<table>
<tr><td>Data</td><td>Phenomena</td><td colspan="2">Theory</td><td rowspan="4">Grouped under feedback loop in corresponding Causal Loop Diagram</td></tr>
<tr><td>Data points, i.e. examples/case studies of phenomena</td><td>Generic Empirical phenomena</td><td colspan="2">Theories that explain the phenomena under A, used for identifying the archetype (and thus crafting the matching Causal Loop Diagram structure)</td></tr>
<tr><td rowspan="2">Relatively direct observations or reports thereof; a particular empirical pattern distinctive to specific investigative contexts.</td><td rowspan="2">Stable and general features of the world that express in robust generalizations of patterns in empirical data and that are typically evidenced across many research situations.</td><td colspan="2">A set of linked propositions, at least one of which expresses a general principle, that help explain the empirical phenomena that are evidenced by data – invoking the notion that the theory somehow implies the phenomenon.</td></tr>
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Contents

DRIFTING GOALS

Data	Phenomena	Theory		Grouped under feedback loop in corresponding Causal Loop Diagram
		As in *The Lancet*	As identified by authors	
eg, reinterpreting the Qu'ran to undermine the status of smoking as haram (ie, prohibited).158	Marketing has been used, among other things, to create a broad consumption ideology, which drives overconsumption,152 and to combat norms that restrict consumption		Marketing makes social norms drift towards unhealthier phenomena	Panel 1, B1
		Privatisation has led to commercial actors becoming actively engaged in the provision of education, health care, social care, housing and water, and other services essential to health.39,42 Although privatisation can improve efficiency in some sectors when the process is well managed, overall there is little evidence that privatising public services improves quality or lowers cost.11,192 Instead, privatisation often leads to price increases and restricted access to services essential to health, such as water or heath care, particularly for the least well-off individuals.181,192,193 The World Bank has noted the difficulties the public sector is likely to face in governing public–private partnerships, with equity effects proving particularly difficult to monitor.192 Nevertheless, the 1980s onwards has seen increasing privatisation of health care with negative outcomes.194,195 (Gilmore et al , p. 13)		Panel 1, B2
		The absence of agreed and enforceable global laws and regulations enables large companies—especially transnational corporations operating across multiple jurisdictions—to choose the most favourable tax, labour, and environmental regulations.		Panel 1, B3
		Simultaneously, globalisation increased the power of transnational private actors whose ability to act is not		

		constrained by the national borders that restrict sovereign states. It made it easier to rapidly shift capital, avoid taxes, escape effective regulation, and participate in (and secure influence over) the increasing complex systems and institutions of global governance.47–4 the shift towards market fundamentalism and increasingly powerful transnational corporations has created a pathological system in which commercial actors are increasingly enabled to cause harm and externalise the costs of doing so (Gilmore et al , p. 1)		
Transnational corporations adopt supply chain and waste practices that negatively affect human and planetary health. For example, extractive companies frequently despoil the environment and externalise the costs of restoration. Local communities (often Indigenous or multiply disadvantaged) are left living in these despoiled areas with mental and physical health effects. Less stringent regulation, often enabled by political practices that help drive down standards and costs, means that environmental damage is often worse in LMICs. Specific examples include: Rio Tinto, a mining company, destroyed two 46000-year-old Aboriginal rock shelters in Western Australia's Juukan Gorge.93 Such destructive practices have contributed to the gap between Indigenous life expectancies and those of the rest of the population.94 Australian–Canadian conglomerate Oceana Gold subjected El Salvador to a lengthy multimillion dollar lawsuit when the country denied the company permission to mine gold deposits there after its prospecting led to substantial concerns about impacts on water supplies, among other things.95 Coca-Cola's bottling plant in Kerala, opened in 2000, led to groundwater contamination and toxic waste release. Eventually, the plant was closed but local communities never received full compensation.96,97 (Gilmore et al , p. 8)	Practices involved in the creation, distribution, retail, and waste management of products or services	Labour, supply chain, and financial practices—all enabled by political practices that help drive down regulatory standards		

Commercial actors actively seek ways to destabilise, outsource, and offshore the responsibility for the costliest aspects of production. Enabled by a weakening in labour market regulation, this has led to a range of perverse working conditions and practices that disproportionately affect low-income workers, especially in LMICs, and lead to physical and mental ill health.17,34 Examples include: a growth in modern slavery and informal or zero-hour contracts that offer no stability of income. For example, some companies continue to support forced labour in the garment industry by purchasing low-cost supplies from the Xinjiang region of China, where Uyghur and other Muslim ethnic and religious minorities held in so-called re-education and detention facilities are forced to produce or process cotton and textiles.98 Clothing retailers offset losses from COVID-19 onto their suppliers and workers who could least afford it, leading to an increase in forced labour whereas retailers received public bail-out funds and continued to sell at below-cost prices.99 An increase in child labour in mines with extreme physical, psychological, and social dangers.100 A decline in private-sector union coverage that has reduced workers' ability to protect themselves against policies and practices that weaken job safety,27 leading to workplace injuries. The workplace fatalities in South Africa's mining industry, four times higher than those in Australia, are attributed to weaker occupational health and safety legislation there.101 Comparative statistics also show that some businesses in the same industry incur higher injuries, suggesting their practices are the cause; Amazon warehouse employees are injured at twice the rates than those working in other companies' warehouses.102 (Gilmore et al , p. 8)	Practices to manage people employed directly within, or under contract to, the organisation within its supply chain	publicly listed companies are incentivised to generate profits to distribute to their shareholders, not-for-profits and nondistributing cooperatives use retained earnings to further the purpose of the entity and might display greater commitment to ethical employment practices than publicly listed companies.72 A key question is how profits or retained earnings are distributed: are they distributed to shareholders, partners, or members, or must they be used to advance the organisation's purpose? The answer to this question helps to explain the incentives that drive the commercial entity's practices, including whether it prioritises financial goals or more pro-social and health-oriented goals (eg, employee wellbeing, paying a living wage, or offering secure employment) (Lacy-Nicohls et al , p. 7)		
Financial practices include tax avoidance and evasion; mergers, acquisitions, and buyouts (including to reduce competition and remove	Practices to support financial position of the organisation (Gilmore et al , p. 9)	The negative effect on government revenues then enables transnational corporations to present what they should have paid in		

superior or healthier products from the market); price fixing; promoting credit and debt; accounting and securities fraud; and financial flows in (investor relations) and out (investment strategy, government subsidies). These practices, often enabled by political practices, have collectively reduced potential state revenues and disposable income for many, with direct and indirect effects on health and welfare often exacerbated by rising costs of health care. Specific examples include: (1) Pricing strategies—in 2021, Taro Pharmaceuticals USA, Sandoz, and Apotex were fined $447·2 million for price fixing various generic drugs in the USA,103 and in the UK, Auden Mckenzie and Actavis UK (Accord-UK) were fined £260 million for price hiking the drug hydrocortisone, which led to the UK National Health Service paying inflated prices for this drug for nearly 10 years.104 (2) Tax avoidance and evasion74—specific examples of tax avoidance include Amazon, which reportedly paid no corporation tax in Europe in 2020, despite a sales income of €44 billion (£38 billion),105 and British American Tobacco and Imperial Brands, which over 10 years paid almost no corporation tax in the UK, where they are headquartered, having engaged extensively in all forms of tax avoidance alongside other transnational tobacco companies.106 Corporations subject to other taxes, such as excise duties levied on harmful products intended to correct market failures and reduce product use, lobby heavily against them, often successfully reducing them.107,108 Finally, some even orchestrate the smuggling of their product to evade those duties and, despite their involvement, then use the problem of smuggling to push for further excise tax reductions.109,110 (3) Credit, debt, and the global financial crisis—through mortgages, credit cards, and loans the financial sector encouraged consumer debt, beyond what borrowers could reasonably afford, to ensure		tax as gifts through tax-deductible reputation management efforts that divert attention from the harm they cause and buy access and influence, perpetuating the problem		

that falling real incomes for many, as a result of the labour practices mentioned previously,111 did not discourage spending.112 The complex packaging of these debts by the financial sector led to unduly high individual indebtedness, homelessness, and ultimately the 2008 global financial crisis. Most countries responded to the crisis with large bail-outs for the major banks that had caused the problem, financed in large part with cuts to social spending with further effects on wellbeing, particularly for the least well off.113,114 In Australia, damaging practices of banks were so detrimental to their customers that a Royal Commission115 was established; it gathered gut-wrenching stories of "people who'd lost their homes and their livelihoods due to misconduct, bad management or straight-out illegal behaviour" by banks and insurance and superannuation companies, with obvious health effects.116 (Gilmore et al , p. 9)				
For example, attempting to influence editorial decisions and distorting the peer-review process and engaging scientists who signed Monsanto ghost-written reports that were then published in scientific journals.80 The goal was to both discredit the International Agency for Research on Cancer's decision and to prevent other regulatory agencies from conducting a re-evaluation of glyphosate.81 (Gilmore et al, p. 8)		With evidence that corporations across diverse sectors consistently engage in similar strategies to shape science in their own interests,65 this funding shift raises the possibility that whole evidence bases will increasingly favour commercial actors and their products.65 Moreover, transnational corporations' growing control over the technology and intellectual property that emerges from this research means they can capture it to advance their goals and veto its use when it does not contribute to profitability, even when this harms health.1		Panel 1, R1
(eg, that the relative risk of cancer from a product must be higher than 2 before it is regulated, regardless of the extent of exposure199).	Risk-based approaches to policy making: transnational corporations (including tobacco and pesticide companies) have embedded industry-friendly scientific standards into decision making by promoting risk-based (instead of precautionary-based) approaches to decision making.65	These [risk-based] approaches aim to prevent product regulation by setting a high regulatory standard		

Reputational management practices are diverse but can be grouped in two main categories: (1) Corporate social responsibility; environmental, social, and governance; and sustainability—all broadly similar concepts that involve commercial entities making voluntary commitments to uphold ethical norms and refrain from causing harm.117 Although some of these efforts have real and meaningful effects, often they contribute more to reputation building than to generating real benefits for society.64 Supporting US legal rulings that genuine corporate social responsibility or corporate philanthropy is illegal,3 evidence indicates that it is at best a superficial, public relations exercise118 and at worse a tax deductible way to shape policy outcomes that work against public welfare.62,64,119 Corporate social responsibility is engaged in most heavily by corporations whose core products are harmful.13 Examples include: in Thailand, a large donation by an alcohol company to the Thai Government after the 2004 tsunami enabled direct access to the Thai Prime Minister to present the company's preferred policy option.120 During the COVID-19 pandemic, the brewing company AB InBev committed to distributing more than 1 million litres of drinking water to communities in Brazil. Since water insecurity is an area of reputational vulnerability for the alcohol industry, this created an opportunity for the company to present itself as a responsible partner in water stewardship.13 In Greece, after tobacco transnational Philip Morris International donated ventilators for the COVID-19 response, its chief executive officer was invited to join a Chamber of Commerce roundtable discussion on the COVID-19 vaccine alongside the Greek Prime Minister, in contravention of Article 5·3 of the Framework Convention on Tobacco Control.121 Yet Philip Morris International's involvement in tobacco smuggling involving the Greek islands122 and its	Efforts to shape legitimacy and credibility, reduce risk, and enhance corporate brand image		CSR activities that erode commitments to non-involvement of health-harming industry involvement in policymaking	Panel 1, R2

wider involvement in tax avoidance106 are both documented and likely to have deprived the Greek Government of substantial revenue. (2) The institutionalisation of public–private partnerships, where state and commercial actors are "involved in multilevel governance networks with weak enforcement mechanisms and lack of democratic control".123 The United Nations Global Compact, developed jointly by state and commercial actors to engage corporations in improving their social and environmental effects, has continued to be a highly influential governance device globally, despite a decade of data that "conclusively demonstrates that the UNGC [United Nations Global Compact] failed to induce its signatory companies to enhance their CSR efforts and integrate the 10 principles in their policies and operations".124 A review concludes that, despite being "an omnipresent policy tool in global health […] the focus on private sector-driven PPPs [public–private partnerships] in global health ultimately undermines the attempt to significantly improve global health".125 (Gilmore et al , p. 9)				
		This power imbalance leads to policy inertia; although many policy solutions are available, they are not being implemented.		
Although there are more than 125 tools to classify and evaluate commercial entities, health is commonly excluded from benchmarking schemes.		These [quantitative] thresholds or models [supporting investors to incorporate a health perspective into their decision making] could support the development of robust and objective benchmarking tools or the extension of existing indices to address more holistic effects of corporations on both human and planetary health. The extension of existing indices could help to overcome some of the practical challenges of scaling up this exercise.		Panel 1, B4
		Noting that benchmarking commercial entities entails the risk of gaming and commercial co-option for the purpose of public relations, it will be important to clarify that health-promoting practices should not be considered		

		compensation for harmful practices. Rather, harmful practices must be minimised or ideally halted.		
		A similar question can be asked about board or executive compensation, and whether or not this compensation incentivises the pursuit of short-term profits over other business goals. (Lacy-Nicohls et al , p. 8)		
		publicly listed companies are incentivised to generate profits to distribute to their shareholders, not-for-profits and nondistributing cooperatives use retained earnings to further the purpose of the entity and might display greater commitment to ethical employment practices than publicly listed companies		
Among the financial practices most damaging to health are the speculative trading in basic necessities, such as food, leading to large fluctuations in food prices and resulting hunger;186 and securitisation of home mortgages that prompted the banking crisis, individual indebtedness, evictions, and homelessness (table).				
eg, in equipment, research and develop-ment, and worker training).4		financialisation has reduced investments by increasing instability in the economy (which shrinks the investor's time horizon) and by increasing the pressure on corporations to maximise short-term profits by cutting back on spending on investments Deregulation of the financial sector played a key role in the emergence of financialisation (panel 1), which has harmed health17,184 and (above all) equity, largely by increasing economic volatility (precipitating repeat banking crises) and debt and stifling economic growth.185 Indeed, despite neoliberalism's single-minded focus on growth, it has generated much lower growth than did the more regulated capitalism of the early post-World-War-2 era. This lower growth occurs because many neoliberal policies, contrary to what its supporters say, have dampening effects on economic growth in the long run.4,11,43 (Gilmore et al , p. 12)		

FIXES THAT FAIL

Data, as in the Lancet	Phenomena	Theory		Grouped under feedback loop in corresponding Causal Loop Diagram
		As in *The Lancet*	As identified by authors	
in some instances resulting in substantial harm before regulations can be introduced, as occurred with glyphosate and rofecoxib (table).201–203 (Gilmore et al, p. 13)	These approaches are often dressed up as being science-based or evidence-based and are promoted by benign-sounding industry third parties (eg, the American Association for the Advancement of Science)68 to trick people genuinely interested in using science for the public good.200 Yet although corporations push for impossibly high evidential standards to prevent and delay regulation,65,199 the standards required for market approval are generally lower,	transnational corporations (including tobacco and pesticide companies) have embedded industry-friendly scientific standards into decision making by promoting risk-based (instead of precautionary-based) approaches to decision making.65 These approaches aim to prevent product regulation by setting a high regulatory standard (eg, that the relative risk of cancer from a product must be higher than 2 before it is regulated, regardless of the extent of exposure199). (Gilmore et al, p. 13)		Panel 1, B5
There is evidence that transnational corporations influence the content of these agreements208,211 to ensure they include, for example, protection of intellectual property and international investors. Such protections make it easier for corporations to stifle and challenge public health regulation and they have used these protections for both purposes.212,213 (Gilmore et al, p. 14)		Trade and investment agreements that operationalise the liberalisation in trade and investment, detailed in level 1, have been used to globalise these policy-making rules.208 Under the moniker of good regulatory practice, trade and investment agreements often require implementation of risk-based regulation, stakeholder participation in formal policy development,209 or a focus on partnership and coproduction.210		
The commercial sector seeks to influence diverse policies at all levels of governance, from global to local. There is growing evidence of joint working67,68 and consistency in approaches across diverse industries including direct involvement and lobbying; building constituencies of support (including third parties through which they	Practices to secure preferential treatment or prevent, shape, circumvent, or undermine public policies (or a combination of the above) in ways that further corporate interests Currently, there is little systematic monitoring of commercial entities and their	"The [CDoH] model can be used to guide solutions from specific interventions addressing commercial practices to system changes; it highlights that commercial entities will need to meet the true costs of the harm they cause," (Gilmore et al, p. 2)		Panel 1, B6

operate); producing and using (often misleading) information to make the industry's case that the policy will be ineffective and economically disastrous; threatening and taking legal action; and intimidating opponents.63,69,70,71 The specific strategy varies with the context and the industry's standing. In LMICs policy influence is often more audacious.72 Examples include: cases from the tobacco industry for which there is documentary evidence. British American Tobacco made extensive payments to politicians, civil servants, and others in Africa to secure policy influence, in one instance paying as little as US$3000 to change legislation in Burundi.49 In Thailand, British American Tobacco claimed "the only means of negotiation with politicians is dollar and cent".73 Tobacco corporations seriously threatening advocates based in LMICs also occurs.74 By contrast, in jurisdictions where the tobacco industry is denormalised, lobbying efforts are increasingly directed through third parties, the scale of which can be overwhelming. In the case of a policy on standardised tobacco products in the UK, 82 third parties with links to the tobacco industry opposed the policy, giving a misleading impression of widespread opposition.75 The tobacco industry routinely threatens, and sometimes legally challenges, legislation, using its power to exert a chilling effect—although the industry is almost always unsuccessful, legal costs can be prohibitive.76 In multilateral settings, the tobacco industry (like other corporations) often operates by gaining the support of powerful governments, which can be a particular challenge for LMICs.67,71 Consequently, the role of commercial actors in norm shaping is often overlooked. Few realise the term litter bug was coined by the plastics industry149 and carbon footprint by British Petroleum,150 both to detract from corporate harm	practices, despite strong evidence that some entities (Lacy-Nicohls et al , p. 10)	"Instead, governments and international institutions regularly engage with commercial and quasi-commercial entities in the development and implementation of public policies, raising challenging questions about if—and to what extent—powerful economic interests are being prioritised over global health and the public interest. (Lacy-Nicohls et al , p. 2) that commercial actors shape the political and economic system and are, in turn, shaped by it (straight arrows), whereas externalities, power, and norms, if unchecked, can lead to escalating health harms (circular arrows). It is these checks in the system, which reflect the balance of power between public and commercial interests, that play a pivotal role in determining the extent to which the commercial sector has positive or negative effects on health (Gilmore et al , p. 5)		

by pointing the finger of blame at individuals via well-funded public relations campaigns. (Gilmore et al , p. 10)				
A particularly egregious example is how Coca-Cola and Ambev exploited a Brazilian Government tax policy to secure a subsidy of 5–10 US cents for every can of soft drink consumed in Brazil. Now in place for over 20 years,137 this directly undermines the country's obesity, environmental, and even economic policies and means the Brazilian Government and each resident (the latter to the tune of US$10 a year) are paying Coca-Cola to cause health harm—26% of the population are obese and 60% overweight. Yet, repeat governments and extensive efforts by the judiciary have been unable to reverse this policy (which is making Brazil one of Coca-Cola's most lucrative markets) because of Coca-Cola's misconduct and the destructive links between powerful corporate and individual political interests.137	Influence extends to diverse policies, including agriculture, social, environmental, labour, trade, and fiscal policies that all affect health, often contributing to policy incoherence. (Gilmore et al, p. 14)	Political, scientific, and marketing practices primarily cause health harm by maximizing the use of potentially harmful industry products, either directly or by enabling transnational corporations to block, delay, or weaken policy and deter litigation (Gilmore et al, p. 7) The model also identifies the underpinning, systems-level problems that are often overlooked, yet explain why commercially driven health harm is hard to address and continues to escalate. (Gilmore et al , p. 2)		
Even though commercial involvement in policy implementation could carry with it discernible benefits, risks could remain. For example, commercial entities might seize on political or technical issues to block, amend, or delay implementation (Lacy-Nichols et al., p.9)		We refer to these [deregulatory policymaking rules] as upstream policies as they restrict the options for, make it harder to pass, and make it easier for commercial actors to challenge downstream public policies (Gilmore et al, p. 13) Within a globalised economy deregulation encourages what is known as a race to the bottom in regulatory standards. (Gilmore et al , p. 12)		
		corporations have not only shaped downstream policies in their interests but established regulatory approaches that make it hard to pass policies that would protect human and planetary health (Gilmore et al, p. 15)		
		Consequently, it is increasingly difficult to get statutory regulation on the agenda and then to shape regulation in the public interest once there. Policy debates become drawn-out battles in which transnational corporations use their		

		substantial power advantage to block, weaken, and delay policies, with evidence that this has occurred from local to supranational levels.63,70,71,127 Even once enacted, transnational corporations work to undermine, circumvent, and overturn policies, through legal and other means.63,6 (Gilmore et al, p. 14)		
For example, a major tobacco company played a key role in promoting Zambian legislation requiring regulatory impact assessment just as the country was attempting to pass tobacco-control legislation.		many jurisdictions now require stakeholder consultations and regulatory impact assessments for every policy that would appear to be good practice. However, evidence shows that tobacco, food, chemical, fossil fuel, and other companies collectively promoted such rules (known in the EU as Better Regulation) expressly to make it harder to pass public health and environmental policies.68,204 These companies have since used such stakeholder consultations to that effect—to prevent, slow, weaken, and challenge policies by flooding consultations with responses from third-party organisations they have funded and with highly misleading evidence they have commissioned. (Gilmore et al , p. 13) Commercial entities' influence on and exploitation of weaker regulatory and enforcement standards in low-income and middle-income countries (LMICs) contributes to inequities in unhealthy product use, environment (Gilmore et al , p. 1)		
Although the Framework Convention on Tobacco Control seeks to exclude the tobacco industry from policy making, no such similarly comprehensive mechanism exists for other industry sectors (Lacy-Nichols et al, p. 2)	current approaches for managing conflicts of interest are inadequate for dealing with the complex range of commercial and quasi-commercial interests now involved in public health governance.9,10 (Lacy-Nichols et al, p. 2)		In addition to mandated involvement of commercial actors in policymaking, approaches for managing the involvement of commercial actors whose interests conflicts are inadequate, enabling them to obstruct effective public health policies	

The [health damaging] effects [of neoliberalism], however, vary somewhat between jurisdictions, according to the extent to which they adopted (or were required to adopt) neoliberal approaches, or cushioned their effects through welfare policies.9,17 (Gilmore et al , p. 11)			Welfare policies that cushion some of the health damaging effects of neoliberal consumerist ideology taking eyes off the ball of those harms	Panel 1, R3

SHIFTING THE BURDEN

Data	Phenomena	Theory		Grouped under feedback loop in corresponding Causal Loop Diagram
		As in *The Lancet*	As identified by authors	
	The practical ability of policy makers, public health practitioners, non-governmental organisations (NGOs), and other stakeholders to understand and speak with greater clarity about what precisely is meant by the commercial sector or commercial actors [must improve].		Commercial health harms manifest through many more pathways than those related to the products of the tobacco, food, alcohol and fossil fuel industries, and the focus on these industries' 'exceptionalism' took eyes off other commercial health harms	Panel 2, B1 & B2
Although a range of frameworks, mechanisms, and tools currently exist to monitor commercial practices, these typically focus on specific sectors or practices and are often run by dedicated but under-resourced NGOs or research teams (eg, the ETC Group and Corporate Accountability, two organisations that monitor transnational corporations and support civil society efforts to challenge corporate power First, there is a need to expand the scope of commercial entities under investigation to consider the effects that other sectors have on health, which have received little attention within the field (eg, finance, technology, transport, weapons, housing, energy, health care, security, incarceration, and education). (Lacy-Nicohls et al , p. 10) It is also important to expand the type of commercial entities under investigation and to look beyond transnational corporations, which	A focus on so-called unhealthy commodity industries characterises much of the CDOH literature, yet these industries represent only some commercial entities by looking beyond the traditionally selected entities (ie, transnational corporations) that produce health-harming products. (Lacy-Nicohls et al , p. 12)	Although the individual health effects of each of these smaller commercial actors are decidedly less than those of a transnational corporation or large national entity, through the provision of employment, generation of household incomes, and delivery of essential services (including health care), their collective effect on public health is substantial. Their collective effort, when combined with their overall contribution to the national and global economy, makes these smaller entities particularly important for investigation as CDOH. (Lacy-Nicohls et al , p. 4)		

could include other commercial entities such as cooperatives, microenterprises, small enterprises, medium enterprises, social enterprises, mutual organisations, and investors. However, quasi-commercial entities such as state-owned enterprises or not-for-profit organisations with business interests could also be included. (Lacy-Nicohls et al , p. 10) Although the Framework Convention on Tobacco Control seeks to exclude the tobacco industry from policy making, no such similarly comprehensive mechanism exists for other industry sectors (Lacy-Nicohls et al , p. 2)				
	an acknowledgment that some commercial practices could benefit health should not be viewed as a compensation for harmful practices	We recognise there are inherent risks in discussing the health-promoting elements of a commercial entity (ie, the entity might claim these elements compensate for other harmful behaviours or might use them as tools of distraction).8		
	Like their practices, beneficial products should not be considered compensation for harmful products			
	although the framework was designed to be globally applicable, it is based on a preponderance of literature from high-income countries. A fuller understanding of the role of commercial entities in different LMIC contexts is needed to make this framework more generalisable and to inform future iterations of this framework.13			
	Indeed, it is the practices and not just the products of major commercial entities that can harm health and widen inequities both within and between countries. (Gilmore et al , p. 1)	These practices work interactively and often synergistically to influence health by affecting one or more, and often multiple, levels of the subsystem. The surrounding label of commercial actors and allies allows for the other actors (eg, think tanks and business interest groups) that often act in concert with business entities and represent their interests (Gilmore et al , p. 4)		

Examples include the financial sector's role in the so-called deaths of despair;23 social media's malign effect on mental health;24 and the pharmaceutical industry's use of intellectual property protections to secure high prices, restricting access to essential drugs, including COVID-19 vaccines, despite massive public investment in their developmen (Gilmore et al , p. 1)	Other industries whose products are often seen as benign also cause avoidable health and social harms.			
These exercises [socially responsible investment indices] tend to be selectively applied to issues that companies perform well on,		Such approaches [self-regulatory], which allow commercial actors to decide which of their practices need restricting and how, are of little effectiveness and are exploited by commercial actors to prevent more effective statutory regulation		Panel 2, R1
such as Volkswagen's now infamous diesel dupe.17 (Gilmore et al., p.7)	Even when regulations are implemented, commercial actors often fail to comply or find cost-saving unethical circumventions (Gilmore et al., p.7) With the establishment of the Sustainable Development Goals, we witnessed a forceful push to further entrench the commercial sectorin global development and health governance via multi-stakeholder engagement (Lacy-Nicohls et al , p. 12)	Even once enacted, transnational corporations work to undermine, circumvent, and overturn policies, through legal and other means.63,69 (Gilmore et al , p. 14)	Commercial actors have the means and power to circumvent regulations they don't like through creating misleading compliance data or downright ignore the regulations	
Transnational corporations influence every step of the scientific process, from evidence production to dissemination and use, with clear evidence that diverse industry sectors act in the same way.65 Examples include: in 1999 Merck launched a large clinical trial on the anti-inflammatory drug rofecoxib (Vioxx). When the study was published, the company misrepresented the trial's results to hide evidence of rofecoxib's cardiovascular toxicity. Despite	Practices involving the production and use of science to alter products or otherwise secure favourable outcomes (or both) for the industry (Gilmore et al , p. 8)			

Merck being aware of Vioxx's health risks, the company strongly promoted the drug to health professionals, providing them with misleading information.77 This led to thousands of avoidable cardiovascular events in patients taking the drug.78 In 2015 the International Agency for Research on Cancer classified glyphosate as "probably carcinogenic to humans".79 Monsanto continued to argue that its glyphosate-based herbicide is safe and internal documents reveal that the company tried to influence the scientific debate. The control over the scientific process happened at multiple levels. For example, attempting to influence editorial decisions and distorting the peer-review process and engaging scientists who signed Monsanto ghost-written reports that were then published in scientific journals.80 The goal was to both discredit the International Agency for Research on Cancer's decision and to prevent other regulatory agencies from conducting a re-evaluation of glyphosate.8 (Gilmore et al , p. 8)				
Understanding different commercial forms and their consequences is complicated by unclear boundaries between the public, private, and third sectors. Moreover, notions of ownership and control are not always clear-cut and could change overtime	Some of the largest global companies have thousands of branches, subsidiaries, sub-contractors, investments, and shareholders. Therefore, untangling and identifying the complex network of connections presents an immense challenge.	These complex organisational structures can be exploited to shield parent companies from liability for harms enacted by their subsidiaries. (Lacy-Nicohls et al , p. 4)		
		whether an entity is upstream (producing raw materials and products) or downstream (engaged in consumerfacing distribution and marketing) within the supply chain could influence the extent to which it is subject to public and consumer scrutiny. In turn, the entity's position within the supply chain could signal its likelihood of engaging in reputational management practices or other defensive practices.96		

		These companies have since used such stakeholder consultations to that effect—to prevent, slow, weaken, and challenge policies by flooding consultations with responses from third-party organisations they have funded and with highly misleading evidence they have commissioned (Gilmore et al , p. 13)		
	Although many of these [not-for-profit] entities are purpose-driven, the practices of some entities have more in common with transnational corporations, suggesting that not-for-profit status is more a legal advantage than a commitment to promote social good (panel 1)			
Financial practices include tax avoidance and evasion; mergers, acquisitions, and buyouts (including to reduce competition and remove superior or healthier products from the market); price fixing; promoting credit and debt; accounting and securities fraud; and financial flows in (investor relations) and out (investment strategy, government subsidies). These practices, often enabled by political practices, have collectively reduced potential state revenues and disposable income for many, with direct and indirect effects on health and welfare often exacerbated by rising costs of health care. Specific examples include: (1) Pricing strategies—in 2021, Taro Pharmaceuticals USA, Sandoz, and Apotex were fined $447·2 million for price fixing various generic drugs in the USA,103 and in the UK, Auden Mckenzie and Actavis UK (Accord-UK) were fined £260 million for price hiking the drug hydrocortisone, which led to the UK National Health Service paying inflated prices for this drug for nearly 10 years.104	Practices to support financial position of the organisation (Gilmore et al, p. 8)			Panel 2, R2

(2) Tax avoidance and evasion74—specific examples of tax avoidance include Amazon, which reportedly paid no corporation tax in Europe in 2020, despite a sales income of €44 billion (£38 billion),105 and British American Tobacco and Imperial Brands, which over 10 years paid almost no corporation tax in the UK, where they are headquartered, having engaged extensively in all forms of tax avoidance alongside other transnational tobacco companies.106 Corporations subject to other taxes, such as excise duties levied on harmful products intended to correct market failures and reduce product use, lobby heavily against them, often successfully reducing them.107,108 Finally, some even orchestrate the smuggling of their product to evade those duties and, despite their involvement, then use the problem of smuggling to push for further excise tax reductions.109,110 (3) Credit, debt, and the global financial crisis—through mortgages, credit cards, and loans the financial sector encouraged consumer debt, beyond what borrowers could reasonably afford, to ensure that falling real incomes for many, as a result of the labour practices mentioned previously,111 did not discourage spending.112 The complex packaging of these debts by the financial sector led to unduly high individual indebtedness, homelessness, and ultimately the 2008 global financial crisis. Most countries responded to the crisis with large bail-outs for the major banks that had caused the problem, financed in large part with cuts to social spending with further effects on wellbeing, particularly for the least well off.113,114 In Australia, damaging practices of banks were so detrimental to their customers that a Royal Commission115 was established; it gathered gut-wrenching stories of "people who'd lost their				

homes and their livelihoods due to misconduct, bad management or straight-out illegal behaviour" by banks and insurance and superannuation companies, with obvious health effects.116 (Gilmore et al, p. 9)				
the problem gambler; irresponsible drinker; Facebook's passive user more likely to be harmed by social media overuse, and so on.15	Problems such as climate change, obesity, drinking, smoking, gambling, and abuse of pharmaceutical opioids are overwhelmingly framed as poor individual choices:	This [individualized] framing, reinforced by transnational corporations' influence on science65 and an increasingly supportive mass media,38 helps absolve corporations, and indeed governments of blame and narrows the range of possible solutions to downstream individual-focused interventions, notably education to correct market failure, ostensibly by helping consumers make supposedly better choices. These individual-focused solutions are less effective than upstream population-level solutions.18,21 Consumers do not have the capacity (time or resources) to make the right choice, however much education is done.		Panel 2, R3
Often overlooked are how public health harms also proliferate through information or, increasingly, misinformation environments. Building on the scientific practices detailed previously but amplified through media and social media, think tanks, and public relations organisations that are funded and sometimes specifically established by industry,65,147,218 an entire ecology of misinformation has developed, creating what has been described as post-truth or agnogenesis—the deliberate creation of ignorance.136 In the case of climate change, it is now established that, over decades, ExxonMobil's public communications (notably advertorials) were even more misleading than its science and deliberately misled the public.135 Social media, with its pay-per-click revenue model, plays a growing role in spreading misinformation.136 (Gilmore et al , p. 14)		1Schools have become venues where harmful industries disseminate industry-friendly framings and misinformation219,220 and working environments, also important determinants of health,39 have become increasingly damaging to health.17,221 (Gilmore et al , p. 14)		

	Public health is currently focused too far downstream (22at the centre of our model on treating ill health and change individual behaviours) to create sustainable health improvement		The downstream focus of public health shifts the burden from the political economy and regulatory policies that shape sectoral policies under which unhealthy environments are shaped to individual behaviour and treatment	

SUCCESS TO THE SUCCESSFUL

Data	Phenomena	Theory		Grouped under feedback loop in corresponding Causal Loop Diagram
		As in *The Lancet*	As identified by authors	
		Commercially driven ill health is the result of a pathological system in which dominant commercial entities are enabled to influence societal norms and values, political and economic systems, policies, environments, incomes, and behaviours. As the health harms that result from this system increase, the ability to address them declines as the governments, organisations, and individuals needed to hold commercial actors to account are increasingly impoverished, disempowered, or captured by the interests of an increasingly powerful commercial sector p.1 By fostering a deeper understanding of commercial entities, this framework also helps researchers to understand how the upstream commercial forces outlined in the first paper in this Series (eg, policies, systems, and ideologies) incentivise some forms of commercial activity over others, and how some—but not all—commercial entities benefit from the present conditions. (Lacy-Nicohls et al , p. 10)		Panel 2, R4-R7
		as harms to human and planetary health increase, commercial sector wealth and power increase, whereas the countervailing forces having to meet these costs (notably individuals, governments, and civil society organisations) become correspondingly impoverished and disempowered or captured by commercial interests p.1		

		Growth in commercial sector wealth and power; decline in state revenue and power (IN THE MDOEL) p. 5 Shaped in interest of commercial elite (IN THE MODEL) p.5		
The increase in precarious contracts has affected mental and physical health,17,32,33 including higher rates of COVID-19.3 (Gilmore et al , p. 1)	Over a similar period but across the corporate sector more broadly, executive compensation has increased exponentially whereas typical workers have seen pay stagnate29,30 and conditions deteriorate.17,3 p. 1	Finally, a low income, low job security, long working hours,223 and stress (all characteristic of changes to labour practices driven by the commercial sector) have important effects on health.17 The growing socioeconomic inequities detailed previously mean these outcomes are increasingly unequally distributed with people the least well off multiply disadvantaged with, for example, greater p. 14 The increasingly unequal socioeconomic environments that follow the concentration of wealth lead to poor societal outcomes on a range of measures, including life expectancy p.14	Eventually you deplete your capable workforce, leading to a tragedy of the commons.	Panel 2, R4-R5
For example, pharmaceuticals and pesticides banned for use in high-income countries are exported to LMICs alongside toxic wastes.27 (Gilmore et al , p. 1)	Unhealthy commodity industries have been shown to disproportionately extract income from and externalise their harms to LMICs, transferring wealth and income to a small elite of shareholders and institutional investors based overwhelmingly in high-income countries, a trend increasing since the 1970s.28 (Gilmore et al , p. 1)			
For example, although externalities can be corrected with fiscal measures, transnational corporations have been uniquely successful in using their financial and political practices to reduce their various tax liabilities and extract state subsidies.28,106,109,137 Effective tax rates on even the most harmful transnational corporations have fallen steadily since the 1970s28 and Tax Justice Network estimates that corporations shift 40% of all profits made abroad into tax havens.109 Combined with wealthy individuals' use of tax havens, countries are losing, on average, the equivalent of 9·2% of their health budget annually.10 (Gilmore et al , p. 7)	Transnational corporate practices (and governmental failure to address them) is such that the system no longer operates in the public's interest but increasingly in the transnational corporations' interest (Gilmore et al , p. 7) Equity is deliberately highlighted because the commercial sector (including increasingly the financial sector) plays an important, yet often overlooked, role in driving social and health	truly transnational corporations with enormous power, influence, and reach;3 and the simultaneous decline in the power and role of the state and other countervailing forces required to hold the commercial sector to account p. 6 However, reputational management, political, and scientific practices are more elective, and could indicate entities engaging in harmful practices. These practices could also reveal that entities have unhealthy commodities in their portfolio		

	inequity both within and between countries.18, (Gilmore et al , p. 2)	(especially entities facing regulation or public backlash). (Lacy-Nicohls et al , p. 5) Similarly, reputational management, political scientific practices tend to be used by larger entities that are better resourced to distract from their harmful practices or to shape policy and knowledge environments in their favour.4 (Lacy-Nicohls et al , p. 7)		
		The increasingly globalised economy of the 20th century weakened states to transnational private actors, and some post-World-War-2 institutions that were engaged in global governance exacerbated this problem p.11		
For example, pharmaceuticals and pesticides banned for use in high-income countries are exported to LMICs alongside toxic wastes.27 (Gilmore et al , p. 1)	Unhealthy commodity industries have been shown to disproportionately extract income from and externalise their harms to LMICs, transferring wealth and income to a small elite of shareholders and institutional investors based overwhelmingly in high-income countries, a trend increasing since the 1970s.28 (Gilmore et al , p. 1)			
For example, by aggressively advertising their products, ignoring or overturning existing regulation, lobbying against any further restrictions on their practices, and even directly drafting policies in their own interest, major corporations drove particularly large increases in unhealthy commodity consumption after liberalisation and privatisation. p.13		For example, by aggressively advertising their products, ignoring or overturning existing regulation, lobbying against any further restrictions on their practices, and even directly drafting policies in their own interest, major corporations drove particularly large increases in unhealthy commodity consumption after liberalisation and privatisation. We use the term actors because major commercial entities rarely act alone but are supported by a diverse range of other powerful organisations, some of whom they fund and direct, albeit often in hidden ways to give the aura of independence. But these commercial		Panel 2, R6-R7

		entities are also often enabled by the governments and intergovernmental organisations that should be holding them to account, as part of a global political and economic system that privileges an increasingly wealthy and narrow elite at the expense of the many p.2		
The many examples include the rise in sugar-sweetened beverage consumption in the Philippines189 and South Africa (panel 2), and the substantial increase in smoking in the former Soviet Union after the lifting of restrictions on foreign direct investment.190 These policies have played a key role in globalising the tobacco, obesity, and NCD epidemics while also constraining access to NCD medicines.189,19 (Gilmore et al , p. 13)				
The entity’s resources can serve to amplify the extent and reach of its practices, either for the benefit or detriment of health. Smaller entities might be precluded from certain practices. For example, entities operating within only one jurisdiction do not have the opportunity to pursue favourable tax regimes, labour standards, or environmental standards. However, entities operating within only one jurisdiction could use other financial, employment, or supply chain practices. (Lacy-Nicohls et al , p. 5)		The entity’s resources can serve to amplify the extent and reach of its practices, either for the benefit or detriment of health. Smaller entities might be precluded from certain practices. (Lacy-Nicohls et al , p. 5)		
Although many of these exclusion lists have been developed for the financial sector, they could also be applied to decision making about other forms of engagement, such as partnerships or joint ventures. A parallel and complementary use could be to identify entities whose practices contribute to beneficial health outcomes for proactive investment.12,37 (Lacy-Nicohls et al , p. 10)				
For example, Walmart has higher revenues than the governments of Australia or Spain, and ExxonMobil than the governments of Belgium or Mexico (appendix p 5).46 This monopoly concentration of most sectors has reduced competition and the power of consumers. (Gilmore et al , p. 6)	In most business sectors, a handful of transnational corporations now dominate; their economic wealth and power outstripping that of many national governments, presenting novel challenges to governance and democracy (Gilmore et al , p. 6)	From the 1930s, unbridled capitalism gave way to a more regulated form, which culminated in the mixed economy model of 1945–1975. Subsequently, the late 1970s saw the emergence of a free-market capitalist system labelled neoliberalism. This system was characterised by a significantly reduced role of the state, focused on		

9 Key features of neoliberalism plus global economic integration led to the consolidation of many smaller corporations into a few larger and uniquely powerful transnational corporations:3 deregulation led to reduced oversight of business; global economic integration and trade and investment liberalisation enabled corporations to expand globally; and privatisation extended their reach into services once considered the function of the state.3, (Gilmore et al , p. 6) Recognising the opportunity to reduce tax and regulation, major corporations and very wealthy individuals played a substantial role in promoting neoliberalism.4,9,17,43 Many corporations and wealthy individuals formed or became donors to neoliberal think tanks such as the Institute of Economic Affairs50 and Reason Foundation,51 which popularised neoliberalism in their home countries,9 and the Atlas Network, which developed a network of neoliberal think tanks and promoted the ideology more widely.8,52 To help mainstream neoliberal thinking, corporations funded business schools in prestigious universities and supported the creation of other powerful organisations, including the World Economic Forum, the World Business Council for Sustainable Development, and the International Chamber of Commerce.8,5 (Gilmore et al , p. 6) By bringing together corporate executives and leaders from policy, academia, and media, these organisations helped entrench and globalise corporations' favoured political, economic, and policy approaches,54 set global economic norms,55 and translate corporate business interests into government action or inaction.56 Advocates of neoliberalism came to hold positions of power in education, media, and national and international institutions (such as the International Monetary Fund, World Bank, and WTO) and, with pressure from the US Government in particular, this led	More recently, and consequent to financial deregulation, the accumulation of profit has increasingly occurred through financial channels rather than through trade and commodity production.5 Financialisation involves new ways of profiting from financial transactions rather than from producing and selling products and has led to financial institutions, including banks and private equity investors, becoming major players in global economic systems and therefore important in commercial determinants of health.17 (Gilmore et al , p. 6)	ensuring the smooth operation and primacy of the market.4,8,9 Key features of neoliberalism plus global economic integration led to the consolidation of many smaller corporations into a few larger and uniquely powerful transnational corporations:3 deregulation led to reduced oversight of business; global economic integration and trade and investment liberalisation enabled corporations to expand globally; and privatisation extended their reach into services once considered the function of the state.3,4 (Gilmore et al , p. 6)		

to the International Monetary Fund and World Bank becoming “centres for the propagation and enforcement”8 of neoliberal orthodoxy, thereby helping to mainstream and globalise a previously marginal ideology. (Gilmore et al , p. 6)				
Marketing practices increase the demand for and consumption of products (ie, unhealthy commodities82,83), including by changing physical and information environments, such as physical alterations to bars84 and increased outlet and marketing density85 in ways that drive consumption.85–NaN Marketing also exaggerates structural inequalities18 by targeting specific geographical areas87 and population subgroups categorised by ethnicity88 or vulnerability, such as people who are homeless or mentally ill.89 Marketing shapes new cultures and norms to drive consumption. Examples include: the normalisation of youth smoking was facilitated by childfriendly advertising, with Camel cigarettes’ Joe Camel having approximately the same recognition as Mickey Mouse among children.90 Similar efforts by the alcohol industry normalised drinking in young people91 and women through so-called pink washing, leading to increased consumption.92 (Gilmore et al , p. 8)	Practices to promote sales of products or services (Gilmore et al , p. 8)			Panel 2, R4-R7
such that the environments are becoming increasingly obesogenic216 (with healthier food options harder to access) and alcogenic (when physical alterations to bars84 and increased outlet and marketing density encourage consumption).85 Less well known is how the automobile, tyre, and fossil companies influenced the built environment and dismantled electric public transport systems in the USA to increase dependence on, and thus sales of, their products. (Gilmore et al , p. 14)	Corporations have altered diverse aspects of the physical environment in order to maximise sales p.14 (not coded as a phenomenon)	Corporations have altered diverse aspects of the physical environment in order to maximise sales p.14		
Few realise the term litter bug was coined by the plastics industry149 and carbon footprint by British Petroleum,1 (Gilmore et al , p. 10)	The media, ownership of which has become concentrated among a wealthy elite, has been shown to increasingly serve that elite, including global corporate interests.148 Herman and Chomsky describe how “money and power are able to filter out the news fit to print,			

	marginalize dissent and allow the government and dominant private interests to get their messages across to the public". (Gilmore et al , p. 10)			
		Closely interconnected changes to these three issues (most notably the emergence of neoliberalism from the late 1970s [panel 3]), and consequently to the system's checks and balances, explain why the commercial sector is having an increasingly negative effect on health p. 6		
Key features of neoliberalism plus global economic integration led to the consolidation of many smaller corporations into a few larger and uniquely powerful transnational corporations:3 deregulation led to reduced oversight of business; global economic integration and trade and investment liberalisation enabled corporations to expand globally; and privatisation extended their reach into services once considered the function of the state p.6		Key features of neoliberalism plus global economic integration led to the consolidation of many smaller corporations into a few larger and uniquely powerful transnational corporations:3 deregulation led to reduced oversight of business; global economic integration and trade and investment liberalisation enabled corporations to expand globally; and privatisation extended their reach into services once considered the function of the state p.6		
		Meanwhile, the corporate entities involved tend to enjoy excess profits, and the power imbalance between transnational corporations and the states, civil society organisations, and individuals needed to hold them to account continues to grow, fuelling the problem (as represented by the black circular arrows in figure 1). Until this system problem that is fuelled by externalities is recognised and addressed, poor health outcomes and inequities in health will continue to grow, causing huge economic and social damage.36 p.7		
For example, major corporations and very wealthy individuals played a substantial role in promoting and shaping neoliberalism as the dominant political and	The interests of these industries are often pursued with the support of business-friendly think tanks,	These norms exert their influence through all levels of the model and have played a key but		

economic norm, funding a diverse set of think tanks, business schools, and other organisations through which they could secure influence (panel 3).4,9 (Gilmore et al , p. 10) The tax-exempt status of these entities is effectively subsidised by taxpayers.1 (Lacy-Nicohls et al , p. 3)	lobbyists, law firms, public relations and advertising agencies, tax accountants, and other professional services. Therefore, these and other industry sectors can be conceptualised as commercial determinants of health, and their practices deserve scrutiny. Paper 2 p. 4	often hidden role in driving commercial harm (Gilmore et al , p. 10) Commercial actors and their allies use these broader norms to frame public health problems, possible solutions, and their role within these solutions, leading to outcomes that favour commercial and shareholder interests but are detrimental to public health p.10 A key question is how profits or retained earnings are distributed: are they distributed to shareholders, partners, or members, or must they be used to advance the organisation's purpose? The answer to this question helps to explain the incentives that drive the commercial entity's practices, including whether it prioritises financial goals or more pro-social and health-oriented goals (eg, employee wellbeing, paying a living wage, or offering secure employment). (Lacy-Nicohls et al , p. 7)		

ACCIDENTAL ADVERSARIES

Data	Phenomena	Theory		Grouped under feedback loop in corresponding Causal Loop Diagram
		As in *The Lancet*	As identified by ourselves	
These companies have since used such stakeholder consultations to that effect—to prevent, slow, weaken, and challenge policies by flooding consultations with responses from third-party organisations they have funded and with highly misleading evidence they have commissioned	commercial involvement in agenda setting, policy development, decision making, and evaluation inherently risks blurring public and commercial interest Although commercial entities can contribute positively to health and society there is growing evidence that the products and practices of some commercial actors—notably the largest transnational corporations—are responsible for escalating rates of avoidable ill health, planetary damage, and social and health inequity (Gilmore et al , p. 1)	These organisational norms of partnership have been so successfully established that many institutions, including UN bodies and governments, have shifted towards working in partnership with commercial actors even within the health arena,124,154 and the norm that unhealthy commodity industries are credible partners persists despite both fundamental conflicts of interest and evidence that partnership approaches are ineffective.151,153 Moreover, these partnership approaches, in both delivery and policy making, reinforce commercial actors as part of the solution to the problems they have created,119,124,125,151 thus serving primarily as corporate reputation management initiatives (table).		Panel 3, B1, R1
For example, the framework could be used to help navigate the tension between continued calls to progress public–private partnerships for health and the increasing evidence that commercial actors can use their influence to weaken implementation of WHO best buys for non-communicable diseases	There can be obvious tensions between the commercial goals of entities and optimising health and wellbeing. Careful consideration of potential conflicts between goals is contingent upon transparency.10			
Even though commercial involvement in policy implementation could carry with it discernible benefits, risks could remain. For example, commercial entities might seize on political or technical issues to block, amend, or delay implementation.				
Contributions to public consultations by commercial entities must be interpreted in the context of conflicting interests, which should be made explicit by the entity concerned. Where engagement proceeds, stringent governance is required.	Conflicts of interest refer to competing goals, and are intrinsically involved in health actor engagement with commercial entities whose primary purpose is not to advance health.10 (Lacy-Nicohls et al , p. 9)			

These [systems-level] problems include the ubiquity of corporate norm shaping, enabled by a media that increasingly represents corporate interests, and that major corporations have not only shaped downstream policies in their interests but have established regulatory approaches that make it harder to pass policies	We use the term actors because major commercial entities rarely act alone but are supported by a diverse range of other powerful organisations, some of whom they fund and direct, albeit often in hidden ways to give the aura of independence. But these commercial entities are also often enabled by the governments and intergovernmental organisations that should be holding them to account, as part of a global political and economic system that privileges an increasingly wealthy and narrow elite at the expense of the many	Though their practices, entities can enter into direct and indirect relationships with other entities (eg, through investments, having a common board or committee membership, membership in a trade association, or using financial services that have harmful clients) and thus explicitly or tacitly endorse the other entity's practices.		Panel 3, B2
For-profit commercial entities often donate to not-for-profit entities, which could influence the agenda and actions of these not-for-profit entities.40		Commercial entities do not act in isolation but alongside other actors, including governments, and within systems that currently enable, but have potential to constrain, commercially driven health harms. (Gilmore et al , p. 2)		
7 commercial practices (scientific, political, marketing, supply chain and waste, labour and employment, financial, reputational management)	Norms shaped in interest of commercial elite	Although commercial actors respond to existing norms, above all they assiduously seek to shape norms, ideas, beliefs, and values in their own interest using the practices outlined above […]to frame public health problems, possible solutions, and their role within these solutions, leading to outcomes that favour commercial and shareholder interests but are detrimental to public health		Panel 3, B3
	transnational corporations have been shown to withhold or deliberately confuse the information consumers need.16,136			
Growing evidence indicates that transnational corporations across diverse sectors not only engage in the same practices65,69,126,127 but often also work collectively8,67,68 with "a shared interest in the defeat of bills such as consumer protection and labour law reform, and in the enactment of favourable tax, regulatory and antitrust legislation".8				Panel 3, B4

This coordination is consistent with evidence of their growing financial,128 operational,68 and board-level129 ties. (Gilmore et al , p. 7)				
especially when utilities such as water were privatised, with widespread externalities a cause of market failure. restricting access to essential drugs, including COVID-19 vaccines, despite massive public investment in their development	Yet the competitive markets on which neoliberalism is premised often did not materialise, with ever larger transnational corporations increasingly negotiating and enjoying monopolistic and oligopolistic positions,		Neoliberalism was supposed to improve competitiveness and growth, but it in reality catered for oligopolies	
Example include pharmaceutical companies using intellectual property protection to restrict access to drugs and vaccines for HIV and COVID-19141,142 and Apple making massive profits from GPS and touch-screen displays developed by the US Government and military.143 This conversion of public knowledge to intellectual property means it no longer "belongs to humanity" as Pasteur claimed139 and that the public (including governments) often pay twice—to fund the research and then purchase the product	Similarly, profits from products developed in or with substantial funding from the public sector have accrued almost exclusively to commercial actors who then restrict access to purchasers (from states to individuals) able to pay the often-inflated prices.			
		Often, generic terms such as private sector, corporations, industry, or business are used to discuss the CDOH.4–6 The use of this terminology gives the impression that the public health community is against the entire commercial world when, in fact, concerns are directed at specific actors and forms of commerce that are harmful to health		Panel 3, B5, R2, R3
		The absence of clear frameworks for differentiating among commercial entities, and for understanding how they might promote or harm health, hinders the governance of commercial interests in public health. (Lacy-Nicohls et al , p. 1)		
	Few commercial entities, if any, are wholly good or bad for public health (Lacy-Nicohls et al , p. 1)			
Panel 1: Hybrid, boundary-spanning commercial entitie (Lacy-Nicohls et al , p. 3)	It is useful to conceptualise public, private, and third sector organisations as made up of			

	combinations of attributes. (Lacy-Nicohls et al , p. 2) 3 This approach highlights that many entities are hybrid in nature (Lacy-Nicohls et al , p. 2)			
		Improved differentiation among commercial actors strengthens the capacity of practitioners, advocates, academics, regulators, and policy makers to make decisions about, to better understand, and to respond to the CDOH through research, engagement, disengagement, regulation, and strategic opposition (Lacy-Nicohls et al , p. 1)		

TRAGEDY OF THE COMMONS

Data	Phenomena	Theory		Grouped under feedback loop in corresponding Causal Loop Diagram
		As in *The Lancet*	As identified by ourselves	
Slave labour working conditions in fashion industry sweatshops,130 illegal discharges of hazardous substances,131 and deforestation leading to climate change, biodiversity loss, and infectious diseases132,133 are examples of transnational corporations acting against the public interest.3,17 (Gilmore et al , p. 7)	Consequently, the problems are escalating, fundamentally threatening development, economic growth, and the wellbeing of future generations.17,36 (Gilmore et al , p. 2) unhealthy commodity industries (panel 1), have driven many of the world's greatest health problems, including the rising burden of non-communicable diseases (NCDs) and the climate emergency.12, (Gilmore et al , p. 1)	Health damage arises when commercial entities operationalise their accumulating power in all its forms (structural, instrumental, and discursive) by engaging in practices and shaping norms that serve to make their organisational needs a higher priority than protecting health, the environment, or social cohesion.58 p.7		Panel 3, R4-R5, B6-B7
	Further details, including growing evidence that neoliberalism has been damaging to health and equity, are available elsewhere and suggest that outcomes, other than for a small wealthy and corporate elite, have largely been detrimental (Gilmore et al , p. 11)	Neoliberalism's almost exclusive focus on encouraging economic growth as measured through gross domestic product (GDP) encouraged unsustainable growth with negative effects on health and the environment,183 ignoring that both are prerequisites to economic development.36 (Gilmore et al , p. 11)		
Consequently, the costs of the harm caused by the production, consumption, and disposal of their products4 (eg, paying to treat the NCDs they cause, to address the social harms of alcohol and gambling, and to clear up oil spills and plastic waste) are largely met by the states, families, and individuals affected (Gilmore et al , p. 7)		Externalities Costs externalised to state and society (Gilmore et al , p. 5) Commercial entities will need to meet the true costs of the harm they cause (Gilmore et al , p. 15)	Money Costs caused by production, consumption, disposal	
Panel 2: Estimates of the harm from commercial products and practices (Gilmore et al , p. 4)	However, there is now overwhelming evidence that some, particularly the largest, multinational and transnational corporations (for definitions of terms used throughout the Series see panel 1) are having increasingly negative effects on human and planetary health			

	and social and health inequities.9, 14– (Gilmore et al , p. 1)			
When a narrow focus on profit at any cost … 7 Slave labour working conditions in fashion industry sweatshops,130 illegal discharges of hazardous substances,131 and deforestation leading to climate change, biodiversity loss, and infectious diseases132,133 are examples of transnational corporations acting against the public interest. (Gilmore et al , p. 7)			Degradation of working conditions/human dignity Environmental degradation	Panel 3, R6-R7
Panel 2: Estimates of the harm from commercial products and practices (Gilmore et al , p. 4)	However, there is now overwhelming evidence that some, particularly the largest, multinational and transnational corporations (for definitions of terms used throughout the Series see panel 1) are having increasingly negative effects on human and planetary health and social and health inequities.9, 14– (Gilmore et al , p. 1)			
		The natural environment, for example, is increasingly degraded from the "production and consumption of stuff".215 (Gilmore et al , p. 14)	Environmental degradation	Panel 3, R8-R9
Transnational corporations adopt supply chain and waste practices that negatively affect human and planetary health. For example, extractive companies frequently despoil the environment and externalise the costs of restoration. Local communities (often Indigenous or multiply disadvantaged) are left living in these despoiled areas with mental and physical health effects. Less stringent regulation, often enabled by political practices that help drive down standards and costs, means that environmental damage is often worse in LMICs. Specific examples include: Rio Tinto, a mining company, destroyed two 46000-year-old Aboriginal rock shelters in Western Australia's Juukan Gorge.93 Such destructive practices have contributed to the gap between Indigenous life expectancies and those of the rest of the population.94 Australian–Canadian conglomerate	Practices involved in the creation, distribution, retail, and waste management of products or services		Production processes with the premise to bring economic growth and opportunities to communities end up polluting their environments	

Oceana Gold subjected El Salvador to a lengthy multimillion dollar lawsuit when the country denied the company permission to mine gold deposits there after its prospecting led to substantial concerns about impacts on water supplies, among other things.95 Coca-Cola's bottling plant in Kerala, opened in 2000, led to groundwater contamination and toxic waste release. Eventually, the plant was closed but local communities never received full compensation.96,97 (Gilmore et al , p. 8)				
		It is important to stress that these behaviours often threaten the small and medium enterprises that make a disproportionately high contribution to inclusive economic growth and employment. Transnational corporations' ability to act in this way reflects their power and legal structures, notably limited liability, which makes it difficult to hold them to account.3,58 But it also reflects the fact that transnational corporations have so successfully reshaped norms that such conduct is now considered inevitable, if not beneficial (Gilmore et al , p. 10)	Competitiveness small medium enterprises and economic growth writ-large	Panel 3, R10-R11.