO, 2020). Unusually, compared with other countries, including other Asian ones, most deaths are of the poor in rural areas (Seresirikachorn et al., 2022; Yongchaitrakul et al., 2012). Previous studies of Thailand’s poor road safety record do not explain why Thailand is such an anomaly, in geography and in numbers, and why numerous government campaigns have failed (Choocharukul & Srisongvikrai, 2017; Seresirikachorn et al., 2022; Suphanchaimat et al., 2019).

We address this analysis from a political ecology context, linked to discourses, power geometries, and the materialities of Thailand’s roads, to argue that the particular structure of RTMs is a function of the country’s necropolitical ecology. Political ecology not only combines “concerns of ecology and a broadly defined political economy” (Blaikie & Brookfield, 1987, p. 17) but, through its post-structural turn, considers how discourses and cultural practices shape the social construction of environments (Véron, 2006). It originated from the perception of

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landscapes and infrastructures “as historical products of human-nature interactions” (Keil, 2003, p. 724), involving the “power geometries and social actors who carry them out” (Swyngedouw, 2004, p. 23; Massey, 1993). We seek therefore, within an overall political ecology perspective, to combine power geometries, the significance of space and place and necropolitics, where death is a function of state ideology, politics and practice.

Power structures and actors determine who can access or control resources, in this case roads. We will therefore argue that political ecology’s approach to explaining unequal vulnerabilities to risk disasters is also valuable in understanding vulnerability to road accidents. Moreover, we situate this in a necropolitical context: “the capacity to define who matters and who does not, who is disposable and who is not” (Mbembé, 2003, p. 27) as entrenched in state ideology and practices. We adopt a broad necropolitical focus, derived by Mbembé from Foucault’s concepts of biopower and biopolitics, but in circumstances that are unlike the direct necropolitics of jails, concentration camps, and similar physically defined places where ‘violent inaction’, involving such things as denial, avoidance, acceptance, complicity or laziness, become mechanisms of indirect and distanced oppression (Davies et al., 2017; Gregory, 2006; Jha, 2023). In this approach we recognise direct parallels and analogies with the structural violence and injustice of elite approaches to climate change and to the working of complex bureaucracies (Gupta, 2012; Sultana, 2022) and to similar circumstances that provide antecedents and parallels in different colonial contexts (Ferguson, 1990; Watts, 1983). States assign differential values to human life: the closer to dominant power, the more valuable lives are seen to be (Verghese, 2021). The notion of necropolitics further contends that by dispossessing people’s rights and liberties, states expose people to ‘death worlds’ (Mbembé, 2003) or the possibility of death. Here, as few others have done (e.g., Cavanagh & Himmelfarb, 2015), we bring these two frameworks together. We argue that Thailand’s high rate of RTMs, particularly among the rural poor, is a product of the country’s necropolitical ecology, characterised by unequal power relations, fragmented state governance and the silent violence of neglect and bias.

Derived from multiple interviews, we seek to contribute to the literature on road safety by identifying four salient factors behind Thailand’s hazardous and uneven road safety system: poorly designed and unplanned roads; loose regulations and limited enforcement; poor driver education and safety culture; and unsafe motorcycles. We further indicate how unequal power relations and convoluted and fragmented governance have stymied reforms and solutions.

2. Political-economic factors behind the poor governance of road safety in developing countries

Most research on road safety has been “technocratic” and apolitical without “addressing the root causes of vulnerability” (Khayesi, 2020, p. 6) and mostly conducted by planners, engineers, and economists, often involving relationships between speed and road safety (e.g. Elvik et al., 2019). With rare exceptions (e.g., Bhalla & Shotten, 2019; Marsden & Reardon, 2017), a political economy approach to transport-related health outcomes remains lacking. Yet safety is not merely the result of transport modes, speed, and movements, but is also due to politics, regulations (or lack thereof), discourses, cultural practices, and power relations (Schwanen, 2016; Wales, 2017). To understand a place’s road safety record therefore requires appreciation of the political, cultural, and geographical contexts in which transport operates. The state plays a crucial role in constructing and designing roads, raising and allocating revenue, creating land use plans, enforcing road safety laws, educating drivers, setting standards for vehicle safety, providing emergency services, and investing in public transport (Wales, 2017, p. 8).

Four general reasons account for state failures to improve road safety. First, states have promoted mobility over safety, by encouraging people to own and drive cars, investing in and expanding national road networks, and liberalising economies to make it easier and more

affordable to purchase imported cars, and avoid restricting any ‘freedom of the car’ as a sign of ‘progress’ (Boateng, 2021; Koltzow, 1993; Obeng-Odoom, 2009). Concurrently, states have adopted road safety campaigns which have stressed the role of personal responsibility in causing accidents rather than increasing regulations (Brondum et al., 2022; Lamont, 2010) especially where some private sector groups, such as automobile associations, have opposed regulations that could improve road safety such as lowering speed limits (Wales, 2017).

Second, road safety is a peripheral responsibility for numerous agencies with a range of transport mandates, hence reducing RTMs is a complex governance challenge requiring collaboration on overlapping interventions: states can therefore experience coordination problems. Moreover, the costs of RTM (and injuries), including health expenditure and reduced economic activity, are not borne by agencies responsible for designing roads or enforcing their safety. Consequently, improving road safety can remain difficult without coordination between agencies (Odonkor et al., 2020; Wales, 2017). Inadequate integration, collaboration, leadership and focus are both horizontal and vertical. Sub-national governments, particularly urban ones, are often given the responsibility of designing roads, providing public transport, and enforcing traffic laws but may lack the knowledge, financial resources, and power to implement road safety (Sharpin et al., 2018) reform, partly due to incomplete decentralisation (Marks & Pulliat, 2022). Fragmented responsibilities and a lack of ownership weaken road safety governance in both Nairobi and Mumbai (Cummings & Obwocha, 2018; Gupte, 2018).

Third, despite many deaths, improving road safety has not been a political priority in many low- and middle-income countries and is often subordinate to other transport priorities, such as congestion reduction, sometimes shaped by pressure group campaigns. Consequently, politicians prioritise easy, highly visible ‘wins’ that can be attributed to them, such as pedestrian bridges. Specifically for road safety, collective action and coordination challenges, poor data, and the difficulty of attributing the causes of RTMs hinders making the issue more politically salient (Wales, 2017). Inadequate data on road safety, partly because of coordination issues, has meant that the scale of the road safety problem is often underestimated and so marginalised. Absent data include victim demographics, spatiality of accidents, transport modes, and the social and economic burden placed on families of victims. In some contexts, a degree of fatalism has meant that high numbers are not necessarily an issue. Traffic calming devices are rare in low and middle income countries, and state legislation establishing and then enforcing use of seat belts, motorcycle and bicycle helmets (that substantially reduce deaths and injuries) is less evident (Ameratunga et al., 2006). Pedestrian and motorcycle user organisations are rare and lack power and authority. Consequently, state capacity is a fundamental issue in tackling road safety.

Fourth, limited public transport, following state underinvestment, has resulted in more people using cars and motorcycles as either drivers or passengers, increasing the risk of accidents since public transport is generally a safer form of transport (Obeng-Odoom, 2009). The degree of convenience, access and affordability of public transport also affects its usage.

A limitation of our review is that it was restricted to secondary literature that included words or phrases such as ‘governance,’ ‘politics,’ ‘reform,’ ‘policy,’ and ‘political economy’ in the text. Consequently, a number of articles were not included.

3. Towards a necropolitical ecology of road safety risk

These four interrelated factors have led to the poor governance of road safety in many low- and middle-income countries. However, while such an analysis is useful in understanding the problem, we contend that a framework combining political ecology and necropolitics has additional and greater explanatory value. Previous studies have found that the poor are the most vulnerable to RTMs and RTIs because they

comprise the majority of high-risk road users, as pedestrians, motorcyclists, and cyclists (Naci et al., 2009). However, these studies do not explain either the causes or persistence of these inequalities. The political ecology of ‘unnatural’ disasters stresses that vulnerability of certain groups to risks are products of political, economic and sociocultural power, tied to space (Collins, 2010; Marks, 2015). As Murray (2009, p. 171) argues, “the social production of ... space unevenly spreads vulnerability and “exposure to risk.” Thus, elites have often focussed on road safety for some groups, such as car users, a more politically powerful group, while excluding worse-off groups, such as motorcyclists, thereby making them more vulnerable to road accidents (cf. Khayesi, 2020).

Moreover, this exclusion can be read as a form of necropolitics which builds upon but also goes beyond Foucault’s notion of biopower (Foucault, 1990). This notion alludes to the state’s use of power to protect, regulate and manage human lives, often of “legitimate” populations (Lemke, 2011). Mbembé (2003, p. 39), however, argues “the notion of biopower is insufficient to account for contemporary forms of subjugation of life to the power of death.” Consequently, he introduces ‘necropolitics’ to explain that how sovereign power sanctions death for certain populations in colonial and postcolonial settings and produces death ‘on a large scale’. Thus, necropolitics emphasises how the state has used its power to expose its population to the potential for death. This power can be also used to decide not to support or protect certain groups, thus ‘letting’ them die as opposed to only ‘making’ them, a more indirect form of a killing (Ortega, 2020). By asking who must live and who is subjugated to death, Mbembé proposes a different hypothesis than that of Foucault (Quinan & Thiele, 2020). Studies have drawn upon this notion of ‘letting them die’ to explain the European Union’s “active inaction” to address the plight of refugees (Davies et al., 2017) and the Khmer Rouge’s inactivity to prevent deaths in Cambodia (Tyner & Rice, 2016). As in Gupta’s study of the Indian bureaucracy (Gupta, 2012), an inactive bureaucratic state apparatus in Thailand has facilitated deadly spaces on and along its roads. Thus, the concept of necropolitics more persuasively explains Thailand’s high rate of RTMs than that of biopolitics does.

Moreover, as political ecologists argue, power geometries shape the environment (Massey, 1993), creating geographies of road necropolitics, and discourses, power-laden and historically contingent systems of language and communication to produce knowledge and truth (Foucault, 2013), which shape their interpretation. For example, where decision-makers or the public attribute RTMs to risky individual behaviour or poor individual driving skills, rather than the state’s governance of the roads, then pressure on political leaders to address this issue diminishes. By blaming victims, the state’s necropower, or the “subjugation of life to the power of death” (Mbembé, 2003, p. 39), is unchallenged, enabling it to continue to assign unequal values to human life.

Political ecologists stress that the ‘materiality’ of the environment should be central to any study. For example, roads are embedded in power relations and politics at every scale, and planned and designed in various ways. Building upon this argument, Truscillo’s (2020: 15) notion of ‘necropolitics of infrastructure,’ which illustrates the death intrinsic in the development of infrastructural development and operations, can valuably be applied to road safety. In the same vein, the concept of ‘infrastructural violence’ underscores how structural forms of violence (Galtung, 1969) become “operational and sustainable” through material infrastructure forms (Rodgers & O’Neill, 2012, 404). One example of this type of violence is the state’s inaction to address inadequacies and inequities in road conditions, thereby contributing to RTMs and disproportionately harming marginalised groups.

As will be shown in the case of Thailand, discourses play a critical role in shaping how RTMs are interpreted and also responded to by the state. Moreover, the construction and operation of roads can be intrinsically linked to death. Further, power dynamics, class cleavages, and urban-rural biases also contribute to uneven geographies of road

necropolitics. We now examine these various factors in the context of the necropolitical ecology of road safety in Thailand.

4. Methodology

The first author conducted semi-structured interviews with 23 key actors from May–July 2021 using purposive (selective) sampling and snowball sampling (targeting interviewees based upon the selected interviewees’ recommendations). By using these combined techniques, we sought to capture a representation from the diversity of (sub)national government agencies, private companies, thinktanks, and academics (see Appendix 1) who either work in organisations whose shape the governance of road safety or have expert knowledge of road safety governance. They were asked about the causes of RTMs, the role of state agencies, and what could be done to improve road safety. Since Bangkok was semi-locked down in 2021 due to COVID-19, most interviews were conducted online but a few were carried out in person in Bangkok, either in Thai or English. We then conducted a thematic analysis of the interview data to discern key patterns and identify the four key underlying factors discussed below. A limitation of this study is that we were unable to interview international motorcycle companies who, as we discuss below, play a key role in shaping road safety risk in Thailand. Additionally, because of the lockdown, it was not feasible to conduct interviews with road safety victims (such as those injured from road accidents) or families of those who had died from road accidents.

Thailand has a population of about 70 million, half of whom live in urban areas (with Bangkok having a population of about 11 million), and some 37 million vehicles, 20 million of which are motorcycles. Thailand has the world’s largest wealth gap with the richest one percent controlling almost 67 percent of the country’s wealth (Lindsay, 2019). These wealth inequalities have bred “other kinds of inequality ... built into the structure of society and the attitudes of its members”, including privileged access to legal, economic, and political structures (Phongpaichit & Baker, 2015: 17). Particularly, since 2006, the country’s political system has experienced ‘authoritarian tendencies’ with recurrent military leadership (Glassman, 2020). Through ‘political clientelism’, business tycoons have been given lucrative state concessions and contracts, within a business-friendly legislative agenda (Kanchoochat et al., 2021).

Inequalities exist not only between the elite and the masses but also spatially between urban, particularly Bangkok, and rural spaces. The state has shown a clear ‘urban bias’ and a pattern of disengagement with historical roots. The replacement of the absolute monarchy by a series of civilian and military governments after 1932 bolstered the political-economic and cultural dominance of Bangkok. It is home to buildings such as the royal palace, Parliament House, and the country’s most-respected temples, which represent political authority, elite prestige, and status (Marks et al., 2020).

During and after the Cold War, the country’s Bangkok-centric orientation became further entrenched due to the backing of Bangkok-based social elites and tycoons (Glassman, 2010), extending into the recent era. Typically, in 2012, 72 percent of public funds were spent in greater Bangkok but only one-sixth of the population (officially) lived there (Joehnk & Cookson, 2015). Much of these funds were spent on infrastructure, an uneven development reflecting infrastructure’s importance as “one of the major vectors for organisation of society by the state” (Rodgers & O’Neill, 2012, 402).

Through the 2010s, numbers of RTMs have remained approximately the same despite a government pledge in 2015 to half the number of road traffic fatalities by 2020 (Beech, 2019; WHO, 2020). Similarly, the disproportionate deaths of motorcyclists in rural areas have also remained constant (WHO, 2020). We suggest that Thailand’s unequal, urban-biased, autocratic, and centralised political-economic system shapes its road safety system and hence the lives of its road users.

Having distinguished four underlying factors accounting for the global incidence of RTMs, we now examine them in the Thai context and

seek to explain why Thailand has such dangerous roads and why the rural poor experience the most fatalities. These factors involve road design without any road hierarchy; limited deterrence due to weak regulations and loose enforcement; poor driver education and safety culture; unsafe motorcycles; and insufficient public transport. We now consider each factor in depth.

5. Thailand's dangerous and unequal roads

5.1. Poorly designed and unplanned roads

The materiality and geographies of Thai roads, along with their design and relationships to plans (or absence thereof), render them dangerous for all drivers, particularly motorcycle users. In the 1930s, the state began road construction on a significant scale, although it was not until the 1950s that many distant provinces gain adequate road connections (Falkus, 1991). The US encouraged road building during the 1950s and 1960s to facilitate access to its airbases, and the government cleared forests and built feeder roads to gain better access to rebel-controlled areas (Baker & Phongpaichit, 2022) to “promote democracy and fight against communism” (2, see Hung, Ian & Baird, 2017). The second National Plan (1967–1971) emphasised the expansion of roads to link remote areas to the national system, becoming important as links between upland and lowland areas, and the Department of Highways constructed 13,000 km of mainly two-lane roads (2, Jaensirisak et al., 2016).

Successive governments have simply enlarged existing roads to four to six lanes by “using the right-of-way available already” (9), being “easier” (9) and “cheaper than building a motorway” (2), for which acquiring land was costly and time-consuming (9). National governments expanded roads to enable increased motor traffic and economic development, through improved access to ports and airports. Governments thus focused on “on mobility over safety” a situation that has “not progressed much” (18). Elaboration of the historical pattern of road construction resulted in roads becoming locked into an unsafe system: path dependency where the contemporary road system was shaped by past priorities (cf. Unruh, 2000).

Ideally roads should fit a hierarchical order: expressways with high mobility and low accessibility, followed by major arterial, minor arterial, and local roads. Local roads should be the most accessible but have the lowest level of mobility (and thus lower speed levels). But in Thailand, when officials sought “to build roads, they never cared about land use planning” (3). Roads and adjacent building construction alongside them grew organically, although in the case of central Bangkok, the monarchy played a key role in shaping the area's development (Ünalı, 2016). As a Bureau of Highway Safety official asserted, “If a road is developed, real estate would follow ... That's why we have big things alongside the highway. This is incorrect in terms of the hierarchical order” (9). An official from the National Institute for Emergency Medicine (NIEM) added, “Our economic plan focused only on GDP, so people tried to move their businesses and homes close to the highway” (13). Without any land use planning, “we have big developments alongside highways” (3), since these roads pass through the centre of cities but also through many rural communities and villages. Consequently, as a NIEM official declared, “urban planning has failed” as it is “too dangerous” (13). The Department of Country and Town Planning (DTCP), the national-level agency with responsibility for urban planning, has never coordinated land and road use with the Department of Highways (3). This lack of coordination between DTCP and other agencies has also led to other national problems in Thailand, adversely affecting flood protection (Marks, 2019) and urban heat islands (Marks & Connell, 2023).

Road development without any hierarchy is dangerous because all types of traffic mix on these four-lane provincial and inter-city roads where the speed limits can reach up to 80 or 120 km/h, mixing vehicles travelling between provinces and those merely going between their

homes and nearby schools, workplaces, or shops. This lack of hierarchy also leads to a high rate of pedestrian deaths (21). Ideally, interprovincial traffic should instead travel along motorways but Thailand currently only has two (9) since “policymakers do not see or understand their importance” (12). Bypasses of urban centres, or anything else, are rare.

Road standards were designed to “increase mobility and the convenience of road users, without thinking about safety” (12). Consequently, as one senior official of the Thailand Accident Research Centre (TARC) asserted, “Roads in Thailand are too good – drivers can speed. When they can speed, serious accidents can happen and people can die” (12). Ironically, this high quality, enabling users to travel at high speeds, alongside a high density of usage, is a probable reason for a higher rate of RTMs than in poorer, neighbouring countries with inferior roads (10). Additionally, speed limits have been deemed too high, much higher than the WHO recommended limit of 50 km/h in areas with roadside communities (WHO, 2020).

This road system is particularly dangerous for motorcycle drivers because the adopted American standards were designed with only cars in mind. Consequently, Thailand's Highway Department “never thought about motorcycles,” despite their being the majority of vehicles, when building roads (12). Motorcycles and cars thus drive in the same lanes (4) and at high densities and varied speeds. To avoid high-speed cars, motorcycles, especially those with less powerful engines, often drive on the shoulder of the roads, where heavy trucks sometimes park, leading to accidents (12). Unusually, as in Cambodia, (Kitamura et al., 2018), a remarkably high percentage of accidents and RTMs occur on straight roads.

A distinct design problem related to the lack of hierarchy is the multiple U-turns which have led to numerous accidents (15) and the lack of deceleration lanes (12). Medians, with U-turns, dominate the most crash-prone locations (Meel et al., 2017). Many U-turns have been built to make driving “more convenient” to service local residents “without thinking about the safety aspect” (12). Some response has followed. In Nakhon Pathom Province, the governor removed a dangerous U-turn where there had been many accidents and the accident rate decreased immediately (10). However, when U-turns were located farther from each other on arterial roads, higher rates of illegal driving by motorcycles in the wrong direction occurred: a particularly dangerous activity (Meel et al., 2017). U-turn bridges are safer but are prohibitively expensive for the Department of Highways and thus reserved only for major roads (12).

Overall, according to International Road Assessment Programme (IRAP) standards, 60% of Thai roads have been deemed unsafe for automobiles and 80–90% unsafe for motorcycles, bicycles, and pedestrians (3, 15). According to a TARC official, road designers have prioritised cars over motorcycles because they “try to do something to serve high-income people and give less importance to low-income people” (12). As we suggest below, the prioritisation of the more middle- and upper-class road users affects not only road design but also asymmetrically shapes the vulnerability of road users' safety in numerous other ways. This unevenness is a basic consequence of the socio-economic impacts of an ‘infrastructural brutalism’ (Truscillo, 2020), that ignores the poor.

5.2. Loose regulations and limited enforcement

Poor regulations, including limited penalties, high speed limits, and legal loopholes, and lack of enforcement of regulations by the police, fail to deter drivers from driving dangerously. In 2021, the Transport Minister, Saksayam Chidchob, increased speed limits on interprovincial roads with four lanes and no U-turn points from 80 km to 120 km per hour (Wancharoen, 2021), arguing that people did not follow the lower limits because they were too low (12). According to TARC and former WHO officials, he did this to increase his popularity (12, 18), despite data showing that 70% of accidents in February 2021 were related to speeding (Karnjanatawe, 2021). A police officer asserted that the

penalties for many driving violations were “too low” (16), such as a 5000 Baht fine (\$140) for drunk driving.

As of 2022, offenders have ignored their fines without punishment. In that year, a total of 17.9 million traffic tickets were issued; however, only 20% of them were paid (Bangkok Post, 2023b). The Department of Land Transfer (DLT) was responsible for penalising drivers, such as revoking their licences, if they did not pay fines or committed numerous violations, but DLT had an incentive to not penalise drivers because it gained more revenue from drivers’ annual registration fees (5). Renewing a driver’s registration was another law not linked to driving violations (12). The statute of limitations for driving violations was one year, so that even if drivers had not paid their fines, their record would be cleared (5). The DLT and the police lacked any effective system to share their data which made it more difficult to fine and penalise drivers (8). Thailand lacks a traffic court which could cause drivers to be “more afraid of violating the law” (16). Consequently, “people just don’t care if they get tickets” (3) contributing to the lack of a “safety culture” (8), and reducing any incentive for police to issue fines.

Police enforcement of existing laws has never been adequate. Improving road safety is a low priority, compared to “solving crimes”, consequently, “they prefer negotiating and trying to close [traffic] cases as quickly as possible” (12). ‘Negotiating’ refers to police officers taking small, off-the-record, payments (normally 500 Baht or less) with drivers’ records unaffected. A police officer noted that most of the income generated from fines is allocated to local authorities and the finance ministry, with the police only receiving a small share (8). Moreover, traffic police officers are poorly paid, at most 10,000 (\$US 300) Baht per month, the lowest level in Southeast Asia (8). Low salaries incentivise officers to “not work hard” but also corruption. Police constantly seek to find ways to extricate bribes from drivers rather than initiate projects “to decrease accidents in their areas” (5). As an ex-officer asserted, their low earnings results in not having “high-performance people in high positions ... Many talented officers have quit ... This is a big problem” (5), for efficiency, reform, and efforts to improve deterrence. Patronage is rampant within the police force (Wong, 2023), with senior police officers often obtaining their positions through payments and connections, while senior officers responsible for road safety are often “not competent and not talented” and “don’t work hard on road safety” (5). As an ex-police officer stated: “there is a relationship between corruption, the police, and business owners.” Business owners may pay the police in exchange for their drivers never being charged for traffic violations. Consequently, these drivers “will speed and break traffic laws – they don’t care about other road users ... This might lead to accidents” (5). A consequence of bribery is under-reporting of accidents in rural areas, as police “will just close the case” or not report it if the responsible party, more likely a car driver, pays off the victims, particularly motorcyclists (12). Corruption erodes public trust and weakens the state’s capacity to meet its citizens’ needs, creating an environment that fosters the unchecked power of the necropolitical regime (see Marks & Breen, 2021).

Few human resources are devoted to highway patrols. According to a Member of Parliament, 200,000 km of road lack sufficient highway patrols (21). Limited monitoring explains why the highest rate of speeding occurs on rural roads at night (14). The traffic police section receives only about 5% of the overall police budget. Consequently, the police have approximately 500 nationwide speeding cameras which, as a traffic police officer lamented, are “not enough” (16). But even with a limited stock, officers “don’t use them - some stations still keep them unopened in their boxes” since the stations have to “pay operating costs but don’t have a budget for this” (12). For example, they lack operational expenses to print the photos from the cameras and send them to the drivers. Limited budgets have restricted the use of breathalysers in many areas (5) with insufficient funding to validate the equipment regularly (WHO, 2020), although some officers use their “own money to validate them” (5). Enforcing drink driving regulations requires highly trained personnel which the Royal Thai Police lacks (WHO, 2020). According to a Ministry of Transport official, enforcement is weak in rural

areas because “local officers mostly know the drivers and they don’t want to have social problems” (11).

Even within the traffic section, officers’ “first responsibility is to facilitate traffic; the second is safety” (8). According to a police officer, this occurs following the police receiving many complaints about traffic congestion (see Marks, 2020), mainly from motorists (who are more likely to be impeded), and because most Thais care more about convenience and unimpeded travelling. “This mindset affects the work of the police” (8) and thus accounts for fewer checkpoints and resources devoted to road safety.

A result of the low level of enforcement is a low rate of helmet-wearing by motorcyclists, only 52% drivers and 22% for passengers in 2018. Helmet usage was higher amongst those who frequently passed police checkpoints, perceived that the police were enforcing the compulsory helmet law, and who had knowledge of this law (Jiwattanakulpaisarn et al., 2013). That was most evident in urban areas where police surveillance was most likely. The low rate of helmet usage contributes to Thailand’s high rate of road injuries (WHO, 2020), particularly amongst low-income motorcyclists and passengers.

5.3. Poor driver education and safety culture

Poor driving behaviour of road users, partially stemming from the lack of deterrence but also from inadequate driving education, exacerbates safety problems. Many drivers, particularly youthful motorcycle drivers, do not have driving licences and Thailand has no strategy to remedy this (WHO, 2020). Some 54% of riders involved in accidents (22% of which were single crashes) did not have a licence (IMMA, 2019), an issue accentuated by many being underage and ineligible to drive.

Such youths are often taught informally by friends and parents and “don’t learn how to drive safely” (3).

Drivers receive no formal education in high schools or universities (4, 18), and the quality of training from driving schools varies. Training and the driving test do not include perception skills. Motorcyclists are not trained how to brake properly, resulting in many accidents (12). Overall, according to a Ministry of Transport official, “education in Thailand does not teach students or children how to use roads properly” (11). TARC confirmed this sentiment, finding that 72% of automobile and 87% of motorcycle drivers in a 2021 survey lacked proper training (IMMA, 2019).

Cultural factors play a part in the limited education and training, and the lack of test success. Some suggested that barriers exist to creating a road safety culture, that Thais seek to oppose any laws, particularly the enforcement of drunk driving laws, and “live to have fun” (*sanuk*) (6, 8). As a result of limited education and fear of being punished, there were “norms” of “reckless driving,” “not obeying the laws,” and driving at high speeds (22). Speed limit signs often “mean nothing,” with some cars driving between 50 and 80 km/h in school zones or through zebra pedestrian crossings (Karnjanatawe, 2021, n.p.). Ultimately some culpability must be attached to inadequate education, training and monitoring schemes.

5.4. Unsafe motorcycles

The roadworthiness of many motorcycles, due to lax standards and regulations is problematic since over 22 million motorcycles are registered, which exceeds the number of households in the country. The high rate of motorcycle usage is largely due to the country’s large wealth gap, with most households, particularly rural ones, not being able to afford personal cars and without easy access to public transport. But also, as Slovic (2002) argues, individuals frequently exhibit a tendency to misinterpret the magnitude of risks, either by fearing them excessively or underestimating their true significance. Hence, owing to the inadequate education provided by the government, the public tends to underestimate the risks associated with motorcycle driving, resulting in

both a high usage rate and the prevalence of dangerous driving behaviour.

This problem particularly affects the relatively poor who “use a lot of older or cheaper motorcycles” (21) particularly in rural areas where there is limited public transport (23). Rayong and Chonburi Provinces have the highest RTM rate in the country, probably because they had the highest rates of motorcycle usage (Seresirikachorn et al., 2022), or had particularly high traffic densities. Motorcycle riders are at least nine times more likely than vehicle drivers to die per kilometre travelled (Thongnak et al., 2022).

Motorcycles in Thailand are also more dangerous to drive and ride than elsewhere because they are designed to travel at higher speeds. For 110–115 cc motorcycles, Thai motorbikes have the highest maximum speed of 160 km/h, compared with 120 km/h in most other countries, hence the potential harm is greater (18). A 1993 government regulation forbids registration of L1 category motorbikes, the safest type since they have 50 cc engines or less and travel at maximum speeds of 50 km/h. A former WHO officer argued that this occurred because Japanese motorcycle companies, with factories in Thailand, had increased the size of engines to increase sales (with advertisements from these companies promoting driving at high speeds) (18). DLT had suggested to her that there would be more crashes with slower vehicles on the road, because of Thailand’s lack of road hierarchy. The powerful private sector have effectively impeded road safety, fearing that their sales would decrease if they were only allowed to sell slower motorcycles which are less popular but also cheaper. However, these companies are politically powerfully because they financially support the major political parties (15), and threaten that if the government increased the standards, sales would decline and there would be “fewer jobs” (18). The private sector has even pressed the Ministry of Transport to create more U-turns on roads, near petrol stations and department stores, despite their being particularly accident-prone (3).

Thai motorcycles are also riskier to drive because Thailand’s safety specifications are weaker than in other countries, such as Japan and India (18, 23). An official of the Road Safety Network Group asserted that motorcycle companies “try to make vehicles cheap and affordable, so try not to insert parts that will raise vehicle costs” (23). Thai motorcycles have no lights on the sides, no reflectors, and narrower tyres (18). Further, the government has yet to prioritise the implementation of Anti-Breaking Systems (ABS) in all motorcycles which would make them safer (WHO, 2020). Older vehicles, both motorcycles and cars, are poorly inspected and regulated, making them more dangerous. “Many UN regulations [related to vehicle certifications]” are “not used in Thailand” (23, WHO, 2020). It is argued that this is because the motorcycle industry is a “powerful lobby” (23) and, since the majority of the deaths from motorcycle accidents are “poor people ..., nobody cares” (18).

The Thai motorcycle industry profiting from more affordable but more dangerous motorcycles is a manifestation of necrocapitalism in which organisational accumulations make certain lives vulnerable to premature death (Banerjee, 2008; Tyner, 2019).

5.5. Limited public transport

Limited public transport exists, particularly outside Bangkok, although in Bangkok too many districts have limited access despite recent improvements and using mass rail is prohibitively expensive for the urban poor (Marks, 2020).¹ Even in Thailand’s next tier of cities, such as Chiang Mai, Phuket, and Udon Thani, “there is no mass transport” (3). Some do not even have fixed-route bus systems. That may be because most tax revenue, including that for public transport, is spent in

¹ Bangkok’s sytrain system (BTS) is more expensive per kilometre than Hong Kong’s MTR or Singapore’s MRT even though per capita incomes are much lower.

Bangkok (3), with non-Bangkokians a lower political priority (Glassman, 2010). As a result, the poor often use motorcycles “for long distances, such as 5–20 km every day to go back and forth from work” (2). Moreover, intercity transport is lacking. The antiquated rail system, which was built over a century ago, has had few improvements and limited maintenance; investment outside Bangkok has been limited and there have been no major improvements to the interprovincial trains’ quality, speed, or coverage (3, 11).² Further, those who lack cars either travel between provinces by buses or public vans. However, these vans are involved in the highest rate of public transport accidents (notably where 11 passengers burnt to death in Nakhon Ratchasima Province in January 2023). They travel at high speed to ensure more trips in a day and thus revenue and are mostly powered by liquid petroleum gas, causing them to be more flammable (Bangkok Post, 2023a). For a middle-income country public transport is surprisingly limited. The corollary, where accidents are a combination of risk multiplied by exposure, is that if “everyone could access public transport, accidents would decrease” (14). Public buses are mostly used by the relatively poor and are slow, with the number of users haemorrhaging in recent years. Passengers are unhappy about the poor service quality and lack of on-board security (Ueasangkomsate, 2019).

6. Underlying political-economic barriers

A key barrier to achieving improved road safety is Thailand’s complex, weak and fragmented transport governance. A “silo effect” has occurred horizontally (13), with a plethora of national-level agencies having different responsibilities and budgets related to road safety but not coordinating with each other. The Department of Highways is responsible for building and maintaining roads but not ensuring their safety; the Police for traffic violations; DLT for vehicle registration, driving licences, and transport plans (including public transport); DTCP for land use plans; Ministry of Education for driver education; Ministry of Public Health with emergency health services, and Department of Disaster Prevention and Mitigation (DDPM) – located in the Ministry of the Interior - for general improvement of road safety (11, 19, 21). Where their mandates overlap, such as for deterring reckless driving and providing driver education (16), “nobody takes responsibility” hence road safety suffers (22).

As the lead implementing agency, DDPM has performed poorly, being without sufficient power and authority to lead or ‘single command’ other agencies in different ministries (3). Despite being the Secretariat of the National Road Accident Prevention and Reduction Policy Board, it cannot order other organisations in the Board to take actions or share data (12, 23). The Board meets infrequently, lacks any strategic plan for road safety and does not use evidence when setting road safety goals (WHO, 2020). A consequence of fragmented governance is poor data on road safety (WHO, 2020) which makes it more difficult to fully assess the scale of the problem and its causes. Each agency works independently when investigating accidents and produces its own data. DDPM lacks a centralised system to link the various datasets and cannot force agencies to share their data (17), so data lack consistency and standardisation (Meel et al., 2017).

Since DDPM and the Police are on the same level in terms of authority (7) the former cannot order the latter to improve its enforcement of traffic laws. DDPM has also been allocated a limited budget dedicated to safety (23), hence cannot effectively form a coalition of agencies. Moreover, road safety is just one of DDPM’s many responsibilities, which range from flood risk reduction to fire safety (3). Consequently, it has proved “difficult” for DDPM “to focus only on this issue” (10) and

² Although the national government has significantly invested in expanding the mass rail system in Bangkok over the past decade, due to its high cost and still limited area coverage, its ridership still remains low and bus services still have higher usage rates (Sathapongpakdee, 2022).

DDPM's leadership meets infrequently to discuss road safety (22). Further, according to a Ministry of Transport official, DDPM "does not have a proper understanding" of this issue since "disasters and road accidents are totally different" (11). A consequence is that DDPM's *The Thailand Road Safety Master Plan 2018–2021* was unfocussed with overambitious goals, "lacked a roadmap" and a "clear framework" and without time-bound targets, supporting action plans or any monitoring, evaluation or assessment mechanisms (22, WHO, 2020). It could not force any agencies to be accountable to the goals listed in the plan or provide the tools needed for implementation.

Budgetary constraints across all agencies further undermine the state's governance of road safety. Although the Ministry of Transport (MoT) is allocated a large annual budget, most of it is devoted to infrastructure, particularly road construction and expansion. Only a "small percentage is dedicated to road safety projects" (3), or to road maintenance which would also improve safety (9). Agencies devote marginal funding to road safety because it is "easy to ask" for physical projects which can be easily assessed, whereas behavioural projects are "difficult to evaluate." (14). At the provincial level, MoT budgets for road safety are only allocated to road safety campaigns, and an insufficient amount is allocated for costlier CCTVs and other technologies to improve road safety (10). Vertical fragmentation also occurs between national and subnational-level agencies. The Ministry of Transport builds roads but has no authority to enforce driving rules on them at the subnational level (11). Within the Ministry of Interior, DDPM cannot force provincial governors, who are high-level officials within this ministry, to address road safety (10). Municipalities do not always collaborate well with national-level agencies. The BMA has rarely talked with the national-level traffic police about "where to improve roads and collaborate on speed management" (1). Speed limits differ depending on which local authority sets them, and are inconsistent (22) so that they lose credibility with motorists (WHO, 2020).

These variations and frictions largely stem from the country's incomplete decentralisation, particularly that of the police, which did not lead to fundamental changes in power relations due to resistance from central bureaucrats who retained a high degree of control (Marks & Lebel, 2016). Although the 1999 Decentralisation Act stipulated that provincial police officers should report directly to the provincial governor, as a former police officer stated, "In practice, police are still highly centralised – they don't want to decentralise. They always claim that they have a major responsibility to protect the royal family." (5). A BMA officer concurred: "There has been talk about decentralising the police for many years, and many task forces recommended this, but this has not gone anywhere" (14). Decentralising the police would be helpful because it would enable local governments to have direct control over enforcing traffic laws, but now have "no authority over the police" (5). Likewise decentralising the responsibility and budget for road safety to local governments could reduce the number of accidents (5, 12, 13), and enable useful comparisons between provinces (13, 17).

Thailand's high rate of road traffic accidents is perpetuated by an institutionalized lack of accountability, stemming from fragmented and weak governance. Various agencies holding different responsibilities, coupled with a weak lead agency lacking authority, contribute to this problem. Budget constraints and incomplete decentralisation further compound the problem.

7. Depoliticised discourses and low political priority: the road to necropolitics

As outlined above, Thailand's poor road safety record is not a technical problem, although it might appear as such due to poor road design and the absence of a clear road hierarchy. It therefore cannot be resolved by merely incorporating more expert knowledge and increasing bureaucratic state power (cf. Ferguson, 1990). Instead, numerous political-economic barriers, related to inadequacies in governance, have caused it to become a particularly wicked problem. While Thailand

successfully coordinated its response to the COVID-19 pandemic by reducing interagency fragmentation and strengthening the lead agency, such coordination and interest has never been directed toward improving road safety. Multiple barriers and path dependency remain formidable challenges, but the foremost reason for the country's poor road safety record is that Thailand's political leaders have not prioritised this issue sufficiently.

The public generally has not exerted pressure on politicians to take action. Public discourses about road safety have been depoliticised, often attributing blame to the victim or Thai culture rather than addressing government inaction. Moreover, punishing drivers for traffic violations is politically unpopular. The public often attributes accidents to the victims having "bad luck" (7) and so "easily accept what happens" (15). This notion largely stems from the widespread Buddhist notion of karma: "if something bad happens to a person it is because of his poor karma." This belief, which encourages people to accept their suffering as a consequence of their past action, was originally found in a 13th-century royal text from the Sukhothai era and has been continuously deployed by the ruling Thai elite to maintain power (Vornig, 2011). Consequently, victims "blame themselves" (17) for poor driving. The police reinforce these notions with the public. As the sole investigators of the causes of crashes, police officers often conduct "limited investigations" (7) and conclude that the drivers' incompetence was the cause of crashes even if they "don't know the exact cause" (2). Road conditions are rarely blamed. Due to so many accidents over many decades, people "still think safer roads are not possible" (17). Consequently, the public does not push its leaders to make changes to the system, even were they in an organised position to do so. A few champions, such as civil society organisations and some Members of Parliament, have advocated for improved legislation and resources for road safety, but lack sufficient power to bring about meaningful changes. Consequently, RTMs are "something to which nobody feels any obligation to respond ... Such death has nothing tragic about it" (Mbembé, 2019, p. 50). This absence of accountability enables the necropolitical power of the Thai regime to remain unchallenged.

Equally the public dislike restrictions on their being able to drive freely, such as reduced speed limits or any increased frequency and rate of fines. Drivers "still think it is okay to drive recklessly and not follow rules" (22). The Transport Minister's decision to increase speed limits in 2021 was therefore met with widespread popular support (7). In contrast, when, in 2018, DLT proposed to increase the fines for drivers caught driving without a licence or with a suspended or expired licence, the proposal met widespread public backlash and, not wanting to lose popularity, the Prime Minister himself, Prayuth Chan-ocha, vetoed it (12, *The Nation*, 2018). Politicians have also pushed the police to hand out fewer fines, fearing that if the police did so, their popularity would wane and they would "lose votes" in the next election (3) since the public is "not happy about strong law enforcement" (15) Politicians "were afraid of people's complaints," including over policies that would impinge on them yet improve road safety, so prefer not to burden the public by increasing fines (12).

The rural poor, who are politically marginalised and geographically dispersed, comprise most of the victims, yet their cause attracts limited interest. As a former WHO officer stated, "a major problem is inequality. The majority who die from motorcycles are poor people. Their lives don't matter to politicians" (18). Their deaths have become normalised and political leaders attach a lower value to accidents, which are not politically costly to them, than to drivers' convenience and lax regulations, which are politically popular (3). Leaders have also not been "actively changing this norm" (22). Most deaths and injuries occur in rural areas, can be ignored, covered up or not reported by local police, and do not therefore trouble urban and national politicians.

Road safety has consequently not been a high priority for national leaders for many years. Past and present prime ministers have shown no sense of urgency to address this issue (11, 17, WHO, 2020). Politicians have not used their political capital on this issue, calculating that it will

take time for results to show so “they will not be rewarded”, rather focusing on issues with potential short-term political gains, as they do not have to be accountable to the public for road deaths and injuries (17). The outcome effectively constitutes a series of related ‘violent inactions’, by politicians, bureaucrats and the police, that have enabled and contributed to a ‘necropolitical brutality’ (Davies et al., 2017) in which the rural poor disproportionately continue to die on the roads.

8. Conclusion

Our necro-political ecology framework reveals that Thailand’s high rate of road deaths and injuries, particularly those of the rural poor, results from numerous political-economic and cultural variables and thus from the built environment of the road system. Deaths occur singly, without scrutiny in distant places. This automobile-dominant road system, with its lack of a road hierarchy and motorcycle lanes, roads built for mobility rather than safety, and extensive U-turns, makes it inherently challenging for bureaucrats and police officers to improve road safety. Equally there is little will to do so. Lax regulations and the police’s poor enforcement of them, stemming from low prioritisation of the issue, limited financial and human resources and corruption, both reduces the visibility of the problem and weakens deterrence against driving dangerously. Motorists and motorcyclists receive limited driver education before being granted licences, whilst cultural factors normalise high accident levels. Motorcycle models are more powerful and speed limits higher than they are in other countries. Limited public transport requires people, particularly in rural areas, to drive more often and be more exposed to the risk of accidents.

Several political-economic barriers, fragmented responsibilities, and limited finance have so far hampered the state from addressing these problems, centred on convoluted governance failures and lack of political will. A lack of coordination between agencies working on road safety, poor data collection, widespread corruption, and an ineffective lead agency, have weakened the state’s capacity to address this issue. In this partial vacuum, powerful segments of the private sector have also sought to gain at the expense of overall road safety. Further, the public – notably the rural poor – do not pressure political leaders on this issue, discounting the role of the state in road accidents and deaths and preferring less costly regulations. Political leaders, perceiving few political benefits in addressing this issue, have largely ignored it.

These conclusions demonstrate the value of applying political ecology to the issue of road safety through its combination of political economy with ecological change. The unequal vulnerability of the rural poor is the result of an assemblage of the materiality of roads combined with depoliticised discourses regarding blame, and uneven power geometries—factors often excluded from traditional political economy

analyses. Through an additional necropolitical lens, we show that fragmented, weak and incoherent governance structures have similarly affected Thailand’s road safety by neglect and inaction, rather than action. It is not necessary for there to be a systematic organisation of direct oppression of the ‘other’ in defined places to translate state power into deaths. Rather, the non-working and inaction of power may be just as influential as direct repression in perpetuating deadly neglect. Since road safety is thus a political problem, capacity is largely determined by the presently limited incentives and interests of state leaders as well as a persistent urban bias that often neglects rural areas.

Necropolitics not only permeates large-scale and dramatic health risks, such as climate-induced disasters and the COVID-19 pandemic (DeBoom2020; Sandset, 2021), but is also embedded in everyday facets of life, such as driving and riding. When states use a ‘hands-off’ approach to issues like road safety, they normalise the suffering of marginalised groups who are condemned to becoming more vulnerable to bodily harm, disability, and death. Such groups may challenge the state’s sovereignty and improve road safety only when governance and politics are restructured and when these discourses are not only reimagined so that the significant risk of road accidents is socially amplified (Slovic, 2002) but also politicised so that the right to safe roads becomes a widespread public demand. Presently, neglect, exclusion, and the ‘silent violence’ of urban bias render their mortality invisible.

Given that road safety is a major issue throughout Southeast Asia, the second-most dangerous region globally, and that authoritarian rule also pervades the region (Morgenbesser, 2020), we propose that a necropolitical ecology of road safety could serve as a valuable framework for analysing this issue in Southeast Asian contexts. It could also be a constructive political-geographical project to further develop the notion of ‘silent violence’ that we have already usefully repositioned from its initial regional context. A comparison of our findings with research conducted in other countries would be beneficial to assess whether similar factors and discourses arise. Additionally, it is worth noting that our research had limitations, particularly in not including the voices of the victims. Further investigation to capture their views is warranted.

Declaration of competing interest

None.

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Appendix 1. Interviewee Information

Interview Number	Identity	Date interviewed (in 2021)
#1	Midlevel official of World Resources Institute	10 May
#2	Civil engineering professor at Thai university	14 May
#3	Transport engineering professor at Thai university	19 May
#4	Representative of Road Accident Victims Protection Company	24 May
#5	Ex-police officer and lecturer at Police Education Bureau	26 May
#6	Senior official of Department of Disaster Prevention and Mitigation	27 May
#7	Senior official of Road Safety Centre	1 June
#8	Police Colonel (Pol. Col.) in Royal Thai Police	3 June
#9	Senior official of Bureau of Highway Safety, Department of Highways	3 June
#10	Midlevel official of Rayong Province Governor’s office	4 June
#11	Senior expert at Office of Transport and Traffic Policy and Planning	8 June
#12	Senior official of Thailand Accident Research Centre	14 June
#13	Senior official of National Institute for Emergency Medicine	15 June
#14	Senior official of Bangkok Metropolitan Administration’s Traffic and Transportation Department	17 June
#15	Senior official of Collaboration Centre for Injury Prevention and Safety Promotion	21 June

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Interview Number	Identity	Date interviewed (in 2021)
#16	Senior official of Traffic Police Division, Metropolitan Police Bureau	22 June
#17	Senior official of Department of Land Transport	23 June
#18	Retired senior official of World Health Organisation's (WHO) Thailand Office	24 June
#19	Midlevel official of WHO	1 July
#20	Senior official of WHO	5 July
#21	Thai Member of Parliament focusing on road safety	5 July
#22	Midlevel official of WHO's Thailand office	9 July
#23	Senior official of Road Safety Network Group	12 July

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