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Processes of Spatialization
under the Global Condition

Markus Sattler

**Commodity chains
as spatial formats
between imagination
and materialization**

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Commodity chains as spatial formats between imagination and materialization

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Abstract

Commodity chains and cognates approaches are widely debated in many social science disciplines to understand and explain the drivers, mechanisms and effects of transnational production processes, including development perspectives and economic inequalities. This article aims to situate the understanding of commodity chains and cognate approaches as historically constituted imaginations of spatial economic relations that contingently travel between scientific disciplines and a wide range of social actors (policy makers, enterprises). The article is based on a spatial heuristic for understanding globalization processes inspired by the Leipzig school of global studies. Discussing commodity chains as spatial formats defined by the interplay of imagination / materialization in the context of particular spatial orders (of a globalized economy), leads to a number of hitherto less explored research questions. Drawing on this school of theorizing, I argue that the multiplicity of approaches should be embraced but simultaneously questioned from the perspective of why, how and for whom differences in imagination and enactment matter. Building upon the centrality of performativity based on the interplay of imagination / materialization, I highlight four areas (divided into chain actors and along imagination and materialization) in which commodity chain related research could benefit from a closer engagement with the Leipzig school heuristic.

Introduction

"If commodities are the blood cells of global capitalism, then commodity chains are its veins (Ouma 2018, 63)."

Can we imagine a global condition of whatever sort without truly global commodity chains? Most economic actors today are enrolled in extra-local, often global, relations of value production, transfer or grabbing. This applies to allegedly 'local' agricultural producers in rural Africa using US American seeds, Chinese machinery and Swedish development aid; European consumers who fill their baskets with Latin American avocados; and Taiwanese semiconductor enterprises that sell their commodities as intermediate inputs to electronic producers all around the globe to name three examples. Geographers have traced these changing geographical financing, production, exchange, consumption and waste patterns through time and in various industries.

The concept of commodity chains is employed to characterize translocal production since at least the onset of European colonialism. Commodity chains rely overwhelmingly on devaluing all sorts of work: from the massive employment of enslaved people during European colonialism, to the abhorrent working conditions in textile factories, to appropriating the 'free gifts of nature' with disregard to its reproduction (Moore 2015). However, commodity chains are in constant transformation, too. Space, and thus geography, is an extraordinarily important dimension of production (Massey 1995). Since the 1980s and for long into the 2010s, production processes hinted at ever-increasing capitalist globalization, further exacerbated by the collapse of the Soviet Union. Many labour movements, value-driven entrepreneurs, social/political movements, civil society organizations and academics accompanied the process of capitalist globalization in the sphere of re/production with skepticism or outright resistance. These actors employed the idea of a commodity chain to challenge, visibilize, politicize, and expose the often intransparent, long, racialized, gendered, ethically, socially and ecologically questionable patterns of globalized production. Re-structuring commodity chains is not only a project by capitalist enterprises, on the one hand, and antagonistic movements, on the other hand. Trump's nationalist-cum-protectionist rhetoric and practice aimed at increasing national production in the US and curbing Chinese (but also European) influence. Less based on protectionism, but still grounded in a form of geopolitics that we thought to have abandoned in the old days of (neo-)realist thought, Germany's decision to diversify its energy sources from Russia to Qatar, Norway and the US in the wake of Russia's invasion of Ukraine can hardly be explained by economic utility, ecological or social sensibility alone. Finally, the Covid-19 pandemic taught us a painful lesson regarding the vulnerability of what media outlets prefer to call 'supply chains' (The Guardian 2021). Yet, it also exemplified how commodity chains are detrimental to understand the origins and spread of pandemics (Wallace et al. 2020).

The conceptual history of commodity chains and value chains as such is significantly shorter, emerging in the late 1970s, further developed in the 1990s and becoming increasingly adopted by a wide range of social actors (international and development organizations; journalists; enterprises; NGOs) for different purposes from the late 1990s onwards. To what extent did the conceptual history interplay with the allegedly materially grounded practices? In other words, what is the 'practice' effect of such concepts and why does it matter to discuss this? Finally, what can we expect of the future of commodity chain research if we take performativity more seriously?

This article confronts these questions. Its core argument is that due to the popularization of commodity chains, especially of its derivatives (supply chain, value chain etc.) and their increasing importance as categories of practice, commodity chain research must confront the theory effect more forcefully in future research. As such, the article highlights the necessity to confront this question

from the perspective why, how and for whom differences in commodity chain research and practice matter and suggests a genealogical approach that looks into the past and present to identify possible future(s). It departs from an emerging spatial heuristic around spatial formats in their interrelation with spatial orders and spatial literacy (Chapter 2). How does this heuristic mobilize new understandings and research questions regarding commodity chains (Chapter 3)? It traces the contested genealogy from world-systems analysis to a variety of practice tools (Chapter 4) and finally asks, how to productively think the importance of performativity further (Chapter 5).

Processes of spatialization under the global condition: a heuristic based on the Leipzig school of global studies

Drawing inspiration from the research outcomes that were elaborated in the scope of the Collaborative Research Centre (CRC) 1199 'processes of spatialization under the global condition', I introduce a spatial heuristic around the terms spatialization-spatial format-spatial order-spatial literacy to interrogate commodity chain and cognate approaches. Departing from a practice-oriented understanding, scholarship within the CRC postulates that practices can be circumscribed as occurring in, and thereby modifying, spacetime, thus leading to processes of spatialization. More stabilized patterns of spatialization can be conceived as spatial formats. In this regard, it is advisable to distinguish spatial formats by their degree to which they are imagined, institutionalized and materially enacted. When these actions become more routinized, institutionalized and stabilized (e.g. via infrastructures that support them), we can speak about spatial formats (Middell 2019, 5–6). Such spatial formats are both materially grounded and discursively constituted, the latter providing impetuses for further institutionalization of new and de-institutionalization of competing spatial formats.

Reflexivity and performativity can lead to the modification of the spatial format in question (Middell 2019, 5). Reflexivity here refers to struggle over signification regarding the legitimate naming and conceptualization of a given spatial format. Performativity finally refers to the everyday enactment of spatial formats, which can lead to reproduction of the spatial format but more likely to some deviations. A spatial format is then – resonating very much with Haraway's cyborg – an 'image of both imagination and material reality, the two joined centers structuring any possibility of historical transformation' (Haraway 2004, 8), being neither ideal nor real type (Middell 2019, 6). To the extent that not only reflexivity but also performativity is crucial, this leads to the hitherto relatively underexplored question whether we as scholars are also included in the reformatting of spaces. Spatial formats that stand in a relation (e.g. competition or complementarity) with other spatial formats constitute a spatial order (Middell 2019, 10). A spatial order can be thus conceived as 'a contingent and relational arrangement of "things" in physical space. The making of spatial order out of competing spatial formats is a dialectic process of imagination and materialization' (Engel 2020, 223). Such an assertion thus converses with Law's concern to see orders as a) incomplete b) plural c) and materially heterogeneous, i.e. more-than-social (Law 1994, 1–2).

In their capacity to format space, actors are detrimental to the establishment and stabilization of spatial formats. As a result, actors' spatial literacy becomes a crucial object of investigation. Spatial literacy refers to the underlying spatial imaginations, constituted by needs, interests, and desires through which actors reproduce or (seek to) reformat spaces. Covering most world areas in a time frame of over 200 years, the CRC has produced a far-ranging analysis of spatial formats, including (without being exhaustive) regions and regionalisms (Engel 2018), knowledge networks (Vonnahme

and Lang 2017, 2019) and blocs (Marung, Müller, and Troebst 2019) but also commodity / value chain (Sippel and Böhme 2019). I will show the degree to which some of these concepts have become widely institutionalized and enacted by a range of actors and thus became dominant spatial formats with many laypersons using these concepts in everyday accounts to make sense of the world. Beneath that surface of everyday language, however, scholars foster a variety of competing spatial imaginations that – while analytically very powerful tools – so far do not enjoy the same degree of institutionalization and material enactment among policy / enterprise / community circles.

The Leipzig school of global studies thus provides for new prominent questions to GCC research that the paper will tackle: Who imagines and enacts commodity chains with what kind of goals in mind and how do actors relate them to spatial orders? Which actors reproduce or challenge these spatial formats (and by implication, spatial orders) employing which kind of associated spatial literacies? Why, how and for whom do these competing imaginations / materializations matter? Which role do scholars play in the dialectic of imagination / materialization of spatial formats and orders? This is a particularly intriguing question given the rapid proliferation of approaches, inspired by, but also departing from, commodity chain research.

Reading commodity chains through the Leipzig school heuristic

A diversity of imaginations and practices associated with commodity chains currently co-exist. Whereas Global Commodity Chains (GCC) and Global Value Chains (GVC) are the most commonly referred to concepts in sociological and geographical literatures, especially in economic geography the Global Production Network (GPN) approach gained traction from the early 2000s onwards. The international business literature, meanwhile, is the site of a quickly proliferating literature on Supply Chains (SC). But moreover Global Destruction Networks (Herod et al. 2014), Global Inequality Chains (Quentin and Campling 2017), Global Wealth Chains (Seabrooke and Wigan 2017) and Global Poverty Chains (Selwyn 2019) comprise few examples from the literatures on international political economy, economic geography and economic sociology. If the differentiation between materially grounded practices, on the one hand, and imaginations, on the other hand, is to be valid, the question arises whether the terms and concepts listed above reflect the same practices or phenomena with only different names. What practices and phenomena do commodity chains, then, analyze? According to early formulations of world-systems analysts

[t]he concept ,commodity chain' refers to a network of labor and production processes whose end result is a finished commodity. In building this chain we start with the final production operation and move sequentially backward (rather than the other way around-see below) until one reaches primarily raw material inputs (Hopkins and Wallerstein 1986, 159).

In fact, such a basic rendering is compatible with the other approaches outlined above. This finding could imply that commodity and cognate approaches describe more or less the same phenomenon and that the stakes refer to properly conceptualizing and legitimately naming them. Whereas the concept of commodity chain is more or less confined to the academic realm, supply chain and value chain are more properly understood as both a 'category of practice' and a 'category of analysis' (Brubaker 2012). Whole study programs are devoted to 'Supply Chain Management' and almost every

large company has a 'Supply Chain Management' department. 'Value chain' similarly is espoused by a variety of actors, less among enterprises than among policy circles and consultancy companies. Yet, the likelihood to identify a company that hires a 'commodity chain manager' or even a 'poverty chain manager' almost zero. Are companies simply refraining from calling the practices/phenomena by their name due to reputational damages, and is there *one* concept that most accurately captures the spatial format at stake? What is the academic task in such a situation? Is the preferred option to eliminate the multiplicity of approaches, to reduce unruly analytical messiness in favor of more clarity?

Before we draw such a conclusion, let us examine the proposition that actors format spaces according to their spatial imaginations, conditioned by their needs, interests and desires. Companies mostly choose to have a 'supply chain management' because many are interested in obtaining inputs that correspond with their needs, interests and desires. What is the core competency (or 'competitive advantage') of our company and what can be reasonably outsourced? Often, it is assumed that the 'main objective is to enhance the operational efficiency, profitability and competitive position of a firm' possibly including 'its supply chain partners' (Min and Zhou 2002, 232). A supply chain resonates with a technical understanding according to which commodities are the necessary building blocks of other commodities with a disregard for the question under which socio-ecological circumstances they are produced. Profit-centered companies and scholars do not have an interest to play the critical academic game of conceptualizing practices in terms of poverty chain management. To the extent that companies use other self-understandings (e.g. 'sustainable value chain management'), then this discursive framing might also have ramifications on what such designated managers are supposed to do. Critical scholars would perhaps interpret it as a discursive greenwashing strategy, but this is perhaps more an empirical question. The question arises what is a) the difference between what those managers, departments and enterprises do and what they say they do, and b) what we as researchers are supposed to do about this difference?

The assertion that we are largely speaking about the same practices and phenomena must be complicated once we ask more fine-tuned questions. Rather than crystallizing any of these concepts as the most appropriate one, I rather depart from the idea that the diversity of concepts should be embraced rather than denigrated as analytical messiness. This is not so much for the sake of diversity itself but because it allows us to ask: why, how and for whom do these differences matter (Barad 2007, 2014)? While internal coherence is continuing to be an important indicator to assess different approaches, often the more important stakes in assessing the desirability of certain concept lie in the unproblematized and often implicit normative assumptions underpinning them. These assumptions matter differently for places, people and communities. To further show how differences in conceptualization matter, I will now turn towards a small genealogy informed by the imagined-and-real practice around spatial formats.

A Brief Genealogy of GCCs: from transnational exploitation to capitalist development – and how to go further?

By referring to genealogy, I do not wish to convey a picture of contemporary processes that can be neatly traced to some pure origins (cf. Foucault 1977). The variety of commodity chain approaches are built upon diverse roots and influences. Nonetheless, I highlight a by now forgotten influence in the developmentalist literature: world-systems analysis. This intellectual tradition is concerned with tracing and explaining the economically, politically and ideologically organized wealth transferred

from 'peripheral' to 'core' producers (Wallerstein 2006, 28). Commodity chains were introduced to spur a debate against the claim that the economic system started 'with large-scale estate-centered economies, proceeds to town-centered economies, and culminates (at the beginning of the seventeenth century) in national or state-centered economies (Hopkins and Wallerstein 1986, 158).' Instead, it linked an ever more 'global' division of labour in the capitalist world-economy to the advent of European colonialism in the long 16th century. In this chapter, I will outline the initial concern with value and power, and the subsequent obliteration of the connection of commodity chains with a spatial order and the invisibilization of class politics (through a reformulation of the value category) in the GCC/GVC literature as well as the dissatisfaction it has created. This allows us finally to turn to the question of (scholarly) performativity and what kind of future research matters why, how and for whom.

Value and Power and the Unevenness of Global Capitalism as a Spatial Order in GCC Research

From its inception, 'value' was the perhaps most central coordinate that facilitated the analysis of spatialization. World-systems thinking popularized the idea that exploitation not only occurs within a given enterprise but also between enterprises in a process called unequal exchange (Wallerstein 2006, 28). For this argument to make sense, it is important to understand the employment of the Marxian category of 'surplus value'. Premised on what is often discussed as the 'labour theory of value', surplus value can be conceived as the surplus labour appropriated in value form by asset owners. To the extent that others than the direct producer appropriate the surplus, this process in Marxian terminology is called exploitation (Ruccio 2011). Here, power enters the stage. As many 'peripheral producers' find themselves in a truly competitive situation, their bargaining powers vis-à-vis 'core producers' is limited. It is core producers who do not conform to the rules of competition but can insulate themselves from competitors through entry barriers such as intellectual property rights and other (non-)tariff barriers. In such an unequal bargaining situation, the surplus value is not only appropriated by the asset owners of the peripheral enterprises but, perhaps more importantly, must be distributed to core producer.

Therefore, world-systems researcher have suggested that the most pressing question regarding 'the role of commodity chains in capital accumulation' can be posed as such: 'If one thinks of the entire chain as having a total amount of surplus value that has been appropriated, what is the division of this surplus value among the boxes of the entire chain?' (Hopkins and Wallerstein 1994, 49). It follows that world-systems scholarship tends to operationalize exploitation in monetary terms. More recent world-systems rooted research has highlighted the close interpenetration of commodity chains with the spatial format of global and world cities and the advanced producer services contained in them in this process of uneven development (Brown et al. 2010).

Obliterating Spatial Orders: From Surplus Value to Value Added Upgrading

The world-systems inspired commodity chain literature was further developed into the GCC concept in initial close collaboration with world-systems scholarship (Gereffi and Korzeniewicz 1994). Many scholars focus in their narration on the transformation from world-systems inspired commodity chain research into GCC and subsequently GVC on the notion of upgrading (Bair 2005; Gibbon, Bair, and Ponte 2008; Ouma, Boeckler, and Lindner 2013; Parnreiter and Bernhold 2020). Upgrading, shortly, is a relational concept as far as it asks how producers innovate in relation to other producers and how, in

value terms, they can appropriate more of the value vis-à-vis others. To illustrate how enterprises can upgrade, scholarship examine how knowledge networks interrelate with the production sphere, including clusters (Marchi, Di Maria, and Gereffi 2019) and innovation systems and networks (Fagerberg, Lundvall, and Srholec 2018; Li 2020; Parrilli, Nadvi, and Yeung 2013; Pietrobelli and Rabellotti 2009, 2011). With the insertion of 'upgrading', an intervention for explaining the unevenness of global capitalism turned into a tool for explaining the developmental aspects of firms, regions and nation-states under contemporary globalization.

While GCC and GVC arguably share more similarities than differences, GVC investigates variation of network forms within and between sectors rather than inter-firm networks of specific chains (Bair 2005). To uncover these, GVC draw more on transaction costs economics (Gereffi, Humphrey, and Sturgeon 2005). Slowly, GVC itself transformed from a tool to understand development prospects to a category of practice employed by international and development organizations for diverse purposes. While early adopters such as ILO maintained some of the initial heterodox spirit, later adopters such as the WTO, OECD or WB rather interpreted GVC as a suitable concept to emphasize the significance of free trade in the wake of the 2008–2009 financial crisis (Gereffi 2019, 200–201). Since the late 2000s, the OECD hails the possibilities for Southern countries to integrate into the global economy via GVCs and sustains a narrative according to which 'upgrading' could be available for everyone (OECD 2011, 2013b, 2013c). A recent World Bank report, *Trading for Development in the Age of Global Value Chains* boldly claims that 'all countries stand to benefit from the increased trade and commerce spurred by the growth of GVCs' (World Bank 2020, xii). This says as much about the quasi-naturalized appearance of GVCs as it conveys an overtly simplified belief in the potential of GVCs for 'development'.

GCC/GVC perspectives are generally firm- or sector-centred and much attention is paid on the inter-firm governance arrangement. Starting from a relatively crude distinction between 'buyer-driven' and 'producer-driven' chains (Gereffi 2001), the GVC literature since then has moved forward in scrutinizing in ever more detail the governance arrangements, by now firmly including international organizations, certifying companies and other stakeholders and identifying various modes of governance (Gereffi, Humphrey, and Sturgeon 2005; Humphrey and Schmitz 2001; Mayer and Phillips 2016; Ponte and Gibbon 2005). Power relations are thus the perhaps most important analytical instrument alongside 'value' in the GCC/GVC perspective. GCC/GVC seeks to include nation-states and households as spatial formats into the analysis. While succeeding partly in linking GCC/GVC with these spatial formats¹, others have lamented that GCC/GVC has evaded to confront 'structural properties of contemporary capitalism that affect the configuration and operation of these chains as well as the developmental outcomes associated with them.' (Bair 2005, 171)

The cost of this more fine-grained engagement has been thus a lack of attention to an overall spatial order, which in the world-systems understanding refers to the core-periphery model. The world-systems roots were obliterated and thus the relational analysis through which the core exploits the periphery via value grabbing. Devoid of any core-periphery language and only vaguely interested in what can be termed as the dialectical counterpart of upgrading (downgrading), the developmentalist GCC and GVC literature primarily analyses the firm- or sector-centric, local, regional or national development perspectives of enrolling in global production processes, paying insufficient attention to the working or environmental conditions along the chain. When developmentalist

1 Gereffi initially stressed the importance of the household as well, and argued that GCC analysis gains its potency by linking enterprises, households and states and moving beyond nation state-centric modes of analysis (Gereffi, Korzeniewicz, and Korzeniewicz 1994, 2). As critics argued, however, empirical GCC studies all-too often neglect the household as a central locus of economic activity, instead focusing mainly on power/governance issues between firms. The GPN framework, too, is devoid of the notion of household, offering only the category "labour" but usually in a wage-labour based understanding of it. The lack of household and gender-sensitive analysis has been acknowledged both within GPN (Kelly 2009) and GCC/GVC approaches (Dunaway 2014). For many enterprises, the search for skilled, yet semi-proleterianized workers, is paramount to their functioning and can explain locational decisions (including issues of offshoring and outsourcing) of companies to begin with.

organizations conceptualize GVCs in relation to a spatial order, their own interests, needs and desires are invisibilized. In such a vein, an OECD video, that seeks to convey the importance of GVCs, argues that

lowering barriers to investment will allow countries to better integrate Global Value Chains. Government policies should enable firms, and in particular SMEs, to reach beyond the borders. This means investing in skills, advanced manufacturing, and high quality infrastructure. Boosting innovation is also key to ensure that workers are ready for the 21st century economy (OECD 2013a)

Here it is the '21st century economy', most likely a 'knowledge-based' one (Godin 2006; OECD 1996, 2013c), that is imagined as spatial order that forces upon enterprises, governments and communities a logic of submission rather than interrogation. The contingency of the economy's claims can hardly be uncovered from the naturalized language behind which the OECD hides. It is not the satisfaction of basic human needs (as many Marxian accounts would posit) according to which the economy must be formulated and organized. Rather, 'the economy' takes on a life of its own and makes demands on workers, governments and enterprises. What is at stake, from the Leipzig school heuristic, however, is uncovering the needs, interests and desires within the OECD to construct value chains simply as the irresistible demand of the 21st century or knowledge-based economy and the performative effects that such a rendering entails.

This leads me to an overlooked aspect within the commodity chain genealogy with its emphasis on upgrading critique. One important way how upgrading came to inspire developmentalist research was by transforming the meaning of 'value' to begin with. While one could assume the transformation of GCC into GVC was concerned with deepening our understanding of 'value', this was hardly the case (Gibbon, Bair, and Ponte 2008, 331). Turning away from the early focus on surplus value, GCC / GVC tends to equate value with 'value-added', in each step of the production process. This value-added was expressed in prices. Different conceptualizations of 'value' already become discernible in the seminal 1994 edited volume with some contributions emphasizing the importance of the surplus whilst others tending to focus on value-added as price (Gereffi and Korzeniewicz 1994). With this transition towards value-added, the questions 'who appropriates the surplus?' (in class terms) and 'what are the socio-ecological conditions of work?' are deprioritized. Conceptual and practical problems become abundantly visible with the sole focus on value-added. 'Social upgrading' (Barrientos, Gereffi, and Rossi 2011) but also 'environmental upgrading' (Poulsen, Ponte, and Sornn-Friese 2018) by now seek to address such shortcomings, though the two concepts are subordinated in policy circles to the issue of what is sometimes now called more specifically 'economic upgrading' in GVC.

Performativity of Commodity Chain Research

Many scholars express discontent how the GVC literature turned into a development tool (Ouma, Boeckler, and Lindner 2013; Parnreiter and Bernhold 2020), instead highlighting the dangers when this analytical method becomes divorced from its aim to explain uneven development. Taking the observation that value chains increasingly figure as a developmentalist tool as a starting point, recent scholarship explores how GVCs function as a technique of economization and integrating non-markets into new market frontiers (Ouma 2015; Ouma, Boeckler, and Lindner 2013). Drawing on studies of performativity, such scholarship highlights how the conceptual language of value chains (as a category of analysis) brings into being, rather than only reflecting, economic interventions (as a category of practice). These interventions plug in and reconfigure smallholder producers as economic actors to be integrated into global 'markets' to their alleged own benefit. This analysis resonates with the assertion that spatial formats are as much about reflexivity as they are about performativity.

What we can learn from a closer engagement with the value chain genealogy is the complex ways in which we cannot bracket off scholars from allegedly 'other' space-formatting actors such as the OECD or WB. Until today, there is a heavy traffic between academic and developmentalist circles to the extent that the lines between them, and consequently between categories of analysis and practice, are blurred. Gereffi has self-consciously claimed that such traffic should be even more fostered via the slogan 'bringing firms, networks and policy-engaged scholarship back in' (Gereffi 2019). This assertion sits very uneasy with the bulk of critical scholars who are very skeptical about collaborations with state and developmentalist organizations. The crucial point with the metamorphosis from commodity chains to GCC / GVC, however, is that it was GCC / GVC scholarship, and not development organizations, moving from 'the spatially distantiated production of commodities within a broader capitalist system' (as a spatial order) to 'technical questions of value generation, allocation and enhancement framed through a functionalist governance typology' (Ouma, Boeckler, and Lindner 2013, 227).

Yet, such critiques often overlook how commodity chain thinking itself became a vehicle of performative politics (Clarke et al. 2007), even when it does not explain uneven development, the appropriation and distribution of the surplus, or critiquing capitalism per se. Many NGOs, consumers and journalists have incorporated the methodological thinking of commodity chain research to advance collective (and sometimes individualist) action against practices of core producers. These benefit from the outsourcing of peripheral activities to sweatshops in the Global South. After the Rana Plaza accident in Bangladesh 2013, as a result of which more than 1000 (mostly female) workers died, NGOs and journalists not only draw attention to the responsibility of local asset owners, municipality and the Bangladeshi government. Importantly, Northern lead firms in the apparel sector with their long track record of dissociating themselves from the working conditions of their 'suppliers' were charged with corporate irresponsibility. It is precisely the merit of commodity chain thinking to politicize such events, although it is granted that the post-Rana Plaza solutions adopted may have not resulted in, and might even jeopardize, substantial improvements for garment workers (Sinkovics, Hoque, and Sinkovics 2016).

Performativity and New Ways Forward

If reflexivity and performativity indeed plays a role in commodity chain thinking and practice, then the question arises how we might more productively utilize this finding for future directions in commodity chain research compared to simply acknowledging their existence. In this last section, I delineate four important ways of taking performativity seriously as an attempt to unpack this concept into more fine-grained areas. The provocation of performative thinking is that there is no possibility to stay simply 'outside' of the commodity chain development as a distanced observer. Researchers are – to varying degrees, admittedly – part of the commodity chains they analysis. Therefore, the distinction between researchers as apart from commodity chain actor might appear striking in the table, but designed with the intent to visibilize and discuss more upfront our own entanglements in research. Along a similar line, the suggested separation between materialization and imagination should be problematized also concerning their entanglements.

Modalities of performativity	Chain actors	Researchers
Materialization (grounded practices)	<ol style="list-style-type: none"> 1. Nominalist enactments 2. Materially connected enactments 	<ol style="list-style-type: none"> 1. Understanding, and being affected by, the stakes involved 2. creativity/responsibility in making certain voices heard 3. methods as political 4. questioning one's desires and positionality
Imagination (inspired by, and guiding materialization)	<ol style="list-style-type: none"> 1. Spatial literacies as theoretical opening 2. actors as capable of ethical-decision making 	<ol style="list-style-type: none"> 1. The making more and less visible of certain aspects and the responsibility this entails 2. For whom, why and how does this account matter?

Researching commodity chains

Imaginations: Actors' imagination as spatial literacy

Not only scholarship fosters interesting new concepts and ideas. Various actors being inspired by, and further developing, commodity chain thinking, can contribute to re-envisioning other worlds. Scholarship can ask for the possibility of such imaginations to buttress but also to transform the complicity of commodity chains in generating destructive ecologies and inequality. While we gained first insights how NGOs, consumers and international organizations imagine commodity chain-related thinking for their specific agendas, the enterprise still figures as a theory placeholder, pre-determined by the quest for profit and the imperatives of competition. Here, a discussion between business literatures and geographical literatures might be beneficial. Supply chain-related business literature tends to treat managerial discourse about sustainability and ethics at face-value, possibly producing greenwashing and carewashing. Here, imagination is hierarchized over materialization. Critical commodity chain-related accounts contribute to 'Othering' enterprises as primarily a destructive entity, treating them with a generalized suspicion as if the relentless quest for surplus appropriation is an unquestionable main motivational driver of enterprises. Here, imagination is treated as something suspicious and is constantly in the danger of being overruled by theoretical considerations. Even if some deviating spatial literacy is granted, general ideas of capitalist competition are used as the last resort to undermine the possibility of less surplus-centered worlds in practice. In this case, imagination is rendered the eternal hostage of an already capitalistically materialized world.

Emphasis on spatial literacies might be fruitful in this context, allowing scholars to disinvest from overtheorizing the spatial imaginations underpinning enterprise practice. If interests, needs, desires and their significance for 'reading' spaces stand at the forefront of constituting spatial literacy, then the issue still remains theoretical but also becomes methodological: Do theoretical assumptions limit us in identifying more richness in spatial literacies, and which ones could open up the terrain of inquiry? Methodologically, it also requires a debate through which methods to identify multiple, conflicting, or complimentary spatial literacies and how these methods themselves might be responsible for creating the worlds they inquire.

Materialization: spatial literacy as contested grounded practice

With regard to materially grounded performativity, two clusters could contribute to future research: *Nominalist enactments and materially connected enactments*.

The first approach is nominalist and functions through organizational and / or ties of signification. As noted above, STS-inspired studies delve deeper how commodity chains and cognate approaches function increasingly as categories of practice, thus re-configuring (rather than simply reproducing in an unchanged form) the spatial format. I call this approach 'nominalist' because it departs from the idea that practices can be seen as connected organizationally and / or through webs of signification. How are 'commodity chains' and other signifiers utilized by actors to pursue their own agendas and interventions? Performativity-inspired STS studies focus on the interplay of imagination and materialization in developmentalist organizations in Africa. More research in other world regions and compromising different actors is required to enhance our understanding of the theory-effect of commodity chains. At least, this would compromise the supply chain departments of companies and consultant companies focusing on supply or value chains.

A 'nominalist' approach must not be the only imaginable future of commodity chains and can be supplemented by materially connected enactments. If we understand as value – rooted in the wider political economy tradition – the practice of comparing and making understandable the worth of different things to diverse audiences (Bigger and Robertson 2017), then we can also widen the terrain for analysis. In this reasoning, the emergence and existence of spatial formats are not necessarily related in webs of signification but in disparate materially grounded practices that nonetheless contain some commonalities. This reflects the emergence of commodity chain thinking (or any kind of concept). World-systems scholars started to imagine how certain materially grounded practices around value generation and transfer constitute a phenomenon, thereby departing from previous signification acts. Value itself is thus to be understood as process and performance.

In political economy, value discussions usually pivot around the surplus. But the surplus analysis is not only a quantitative accounting device for tracing the unequal distribution of monetary benefits between asset-owning non-producers and producers, or between core firms and peripheral firms as world-systems is prone to emphasize. It is also evoked to identify the social conditions under which commodities and (surplus) value are produced (Henderson et al. 2002, 444).

Increasingly important is also an ecological edge to this reasoning. Commodity chain research can benefit from recent conceptual advancements in the study of value and valuation. Pecuniary modes of value are questioned from political economy perspectives. The predominant way of rescuing value from the straightjacket of monetary thinking is through the 'labour theory of value' that posits an 'objective' status to human labour as the bearer of 'value'. Yet, ecological thinking situates the discussion of labour and value on a looser ground, thus re-shuffling the topography of valuation.

Ecological, feminist, and postcolonial scholarship conceives capitalist valuation as a process extending workers' exploitation – the usual emphasis in commodity chain thinking. Moore poignantly summarizes this in the idea that '(t)he condition of some work being valued is that most work is not' (Moore 2018, 243). Rather than facing a positive definition of what value is (across all societies and times or only under capitalist mode of production), Moore confronts us with an analytical device that forces us to take a step back and examine in- and exclusions. Feminists have been at the forefront of the debate, by disclosing the centrality of the (often) non-commodified or low paid reproductive labour as a condition of possibility for the valuation of exploited commodified labour. The same concern also drives the usually undervalued or entirely unvalued contribution by nature to capitalist valuation. All the recent attempts to imagine and enact the value of nature (though still less reproductive work in human communities) in enterprises point toward a multiplicity of logics rather than a singular 'capitalist' one even among neoclassical economists (Nelson 2017). Practices of (de-)valuation constantly change and, thus, value itself must be understood as a process rather than a substance. The ramifications of such a processual, performative approach of value for commodity chain thinking are far

ranging. Not only the creation of prices (value-added), the distribution of the surplus are at stake, but similarly a wide range of issues around metabolism, multi-species survival and reproduction. Further disinvesting from 'capitalocentric' readings, this entails an understanding that commodity chains do not only buttress capitalist spatial orders. Wide-ranging forms of other-than-capitalist labour feed into capitalist valuation, but cannot be automatically reduced to it. More importantly, even some 'lead firms', the archetype of capitalist production, are currently re-configuring valuation in a way that necessitates re-thinking oversimplified assumptions about spatial literacy. A prominent example is Fairphone that complicates any narration of translocal production as necessarily rooted in the drive for value-added and/or the surplus (Jindra et al. 2019). Its activities are a reminder of the interplay between imagination and materialization, showing a clear awareness about certain minerals' implication with armed conflicts, or an awareness that conducting business with 'suppliers' is not only an exchange between independent buyers and sellers, but a continual process of establishing socio-ecological relations. While its spatial literacy is rooted (amongst other things) in a desire to read supply spaces through a more socio-ecological angle that emphasizes 'transparency', the materialization of that spatial literacy faces resistances.

Researchers' commodity chains

Materialization: Research as a materially grounded practice

Scholars of various traditions have noted the openings when reframing methods and methodology as political (Law 2004; Roelvink 2020), asking which methods are desirable to research and perhaps co-produce the commodity chains that they inquire. Currently, many commodity chain approaches rely on a form of critical realism that is able to secure researchers to a position as distanced observers as a result of which their own positionality and desires are hardly transparent (Sattler 2023).

The performativity literature suggests there is no way to stand outside the chain, and that one is always involved in the reconfiguring of the world, notwithstanding how small our contribution is. Reflexivity, here, is not enough (Barad 2007). Thus, it makes methodologically a big difference whom, what, how and why we ask in commodity chain research. Regarding whom we ask, we might arrive at different findings whether we engage with management, workers, lead firms, suppliers, spreadsheets of value-added, households, or communities (also in the ecological sense of including populations of more than one species, leading to methodological discussions around multi-species ethnography) not involved in, but affected by, commodity production. The produced findings will matter differentially for these groups. Also what we ask matters: If we understand methods as political, then the question is not only about assessing how things *are*, but also taking care to do research in such a way as to promote how things might work differently and might *become* more real without presupposing that one's own positioned desires should be free from critical scrutiny. Especially pertinent might be to ask questions that disrupt the reification of 'value-added' or the 'distribution of surplus' as desirables but treat them as unresolved problems.

But also how we ask and observe matters: how do our own normative assumptions of what is, and ought be, shape the research process? Shall the research process make participants simply reflect on how things are? Shall they push them to re-think how things could be different? Lastly, there is a need to account for why we ask this question to begin with. Decolonial scholarship demands to turn away from the idea to primarily address the 'gaps in the literature' but to more properly address the places, peoples and communities we research (Jazeel 2017). Such an assertion destabilizes the idea to re-orient to world-systems roots or to explain inequality as is often the result of genealogical inquiry into commodity chain approaches (Bair 2005; Parnreiter and Bernhold 2020). Rather, it re-orient to questions how to align commodity chains as to make the earth more inhabitable (and for whom). This

all of course rests on the legitimacy through which research is conducted in the first place. Arguably, this very much depends on the context, including the researcher's involvement in, or commitment to, the place, community or people that are directly or indirectly affected by the commodity chain.

Imagination: Research as performative account of writing other worlds

Besides our material enactment within the research process, scholarship, in its function to imagine other worlds, can have profound performative effects, too. The genealogy of commodity chain thinking suggests that scholarship cannot fully control how other social actors adapt and appropriate academic accounts. Performativity, in this sense, cannot be about taking responsibility for all the possible adaptations but about taking responsibility of one's own in- and exclusions (Gibson-Graham 2008) in writing other worlds. Writing other worlds is about reframing and re-presenting the complexity of our research in a new language that matters. Based on the multiple crises we face, accounts that either champion development in the conventional sense (as 'value-added') or that expose once and again the transfer of surplus from periphery to core need to be examined from the perspective who benefits thereof and how.

The proposed interrelation of spatial formats and spatial orders urges us to keep track of the larger picture: to ask to with which other spatial formats a commodity chain is connected and how these linkages constitute a spatial order and the performative effects of such imagined associations and dissociations. Through the Leipzig school heuristic, we can highlight the erasures in the developmentalist GVC research and practice that dissociates commodity chains from a larger spatial order (instead being interested in firm / regional / national developmentalist effects) or presents them as a naturalized feature of a universally imagined knowledge-based economy. More importantly, it invites us to ask about the material and performative effects of such associations / dissociations as well as their historical condition of possibility 'in order to understand their contingency and subvert their claims of universality' (Gabriel and Sarmiento 2020, 413). The Leipzig school asserts the multiplicity and fragility of orders with which spatial formats can be associated. Yet, the counterproject to genealogical inquiry, namely reconstruction rather than deconstruction, is not trivial either. To conceptualize, imagine and claim material processes as a spatial order is similarly imbued with questions why, how and for whom such concepts matter. While the analysis of core-periphery construction or uneven development within a capitalist world-system is a fruitful entry point to expose global capitalism, the Leipzig school heuristic allows focusing on the implications for spatial orders that might destabilize dominant conceptualizations of commodity chains as necessarily interlinked with a capitalist global economic order.

Conclusion

Building on the Leipzig school terminology of spatial format, orders and literacy, I interrogated commodity chains and cognate approaches. The Leipzig school of global studies can offer valuable points to ponder for future research. Through its insistence on the dialectics of imagination and materialization, it urges us to question the somewhat naturalized ontological status ascribed to commodity chains as a self-evident spatial format under the global condition. Instead, it invites us to reconstruct how some imaginations become 'real' under concrete historical trajectories by focusing on the role of reflexivity and performativity. The concept of spatial literacy allows us to be more flexible with regard

to understanding the underlying needs, wants and interests of actors. While many Marxian approaches assume the quest for surplus among enterprises as an unproblematic academic *fait accompli*, the concept of spatial literacy reclaims needs, interests and desires as a site of investigation, requiring curiosity rather than preliminary conceptual closure. These spatial literacies might give rise for competing, conflicting or complimentary spatial formats hitherto unexplored.

Such spatial formats might be premised upon materially grounded practices or 'webs of signification' that are 'related analogically rather than organizationally' (Gibson-Graham 2006, xxiv). By adding that performativity includes – but certainly is not reducible to – us as researchers, I presented some evidence for the assertion that academic imaginaries can become materially enacted, perhaps in a contingent fashion. The GVC concept emerged from a category of analysis employed by world-systems scholars interested in explaining the historical emergence of a global division of labour in the capitalist world-economy to a widely used category of practice and marketization tool by developmentalist organizations. I thus showed both the diversity of competing spatial formats and welcome scholarship to reflect why, how and for whom some seemingly minor differences matter.

To the extent that spatial thinking takes performativity seriously, this must also include recognizing what kind of globalization projects we as scholars contribute to visibilizing and perhaps making more 'real' than others. While most commodity chain approaches deny the researchers as part of the chains/networks they analyze, the genealogy section demonstrated that such a disarticulation is not convincing. Current disembodied commodity chain research hardly allows for the urgently needed research and economic politics in the Anthropocene. Translocal re/production will continue to be omnipresent in the coming decades. Why, how and for whom does our academic imaginary matter?

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