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Review

One world, no longer: the past, the present, and the future of global value chains

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Abstract: Global value chains (GVCs) are both a product and a facilitator of the model of globalization that dominated for almost two decades following Soviet collapse in 1991. The North Atlantic Financial Crisis of 2007 onwards undermined that dominance, as did the subsequent economic stagnation and associated rising political and social discord. The reversion to more nationalist modes of discourse and policy marks the return of a more visibly geopolitical dimension to the global political economy. The Covid-19 pandemic has accelerated and accentuated these trends. This paper charts the emergence and consolidation of the era of "one world, ready or not", and employs the work of various critical authors, most prominently William Greider. Greider's extensive critique of US-led globalization, offshoring, and what has since become known as "supply chain capitalism" not only appears prescient by comparison with the work of contemporaneous, high profile representatives of the economics discipline who were its champions, but helps us to locate the sources of its unravelling. The implications of this for GVCs are outlined in the final section, which foresees a fragmentation of the world into spheres of influence dominated by regional powers, each of varying strength and cohesion. This will most likely result in the reconfiguration of many GVCs along more regional lines, as the dictates of efficiency clash with the requirements of supply chain resilience and the associated prerogatives of national security, as defined by those states at the centre of the new regional power blocs. Common to all phases of development discussed in this paper is the subordination of the peoples of the Global South, as the mechanisms of imperialism are adjusted and adapted to the changing conditions arising from the irreconcilable contradictions of global capitalism.

Keywords: globalization; imperialism; value chains; offshoring; international trade; geopolitical rivalry

JEL Codes: B27, D24, F15, F23, F54, F63

1. Introduction: reconciling economic theory with reality

It is almost 60 years since management theorist Peter Drucker described logistics as an under-explored and poorly understood aspect of business (Drucker, 1962). Since then, the global political economy has been transformed into a system of what Anna Tsing has dubbed "supply chain capitalism" via "subcontracting and other allied forms", following a risk management logic in which risk is shipped elsewhere, "away from the worlds of risk managers" (Tsing, 2012).[1] It is Tsing's contention that, together with financialization, supply chain capitalism has subordinated production such that the latter must now adhere to a radically short-termist (effectively disposable) agenda that optimizes immediate risk-return trade-offs by outsourcing as much as possible.

It is a peculiar and contradictory development that, in order to maintain its legitimacy, relies increasingly upon a tolerance for cognitive dissonance that sooner or later must snap.[2] As US President Bill Clinton bemoaned, having committed his administration to winning contracts and opening markets for US multinationals while "reforming" welfare provision, "the global economy seemed to be destroying good jobs faster than he could create them", given the shrinking number of domestic jobs created by every $1 billion of exports (Greider, 1997). Despite the fanfare that accompanied all the trade policy achievements and their aggressive pursuit during especially Clinton's presidency, living standards for many working people in the USA continued to stagnate or decline.[3] The scientific gloss provided by leading economists insisting upon the veracity of core theoretical axioms and the essential truth of hallowed models proved insufficient in the long run. Eventually, the tolerance required to sustain such cognitive dissonance snapped, and the result was the shock victory of Donald Trump in 2016 on a protectionist platform of returning jobs to the US. Similar social forces were at work in

[1]"Logistics maps the form of contemporary imperialism. Over the course of the last century, logistics has come to drive strategy and tactics, rather than function as an afterthought. Meanwhile, over the last fifty years, corporate civilian practice has come to lead this former military art, redefining logistics as a business science" (Cowen, 2014).

[2]James O'Connor's classic work *The Fiscal Crisis of the State* explains very succinctly the often-contradictory role of the state in capitalism, whereby the facilitation of the accumulation process must also be accompanied by legitimization efforts he classifies as social expenses, "required to maintain social harmony", such as welfare provision or repression of strikes or political opposition (O'Connor, 1973). It was the conceit of the era of neoliberal globalization that such social expenses need not be incurred, with political consequences that are now very apparent. These are discussed in more detail below.

[3]Mark Setterfield has noted the emergence of a new institutional framework since the 1970s whereby US unemployment can fall to historically low levels without generating inflation. He hypothesizes that this is the result of "an incomes policy based on fear", by which "fear is generated by relatively enduring institutional features of the labor market that have increased worker insecurity" (Setterfield, 2005). Supporting evidence for this comes in the widely noted growth of household debt, marking the supplement of stagnating incomes with easy credit that is then the means by which borrowers are held to the discipline of repayment schedules, if not in fact mere payment schedules, since the lenders' business models in a largely unregulated environment encourage debt servicing, rather than the repayment of loans (Adkins, 2015).

producing the narrow majority that voted for Britain to leave the European Union that same year (Hopkin, 2017).[4]

Another apparently peculiar contradiction of the era of neoliberal globalization is the simultaneous casting off by most high-income states of much manufacturing as the way to achieving or sustaining prosperity in the present era,[5] while the governments of developing countries urgently scramble to attract it, seeing it as their way of climbing the global hierarchy. Can both be correct? The linearity of this procession of developmental stages not only takes for granted implicitly the permanence of the system of global hierarchy of states, in which development is the means by which the lower-ranked jockey for position, but also ignores a crucial aspect of this supposed cascade of developmental stages: the segregation of space both according to and in turn facilitating the structural inequalities inherent in this division of labour. Firstly, this segregation is premised on the presence of a growing global surplus of labour that is, for the most part, concentrated in the Global South and confined within its domicile states, unable to flow as freely as capital or those individuals belonging to elite strata. Secondly, just as the structural inequalities inherent in this global regime displace and ultimately replace investment in the higher income countries, so these inequalities become more pronounced also within the latter, as increasing numbers of communities are discarded in favour of the cheaper alternative pools of labour on offer abroad, where laws against the super-exploitation of labour, if they exist at all, are unlikely to be enforced. And whereas, all due acknowledgement of the exceptions notwithstanding, working conditions in the higher income countries remain superior (and therefore comparatively expensive) to those in the Global South, the social protections and support mechanisms for industrial capitalism begun under Otto von Bismarck in Wilhelmine Germany and developed during the era of the Keynesian welfare national state (Jessop, 2002) are being replaced by increasingly punitive workfare regimes that insist upon welfare recipients' obligation to find something that has been taken away from them by the same forces championing personal responsibility.

It is in this context that the phenomenon in question, global value chains (GVCs)—also known as global commodity chains (GCC) and global production networks (GPN)—have become a defining feature of the global political economy: both a driver and a consequence of globalization. This paper is an attempt to use the past, present and future of GVCs as a means of identifying how the emergence and eventual dominance of these value chains are part of a more comprehensive restructuring and reconfiguration of the global political economy. As such, it is less about GVCs *per se* than it is about the environment in which they have taken shape (and indeed helped to shape), how they came to occupy such a dominant position in the post-Cold War era, and the consequences of that hegemony as the structures supporting it buckle under the weight of their contradictions, a process amplified amid the unfolding Covid-19 coronavirus pandemic of 2020.

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[4]"Britain has become a low-wage assembly outpost for industry in Europe, but the City of London remains the world capital of foreign-exchange traders" (Greider, 1997).

[5]"When I spent a semester in Denmark in 2009, for example, the government was trying to position the whole country as a site for design and innovation, leaving all production to India and China. Indians and Chinese, of course, disagree, as they compete by outsourcing to disadvantaged regions and classes within the nation" (Tsing, 2012).

The work of a broad range of heterodox, critical commentators and analysts will be used in order to make sense of these processes and developments, with a view to sketching a plausible scenario of what the future holds. Of particular interest is the evolution of the state form in response to the changing dominant mode of production, the resultant reconfiguration of the imperialist chain, the political consequences of these developments, and the logical and empirical contortions of an increasingly discredited yet largely shameless economics discipline.

In conducting this survey, recourse is made to a now largely forgotten work whose prescience provoked responses from supposed experts ranging from dismissal to derision. Those same experts are now reassessing their own contributions to the current disintegration of the form of globalization that they championed so vociferously, as we shall see below. That process of disintegration was already foreseen before the turn of the century with remarkable clarity:

"If my analysis is right, the global system of finance and commerce is in a reckless footrace with history, plunging toward some sort of dreadful reckoning with its own contradictions. Responsible experts and opinion leaders, of course, do not share my sense of alarm. Nor do most political authorities, who, in any case, seem thoroughly intimidated by the economic events …. In sum, I do not see much likelihood for timely political action, the kind of government intervention that might avert the disastrous outcome I foresee …. The destructive pressures building up within the global system are leading toward an unbearable chaos that, even without a dramatic collapse, will likely provoke the harsh, reactionary politics that can shut down the system."

So wrote award winning journalist and National Editor of *Rolling Stone* magazine, William Greider, in his best-selling *One World, Ready or Not* (Greider, 1997). For his efforts he was condemned as "not only reckless but simplistic, and remarkably ill-informed" (Krugman, n.d.a). This is the kind of treatment that awaited anyone of sufficient consequence who dared to suggest that the outcomes predicted by economic orthodoxy were far from the facts on the ground. Together with other analysts representing a range of critical, heterodox economic perspectives, we will see just how much Greider very laboriously and with due care and attention to detail actually got right, as opposed to those whose charges of recklessness, simplistic-ness and remarkable ignorance would appear, in hindsight, to be more appropriate as unflinching but thoroughly deserved self-criticism.

It was soon after Drucker's intervention that the overseas expansion of US-based multinational corporations (MNCs) began to register more prominently in the literature of political economy (Vernon, 1966; Baran & Sweezy, 1966), which, in its increasingly mainstream neoclassical guise, had mostly concerned itself with analyses of trade from the perspective of market transactions based on factor endowments, following the tradition of Ricardo and Heckscher & Ohlin (H-O). Already challenging this hegemony were the findings of Wassily Leontief, whose "paradox" concerned the prevalence of capital-intensive imports to the United States from less developed countries, contrary to the H-O framework's anticipation of predominantly labour intensive goods (Wolff, 2004). Contemporaneously Singer (1949) and Prebisch (1950) pointed to disturbing evidence that Ricardian trade theories, far from facilitating the economic development of lower income countries, were in fact responsible for policies that resulted in their deteriorating terms of trade and consequently lagging income levels- the Prebisch-Singer hypothesis or trap. In their separate ways, Raymond Vernon's product cycle theory and more emphatically the "monopoly capital" school of Paul Baran and Paul Sweezy reoriented the theoretical focus back to the organization of production.

While much theoretical and analytical work subsequently focused on foreign direct investment (FDI) as the main means of MNCs' international expansion, the logistical and administrative operations inherent in such expansion were also noted. Already in 1971 Vernon observed a distinctive shift away from FDI "concerned first of all with serving local markets". Instead, beginning in the mid-1960s, some MNCs "appeared to be learning how to use their subsidiaries in the less developed areas as part of an international logistical system. The productive facilities of such enterprises were being integrated into a very much larger global framework. The huge international automobile enterprises were found manufacturing parts that were destined for export to assembly plants in other countries. The large multinational electronics firms were engaged in similar pursuits …. By 1970 … enough information had been developed to indicate that the propensity for foreign-owned subsidiaries in the developing countries to export a portion of their output had grown into a phenomenon of rather considerable significance" (Vernon, 1971).

This was in the context of the widespread adoption by developing countries of import substitution industrialization (ISI) and the vertical integration of supply chains within MNCs. But even at this early stage it was observed that the loss of low skilled manufacturing jobs at home was occurring as US multinationals led the way in constructing vertically specialized supply chains, presaging the more widespread adoption of an export-oriented industrialization (EOI) model that followed the collapse of ISI as a viable development strategy (Helleiner, 1973a; 1973b; Gereffi, 1994).

As we will see below, many of the issues touched upon briefly above remain pertinent to the theory and analysis of global value chains (GVCs). Of particular concern in this paper are the Marxist and heterodox political economy approaches that have been developed and applied with respect to the globalization of production and its operationalization in practice. As highlighted by Milberg and Winkler (2013) in their comprehensive analysis of GVCs, and how and why mainstream economics has failed to take seriously the legitimate concerns of many North American and Western European workers regarding the impact of offshoring on their working conditions and living standards, the guild-like discipline's refusal to tinker with core axioms that were formulated under very different circumstances and therefore of questionable relevance today (or even yesterday) opened the field for others to analyse and understand the offshoring phenomenon that largely drove globalization up to the 2008 financial crisis.

Marxist and heterodox political economy adherents are keenly aware of the shortcomings of orthodox neoclassical economic theory and its ignorance of questions of power and institutions. This is a particularly serious shortcoming when taking into consideration the legacy of colonialism and its lingering presence amid newer forms of imperialism. For this reason, this paper will seek to apply insights from a relatively wide spectrum of critical thought with a view to addressing the following issues, in ascending order of importance:

(1) The development of GVCs over the past 50 years
(2) A critical look at the conjuncture prior to the outbreak of Covid-19
(3) The future of GVCs following the Covid-19 global pandemic crisis

Among the range of perspectives employed in this overview, Marxist theory's focus on the organization of the labour process brings to the study of GVCs some much-needed clarity. The re-creation in Asia and Latin America of working and living conditions commonly imagined by "Whiggish" historical narratives to belong to 19th century Europe and North America before being consigned to history by enlightened leaders underscores the reality at the heart of a social relation founded upon exploitation.[6] Conventional statistical measures of economic activity, such as value-added, gross domestic product and trade statistics are misleading if not even deliberately obfuscatory. This problem was already known 50 years ago: "studies reveal how difficult it is to measure the balance-of-payments effect [of FDI] in a way that has real meaning; at the same time, such studies disclose how sensitive the results are to the assumptions—the unavoidably arbitrary assumptions—of the researcher" (Vernon, 1971). If anything, these problems have intensified due to the vast increase of intra-firm trade, the declining importance of FDI, changes to accounting methods, and the growth of arm's length contracting[7] via offshoring and outsourcing more generally, facilitated by technological advance, international trade agreements and global financial flows, and all supported by governance mechanisms that enforce degrees of conformity upon states in accordance with their rank ordering in the global hierarchy.

2. GVCs: How did we get here?

"Since the 1960s, international companies have been slicing up their supply chains in search of low-cost and capable suppliers offshore" (Gereffi, 2014).

"Outsourcing, fundamentally, has always been about the search for cheaper labor, and therefore cheaper locations" (Peck, 2017).

[6]Marvin Gettleman (1974), Douglas Ashford (1989) and Derek Fraser (2017) are among those who have followed historian Herbert Butterfield in warning against the "Whiggish" tendency to superimpose a linear progress on the past leading directly to the present's supposedly far more enlightened collective consciousness with respect to social welfare. The backlash against self-styled "progressive" elites that is evident to varying degrees across Europe and North America today is a significant political consequence of this tendency, always more pronounced in social democracy, which could co-opt Tory paternalism (*noblesse oblige*) whilst adding to it a more righteous sense of purpose. Cabinet minister in the British government of Clement Attlee, Douglas Jay already famously wrote in his 1937 book *The Socialist Case* that "in the case of nutrition and health, just as in the case of education, the gentleman in Whitehall really does know better what is good for people than the people know themselves" (quoted in Toye 2002). Historian Richard Toye goes to some length to contextualize this notorious quotation and to mitigate the effects of its selective appropriation by a succession of Conservative Party politicians, up to and including a retired Margaret Thatcher. Of particular relevance here is the extent to which already in 1937 leading Labour Party thinkers were fully reconciled to the existing structures of the British state, amid prolonged mass unemployment, widespread poverty, and a relatively recent General Strike and much longer miners' strike that had been ruthlessly crushed. Toye's efforts at rehabilitation notwithstanding, the authoritarian paternalism that revealed itself in Jay's choice of words exposed a glaring and inherent weakness of the post-1945 settlement that by 1979 had lost much of its appeal among its supposed beneficiaries within the working class, many of whom were persuaded by what Perry Anderson summarises as Thatcherism's "hope of new jobs, control of inflation and the promise of information technology", appealing "with notable effect to the popular sensibility of what Raymond Williams … termed 'mobile privatization'" (Anderson, 2020), an ideological (as in interpellative) offering with particular traction in the Anglosphere, and a forerunner of the current rightist populism.

[7]This is also referred to as "non-equity modes" (NEM) of internationalized production (Milberg & Winkler, 2013).

2.1. The internationalization of production

With its focus on market transactions mediated by prices, neoclassical economics has been notoriously ignorant of both the firm and the individual human being, both of which it reduces to rational utility maximizing machines. Trade theory as a result largely ignored the growth of the MNC, despite their growing significance as vehicles and conduits of trade, in addition to their increasing political influence.

For these reasons Raymond Vernon's work stands out as being particularly prescient for someone otherwise working well within the academic mainstream, albeit not the economics discipline in its most refined form. His focus concerned the emergence of MNCs as political and economic actors in their own right, the impact of this upon states, and the relationships between the two. The neoclassical economics paradigm's "world composed of distinct national economies, each with its separate endowment of land, labour and capital" and its treatment of MNCs as "largely irrelevant" meant that "if the operations of the multinational enterprise had to be addressed, it was sufficient to analyse them like any other international investment—for instance, like a Japanese insurance company's purchase of a US Treasury bond" (Vernon, 1993). Mainstream political scientists were similarly inclined to ignore MNCs owing to an axiomatic commitment to state sovereignty, which certain events during the 1970s appeared to vindicate. Nevertheless, not all political scientists were convinced. The realist scholar of global political economy Robert Gilpin discerned a threat to state sovereignty posed by the growth of MNCs. This threat was cheered by libertarians such as Harry Johnson (who was to international trade what Milton Friedman was to corporate social responsibility), who saw welfare benefits for both host and home economies (Johnson, 1970). Gilpin argued that while "from the perspective of the home economy the benefits of foreign direct investment are private, the *costs* (and they are substantial) are public. Such investment benefits the owners of capital to the overall disadvantage of other groups and the economy as a whole" (Gilpin, 1975).[8] We will return to Gilpin's argument below in the final section.

Vernon's highlighting of the operational aspects of MNCs is what mainly concerns us here. While he shared the common assumption of MNCs as defined by their international expansion via FDI that even today commands much economics literature, the organization of work was a particular interest that he had developed during a pre-Harvard stint as planning and control director at Mars during the 1950s.

"Long before the Japanese had been heard from, Forrest Mars had mastered the art of lean production, just-in-time inventory control, and a zero reject rate. He knew all about firm-specific capabilities, and carried the principle of the customer as king to a religious level. His ideas could have provided the core curriculum in any business school—except perhaps for those in human resource management. There, his basic rule was simple: Whip the greyhounds, and feed the donkeys carrots" (Vernon, 1994).

Indeed, during the past 50 years, the business school curriculum has been developed accordingly, with supply chain management now regarded as an academic discipline in its own right, incorporating

[8]Gilpin described himself as a "state-centric realist" who, in line with such a designation, regarded states as the principal actors in an otherwise anarchic international system, and "assumes that national security is and always will be the principal concern of states" (Gilpin, 2001).

logistics, materials management, purchasing, and operations management (Melnyk et al., 2000). HRM, although firmly established in the academic sphere, remains an uneasy amalgam of employee administration ("personnel") and staff development that in practice struggles to achieve boardroom representation (Caldwell, 2011). As for Mars' management style, its Taylorist principal features are widely applied today in the organization of GVCs, as discussed in the following section.[9]

Among the striking features of the era of growth of MNCs has been the persistence of what William Milberg and Deborah Winkler have described as the "outsourcing" by the economics discipline of the task of explaining "corporate strategies, labor market segmentation, buyer-supplier asymmetries, and government regulations [that] are key to understanding the social welfare and economic development consequences of globalized production" (Milberg & Winkler, 2013). The disciplinary commitment to modelling in accordance with the Ricardian trade paradigm has served to exclude consideration of inconvenient evidence and incommensurable theory. The political consequences of this will be discussed in the final section, but here it is worth highlighting the short-term material benefit accrued by individuals and the discipline as a whole, whereby arguments given an authoritative "scientific" gloss are employed in the service of vested interests, as brutally exposed by Charles Ferguson in his award-winning 2010 documentary *Inside Job* (see also Ferguson, 2014).

2.2. The evolution of imperialism

While other academic disciplines took up the challenge, Marxists and other heterodox scholars were already alive to the emergence of MNCs. As noted above, the Prebisch-Singer hypothesis was already challenging the claims of conventional trade theory in the 1950s. In addition, Singer (1950) had noted "the spectacle of a dualistic economic structure", whereby much FDI into underdeveloped countries was extractive, such that it "never became a part of the internal economic structure of those underdeveloped countries themselves, except in the purely geographical and physical sense", thereby being "merely geographic investment", as highlighted by Baran (1957).

Baran's landmark work, *The Political Economy of Growth*, went deeper than Singer and Prebisch in explaining why countries in what became known as the Third World failed to develop. It explained in considerable detail the manner in which colonialism, and imperialism more generally—defined as the global hierarchy of states in which less developed countries "remain economic appendages of the advanced capitalist countries and … their governments depend for survival on the pleasure of their foreign patrons" (Baran, 1957)[10]—prevented the economic development of the less developed

[9]"The facts are abundantly bleak: how some societies are upended by industrialization, how free-running commerce revives brutalities that shocked public morality in the nineteenth century, how politics and business sometimes conspire to treat people as mere commodities" (Greider, 1997). So much for "progress".

[10]Hopkins and Wallerstein (1977) suggest a definition of imperialism as referring to "any use of political power by a stronger state (usually a core state) against a weaker state (usually a peripheral or semiperipheral state) intended to alter allocations in the world market, either directly or indirectly, then it is easy to maintain that this is a constant of the inter-state system as it has operated within the capitalist world economy. We could then view 'informal empire' and 'colonialism' as cyclical alternatives in the form of imperialism." The authors appear to concur with the seminal paper of John Gallagher and Ronald Robinson who observed the apparent superiority under certain circumstances of informal

countries, locking them instead into relations of dependency (see also Emmanuel, 1972, Amin, 1977). Thus was born a significant body of work with particular (but not exclusive) focus on Latin America, where the idea of the development of underdevelopment was especially easy to grasp (Galeano, 1973, Kay, 1989). A few Cold War-era geopolitically strategic exceptions such as South Korea, Taiwan, Singapore and Japan aside (Johnson, 2000), the economic subordination of the Global South to the prerogatives of the Global North was (and remains) structural.[11]

Within the imperialist chain, jockeying for position among the leading powers has, until recently at least, entrenched the US as the paramount leader, with Britain arguably (again, until recently at least) occupying a prominent deputy role as an innovator of legal and regulatory forms (governance practices) that are "exported" such that they "ensure protections and guarantees for global firms and markets" (Sassen, 2007; quoted in Mezzadra & Neilson, 2019). With a few exceptions such as "françafrique" (Bovcon, 2011), where France as former colonial power has retained a privileged and directly interventionist role, "where it is politically no longer possible to operate through the medium of the old-fashioned and compromised colonial administrations and to impose its control merely by means of economic infiltration, American imperialism sponsors (or tolerates) political independence of colonial countries, becoming subsequently the dominant power in the newly 'liberated' regions" (Baran, 1957).

This "infiltration" has since greatly expanded via the international financial institutions, namely the World Bank and the International Monetary Fund (IMF), "which is basically an institutional surrogate of the United States government" (Johnson, 2000). The Washington Consensus that united these institutions in the imposition of Structural Adjustment Plans beginning in the early 1980s (but with significant antecedents) both extended and intensified that infiltration, until the Asian Crisis of 1997 provided the first clear instance of "blowback" when the Asia-Pacific Economic Cooperation forum (APEC) "came unglued". Malaysian Prime Minister Mahathir Mohamad imposed capital controls to prevent the outflows of short-term capital wreaking havoc elsewhere. Consequently, at an APEC summit in Kuala Lumpur, US "Vice President Al Gore openly denounced him, encouraging the people of Malaysia to overthrow him" (Johnson, 2000). Japan's offer to help establish an Asian Monetary Fund tasked with providing loans to affected Asian states was "denounced … as a threat to the monopoly of the IMF over international crises" by US Assistant Treasury Secretary Lawrence Summers, and the idea was buried (Johnson, 2000), just as was Mahathir's earlier proposal for an East Asia Economic Group in 1990 (Hyun & Paradise, 2019).

arrangements in serving imperial interests, as opposed to direct colonial rule. See Gallagher & Robinson (1953). As discussed in the following section, there are distinctive echoes and even revivals of colonial-era informality in present-day arrangements, lending credence to Hopkins & Wallerstein's suggestion of cyclicality in the forms of imperialist regime.

[11]A similar geopolitical pattern was observed with respect to downwardly redistributive, regulated forms of capitalism: "In Europe and in Asia, it has been observed, the free industrial nations closest to the Soviet empire's borders seemed to develop the most generous welfare states—a discreet form of social bribery that effectively undercut appeals from the hard left. The farther one lived from the active Communist alternatives, the less the political need for this, as in the United States. The end of the Cold War has effectively reopened this unspoken bargain in many Western European societies. With the triumph of capitalism, business interests sense that they no longer need to pay the bribe" (Greider, 1997).

Imperialism was the core concern of Nicos Poulantzas in his *Classes in Contemporary Capitalism* (published originally in 1974 in French). Baran's concept of "infiltration" of US imperialism in the supplanting of the old colonial powers is greatly expanded in Poulantzas's portrayal of an "imperialist chain" in which relations between the imperialist powers were undergoing a restructuring qualitatively different from earlier phases, where one metropolis dominated the others. Instead, "it has been achieved by establishing relations of production characteristic of American monopoly capital and its domination actually inside the other metropolises, and by the reproduction within these of this new relation of dependence … it similarly implies the extended reproduction within them of the political and ideological conditions for this development of American imperialism" (Poulantzas, 1975). In retrospect it is not difficult to agree with this analysis, given the European Union's convolutions over economic integration, exacerbated by its concurrent (geo)political expansion, the transformation of banking and finance (not least the City of London as a global financial centre to rival New York), and the enshrinement in the European Court of Justice of a jurisprudence that systematically prioritises "economic freedom" over social and labour rights (Zimmer, 2011).[12] Rivalries between the various metropolises remained (and still remain), as with the preferential trade agreements between the European Union (and before that, the European Economic Community) and developing countries, many of which were former colonies of those same European states now acting in concert: "this indicates the importance that the domination of the dependent formations assumes within inter-imperialist rivalries" (Poulantzas, 1975). Ultimately Poulantzas was absolutely clear regarding the purpose of this reconfiguration: "The international imperialist division of labour is thus related above all to the social division and organization of the entire labour process" (Poulantzas, 1975).

2.3. Commodity chains

As we have seen, by 1970 the transformation of MNCs into more sophisticated vehicles for the international coordination of production was already causing some analysts to take note. Bair (2005) traces the first use of the term "commodity chain" to Terence Hopkins and Immanuel Wallerstein, who argued that trade theory was bogged down by the "fundamentally misleading" distraction of political boundaries and the actual or implied linear sequentialism of "*first* national markets, *then* expanded foreign trade geared to an international market" (Hopkins & Wallerstein, 1977). Instead, the authors proposed taking a final consumable product and tracing backwards the process of its production and sourcing of the inputs required to make it. This would encompass labour, transportation, and intermediate stages of the production process, all the way back to the initial extraction or cultivation of the basic raw materials. Their justification for adopting this approach was threefold: (1) commodity chains that cross political boundaries have existed for centuries; (2) internationalization has never been a linear process and in any case pre-dates the modern state system; and (3) setbacks or obstructions to internationalization have been localized and temporary, as with mercantilist policies or convergence of cyclical patterns (economic recession and absence of political hegemony and the stability associated with that).

[12]Formerly an economic adviser of the French employers' association Medef, Jean-Luc Gréau has emerged as a powerful critic of globalization's impact on the European Union with arguments sharing certain striking similarities to those of Poulantzas, albeit from a euro-nationalist perspective more akin to the realism of Gilpin. See Gréau (1998, 2005, 2008) and Grahl (2011).

Subsequently, Hopkins & Wallerstein (1986) provided supporting evidence for their conceptualization of capitalism as a global and globalizing phenomenon with examples of commodity chains from the three centuries preceding 1800, alongside Arrighi & Drangel's (1986) emphasis on world-systems theory's (WST) recognition of the unequal nature of development, power and distribution of rewards in capitalism, such that what became modern states could be designated core, peripheral or semi-peripheral. "In the world-economy, complementarity goes along with inequality" (Hopkins & Wallerstein, 1977). Within the same state there can co-exist zones or regions at differing levels of development, but Hopkins & Wallerstein (1977) point out that (a) states' designation as core, peripheral or semi-peripheral depends on their political structures, which are treated as determined by the "predominant zones"; and (b) such variegation applies more to core states, whereas "peripheral states tend to be more economically homogeneous". Thus, both the United States and Britain host significant levels of poverty and super-exploitation of labour, but the political structures are largely determined by the needs of Wall Street and the City of London, respectively.

Originally drawing heavily from the commodity chain focus of Hopkins & Wallerstein was the work of Gary Gereffi, which began in the *dependencia* tradition of WST (Gereffi, 1983). However, it was Gereffi's central and much-cited contribution to a 1994 conference of the Political Economy of World-Systems research group on *Commodity Chains and Global Capitalism*, where he first presented the basis of what has since developed into his analytical framework of GVCs (originally global commodity chains). It was here that Gereffi made the important distinction between producer-driven and buyer-driven global commodity chains. Whereas manufacturers ("industrial capital") had by this time already engaged in the outsourcing and offshoring of aspects of production, Gereffi noted the rise of "commercial capital" (defined as "large retailers and brand-named companies that buy but don't make the goods they sell") as having a "key role" in the growth of export-focused manufacturing operations in developing countries (Gereffi, 1994). To facilitate analysis of these, Gereffi proposed a four-dimensional framework that encompasses (1) the processes by which inputs were transformed into outputs; (2) the geography or spatial dispersion of global commodity chains; (3) the governance of these; and, added later, (4) the institutional environment in which they operate (Gereffi, 1995). Incorporating and adapting Michael Porter's concept of the "value chain" (Gereffi et al., 2001), it was decided by a group of leading researchers in 2000, Gereffi among them, to adopt the GVC term in place of global commodity chains in order to distinguish this research paradigm from WST. Gereffi also highlights the "association of 'commodity' with undifferentiated primary products … leaving out manufactured goods and services" (Gereffi, 2018), but another possible reason for this decision is the Marxist connotation associated with "commodity"—goods and services made for profit, as opposed to use. "Value" also has a Marxist connotation, of course, but as will be explored in more detail below, its more positive association with profit and widespread deployment in marketing and management literature renders it less suspect.

2.4. Configuring a compatible system of global governance

Before proceeding to the next section, we can summarise our story so far. Even as decolonization accelerated in the decades following the Second World War, the imperialist exploitation of the former colonies was adapted such that the imperialist chain identified by Poulantzas was reconfigured and retooled. The United States became the pre-eminent power, with Western European states and Japan ever more subordinate but remaining core, especially given the geopolitics of the Cold War. More and more US corporations sought investment opportunities beyond their home markets and, as highlighted by Vernon, exploited the cost savings provided by locating production abroad, in the process developing more sophisticated supply chain management systems that began as formally vertically integrated via FDI. The structural adjustment policies forced upon indebted Third World countries from the 1980s onwards, the collapse of the Soviet Union in 1991 and the aggressive pursuit of a homogenized global capitalism by the US under the Clinton administration, culminated in the establishment of the World Trade Organization (WTO) in 1995, providing a crucial, legally enforceable regime for the protection of intellectual property rights. Corporations from the US and other core countries further reconfigured their global operations accordingly. Instead of outright ownership as a condition of control of the production process, arm's-length contracting, intellectual property rights enforcement formally via the WTO, and greatly enhanced information and communications technology enabled MNCs to retain control of the production process via "non-equity modes" while transferring the risks associated with the various links of the supply chain to their suppliers. Meanwhile, the same multinationals could capture a larger share of the value created by exploiting the new legal forms and enforcement mechanisms.[13]

In the last 75 years global capitalism has gone from being predominantly a collection of coordinated national economies in the core (Keynesian Welfare National States, following Jessop, 2002), with Fordist industrial manufacturing concentrated there, to a regime in which much of industrial manufacturing has been "offshored" in Taylorist form to the Third World, which was given formal independence but thereafter subjected to neo-colonial patterns of domination as the US both supplanted and subsumed European imperialisms[14] in the reconfiguration of the global imperialist chain. This was accelerated following the collapse by 1980 of the New International Economic Order (NIEO), in which many of those former colonies joined forces to demand a more equitable global trade system (Hudson, 2004).[15] Meanwhile, core states have been reconfigured such that their downwardly

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[13]Barriers to entry in manufacturing have fallen significantly and especially producers in China and India have been able to exploit low wages in combination with their growing technical facility. Meanwhile, "copyright and brand-names have a very long life (more than 70 years for the former and in perpetuity for the latter), and these represent 'absolute and immutable' forms of economic rent. It is not surprising, therefore, that the high income countries in general (and the US in particular) have placed so much emphasis on intellectual property rights in recent years" (Kaplinsky, 2000).

[14]These are allowed a degree of independence within strict limits, such as France's direct interventions in the political economy of its former African colonies. But such limits are not to be crossed, as was the case in Rwanda, where France's backing of the Hutu regime in 1994 was insufficient to prevent its overthrow and replacement by a regime more congenial to the US and UK (Cilliers, 2001). The Suez debacle of 1956 was the signal event that confirmed the new hierarchy of global imperialism, in which the British empire was no longer regarded by the US "as a bulwark against Communism, but rather a liability in the Cold War" (Lewis, 2011).

[15]Structural adjustment programs (SAPs) of the kind that typified what came to be known as the "Washington Consensus" predate the Mexican default of 1982 that is commonly regarded as the onset of the Third World debt crisis, which was triggered by the interest rate policies of the US Federal Reserve Bank under Paul Volcker. This event only intensified the

redistributive functions have been steadily reduced. Instead, their domestic policy focus was transformed into a more disciplinary and punitive regime intended to promote self-reliance and national competitiveness, itself redefined as attractiveness to investors, as opposed to export performance (once again following Jessop 2002, who designated the new model as the Schumpeterian workfare state). Industrial policy was officially and very conspicuously replaced by a commitment to free trade as welfare maximizing, enabling more efficient allocation of resources in stark contrast to the state "picking winners", and the financial sector was liberalized such that financial engineering became more admired and lucrative than the kind of engineering associated with any kind of industry. Non-financial firms are now as likely to be profiting (or lossmaking) from financial dealings as they are to be from their ostensibly core business.[16] This particular aspect of the more general phenomenon of "financialization" (Martin, 2002; Foroohar, 2016) is of specific relevance to our understanding of GVCs, and their economic and political consequences, discussed in the next section.

3. GVCs: The pinnacle of globalisation?

"Commerce either persuades a society to relax its laws and social obligations or it exits to another society. As production moves elsewhere, a second great political task emerges: persuading the developing territories themselves to adopt new rules, laws to protect the free flow of commerce and, above all, to protect the property rights of capital" (Greider, 1997).

3.1. Outsourced responsibility and the obfuscation of reality

In their comprehensive analysis of the economics of GVCs, William Milberg and Deborah Winkler alight upon the economics discipline's abdication of the responsibility to explain how this particular form of production and its attendant organization has overtaken traditional FDI as the main means by which MNCs extend their control over productive assets. Reliance on (a) Ricardian trade models to explain international flows of income and capital, and (b) transaction cost analysis to rationalize firms' decisions to engage in FDI (or indeed any other decision), mean that the discipline has effectively contracted out the task of providing a more satisfactory account of GVCs. Indeed, as with so much else in conventional economic wisdom (e.g., "trickle down" theory), decades of glaring evidence to the contrary notwithstanding, the Ricardian assumption of full employment continues to provide the intellectual (it surely cannot be scientific) support for policies that have demonstrably hurt

vigour with which SAPs were applied as "conditionality" by both the IMF and World Bank, as these were called in to "rescue" developing countries unable to service their debts. The cure was often worse than the disease (Pender, 2001).

[16]One of the most spectacular examples of this was German luxury sports car manufacturer Porsche, prior to its eventual takeover by Volkswagen in 2012. In 2007 Porsche reported profits of €5.86bn, of which €3.6bn were from derivatives trading related to its stake in Volkswagen, compared to €1.05bn from selling cars, "prompting accusations it was acting more like a hedge fund" (Milne, 2007). A year later, Porsche booked profits of €8.57bn (more than the company's revenues), of which €6.83bn were attributed to Volkswagen stock related derivative trades, and €1bn from the increase in the value of Porsche's stake (Schäfer, 2008). However, in 2009 Porsche recorded a €4.4bn loss and net debt of €11.4bn, up from €3.1bn the previous year (Schäfer, 2009). Instead of acquiring Volkswagen, Porsche was absorbed by its erstwhile target.

large numbers of communities formerly dependent on industrial manufacture (Milberg & Winkler, 2013), and led to political outcomes that will be discussed in the final section.

Why this is so is a legitimate question for the nowadays neglected sociology of knowledge, but a measure of the strength of what might be called the disciplinary code that normally keeps economists in line regarding certain core issues can be gleaned from the reception afforded to no less than Paul Samuelson, when he dared to question very gently the flawed basis of much free trade orthodoxy.

"Marie-Antoinette said, "Let them eat cake". But history records no transfer of sugar and flour to her peasant subjects. Even the sage Dr. Greenspan sometimes sounds Antoinette-ish. The economists' literature of the 1930s—Hicks, Lerner, Kaldor, Scitovsky and others, to say nothing of earlier writings by J.S. Mill, Edgeworth, Pareto and Viner—perpetrates something of a shell game in ethical debates about the conflict between efficiency and greater inequality" (Samuelson, 2004).[17]

Instead, other academic disciplines and various heterodox economists have contributed to a rich and growing literature on GVCs that restores to view questions of corporate strategy, profit and power. Transaction cost economics' Vernon-like rationalization of FDI as merely the application of constrained optimization models "subject to given technology, input prices, and market prices" leads to the conclusion that "structure (that is, the structure of transactions costs) drives strategy", whereas what is required is a theory capable of recognizing the dynamics of GVCs and the key role of corporate strategy (Milberg & Winkler, 2013). In other words, the direction of causality should in fact be the opposite: strategy defines structure. As William Lazonick (1991) earlier pointed out, the firm according to transaction costs and mainstream economics more generally is merely adaptive, as opposed to innovative. Thus has the study of GVCs been "outsourced" to others who are prepared to do the work of "understanding the historical conditions under which the innovative rather than simply adaptive business organizations will emerge" (Lazonick, 1991).[18]

Globalization and, more specifically, offshoring, began to take off during the 1980s and accelerated further during the 1990s, as much due to the official policy of the Clinton administration as to the strategies of corporations (Garten, 1997a).[19] Following the brief pause caused by the bursting

[17]Among the chorus of disapproval were Mankiw & Swagel (2006), Bhagwati et al. (2004), and Dixit & Grossman (2005).

[18]This has particular resonance at a time when fevered invocation of innovation accompanies policies that are intended to facilitate it is predominant, notwithstanding many such policies' counter-productive top-down style of delivery and restrictive performance targeting manner of composition, as if innovation can be made to order. See Flanagan & Uyarra (2016); also Suarez-Villa (2009).

[19]"Bill Clinton's essential trade strategy was a hearty brand of patriotic mercantilism, dedicated to advancing the particular fortunes of America's multinational corporations by winning new markets for them. He dispatched cabinet officers to China, India, Indonesia, Malaysia, and elsewhere, often accompanied by corporate CEOs, to help sell their goods. The president personally celebrated when they came home with new contracts. His trade negotiators provoked a series of dramatic showdowns with other governments, demanding that the Japanese, Chinese or others open the door to various American products.

"American presidents have been doing much the same for years, albeit with less fanfare and self-congratulations. Despite its free-market ideology Ronald Reagan's administration was actually more aggressive (and successful) in defense of U.S. industrial sectors, fashioning temporary market agreements to help steel, textiles, autos, semiconductors and some others.

of the dot.com boom and more especially the 9/11 terrorist attacks in 2001, a new wave of outsourcing was quickly unleashed, and has produced a world in which "production and the realization of value are more de-linked geographically than ever before" (Milberg & Winkler, 2013). Nevertheless, there appears to have been a stabilization following an unexpected fall in 2013: Jamie Peck (2017) reports that the "global sourcing market is reckoned to be worth in the region of $120–145 billion annually", and a more recent estimate puts the value at $135.5 billion in 2019, up 9% year-on-year (Information Services Group, 2020). The significance of this apparent plateau will be discussed in more detail in the concluding section.

The inadequacy of traditional economic statistical measures of trade is a common complaint, since "trade statistics assign the full value of the good or service to the country that exports the final product" (Milberg & Winkler, 2013). This is misleading precisely because GVCs are characterized by "vertical specialization", whereby exported goods and services have a high import content, due to the reconfiguration of supply chains such that countries become more specialized in particular stages of production.[20] Hummels et al. (2001) define vertical specialization as occurring where (1) goods are produced in multiple, sequential stages; (2) at least 2 countries host value-adding stages of the supply chain; and, crucially, (3) at least one country imports inputs for its stage of the production process, before exporting some of the output. The third aspect "is what sets vertical specialization apart from other concepts such as outsourcing or trade in intermediate goods" (Chen et al., 2005).

This distinction involving imported inputs for export-oriented production leads Chen et al. (2005) to observe that even as imports of intermediate goods stabilize (as in the US) or decline (as in other OECD countries), the "imported intermediates that are embodied in a country's exports have increased over time" (Chen et al., 2005). In their earlier study of 10 OECD and 4 emerging economies, Hummels et al. (2001) found that the import content of their exports grew by 30% between 1970 and 1990, with vertical specialization accounting for 30% of export growth overall by 1990. Thus, consistent with the original observations of Vernon and Helleiner, production networks and supply chains have undergone a continuous process of cross-border reconfiguration over the past 60 years.

The British car industry is a case in point. Today over half the content of UK-manufactured cars is imported,[21] while more than 75% of UK-manufactured cars were exported in 2016, partly

Republicans and Democrats alike, the government took its cues in this from the major multinationals. "In our system", Commerce Undersecretary Jeffrey E. Garten confided, 'the fact is, trade policy is driven by private interests'' (Greider, 1997).

[20]Chen et al. (2005) note that vertical specialization "is likely present in both manufacturing and services production. However it shows up in the official data only for manufacturing, not for services. This difference accounts for two-thirds of the increase in manufacturing exports (as a share of total exports) and explains why services exports show no apparent trend." This is despite the "exponential" growth of global supply chains during the 1990s and 2000s, including "all kinds of services, from call centers and accounting to medical procedures and research and development (R&D) activities of the world's leading transnational corporations" (Gereffi, 2014).

[21]Estimates vary, but all seem to agree that foreign content accounts for more than half of materials. Such variations are attributable to the difficulties of estimating the true value of trade imbalances, owing to the way trade statistics record export values of final products. In 2016 consulting firm Vendigital calculated that 80% of materials used in UK-manufactured cars was imported (Campbell, 2016). Even parts sourced in the UK may first travel long distances prior to assembly—a crucial point in a time of Brexit. Campbell describes how fuel injectors for diesel trucks are manufactured in

accounting for a trade deficit of £18bn in road vehicles and related products (Protts, 2017). This arrangement is very much the result of Britain's membership of the European single market, due to end on 31 December 2020 owing to the country's departure from the European Union. While a "hard" or no-deal Brexit would increase the price of imported cars, thereby increasing the competitiveness of domestically manufactured vehicles, the relatively small UK market means that the economies of scale required to compensate for the loss of tariff-free access to the European single market are very limited. This applies also to component manufacturers (Campbell, 2016).

Given all the costs related to transportation and logistics incurred by such complex supply chains, how can they be profitable, and even more so than in a geographically proximate industrial cluster of the kind most associated with the work of Michael Porter (Porter, 1990; see also vom Hofe & Chen, 2006)? The two chief sources of profit are superior productivity and lower labour costs. If these can be combined, then profitability can be enhanced significantly.

Orthodox economic theory denies this possibility, because it treats the choice as binary and mutually exclusive. Wages rise due to enhanced productivity or fall in accordance with reductions in productivity: "Complaints about low-wage labor (sometimes referred to as the 'sweatshop labor argument') are routinely dismissed as illogical because, if trade follows comparative advantages à la Ricardo, relative wages merely track relative productivities, and therefore no country can gain an overall competitive advantage in average unit labor costs" (Blecker, 2005). Similarly, in another convenience-enhancing and ideologically reassuring assumption, Karabarbounis & Neiman (2014) note that, as with Ricardian trade models' assumption of full employment, "the stability of the labor share of income has been a fundamental feature of macroeconomic models, with broad implications for the shape of the production function, inequality, and macroeconomic dynamics".

Thus, in the world of macroeconomics as taught and practised in the world's most prestigious universities, think tanks and government departments, (a) wages are tied to productivity; (b) the labour share of income is stable over time; and (c) any job losses incurred due to offshoring are quickly compensated by new employment opportunities. Anyone in the imperial centre fearful of falling living standards and deteriorating work conditions, or even worse, unemployment, must surely be hallucinating. Meanwhile, in the Global South, lower wages must be an indication of the lower productivity of workers there.[22]

England using imported European steel, which is first machined in the UK before being sent to Germany for heat treatment, after which it is returned to England for manufacture of the injectors, which are then sold to truckmakers in Sweden, France and Germany. "If the resulting truck is sold in the UK, the component or materials used in it will have crossed the English Channel five times before the lorry is ever driven by its eventual customer. If tariffs are applied at each stage, the cost could be substantial." Similar scenarios apply across the full spectrum of vehicle manufacturing industry involving British supply chain components, all the way to the bumpers on Bentley's Bentayga model.

[22]Blecker continues: "… the basic analytical framework that most international economists use for many purposes remains stuck in the intellectual habits of the past. Core theoretical models of international economics (both trade and finance) continue to be based on assumptions that deny the new realities of globalized financial markets" (Blecker, 2005). For a discipline known for its physics envy, its fetishism of method at the expense of relevance is as ironic as it is unscientific. If anyone claiming expertise as a chemist were to insist upon the relevance of phlogiston today, their credibility would quickly vanish (see Allchin, 1992). The economics discipline appears to be untroubled by such questions.

3.2. Super-exploitation and value extraction

In his portrayal and analysis of the global production system that has formed during the last 50 years, and of the ideological justifications, omissions and elisions that have accompanied it, John Smith painstakingly illuminates the imperialist nature of GVCs by focusing on the mechanisms by which the workers of the Global South are super-exploited, which is to say, underpaid and overworked, contrary to orthodox theory and models (Smith, 2016). Employing a Marxist theoretical framework drawing heavily on the monopoly capital tradition of Baran and Sweezy, Smith uses the labour theory of value to locate the true sources of value in complex value chains in which the distribution of "value added" along the chain is typically counted as skewed heavily towards the lead firms at the head of these chains. This is made possible in practice by a combination of the following factors:
(1) Oligopsony power exercised by lead firms (MNCs) over internationally competing supplier firms that are forced to operate at the tightest margins of profitability
(2) Intellectual property rights enforced via the WTO and other governance mechanisms, backed ultimately by the states in which the lead firms are headquartered
(3) Repressive labour regimes in which the host states deny workers rights of organization, protest, strike, and other forms of resistance against their super-exploitation

The results have been apparent for decades, as states compete to attract investment, whether to compensate for declining industries in the Global North, or for developing countries to climb the development ladder in the ways deemed acceptable by the prevailing political and economic orthodoxy. This competition manifests in anti-trade union laws, decreased environmental protections (or lax enforcement of these) and significant reductions in corporate tax rates, among other ways:

"The most alarming aspect of how globalization degrades law is in the conditions for work. The new information technology has been popularized as the dawn of a "postindustrial age", but that blithe vision ignores what is actually happening to industrial workers. In the primitive legal climate of poorer nations, industry has found it can revive the worst forms of nineteenth century exploitation, abuses outlawed long ago in the advanced economies, including extreme physical dangers to workers and the use of children as expendable cheap labor. Indeed, the powerful strands of the global market also undermine legal protections for workers in some advanced economies. Sweatshops are back in the United States, visible from Los Angeles to New York and across the rural South" (Greider, 1997).

By his own account, Greider was most influenced by the works of Thorstein Veblen and Karl Polanyi (Greider, 1997). He was certainly familiar with the work of Marx, and had little trouble recognizing what was fundamentally at stake in the globalization unfolding throughout the 1990s: "In the globalizing economy … the commodity is human labor, the price is wages. Wage arbitrage ... moves the production and jobs from a high-wage labor market to another where the labor is much cheaper. The producers thus reduce their costs and enhance profits by arbitraging these wage differences, usually selling their finished products back into the high-wage markets" (Greider, 1997).

Smith provides a detailed account of how this arbitrage is elided by a wide spectrum of the literature, stretching from the orthodox IMF to, somewhat surprisingly, work in the Marxist tradition. Whereas Ellen Meiksins Wood argues that the new imperialism is "a complex interaction between more or less sovereign states" (Wood, 2005), rather than involving a traditional colonial relationship (or indeed a neo-colonial relationship), David Harvey's argument echoes Robert Gilpin's somewhat mercantilist worries regarding the offshoring by MNCs undermining US economic security, except that Harvey locates the origin of this threat to the rise of finance (Smith, 2016; see also Harvey, 2003). Given the centrality of the capital-labour relation in Marxist theory, its marginality in some prominent explanations (or casual dismissals) of imperialism by avowed Marxists is counter-intuitive, to say the least. Smith goes on to detail further Marxian denials of the persistence of unequal exchange relations between the countries of the Global North and South, despite other non-Marxist authors grasping with apparent ease the contemporary applicability of the Prebisch-Singer trap, whereby developing country producers, with a few notable exceptions,[23] have been unable to capitalize on their transition to manufacturing for export (Milberg & Winkler, 2013). They could hardly do otherwise, given their subordination within global supply chains by the lead firms of the (mostly) core states.

Smith's restoration of the capital-labour relation at the centre of his analysis of GVCs allows him to expose the mechanisms by which value is extracted (rather than added) by those lead firms mainly through arm's length contracting with supplier firms, thereby enhancing the economic statistics of the states in which the lead firms are headquartered, rather than those where the value originates. Even here the full extent of extraction or capture is difficult to estimate, given the tax-evading accounting techniques employed by MNCs that record market transactions (as opposed to measuring *product*) in such ways as to minimize the firms' aggregate tax liability, especially with respect to the trade in services (Smith, 2016). Smith calls this the "GDP illusion".[24]

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[23]"In poorer countries, as we have seen, companies have the leverage to set the terms for their investments and to extract special benefits. But the bargaining power shifts to the governments if they control access to a 'hot market' like China or India or even smaller nations like Indonesia where the economic growth is robust" (Greider, 1997). With respect to the latter country, its robust growth was quickly upended by the Asian Crisis that unfolded just after Greider's book was completed, with devastating consequences for its economy and workers, as well as the collapse of a hitherto US client government (Johnson, 2000), suddenly cast as "crony capitalist" by the very people who had praised it and provided it with generous financing over three decades. Here was an exemplary instance of a country apparently climbing the global hierarchy by "upscaling" but suddenly thrown into reverse by the vicissitudes of short term financial flows blessed with the imprimatur of the US financial elite, which then oversaw the fire sale of suddenly cheap assets. See also Wade & Veneroso (1998), and the 2001 documentary film by John Pilger, *The New Rulers of the World*.

[24]The problems with GDP are widely recognized and there have been various efforts to craft more satisfactory alternative measures of economic output. Former World Bank economist Herman Daly's criticism of GDP and national income accounting more generally as "treat[ing] the earth as a business in liquidation" is among the most famous and telling (quoted in Cobb, Halstead & Rowe, 1995). Revealingly with respect to the use of such statistics, GDP, supposedly measuring the value of all output produced within a country in a given time period, replaced GNP (gross national product) as the main measure of economic performance in 1991. GDP includes value added domestically, irrespective of ownership, and excludes foreign-generated income. GNP, by contrast, measures the value added that is owned by a country's residents irrespective of where it has been generated. This is especially significant because the switch to GDP "turned many struggling nations into statistical boomtowns, while aiding the push for a global economy. Conveniently, it has hidden a basic fact: the nations of the North are walking off with the South's resources, and calling it a gain for the South" (Cobb et al., 1995). This is possible (statistically) due to the fictitious "value added" which is mostly an *ex post* rationalization of higher-priced market transactions at the top of the supply chain. These higher prices supposedly reflect the superior market value of what Baran & Sweezy (1966) called the "sales effort", together with executive leadership, at the head of the supply

Building on and complementing Smith's work is Intan Suwandi's study of contracting within GVCs from the perspective of two Indonesian firms. Whereas Smith (2016) posits "in outline at least … a value theory of imperialism", Suwandi (2019) builds on this by employing her concept of "labor-value chains" whereby she illustrates the operationalization of "exploitation within the labor theory of value". Like Smith, she rejects the statistical subterfuge with which the high productivity of factory workers in countries with low unit labour costs is obscured, using instead market prices of labour rather than the purchasing power parity currency rates employed in the mainstream literature (Suwandi, 2019; see also Smith, 2016).[25] She also grounds MNCs very firmly with respect to geography, emphasizing Smith's point concerning the relationship between these corporations and their home states, but with reference to the argument of Ernesto Screpanti who, unlike Smith, rejects the use of the designation "transnational" to corporations.

"Recently, both mainstream and radical theorists, particularly in Europe, have adopted the conception of transnational corporations, and have evoked a widespread process of transnationalization, whereby corporations with global reach are no longer seen as necessarily headquartered in the center of the world economy or connected to particular core states. This has then encouraged a shift toward an extreme firm-level analysis of transnationalization, where nation-states are seen increasingly as non-actors (or displaced actors) within a globalized economy … multinational corporations are still pretty much national in their governance structure, especially if we consider that the center of management and advanced technological research of multinationals is still concentrated in the developed Global North" (Suwandi, 2019).

In addition, those multinationals, in the event of any threats to their property rights, have recourse to their vastly more powerful home states, which usually act in concert with the other core states in enforcing those rights.

The labour arbitrage highlighted by Greider, Smith and Suwandi is made possible by the lack of freedom of movement granted to workers, as opposed to capital, which has been given almost unlimited

chain. This is exemplified by sportswear company Nike, which famously manufactures nothing, but is instead a "world leader in the design, distribution and marketing of athletic footwear" (Locke, 2012)—in other words, a marketing company at the head of a buyer-driven supply chain. Locke quotes the Nike website's claim of strategic continuity from its inception: "Our business model in 1964 is essentially the same as our model today: We grow by investing our money in design, development, marketing and sales and then contract with other companies to manufacture our products." Having originally imported low cost shoes from Japan, the Nike brand was launched in 1972 with the company subcontracting the manufacture of its own designed shoes to Asian contract manufacturers, first in Japan, and later in South Korea, Taiwan, Indonesia and elsewhere. For a brief period Nike also operated its own factories in the US, but closed these in the early 1980s after it decided to source all production from Asia.

[25]This subterfuge is based on the Balassa-Samuelson hypothesis, which states that productivity differentials in tradable goods between countries correlate with wages and prices, thereby determining the gap between equilibrium exchange rates and purchasing power parity (PPP). These productivity differentials determine the domestic relative price of nontradable goods (such as haircuts or taxi rides), and these differences in the relative prices of nontradables determine the deviation of exchange rates from PPP (Asea & Corden, 1994). Empirically, PPP is observed more as an exception than as a general rule, given its "persistent violations" (Blecker, 2005). Nevertheless: "Under the skin of any international economist lies a deep-seated belief in some variant of the PPP theory of the exchange rate" (Dornbusch & Krugman, 1976).

freedom until relatively recently (see below). Large reserve armies of labour are effectively confined to territorially limited jurisdictions, where the rights accorded to workers range from very little to non-existent. This adds to capital's already considerable leverage over most states seeking to attract investment as a means of furthering their economic development. As stated above (see note 23), those states with large markets that have significant growth potential and/or which are already sufficiently lucrative have sufficient bargaining power to extract concessions from MNCs (and their state backers that would otherwise insist on untrammeled access) can more readily climb the development ladder by retaining more of the value generated. In the case of China especially, this has led to a sustained, rapid economic growth and a significant qualitative leap with respect to its own indigenous capital formation (Yang, 2020), such that it is now regarded as a major geopolitical rival to the US.

The contrast with Indonesia is stark. Having lost its Cold War rationale as a bulwark against the spread of communism, it lost the patronage of the US, which oversaw a brutal restructuring via the IMF in the wake of the Asian Crisis of 1997. While most elements of the deposed Suharto regime were able to hold on to their spoils, the development of the rest of the economy suffered a major setback as a result of the conditionality imposed by the IMF in return for its "assistance" (see Pincus & Ramli, 2001). As a result, the years of rapid growth were followed by particularly severe retrenchment, which effectively lowered the global wage floor and provided a fresh source of even cheaper labour but with varying levels of skill that was said to reinforce the competitiveness especially of the small and medium-sized enterprise (SME) sector, which was forced to look to export markets, given the destruction wreaked upon the domestic economy (Ter Wengel & Rodriguez, 2006).[26] Suwandi's study shines a spotlight on what that competitiveness means in practice for companies competing to win contracts to service GVCs overseen by lead firms that not only super-exploit labour but take advantage of the legalities whereby risk can be outsourced whilst value is extracted. Such is the skewed nature of bargaining power within these chains that lead firms are able to dictate how supplier firms organize their workforces and gain access to otherwise confidential cost information in order to dictate further reductions where possible, while insisting on just-in-time delivery systems often "solely to help dominant companies save inventory costs" (Suwandi, 2019). At the same time the lead firms require the same or even enhanced quality standards, in addition to flexibility, and such is the nature of competition between suppliers that they are effectively unable to resist these contradictory demands.

Under such circumstances, it is difficult for a country even as large and resource-rich as Indonesia to "upgrade" in the manner of China, South Korea, and India. While such an objective is common to all developing economies adhering to the rules of the present global development regime, in practice it is highly unlikely that they will succeed, given the structural obstacles that they face. In certain respects history is repeating itself, given what Milberg & Winkler (2013) describe as a contemporary manifestation of the Prebisch-Singer trap. Industrial upgrading by firms does not necessarily translate into wider economic upgrading because as firms climb the ladder they depend more on imported inputs, thereby reducing their ability to generate multiplier effects locally. Indonesian SMEs' reorientation to export markets following the Asian Crisis remains a key policy objective at the level of global policy actors like the OECD, which specifically encourages SMEs to seek entry to GVCs in order to "access

[26]"Overall, imperialism requires not just the exaction of tribute, but the restructuring of whole economies to meet the needs of the core imperial powers" (Suwandi, 2019).

better and cheaper inputs (participation via imports) to increase their competitiveness, and offer new opportunities through specialising in producing intermediates rather than mastering all the tasks required to produce final goods (participation via exports)" (López González et al., 2019). It remains to be seen how viable such a strategy will be in a world showing increasing signs of political division amid economic oversupply, as discussed in the final section below.

3.3. Ecological dimensions and degradations

In a further twist to the Prebisch-Singer trap, various scholars specializing in ecological economics and social science have identified the unequal exchange relating also to ecology and have employed the logic of world systems theory to construct a compelling analysis of this (for example, see Foster & Holleman, 2014). Anthropologist Alf Hornborg's work begins with the laws of thermodynamics: firstly, there is a fixed amount of energy in the universe; and secondly, all transformation of energy involves the production of entropy, namely, that form of thermal energy which is unavailable for mechanical work. That is to say, waste. Our planet's system of ecology is equipped to absorb a certain amount of this naturally occurring matter, but its industrial scale production fed largely by oil and the logic of liquidation highlighted by Herman Daly (see note 24 above) has transformed the aggregate output of entropy such that our planet's ecosystems are literally choking on it, whether via polluted or acidified water, soil that is polluted or otherwise emptied of its nutrient base by industrialised agriculture, or air filled with the detritus of fossil fuel-based energy conversion. Nuclear fission adds to this toxic cocktail its own uniquely dangerous and long-lasting bi-products.

Hornborg (1998) conceptualizes the energy available for work as exergy—"the quality of energy in a particular substance or context or, in other words, that part of the energy which is available for mechanical work". Our systems of industrialised production and consumption are, in Hornborg's words, "dissipative structures", defined as such by their "stay[ing] far from thermodynamic equilibrium by continually drawing in exergy (negative entropy) from the outside and exporting the entropy, or disorder, they produce in the process" (Hornborg, 2001). These dissipative structures "can be maintained only through the continuous degradation of imported exergy" (Hornborg, 2001).

In the century leading up to the 1970s, the extraction of exergy largely fed the dissipative structures of the Global North, which housed the vast majority of the world's manufacturing industry. Much entropy spewed forth into the air, soil and rivers of these countries, even as many colonies were stripped of their natural riches to help feed this accelerating frenzy of energy conversion and consumption. But, as we have already seen, the relative costs of production concentrated in the Global North began to rise compared to those of the Global South, where many newly independent states were eager to embark on development via industrialization and were offered competing versions of this by the Cold War superpowers, with particularly aggressive methods of persuasion and coercion employed by the West to ensure selection of its own versions of "modernization" that not uncoincidentally secured access to vital resources by the West. As deindustrialization of the Global North gathered pace and manufacturing was transferred increasingly to the South, there arose greater awareness of the ecological damage inflicted by industrialization and its attendant consumerism, triggered by Rachel Carson's landmark *Silent Spring*, published already in 1961. Kenneth Boulding's "Economics of Spaceship Earth" (Boulding, 1966) prefigured Daly's image of capitalist industrialization as asset-stripping. Nicolas Georgescu-Roegen studied the implications of the laws of thermodynamics for economics (Georgescu-Roegen, 1971), and from there the scholarly interest in environmental and later ecological economics continued to grow.

As that awareness has increased and become more widely disseminated in the Global North, it has been employed as an ideological compensation or *ex post* rationalization of the attendant job losses and reductions in material living standards arising from deindustrialization and the cessation of environmentally destructive practices such as coal mining or steel making .[27] The optimism implicit in this rendering was expressed in particular detail by the proponents of ecological modernization theory (EMT), of whom the most prominent originally was Joseph Huber. The promise of EMT was and remains "a switchover to the use of cleaner, more efficient, and less resource intensive technologies through a process of "super-industrialisation". Second, ecological modernisation relies on the implementation of anticipatory planning practices modeled on the German notion of *Vorsorgeprinzip*, or the precautionary principle. Third, successful execution of this approach depends on the organisational internalisation of ecological responsibility. Finally, ecological modernists emphasise the role of strict governmental regulations to promote innovation in environmental technology" (Cohen, 1997).

This was rapidly embedded as best practice in state and corporate policymaking, and is now sufficiently taken for granted as to be conventional wisdom. As Cohen elaborates, "ecological modernisation has been tailored to serve as a political programme and a corporate competitiveness-enhancing strategy", rejecting the environment vs efficiency trade-off that justified private and public sector reluctance to adjust, instead championing the benefits of "eco-efficiency" and its associated reduction of costly waste (Cohen, 1997). The convenient fundamental compatibility of free trade, free markets and sustainability reached its apogee in the United Nations' Sustainable Development Goals, which are of such applicability and common sense that major consulting firms like PricewaterhouseCoopers have constructed sophisticated consulting packages designed to facilitate other organisations' adherence to these.[28]

However, the transfer of much manufacturing industry from the Global North to the South has facilitated the development of an "out of sight, out of mind" approach with respect to the conditions in which the labour is now performed, as noted above. Those conditions include an unwinding of environmental regulations and practices taken for granted in most of Europe and North America. Also very much under-recognised is the existence of a "pollution deficit" between the North and South, whereby as much as 30 per cent of the pollution generated in the South is directly attributable to consumption in the North (Peng et al., 2016). This phenomenon is known as "environmental load displacement", enabling the countries of the North to claim success in reducing emissions locally, but in fact simply offshoring them (Hornborg 2009), facilitated by the statistical smokescreen enveloping

[27]See Boehmer-Christiansen et al. (1993), Gassebner et al. (2008), and Haas (2020).

[28] See "Sustainable Development Goals—how will they impact your business?", https://www.pwc.com/gx/en/services/sustainability/sustainable-development-goals.html (accessed 7 December 2020). Scheyvens et al. (2016) provide a more nuanced but ultimately mild critique of dominant neoliberal modes of practice before exhorting readers to "move beyond a 'business-as-usual' approach and towards the fundamental neoliberal agenda shaping how business and society operates". If it were that easy, then presumably there would be a stampede of reshoring. Even with all the likely forced reconfiguration of GVCs resulting from the combination of geopolitical tension and Covid-19's exposure of supply chain fragility, this is unlikely to occur, for reasons discussed in the final section below.

international trade in general and GVCs in particular. Thus, in addition to the extraction of value such that most of it is recorded as being concentrated at the end of the value chain, GVCs facilitate the redistribution of entropy such that it is concentrated nearer their beginnings, far from the consumer markets they nominally serve. This goes to the heart of Hornborg's critique of technology as a social relation obscured by the same fetishism of the commodity or money prices:

"But in representing exchange relationships, money cannot repair damages to the biosphere, only redistribute them in the world system. Ecological issues and distributional issues are truly inseparable" (Hornborg, 2009).

3.4. Reversions to older modes of imperialism

Some of the echoes of the past originate even farther back than the apparently re-emergent Prebisch-Singer trap. This is brought to light by Sandro Mezzadra & Brett Neilson, who discern important continuities between the colonial era and today, despite the novelty of our supposedly post-colonial conjuncture. Drawing inspiration from the work of Michael Hardt & Antonio Negri, Mezzadra & Neilson point to the evolving nature of the state, which has combined a more punitive set of policies towards labour with delegation of powers to branches of capital, following the crisis of the "planner state" that climaxed in the 1970s. The state remains important, but "states are increasingly traversed, pressed and disarticulated by processes of capitalist production, valorization, and accumulation whose logics and domination they are no longer able to fully control and contain" (Mezzadra & Neilson, 2019). As a result Max Weber's definition of the state as successfully claiming "the *monopoly of legitimate force* for itself" within a defined territory (Mezzadra & Neilson, 2019) is compromised in all three respects: territory, legitimacy, and monopoly. Because of this Mezzadra & Neilson adopt Hardt & Negri's concept of "mixed constitution" of empire, which "nicely captures both the heterogeneity of actors and orders that characterizes the political and legal form of globalization and the directly political role capital plays within it" (Mezzadra & Neilson, 2019).

As the final section will detail, this portrayal of globalization already appears to have been superseded by trends that have accelerated and intensified with the outbreak of the Covid-19 pandemic, but within it there is an important insight concerning the plurality of historical state forms, transcending the transition from empire to nation state. Here they draw on Philip Stern's study of the British East India Company and his conceptualization of that as a "company-state" that effectively created its own systems of administration and governance over territories and operations that were not otherwise subject to Weberian sovereign state authority (Stern, 2011). Stern's treatment of the East India Company as exemplary of a particular, quickly adaptable state form in which the economic and the political were very explicitly more entwined than in later conceptions of the corporation as exclusively economic offers clues as to the nature and practices of governance in variegated contexts. Much has been written in recent years regarding the privatization of governance, and how this especially applies in a transnational context (for example, Cashore, 2002; Pattberg, 2005; Mayer & Gereffi, 2010; Schouten & Glasbergen, 2011; Maurer, 2017; Stringham, 2015). However, this literature focuses mainly on networks and not on Stern's concept of the corporation as a "body-politic on its own terms" that in certain respects presaged or anticipated modern nation states (Stern, 2011). Mezzadra & Neilson (2019), following Stern and citing other authors including Lisa Lowe (2015), make the telling observation that the free trade ideas of Adam Smith and David Ricardo were vigorously propagated by opium traders like James Matheson and long-time British East India Company employee John Stuart Mill. This underlines how such abstracted logic as that advanced in Ricardo's theory of comparative advantage was earlier in practice operationalized by those directly involved in its application and/or use as *ex post* rationalization of imperialist acquisition of resources, administration of territories, and subjugation of local populations, however temporarily. This was a continuously evolving set of practices that were adapted to suit the demands of each situation.[29]

For Mezzadra & Neilson (2019), such a "loose, incomplete, but also corporate project" as exemplified in much of the history of the British East India Company (prior to its nationalization in 1858, by which time many of its practices were institutionalized and therefore incorporated by the British state wholesale) provides antecedents of empire conceived as global(ising) capitalism or capital-in-aggregate, which, far from imposing a "universalization" of institutional forms and social practices, generates "conditions of heterogeneity that require careful investigation from a political, legal, and social angle" (Mezzadra & Neilson, 2019), albeit avoiding the reductionism and extrapolation of much "varieties of capitalism" literature (Jessop, 2015b). "The notion of empire remains relevant because it groups the powerful push of global capital on the development of states and legal systems … Geographical and institutional entities such as the concession and the chartered company make multiple returns in new clothes in this scenario" (Mezzadra & Neilson, 2019).

Nevertheless, even if history rhymes it does not repeat itself exactly, and while the "retreat" or "hollowing out" of the state had already become an intellectual and political commonplace during the 1990s, such disappearances were more illusory than real. Unlike the British East India Company, which developed many of the imperialist institutional forms and operational technologies subsequently adopted by the British state (among others), today's MNCs have centuries of accumulated knowledge to help them manage contemporary challenges. More significantly, most such MNCs are ultimately backed by fully formed and still very functional modern states whose domestic economic roles may have experienced radical transformation during the last 50 years, but whose foreign policies show a remarkable continuity with respect to the opening and acquisition of markets, security of access to vital raw materials and "rescue" of peoples unfortunate to be ruled by non-compliant governments. As such, while MNCs can sometimes be regarded as "movable enclaves" of "global law" (Lindahl, 2013), they are supported by the combined forces of their state sponsors and the legal infrastructure provided by the World Trade Organization, multilateral and bilateral trade agreements between states, and commercial law more generally. Furthermore, for all the variegation of state forms and social practices in actually existing capitalism more generally, Mezzadra & Neilson (2019) are compelled to acknowledge Saskia Sassen's observation "that a limited number of states, primarily the United States and the United Kingdom, are producing 'the design for the new standards and legalities needed to ensure protections and guarantees for global firms and markets'" (Sassen, 2007), which are then implemented and adapted by other states as part of a globalizing "market rights" agenda. On this reading, the centrality of the Anglosphere to the neoliberal globalization

[29]Mark Donoghue highlights the ambiguities of Adam Smith's treatment of the East India Company, which ranged from highly critical to approval of its managerial efficiency and profitability. In addition, Smith approvingly noted the provision of public goods made by joint stock companies in the absence of sovereign state authority. His criticisms focused mainly on what he regarded as abuse of monopoly power. See Donoghue (2020).

project was its driving force (van der Pijl, 2006) and explains that project's more recent stalling, as will be discussed below in the final section.

It is in this context that GVCs were able to develop such that their extension was truly global. However, as observed since the beginning of this century (and arguably earlier), the increasingly erratic use of military force and economic weaponry by the US, supported (and even cajoled) by the UK, combined with an economic orthodoxy that has demonstrably failed even in its own heartlands, and the refusal of a resurgent China to fit the template that the conjoined hubris of US economists and policy wonks had prepared for it (Nye 2010; 2018), has posed a significant challenge to "one world, ready or not". This has been brought into even sharper relief by the Covid-19 global pandemic of 2020. What this challenge means for the future of GVCs is the subject of the final section of this paper.

4. Where do we go from here?

"Sooner or later, people will figure out what is happening to them and rebel" (Greider, 1997).

4.1. The drift of policy

The Covid-19 global pandemic that quickly covered the globe during the first half of 2020 has cast a very searching light on the sustainability, including the operational practicality, of many aspects of the global political economy as these have evolved during the last 40 years. For both states and corporations, financial discipline and the cult of a narrowly-defined efficiency have come at the expense of organizational slack and infrastructural resilience. This is despite a growing chorus of warnings about the risks inherent in an economic system premised on geographically distant suppliers operating at as close as possible to zero spare capacity, just-in-time maximum efficiency.[30]

In 2017, Michael T. Osterholm and Mark Olshaker published a book aimed at a general audience, intended to communicate the dangers of deadly germs and the risks of their pandemic spread. In the preface to the most recent edition, the authors explain:

"We proposed this book during the 2014–16 Ebola outbreak in West Africa. We completed it during the Zika outbreak that spread from the Pacific Islands to North and South America. As we wrote, we were mindful of the 2002 SARS (Severe Acute Respiratory Syndrome) coronavirus outbreak that began in Southeast Asia and spread to Canada, the H1N1 influenza outbreak that stormed up from Mexico, and MERS (Middle East Respiratory Syndrome), another coronavirus that took hold in the Arabian Peninsula in 2012" (Osterholm & Olshaker, 2020).

Chapter 19 of Osterholm & Olshaker's book paints a scenario of sufficiently fine detail to expose the myriad ways in which market fundamentalism's myopic treatment of "imperfections" has produced political consequences as deadly as the Trump administration's "deconstruction of the administrative state" (Boot, 2019). Osterholm is the founding director of the Center for Infectious Disease Research and Policy (CIDRAP) at the University of Minnesota. This body has prepared such scenarios "for

[30] "Companies were given a foretaste of global supply chain disruption in 2011 with the earthquake in Tohoku, Japan. It appears they did not heed the warning" (Hall, 2020).

organizations ranging from the White House and Fortune 500 companies to state and local governments, including public health departments and hospitals" (Osterholm & Olshaker, 2020).

The authors explain that a "catastrophic influenza pandemic will unfold like a slow-motion tsunami, lasting six to eighteen months" (Osterholm & Olshaker, 2020). In their scenario, within six weeks of its outbreak, and despite the cooperation of various governments and the World Health Organization, the epidemic has become a pandemic. Travel restrictions have been imposed and disruptions to supply chains mean that shortages of products requiring parts sourced from particular regions are becoming more widespread. Stockpiling of certain foods and household goods occurs alongside widespread consumer rejection of particular meats and other foodstuffs regarded as at risk of transmitting the disease. Workers at ports and on merchant vessels are falling ill, exacerbating the supply chain shortages.[31] Meanwhile there is panic buying of those medicines deemed to have some remedial or palliative effects. Hospitals and doctors' surgeries are struggling to cope, leading to growing social and political unrest … and so on.

The above scenario shares much in common with the actual unfolding of Covid-19 and the various responses to that. Prominent in the commentary relating to the economic impact of coronavirus has been its effect on global supply chains. This has developed in three stages. The first stage featured simple reportage of specific episodes of disruption. Parallel to this developed a stream of commentary that was initially speculative in nature and more general than specific in its considerations of longer-term changes to supply chains.[32] The second stage was marked by an apparently greater awareness of the severity of interruptions and disruptions to supply chains,[33] alongside an increased willingness to

[31]This is a relatively under-reported but utterly tragic aspect of the current crisis: "They are the forgotten collateral damage of the coronavirus pandemic. More than 300,000 commercial ship workers, the lifeblood of global commerce, are now stranded on vessels because virus control measures and travel restrictions have prevented crew rotations. Some have been on board for 17 months, well past their contract terms and an 11-month legal maximum, barred not just from rejoining families but from getting ashore for recreation or even medical care … This is not just a humanitarian issue. Exhausted crews mean an increased risk of accidents that could harm people or the environment or threaten global supply chains … The problem is exacerbated by the fragmented nature of the industry, with a network of shipowners, operators, recruiting agencies and charterers operating across multiple jurisdictions, blurring lines of responsibility and liability" (Editorial Board, 2020). The chief executives of over 20 MNCs have written to the Secretary-General of the United Nations, urging him to urge member states to action, while the World Economic Forum advocates the principle of radical change in the context of a wider "great reset" of the global economy. So much for those Sustainable Development Goals launched in 2015.

[32] Such speculation includes the future of cities: "More than other large cities, New York exemplifies the urban characteristics that the virus has turned into vulnerabilities—population density, sky-high cost of living, a reliance on retail, culture and tourism, and a dependence on crowded public transport" (Chaffin, 2020).

[33]"Volkswagen has warned that the cost of crucial car components has risen sharply because of the pandemic, putting further pressure on profits as the industry enters a deep recession … Carmakers such as VW rely on thousands of suppliers that often make bespoke parts to order, delivered to production lines on a tight schedule … VW's German plants rely on 6,500 individual parts from Europe alone" (Miller, 2020).

contemplate lasting changes,[34] especially as shortages of critical items such as personal protective equipment for health workers became acute and the national security implications of these shortages began to feature in political discourse. The third and (at the time of writing) latest stage is marked by a broad consensus that a return to pre-coronavirus supply chains is unrealistic, especially as trends existing prior to Covid-19 and already challenging the "one world, ready or not" conjuncture—most especially the deteriorating trade relationship between the US and China—have accelerated.[35] Not only is it increasingly taken for granted that there will not be a return to the past, but also it is now a matter of increasing political urgency that states take a more active role in enhancing the security of critical supply chains as part of a more widespread reorientation to activist industrial strategy and policy—another pre-existing trend that has since become integral to the conventional wisdom as a general principle, even if the details remain somewhat sketchy in those countries that had been the flag bearers for "one world, ready or not".[36] Rapidly evolving policies that, for all the theatrics of party politics, command the assent of a wide spectrum of opinion appear to mark the beginning of a significant shift in the direction of economic policy that will require significant relearning of state capacities and a somewhat radical ideological shift, at least in the Anglosphere, where the merits of privatization, markets and laissez-faire have been hegemonic for decades.

The fact that the trajectory of neoliberal globalization was running out of road was already apparent to Greider (1997), whose lengthy book detailing various aspects of what he described as the "rentier's regime" that had emerged during the 1980s was in essence a warning of the new world

[34]"French president Emmanuel Macron has announced an €8bn plan to revive the country's motor industry … Mr Macron said the aim was to 'relocalise' manufacturing in France and 'to make France the leading country in Europe for the production of clean vehicles', with an output target of 1m a year by 2025" (Mallet, 2020).

"The coronavirus crisis has sharpened the need to bolster the resilience of industrial supply chains, the EU's internal market commissioner has warned … The early weeks of the emergency exposed Europe's reliance on China, in particular, for medical and pharmaceutical supplies, spurring policymakers to find ways to boost domestic industry … Europe is wholly reliant on imports of lithium, used in battery production, with 78 per cent of supplies coming from Chile alone … The EU's post-pandemic industrial strategy will hinge in part on efforts to agree a recovery fund to boost industrial resilience (Fleming & Peel, 2020).

[35]"This is not merely a rough patch, or passing hostility stirred up by the pandemic. Even before this terrible spring, politics and corporate attitudes were in flux … The Chinese market is too large, with companies invested too heavily, for them to consider bailing out. But the trend towards two-track corporate strategies is accelerating. As crossing the border becomes trickier, companies are taking a 'for China, in China' approach to the domestic market while deepening and diversifying ex-China supply chains to the rest of the world" (Armstrong 2020). This is in line with an increased usage of "decoupling" as a guiding principle of US policy with respect to China (Foroohar, 2020a; Hille, 2020b).

[36] In addition to national and EU-wide initiatives in Europe, Asian governments are reverting to tried and tested "developmental state" modes of policy (Hille, 2020a; Lewis, 2020). Perhaps most remarkably, in the Anglosphere, a measure of how conventional wisdom has been upended by the pandemic is the argument of the Republican leader of the US House of Representatives, Kevin McCarthy, that the US "learn the lesson" of relying on "unstable" supply chains in "matters of public health, national security and economic prosperity" (McCarthy, 2020). However, McCarthy's argument not coincidentally recalls aspects of the Monroe Doctrine that regards especially Latin America as the exclusive domain of US interests (see below).

economic order's inherent lack of sustainability. This was not least due to the millions of dispossessed that it left in its wake, including in the former industrial heartlands of the Global North—a point made contemporaneously by Johnson (2000). This was a recipe for the political instability that has recently gripped Europe and North America, and which also characterizes the global conjuncture. Johnson already warned of further blowback arising due to the fall out of the arrogant handling of the Asian Crisis by the US, both directly and via the IMF, preceded by its aggressive "ideological campaign to open up the economies of the world to free trade and the free flow of capital across national borders" that left those Asian states "significantly more defenseless" (Johnson, 2000). Not surprisingly, Asian views of the US model and its economics profession grew more skeptical.

"Both the crisis, and the (not-unreasonable) perception that the United States exploited the crisis to advance its interests, undermined the legitimacy of the [post-Cold War] US order and unwittingly primed the path for the future march away from that vision" (Kirshner, 2014).

This ideological drift was compounded by the euphemistically titled "Global Financial Crisis" of 2007 onwards, of which more below (Kirshner, 2014).

4.2. The centre no longer holds

Donald Trump's rise to victory in the presidential election of November 2016 owes much to his recognition of points raised especially by Greider and others decades earlier, but ignored or dismissed by "top" economists and policymakers alike. With unprecedented impact, he connected the trade deficit to the loss of jobs and living standards experienced by "rust belt" communities all over the USA, and thereby connected with an electorate that had been ignored or dismissed by mainstream politicians, business leaders and economist ideologues for decades, lone voices such as Gilpin's notwithstanding. Despite his policies' failure to reduce even the bilateral deficit with China, and his consequent silence on the subject during the 2020 presidential campaign (Sevastopulo & Williams, 2020), he has succeeded in discrediting the bipartisan trade consensus, such that the incoming Biden administration has promised to continue policies aimed at reshoring (Auerback & Ritch-Frel, 2020).

The US trade deficit has been an object of some wonder now for over two decades, during which time, despite repeated efforts by successive administrations to boost exports over imports, it remains at a level that would necessitate an IMF rescue package and all its attendant conditionality for any other state.[37] However, with its advantages of issuance of the world's reserve currency and overwhelming military superiority, this has not proven to be an insurmountable problem for the US, so far.

[37]"… most important, the US trade deficit is not driven primarily by the exchange rate but rather by its extremely low rate of savings and high rate of consumption compared with the rest of the world, and especially China. As long as these disparities continue, US external accounts will remain unbalanced" (Kirshner, 2014). Relatedly, Andrew Smithers points to what he calls the "bonus culture" that has incentivized "returning cash to shareholders" via buybacks and dividends at the expense of investment due to the rise of "shareholder value" doctrine, which was supposed to discipline executives against misuse of company resources but which has instead enabled them to enrich themselves in what amounts to a slow but steady liquidation of the country's economic base that has accompanied the bonus culture. See Smithers (2019, 2020). This culture took hold in what William Greider called the "rentiers' regime", in which rentier discipline "effectively suppressed new capital formation" by holding down economic growth through high interest rates that discouraged

Nevertheless, it has assumed increasing political prominence, due to (1) the loss of large numbers of manufacturing jobs to foreign producers; (2) the disappearance of iconic producers as a result of foreign competition; (3) the decades-long stagnation and even decline of wage levels and living standards for many people in the US; (4) the failure of promised prosperity to materialize despite decades of trade liberalization, to which it had been specifically linked; and (5) what might be regarded as the "instinctive mercantilism" of people confronted with a steadily declining range of products "made in the USA". The crude but effective criticism of all this during his campaign for the presidency gave added credibility to Donald Trump's promise to "make America great again". The same sentiments were simultaneously and very prominently displayed by the campaign to leave the European Union and "take back control" in the UK's Brexit referendum of June 2016 and its aftermath.

4.3. Learned and lucrative ignorance

A cursory glance at the record of the economics discipline during the preceding four decades offers some insight into why popular rejection of conventional wisdom and the elitism it is seen to represent has gained such traction. The opprobrium earned by Samuelson for his mild apostasy in 2004 was as nothing compared to the vitriol routinely poured on those such as Greider, whose central thesis of global oversupply driving down prices and, with even greater vigour, wages was dismissed by economists. To Greider's "thoroughly silly book" (Krugman, 1997) Paul Krugman retorted:

"This thesis may sound persuasive, but as soon as you think hard about it you realize it doesn't hang together. To take just one of its problems: all of the increased production in the world has as a necessary counterpart increased income—every dollar of sales must also represent a dollar of wages or profits to somebody. And there are only two things you can do with income: save it or spend it. So if we are really suffering from global oversupply, we must be suffering from a global excess of savings compared with investment opportunities. Are we? On the contrary, if anything we seem to be suffering from declining savings rates in the advanced countries; while savings have been rising in the developing world, investment demand has surged even more" (Krugman, n.d.a).

Events have confirmed Greider's prescience, borne of a keener awareness of reality on the ground than that of the tenured and cloistered professors whose authority was being challenged, whose reliance on static modelling left them unable to comprehend dynamic processes amid complexity.[38] The global

investment (1) by imposing a higher hurdle rate, and (2) by suppressing the growth that would have encouraged investment in the first place (Greider, 1997). Milberg & Winkler (2013), citing Stockhammer (2004) among others, attribute to financialization the use of profits gained from offshoring for buybacks and dividends, as opposed to investment that would regenerate the economy of the US rust belt. Instead, they have fueled the bonus culture that the cult of shareholder value has, with great irony, legitimized.

[38]Krugman is unashamedly honest with respect to his profession's limpet-like attachment to axioms whose basis in reality is so often questionable, but justified on account of their compatibility with the discipline's methodological practices. To "this most rigorous of the social sciences", the commonly made argument that "economies of scale could be an independent cause of international trade, even in the absence of comparative advantage" had been ignored. Why? "Because it had never been expressed in nice models … I suddenly realized the remarkable extent to which the methodology of economics creates blind spots. We just don't see what we can't formalize" (Krugman, n.d.b). This would appear to include GVCs. Regarding

oversupply of labour unleashed by Soviet collapse and China's prior opening has resulted in exactly the sort of worldwide downward pressure on wages that Greider observed during the 1990s (Benanav, 2019), accelerating a process of offshoring that had already gathered sufficient pace by 1970 (Helleiner, 1973a). That would account for Krugman's otherwise correct assertion that there was and is no "savings glut"—a common explanation for the financial crisis of 2007 put forward by Federal Reserve chairman Ben Bernanke and supported in the *Financial Times* by Martin Wolf. As Thomas Palley (2012) pointed out, China's accumulation of US Treasury bonds was the result of its enormous bilateral trade surplus. To this he could have added one of the chief consequences of the Asian Crisis of 1997–8, whereby countries deliberately "geared up their export sectors to earn dollars that could then be stowed away as foreign reserves that could be deployed for future battles against speculators" (Bello 2017).

Meanwhile, declining savings rates in the advanced countries are consistent with stagnant or falling wages, which have been widely observed to have been increasingly supplemented by debt. According to Martijn Konings, the roots of the recent proliferation of consumer credit and accumulation of household debt can be found in reforms made as part of the New Deal in the 1930s:

"Long-term popular credit now came to appear as an excellent disciplinarian of the working classes, giving them a stake in the system and locking them into a life devoted to repaying the debt they had incurred in acquiring that stake—a logic that applied equally to mortgage credit" (Konings, 2011).

More recently, consumer credit has evolved from regimes of repayment to payment, where continuous servicing has become the norm (Adkins, 2015). This has fueled the financialization of daily life (Martin, 2002) and the discipline of being tied to a schedule of servicing payments, while being forced to search for ever cheaper produce made in and shipped from countries whose labour costs are so cheap as to make all the additional logistical expenses incurred viable with regard to overall profitability. Finally, as noted by Milberg & Winkler (2013) and Smith (2016), among many others, the labour share of income in the advanced countries has been declining steadily since at least the early 1980s.[39]

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the consequences of free trade or "hyperglobalization", once again, Greider was a better guide: "The obsession with nations in competition misses the point of what is happening. The global economy divides every society into new camps of conflicting economic interests. It undermines every nation's ability to maintain social cohesion. It mocks the assumption of shared political values that supposedly unite people in the nation-state" (Greider, 1997). The current disintegration of social and political consensus required to sustain multiparty liberal democracy especially in the Anglosphere bears eloquent witness to Greider's insight.

[39] Kim (2020) notes the increase of US household debt relative to GDP "from about 45 percent in 1975 to nearly 100 percent in 2006". Stockhammer (2013) estimates that in all OECD countries excluding South Korea, the wage share fell by an average of 9.4% between 1980 and 2007. On this point, it is worth noting the observation of Karabarbounis & Neiman (2014) that, as with Ricardian trade models' assumption of full employment, "the stability of the labor share of income has been a fundamental feature of macroeconomic models, with broad implications for the shape of the production function, inequality, and macroeconomic dynamics". These authors' analysis of a data-set of 59 countries between 1975 and 2012 reveals a 5% decline in their globally aggregated measure of the corporate labour share of income, from roughly 64% to approximately 59% (Karabarbounis & Neiman, 2014). Given the widely documented increases in wage inequality during this period (Milberg & Winkler, 2013; Smith, 2016), the share of those at the bottom of the distribution is inevitably even smaller than before (Abel & Deitz, 2019). Karabarbounis & Neiman (2014) attribute much of the decline in the labour share to "the decline in the relative price of investment goods". To this can be added the relocation of industrial production to

All of which makes the appeal of Trump's message much easier to understand. So much so that even Krugman has delivered a *mea culpa* of sorts, in which he admits that he and other economists underestimated the impact of imports from developing countries on employment and income inequality in the US (Krugman, 2019). However, his retraction is very qualified and deliberately ignores those whom he regards as "non-economists" (and therefore not qualified and not worthy of such acknowledgement) who otherwise were warning of the consequences for literally decades, among them Greider. How else to reconcile his claim that "as far as I know almost nobody foresaw the massive rise in trade or focused at all on localized regional impacts" (Krugman, quoted in Hirsh, 2019)?[40]

This kind of professionalized arrogance has been reinforced by its institutionalization within the apparatus of the state. While the technocracy of economists has been a widely observed phenomenon internationally (Christensen, 2017), it is particularly pronounced in the Anglosphere, and most of all in the US, where the evolutionary development of the financial system took a unique path that has since given it a commanding position globally (Konings, 2011), thereby reinforcing the authority of its economist champions.[41]

Financialization in practice has added weight to the apparent validity and applicability of neoclassical economic theory. Its atomistic utility maximizers are most closely approximated by financial market actors (which is not to say that the approximation is close). That theory's inattention to adjustment could most easily be ignored in a context characterized already almost a century ago as

repressive regimes that facilitate and enforce the super-exploitation of labour, combining lower wages and associated inadequately compensated higher productivity (Smith, 2016; Suwandi, 2019). Smith (2016) also notes the overestimation of the labour share due to the inclusion of compensation paid to executives and senior managers "falsely counted as labor income".

[40]Hirsh notes the warnings made over 20 years ago by Joseph Stiglitz, Robert Reich, Laura D'Andrea Tyson, Dani Rodrik and Robert Kuttner, who are all economists, albeit associated with advocacy of "progressive" reformism and a more activist state. Reich and Tyson in particular were subjected to cavalier dismissals of the kind otherwise reserved for "non-economists" like Greider or Chalmers Johnson, who wrote of China's then goal of gaining membership of the World Trade Organization as a developing country as follows: "If it achieves that—as the ideological myopia of American trade negotiators of both parties and the economists who advise them makes likely - its mercantialism will ultimately do serious damage to the American economy …. Like Japan before it, China will run up huge trade surpluses with the United States rather than generating a balanced and mutually beneficial trade. Managed trade is the antidote to this, and it need not hamper China's economic development, but it is anathema to the economic ideologists of the United States. Management of trade with China would require the kind of political leadership and a governmental capability that the country may simply not be able to muster in the post-Cold War world" (Johnson, 2000). Arguably Trump could have provided that leadership, but his deliberate carelessness and apparently intentional "deconstruction of the administrative state" makes the issue of governmental capability even more of a lost cause (Boot, 2019; see also Fallows, 2020).

[41]The unique position of public authority that many orthodox economists came to assume during the 1990s, especially in the US, is the subject of an informative, critical study by *New York Times* leader writer Binyamin Appelbaum (2019). This ascendancy was accomplished in tandem with that of the financial sector more generally, perhaps best symbolized by the Clinton administration's Treasury team of Secretary Robert Rubin (ex-Goldman Sachs) and Assistant Secretary Lawrence Summers (ex-World Bank, tenured Harvard professor), who later succeeded Rubin, who went to work for Citigroup. As Jonathan Kirshner (2014) notes, "Robert Rubin is perhaps the poster-boy for the cozy relationship between government and finance that, if observed in other countries, Greenspan and other champions of the American model would have labeled 'crony capitalism.'"

one driven by "animal spirits" and where, today, thanks to technological advance and regulatory liberalization, markets are even less hindered. This is in stark contrast to the "real" economy, of course, but it underscores the irony of this plaintive tweet, issued on 21 March 2020:

"Why can't the greatest economy in the history of the world produce swabs, face masks and ventilators in adequate supply?" (quoted in Adler & Breznitz, 2020)

Its author was none other than former US Treasury Secretary and Harvard University economics professor Lawrence Summers, whose career in US government and the World Bank did more than most to ensure the global liberalization of finance, the offshoring of production and the removal of legal and regulatory barriers to these. Nevertheless, even more than Krugman, Summers appears to have undergone a significant revision of his position, although remaining well within the boundaries of conventional policy discourse.[42]

After serving for 2 years as Barack Obama's chief adviser on economic policy,[43] Summers returned to Harvard University and emerged in 2013 with an old, previously discredited idea associated with Alvin Hansen, the economist reputed to have brought the ideas of John Maynard Keynes to the US (Brazelton, 1989). Hansen had coined the term "secular stagnation" to explain the persistence of the Great Depression as indicative of underlying structural problems in the US economy, relating to lack of investment opportunities stemming from lack of technological innovation, low immigration, and ageing population and the closure of the western frontier (Hansen, 1939). The onset of war soon after the publication of this diagnosis meant that the idea of secular stagnation was forgotten, especially in the ensuing economic boom following the end of the Second World War.

The financial crisis, symbolized in the collapse of Lehman Brothers investment bank in September 2008 and subsequent government-led bailouts of other financial titans, has since prompted a lot of introspection among economists who had championed the policies of "one world, ready or not". The persistence of low or no growth despite massive injections of funds by governments and central banks via fiscal stimulus and "quantitative easing" can be explained in part by the austerity policies that quickly reversed the direction of fiscal policy. Persistent quantitative easing and record low interest rates have not produced the anticipated economic recovery, even as debt levels have exceeded those that had accumulated by the onset of crisis in 2007.[44]

[42]It was as chief economist of the World Bank that his name was associated with the notorious memo that advocated the shipping of toxic waste in return for payment to poor countries as a development policy (Swaney, 1994). It later emerged that Summers was not in fact the original author of the idea featured in the memo—that honour belongs to Lant Pritchett (Hirsh, 2010)—but all claims to "sardonic counterpoint" aside, it is a particularly revealing application of the logic of neoclassical economics that Summers was happy to distribute within the World Bank. Regarding his advocacy of the neoliberal trade regime, see the quotation from 2001 in Adler & Breznitz (2020).

[43]In this position he did much to neuter the more radical policies that were formulated by Obama's original economics team, and thereby enhance the continuities with the preceding Bush and Clinton administrations. The story of how the Obama administration betrayed its original reformist zeal is detailed at length by Ron Suskind (2011).

[44]By the end of 2019, financial analytics firm AB Bernstein estimated that total US debt would amount to almost 2000% of US GDP. Of this, household debt accounts for 150% of GDP, financial debt for 450%, and all social insurance programmes an aggregate of 1117%. Against these, the aggregate federal, state and local government debt of 100% of GDP appears somewhat modest (Cox, 2019a), yet accounts for a disproportionate amount of criticism.

Because of this, or even despite this, given his support for a savings glut explanation of low demand, Summers has revived Hansen's concept and adapted it, although almost immediately he attributes low interest rates to the same savings glut, rather than to an ineffective privatization of investment policy that has failed to provide the necessary stimulus for growth. Instead, he argues, the lack of investment has resulted in low growth, and lowered prospects for future growth. This has rendered central banks' inflation targeting hopelessly out of time with prevailing market conditions. Given that prices are not rising, poor productivity does not explain low growth. Instead, there is a serious risk of deflation setting in. Instead of financing fixed investment, asset prices have been grossly inflated due to the redirection of savings (or investment, depending on your view) chasing apparently easier returns. Acknowledging the "rapid acceleration of private sector credit growth" without apparently linking that to the "savings glut" and the corresponding mushrooming of the non-bank financial sector, Summers depicts the present as "the mirror image of the macroeconomic problems we have dealt with for decades", with demography creating "an environment of abundant savings with an absorption problem". As a result, the "medium-term issue is the full absorption of savings rather than the crowding-out of investment" (Summers, 2020).

While the theory underpinning Summers' model appears to be subject to some causality issues,[45] the conclusion he reaches is significant to the extent that it indicates a fuller embrace of activist economic and regulatory policies of the kind that he, Krugman and other leading economists were doing their best to oppose during the 1990s. The political tide was already turning, but the Covid-19 pandemic's brutal exposure of the shortcomings of the models and policies associated with the era of what Krugman now terms "hyperglobalization" will only intensify the revisionism currently sweeping the upper echelons of the economics discipline and policy circles.[46]

Of particular interest with respect to Summers' change of position is his apparent awakening with respect to precisely the threat posed by global pandemics. While chief economist at the World Bank

[45]Summers (2020) argues: "Strengthened financial regulation and its legacy mean households find it more difficult to borrow and spend", apparently oblivious to ballooning household debt and its provision by the unregulated non-bank lenders or "shadow banks", whose financing of this credit provides an outlet for savings seeking higher yield in an era of record low interest rates. According to bond rating agency DBRS, by the end of 2017 the global shadow banking sector increased by 75% since 2010, to an estimated $52 trillion in assets (Cox, 2019b).

[46]Much of this effort will be diverted by (a) vested interests lobbying for the retention of as much of the status quo as possible; (b) genuine ideological attachment to "veritable truths" akin to holy scripture; and (c) methodological "rigour" trumping evidence, reason and the contributions of non-economists more generally, since to acknowledge the legitimacy of the latter would be to undermine whatever remains of the economics discipline's policy hegemony. Summers is hardly alone in emphasizing the benefits of increased spending on infrastructure, education and research and development. Meanwhile, most textbooks and undergraduate economics courses are unlikely to change substantively, aside from whatever "deviations" or reality adjustments individual authors or instructors might insert into these. The exceptions will most likely remain those university departments where heterodoxy is permitted. Imaginative university leaders might support and even cultivate these in anticipation of the increased interest occasioned by heterodox critiques of neoclassical economics, but whereas marketing and strategic management courses emphasize the merits of differentiation as a competitive strategy, universities are often the slaves of conventional wisdom with respect to economics. For as long as the elite universities of the Anglosphere retain their global hegemony, this is unlikely to change to any significant extent.

he oversaw the publication of its 1993 World Development Report, *Investing in Health*, and on that basis in 2013 *The Lancet* invited him to join a Commission tasked with developing a new investment framework intended "to achieve dramatic health gains by 2035" (Jamison et al., 2013). More pointedly, Summers helped to launch the report *The Neglected Dimension of Global Security* commissioned by the National Academy of Medicine, in January 2016.[47] An extract of his speech is reproduced in Osterholm & Olshaker (2020).

"Of all the issues before us, pandemic and epidemic is the issue with the highest ratio of global seriousness to policy attention: that relative to its significance for humanity, there is no issue that gets less attention."

The extent to which that claim was true under the Obama administration has been profoundly amplified since. James Fallows (2020) reports that

"During the Obama administration, the U.S. had negotiated to have its observers stationed in many cities across China, through a program called Predict. But the Trump administration did not fill those positions, including in Wuhan. This meant that no one was on site to learn about, for instance, the unexplained closure on January 1 of the city's main downtown Huanan Seafood Wholesale Market, a so-called wet market where wild animals, live or already killed, were on sale with fish and domesticated animals. It was at this market that the first animal-to-human transfer of the virus is generally thought to have occurred, probably from a bat. But by that time, as Marisa Taylor of Reuters first reported, the Trump administration had removed dozens of [Center for Disease Control] representatives in China."

This is symbolic of more general trends that the Covid-19 pandemic has done much to accelerate: the economic decoupling of the US and China in the context of increasing political hostility, and the lasting reconfiguration of global supply chains into more localized and regional patterns designed to reduce core dependency on a semi-peripheral challenger that is no longer content to remain semi-peripheral and therefore subordinate to US global hegemony.

4.4. Shorter, tighter value chains

At the end of July 2020, the Trump administration announced that it would be launching a "Back to the Americas" initiative whereby it "would use financial incentives to encourage U.S. firms to move production facilities out of Asia and into the United States, Latin America and the Caribbean" (Shalal & Garrison, 2020). While not exclusively a "reshoring" project, the geopolitical rationale behind this more expansive "nearshoring" is clear enough: China's financial and trade diplomacy in South America. The initiative has been led by Mauricio Claver-Carone while he was a member of the National Security Council. Before that he was US representative at the IMF. He has since been elected to serve as president of the Inter-American Development Bank, the first US holder of the position, beginning his 5-year stint on 1 October 2020. This was preceded less than a year earlier by the Trump administration's "Growth in the Americas" program, launched in November 2019, and the signing of the US-Colombia Growth Initiative

[47] National Academy of Medicine (2016).

in August 2020 (Reuters 2020).[48] Taken together, these developments are a sign of retrenchment and implicit acceptance of the limits to US hegemony in an increasingly multipolar world.

Various iterations of plans to revitalize the European Union's industrial strategy have been drafted since January 2020, assuming added urgency in the wake of the Covid-19 pandemic and increasing geopolitically-induced insecurity. The fundamental problem for the EU, however, is its inadequacy in dealing with the contradictions associated with its function as a transnational integration regime (TIR—indeed, the largest of its kind—see Bruszt & McDermott, 2009). While it has a "pro-active pre-accession integration strategy" that succeeds in removing various institutional and legal obstacles to the promised "level playing field" that such regimes exist to bring to fruition, the EU's TIR lacks adequate regional development policies that would compensate for the one-size-fits-all enforcement of Single Market rules. This "helps illiberal leaders to consolidate their powers" due to the EU's inattention to the provision of "market-correcting measures" that would mitigate the dislocation and discontent generated by its regionalized variation of "one world, ready or not" (Bruszt & Langbein, 2020). This promises difficulties ahead in the EU's efforts to organize a more secure set of local supply chains, unless it is able to combine its industrial strategy with a more supple apparatus of integration. While Brexit represents the removal of a significant obstacle to the sort of market corrections required of such policies, experience, especially with monetary union, suggests that the EU will lack the necessary decision-making unity to advance its agenda more effectively.[49] Nevertheless, the rapid rehabilitation of industrial strategy is a measure of the severity of the deep crisis that had already gripped the global political economy prior to the Covid-19 pandemic, which has only accelerated the unravelling of the neoliberal globalization model.

Talk of industrial strategy and policy represents a major ideological departure, especially in the Anglosphere, where market fundamentalism has been especially virulent since 1980 (e.g., Chester, 2013; Hopkin, 2017; MacDonald & Paul, 2011), albeit to varying degrees. It has been exported via Structural Adjustment Programs (SAPs) and other "conditionalities" attached to the loans provided by the IMF and World Bank to developing countries (Keaney, 2011). Its limitations became apparent relatively quickly, bringing forth the co-optation of the institutional remains of Cold War-era social democracy that was the "Third Way" (Panitch, 1998; Porter & Craig, 2004), which remains a core paradigm in development policy (Güney-Frahm, 2018). Market fundamentalism's embedding in the law and institutions of the European Union was a longer process due especially to the strength of organized labour, which had secured legal rights of representation and participation in corporate management, drawing on older traditions of social

[48]While Jair Bolsonaro's administration is the most pro-US that has led Brazil in recent decades, its relative precariousness suggests that Colombia is regarded as a more reliable regional ally and therefore bridgehead for the projection of US power, both soft and hard. The rhetoric accompanying the US-Colombia Growth Initiative emphasizes rural investment aimed at "rule of law, security, infrastructure, rural development and democracy", according to National Security Advisor Robert O'Brien (Reuters, 2020). This suggests a concerted effort to stamp out whatever remains of the Farc and ELN insurgencies, to be followed or accompanied by a relocation of manufacturing industry from Asia. Colombia's president Ivan Duque was a prominent supporter of Claver-Carone's candidacy for IADB president.

[49]"China and Russia understand more than the EU that they need to become independent of the dollar-based payment infrastructure. Why is the EU's response so weak in comparison? The combination of a crisis-prone monetary union and an enlargement to include countries that were politically not ready for EU membership are two deep reasons why the EU is now mostly obsessed with itself" (Münchau, 2018).

solidarity and responsibility across a relatively broad spectrum of political thought.[50] Nevertheless, while these rights nominally remain in place, their redistributive effectiveness has diminished since the high point of the mid-1970s, when Germany's codetermination law was passed (see van Apeldoorn 2002 for a detailed account of the triumph of neoliberalism in the EU). Its impact on the political and social cohesion of the European Union has been predictably negative (Bulmer & Joseph 2016). Thus, as with the British example, the EU has fallen victim to its own ideological purity. These were of course self-inflicted wounds, unlike those administered to the Global South.

As with earlier forms of imperialism, the observation of the "rules of the game" varies according to states' rank within the imperialist chain. Thus, the US has been able to conduct a far more activist industrial policy than is normally acknowledged, despite the political and rhetorical contortions necessary to support it in a strongly "anti-statist" ideological climate (Mazzucato, 2013; Weiss, 2014).[51] Meanwhile, the British state has followed a much more market fundamentalist path in practice, using its position within the EU to steer Europe-wide policy in the same direction, with similar, negative political consequences for both (Hopkin, 2017).[52] The rise of economic and political nationalism in Britain and elsewhere is a predictable outcome of the insecurity created by the transition to the Schumpeterian workfare state amid deindustrialization, wage repression and the weakening of trade unions, all driving a lowering of living standards. Equally predictable is the use of scaremongering over immigration, which further legitimizes the punitive withdrawal of welfare provision while distracting attention from the absence of workplace protections that would make the super-exploitation of immigrant labour more difficult to sustain whilst protecting the entire working population from such divisive methods (Hopkin, 2017).

It is therefore significant that within British conservatism (and British capital and state more widely) there has arisen a revival of interest in industrial policy, already symbolized in former Prime

[50]While labour under such conditions remained subordinate to the prerogatives of capital, as indeed it must in any capitalist regime, its relative strength in numbers and cohesion, together with the threat posed by revolutionary socialism as highlighted by Greider above in note 11, meant that conservative *noblesse oblige* and social democratic corporatism were largely compatible and together presided over stable growth regimes throughout much of the capitalist world during the latter half of the 20th century. Deindustrialisation and financialisation combined to weaken this social compact, whose remnants are most visible in the EU, but in a much depleted form.

[51]Linda Weiss (2014) details many such contortions in her important study of how a sophisticated form of what she calls "hybridization" between the state and the private sector harnesses the market mechanism to produce the intended outcome of US technological supremacy. It is an industrial policy tailored to support the national security state's goal of US technological leadership. Those contortions have since been rapidly unwound. In recent times the perceived threat to that supremacy posed by Chinese firm Huawei's superior fifth generation telecommunications network technology has led the Trump administration to speculate openly about the purchase of an equity stake in Finland's Nokia and/or Sweden's Ericsson as a way of bolstering the development of a US-controlled alternative (Payne & Manson, 2020).

[52]Nevertheless it is inaccurate to say that the British or any core state has "retreated", as the hegemonic narrative of the post-Thatcher era claimed. As is always the case, the dominant forces within the state apparatus selected those sectors to be favoured—most obviously in Britain's case, the financial sector concentrated in the City of London. "Even in the Anglo-American heartlands of [market fundamentalist] ideologies, states continued to play important economic roles, only more one-sidedly in favour of the wealthy" (Desai, 2013).

Minister Theresa May's refashioning of the responsible ministry as the Department of Business, Energy and Industrial Strategy upon her succeeding David Cameron in 2016. It was May's chief policy adviser, Nick Timothy,[53] who drove this, although again he was swimming with the tide, given the cautious public embrace of "market-driven industrial activism" by Gordon Brown's government already in 2008 (Stratton, 2008). As with development policy over 20 years ago, the failures of market fundamentalism as the basis of domestic policy are such that they threaten to undermine the legitimacy and even functioning of the regime constructed in its image.

Such developments are indicative of a more general trend in policymaking, which has slowly, even reluctantly, turned away from the market fundamentalist ideal of "one world, ready or not" towards a more geopolitically informed agenda, in line with the analysis presented by Radhika Desai (2013) and Kees van der Pijl (2006), among others. The Trump administration's erratic policies with respect to US allies, its headline-driven mercantilist trade policies, and its aggressive efforts to "contain" China and Russia (Stephens, 2020) have accelerated the decline of confidence in the Pax Americana that arguably started to buckle with the Asian Crisis of 1997-98 (Johnson, 2000), followed by the catastrophic invasion of Iraq in 2003, and culminated in the euphemistically named Global Financial Crisis of 2007–2009 (Kirshner, 2014).[54] Hence the urgent efforts to coordinate a unified EU response to perceived security threats, including those related to suddenly stretched supply chains, which coronavirus has only intensified (Macron, 2019; Toia, 2020; Wolf, 2020).[55] Business schools are following suit, with a more equitable emphasis on resilience as opposed to efficiency alone (Jack, 2020).

5. Conclusion

During the last 60 years the global economy has undergone a rapid reconfiguration such that manufacturing industry, far from having declined in importance, has been relocated in large part from the Global North to countries whose lack of labour rights and protections, coupled with a surplus of labour that is not free to migrate beyond its domestic borders (if that), allowed MNCs to reorganize production such that their profits were boosted via the super-exploitation of that labour. The retreat and eventual collapse of the Soviet Union consolidated the radical transformation of development policy from ISI to EOI, consistent with the emergence of a global political economy dominated by what have since become known as global value chains. The combination of digital technological

[53]Timothy has since continued to argue for "an advanced industrial strategy" as part of a comprehensive "One Nation" conservative policy framework intended to correct decades of market failure and as such a conscious rejection of much conventional wisdom and policy of the neoliberal era (Timothy, 2020), not unlike that of Will Hutton (1995) aimed mainly at the Labour Party 25 years before, as Hutton acknowledges in his encomium prefacing the book. However, in keeping with the times Timothy's book takes aim at "elite liberals" of both left and right, whose versions of "ultra-liberalism"—"militant" identity politics and market fundamentalism, respectively—separate them from the general public and have "atomizing social effects" (Timothy, 2020), which confuses cause and effect.

[54]There is an extensive literature on the more accurately titled North Atlantic Financial Crisis (e.g., Jessop, 2015a).

[55]The coronavirus pandemic has, according to Italian member of the European Parliament Patrizia Toia, underscored the "end of the relocations era" and instead given impetus to a revival of the older idea of "Fortress Europe". Lawrence Summers would appear to agree that similar measures are required in the US.

advance with the imposition of supranational institutional and legal infrastructure backed by US financial, political and military might, allowed MNCs to adopt new forms of control, leveraging their oligopsonistic market power and political lobbying capacity to ensure cut-throat competition among supplier companies and their host economies more widely that greatly reduces their ability to "move up" the value chain. A series of financial crises, starting with the Asian Crisis of 1997–98 and culminating in the North Atlantic Financial Crisis of 2007 onwards, has triggered a widespread loss of confidence in the "One world, ready or not" model of capitalism that was being aggressively promoted by the US, both directly and via its institutional proxies and state surrogates. Combined with the failure of the US and its allies to impose meaningful order on Afghanistan, and the tragic fiasco of the illegal invasion of Iraq that together revealed the limits of US military reach, a newly resurgent China has joined a resentful Russia in challenging the global order defined by US hegemony. The internal political contradictions of offshoring culminated in Donald Trump's US presidential election victory and the vote in favour of Brexit in 2016, further undermining the status quo due to the breakdown of functional governing consensus in the very countries that had most energetically promoted market fundamentalism on other states, while administering varying doses of the same medicine to themselves. In so doing they dissolved much of the internal social cohesion required to persuade the rest of the world of the superiority of their economic or political wisdom. Largely because of British influence, the same problem has been bequeathed to the EU, which must now rediscover and reassert its much depleted reserves of Gaullist realism in order to remain viable as a political and economic project. That will prove challenging, given the geopolitically-driven expansion aimed at containing Russia and the consequent incorporation of countries ill-suited to their formal incorporation into an apparatus that is itself poorly equipped to counteract the social dislocation borne of its market fundamentalism.

In this context of global fragmentation, we can expect GVCs to be themselves reconfigured in the context of a greater emphasis on economic security in the Global North, encompassing both supply chain resilience and industrial strategy. Most apparent is the decoupling of supply chains serving China and the rest of the world (Hille, 2020a). But there is also a separate move towards more regionalization of supply chains in a world more emphatically multipolar than it has been for decades, arguably since the Second World War. Leading management consultancy McKinsey Global Institute (MGI) estimates that up to a quarter of global product sourcing (comprising goods worth between \$2.6tn and \$4.6tn) could be relocated, and not just as a result of the coronavirus pandemic (Edgecliffe-Johnson, 2020; Foroohar, 2020b). MGI's analysis identifies increasing frequency of shocks to the global trading system and the lack of resilience in supply chains, which are on average expected to be subject to month-long disruptions ever 3.7 years. States and capitals are expected to adjust accordingly, even though it will take years for much of the promised reconfigurations to materialize.

The Trump administration's "Back to the Americas" signifies a revitalized Monroe Doctrine and an associated intensification of the frustration of Latin American peoples' democratic aspirations, even as it also undercuts the promise of reshoring jobs that was an explicit part of Trump's electoral appeal.[56]

[56]The under-reported recent financial and political turmoil in Costa Rica is a disturbing harbinger of the dislocations likely to unfold. In September 2020 violent protests broke out in response to the government's plans to cover its growing budget deficit with an IMF loan of \$1.75bn, whose conditions carry strong echoes of the not so distant past: "temporary tax rises, the sale of state assets and pay freezes for public sector workers". The somewhat counterintuitive juxtaposition of this

Similarly, southern and eastern European states within and neighbouring the EU will become more important as sources of cheaper (if not as cheap) labour and, where available, raw materials. This will involve a much more delicate process of transformation, given the dependency of EU cohesion on its legitimacy within member states, and the implications of a more emphatically subsidiary status for those member states of the Mediterranean and Balkan regions especially. Meanwhile China and Japan will compete for hegemonic leadership in Asia, with South Korea and India providing both challenges and counterweights to these rivals.

A multipolar world comprising spheres of influence, albeit of varying degrees of hegemony and still subject to a more powerful US global reach, means that the age of "one world, ready or not" has passed, at least for the foreseeable future. If it ever returns, it will not be on terms similar to those of the brief "unipolar moment" of the post-Soviet Bush-Clinton-Bush era. For the organization of GVCs, this will mean geographic retrenchment, partial reversion to vertical integration as lead firms (often in partnership with their home states) secure more firmly access to vital raw material supplies, and at least in the medium term a reduction of their oligopsony power due to the reduced number of competing supplier firms. In the longer run, however, Taylorist super-exploitation of cheap labour can just as easily be organized more locally, and even domestically, as with fast fashion brand Boohoo, found to have been relying heavily on sweatshop factories based in Leicester, England that pay less than half the official minimum wage, despite being highly placed in "ethical investment" indices (Mooney & Nilsson, 2020).[57]

The injustice of conventional wisdom's condemnation that greeted William Greider's *One World, Ready or Not* is matched only by the latter's subsequent vindication. It appears that we were not ready for one world after all, at least of the kind being explained to us as inevitable and irresistible by its champions. Former Clinton administration Undersecretary of Commerce, subsequently Dean of Yale School of Management, Jeffrey E. Garten was honest enough to acknowledge that "Greider at least sets a direction for thinking by making it clear that a world economy on automatic pilot will eventually drive itself off a cliff", and in so doing had "written one of the most stimulating and important books of the decade" (Garten, 1997b).

For those wanting to understand more about why the era of globalization proved to be so short lived, there is no shortage of critical literature with its theoretical pedigree very prominently on display. But for those readers looking to supplement their reading of such literature with a more empirically rich explanation of why it all ended so quickly, Greider's "silly" book will be of eminently greater value, offering a lucid guide to the flaws inherent in the regime of neoliberal globalization, and important clues as to how the present efforts to retain as much as possible of that regime inside

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situation with Costa Rica's admission to the OECD in May 2020 suggests that a tighter grip is in the process of being exercised across the continent—"Back to the Americas" indeed. See Stott (2020).

[57]This scandal had already been uncovered by Sarah O'Connor in the *Financial Times* two years earlier (O'Connor, 2018). Despite her extensive report, there was no effective impact, whether on Boohoo's practices or those of its suppliers, or indeed on the "experts" paid to provide reliable guidance to ethical investors eager to avoid associating their money with sweatshop labour, environmental destruction or lack of executive accountability. Only when an apparently unexplained concentration of coronavirus infections occurred in the Leicester area did investigators rediscover what had already been public knowledge for at least two years.

geopolitically delimited spheres of influence rivalling each other for access to vital supplies ultimately will also prove to be unsustainable. Here Hornborg's epitaph for the Soviet Union is worth recalling:

"The collapse of the U.S.S.R. can be interpreted as a spectacular illustration of the limitations of industrialism. The Soviet attempt to confine a complete industrial metabolism (resource base, 'realization', and all) within a single political boundary destined it to be the first industrialized nation to run into seriously crippling ecological and social disorders" (Hornborg, 2001).

The political retreat from global multilateralism will impose certain confinements upon the various nodes of the hitherto globalized networks of production. Supply chain capitalism will adapt to this new set of arrangements,[58] and value chains will become somewhat less global as a result. The global reconfiguration of these chains will feature some "reshoring",[59] but is more likely to be characterized by the relocation of production to low-wage countries aligned politically (or at least suitably compliant) with the sphere of influence within which the lead firms are headquartered. To a certain extent, this will involve the transfer of production to locations closer to the core of each sphere, as with the "Back to the Americas" initiative. The logistical challenges this will pose will be addressed in the treaties and agreements that will accompany the transition to a new global regime. Global value chains will remain within this new configuration, of course, given the time lags of the relocation process and the limited availability of certain key factors of production.[60] Nevertheless, their global pre-eminence will be reduced while the direction of travel as regards value extraction will continue to adjust as China's "Belt and Road" initiative reshapes trade flows and systems of production, in line with its emergence as a globally significant power in its own right.

Conflict of interest

The author declares no conflicts of interest in this paper.

[58]Alain Verbeke wishes that "future [international business] research can hopefully demonstrate that the pandemic is no match for agile GVCs …. Paradoxically, in an era of declining multilateralism, agile GVCs are the best safeguard to maintaining the economic connections necessary for a thriving world economy" (Verbeke, 2020). A more sober note is struck by Gary Gereffi, who observes: "Globalization in its expansionary phase in the latter decades of the twentieth century and the first decade of the current century has run its course. Recent disruptions including the global economic recession of 2008-2009, the digital revolution … the waves of economic nationalism and populism since 2016, and the COVID-19 pandemic in 2020 all portend a more fragmented, multipolar, and regionally oriented international system" (Gereffi, 2020).

[59]Tesla recently caused market jitters in the battery industry, currently dominated by five producers, when it announced its effective entry into that industry via the acquisition of mining rights in Nevada, where it expects to extract lithium, for which it intends to build a refinery in order to supply a new factory in Texas. Such vertical integration up the supply chain recalls the carmakers of earlier eras manufacturing their own steel. See Sanderson (2020).

[60] China currently controls approximately 80% of the global supply of rare earths, vital for technologies such as touch-screens, electric vehicles and wind turbines. Consistent with Linda Weiss's analysis of the permanent industrial policy supporting the needs of the national security state, the Pentagon is financially backing at least two separate projects involving the mining and processing of rare earths inside the US in order to reduce the vulnerability of US defence and other industries to politically-motivated supply interruptions (Smyth, 2020).

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