Contacto
poblacionysociedad@humanas.unlpam.edu.ar
https://cerac.unlpam.edu.ar/index.php/pys/index

Territory, territoriality and territorialization in global production networks

Territorio, territorialidad y territorialización en las redes de producción globales

Felix M. Dorn
Department of Development Studies, University of Vienna, Austria.
felix.dorn@univie.ac.at

Robert Hafner
Department of Geography, University of Innsbruck, Austria. robert.hafner@uibk.ac.at

Abstract

Global production networks (GPN) provide a powerful multi-scalar approach for analyzing the organization of production, but lack the means for conceptualizing social-ecological issues. Territory and territoriality underscore the epistemological character of socio-environmental problems. Territoriality is an underdeveloped conceptual resource for analyzing a GPN's territorial configuration. Discussing different contextual conceptions of territory, territoriality and territorialization (e.g. in the Anglophone, Francophone and Latin American debate), we propose an analytical framework to enable a more structured operationalization in GPN research. As a result, we introduce the five P of territoriality – *pluralistic*, *polysemic*, *process*, *power relations* and *physical space*.

Keywords: territory; territoriality; territorialization; global production networks; thought styles

Resumen

Las redes globales de producción (GPN por sus siglas en inglés) ofrecen un enfoque multiescalar muy potente para analizar la organización de la producción, pero carecen de medios para conceptualizar las cuestiones socio-ecológicas. El territorio y la territorialidad subrayan el carácter epistemológico de los problemas socioambientales. La territorialidad es un recurso conceptual poco desarrollado para analizar la configuración territorial de un GPN. Discutiendo diferentes concepciones contextuales del territorio, la territorialidad y la territorialización (en el debate anglófono, francófono y latinoamericano), proponemos un marco analítico que permita una operacionalización más estructurada en la investigación de la GPN. Como resultado, introducimos las cinco P –en inglés– de territorialidad: pluralista, polisémica, de proceso, de relaciones de poder y de espacio físico.

Palabras clave: territorio; territorialidad; territorialización; redes de producción globales; estilos de pensamiento

Introduction[1]

Global production network (GPN) literature examines the organization of production. With transnational corporations being capitalism's central players, GPN-literature focuses on the dynamic interrelations between different actors and spatial scales, and grasps global production as horizontal, multidimensional and multilayered (Alford, Visser and Barrientos, 2021; Coe and Yeung, 2015; Henderson *et al.*, 2002; McGregor and Coe, 2021). In so doing, territory and territoriality provide a material grounding for the consequences of global economic activities but often lack further embedding in socio-cultural discussions, particularly in relation to the Anglophone, Francophone and Latin American thought styles.

There is a great number of different underlying understandings of territory and territoriality, widely discussed in human geography (Antonsich, 2017; Bryan, 2012; Delaney, 2005; Elden, 2013b; Faludi, 2013; Haesbaert, 2013b; Lee, Wainwright and Glassman, 2018; Painter, 2010). Two challenges arise: First, it becomes increasingly difficult to unearth the authors' positioning in the territoriality debate (what do they mean with territoriality?), and second, the aspect of multiscalarity in territoriality research (e.g. Ceceña, 2016; Reyes Nuñey and Veiga, 2021) is still underdeveloped. On the contrary, GPN-literature has a strong focus on multiscalar dimensions. Here, however, despite continuous endeavors for further theoretical refinement (Hughes, McEwan and Bek, 2015; Tups and Dannenberg, 2021), territoriality has so far not received enough attention. Coe and Yeung (2015) consider the territoriality dimension of GPNs as hitherto under-theorized, elusive and underdeveloped. Similarly, Bridge and Bradshaw (2017, p. 219) state that "territoriality is an underdeveloped conceptual resource for more closely examining the territorial configuration of networks and the value activities of which they are comprised" and that "GPN's potential as a distinctively geographic mode of analysis is underdeveloped and can be enhanced by attending to [...] GPN's account of territoriality, understanding of materiality and material transformation and interest in network practices". We address this yet underexplored research potential on a theoretical level, and enhance the GPN-approach by developing a detailed understanding of territoriality throughout this article.

This article therefore aims at linking GPN-literature and the rich debate on territoriality in a theoretical-conceptual way. To do so, we first review the GPN-approach and examine current uses of territoriality within GPN literature (section 2). Second, we discuss different conceptions of territory in the Anglophone, Francophone and Latin American debate to structure diverging theoretical accesses (section 3). The differentiation of those foci is a first step towards a better (and more transparent) understanding of how territory is used and understood, both by research subjects as well as researchers. We then illustrate the uses of territoriality and territorialization (section 4). Third, based on the broad review and structuring of the territory, territoriality and territorialization concepts, we propose an ontological

breakdown introducing the five P of territoriality –*pluralistic*, *polysemic*, *process*, *power relations* and *physical space*–. The analytical framework of the five P of territoriality is a proposal towards a more structured operationalization of research (section 5). Before concluding, we show the analytical value of territoriality to materially *ground* global production networks grasping the territorial configurations and power relations, and to analyze actors' contrasting territorial logics. In addition, we contribute to a dynamic academic discussion on the (neo-)coloniality of global economic activities, including both mining, agriculture, and manufactures (Alimonda, 2015; Dorn and Huber, 2020; Dorn, 2021b; Svampa, 2019), by discussing the meta-level implications of territory, territoriality and territorialization.

Territoriality and territorialization in global production networks

The global production networks (GPN) approach is often attributed to the so-called Manchester School (Coe *et al.*, 2004 y 2008; Henderson *et al.*, 2002). Based on a critique of the global value chain-approach (GVC) and the global commodity chain-approach (GCC), Henderson *et al.* (2002) introduce a framework that shifts the attention towards the social circumstances of commodity production and consumption. The GPN-approach aims at a better understanding of economic integration and regional 'development processes'. To conceptualize economic production processes as less vertical and linear, but rather as horizontal, multidimensional and multilayered, the GPN-approach replaces the linear chain metaphor with the network concept (Henderson *et al.*, 2002). It thus intends to do justice to the increasing complexity of economic value creation processes. The focus lies on the dynamic connections between different actors, groups of actors, and spatial scale levels (multi-actor and multi-scalar). Next to economic actors, the GPN-approach explicitly includes non-economic actors, such as local, regional, and national institutions, non-governmental organizations, (indigenous) communities, trade unions, and civil society organizations as well as the broader political context (Kister, 2019).

The GPN 1.0 approach develops a relational, process-oriented and spatial view of production processes. The theoretical-analytical framework draws upon the three fundamental conceptual categories of power, embeddedness and value (see Yeung, 2021 for a differentiation of GPN 1.0 and GPN 2.0). They not only provide the tools for decoding complex economic, institutional and social local-global interactions, but also analyze power relations and interactions between economic and non-economic actors. GPNs aim at a horizontal, multi-layered and multi-dimensional consideration and analysis of the transnational organization of production in relation to development processes. Extraction processes are also largely organized transnationally, so that resource-based GPNs are structured by transnational elites, institutions and ideologies. In doing so, the GPN approach strives to dissociate from the

often state-centric understanding of development processes of its predecessors. Particularly for a resource-based GPN, a broader understanding of development processes is useful (Dorn and Huber, 2020).

Bearing in mind that the GPN-approach lacks the means for theorizing and conceptualizing social-ecological issues, territory and territoriality underline the epistemological character of socio-environmental problems. This requires shifting the focus from manufactures and lead firms, to putting further emphasis on individual and collective actors beyond the core production units. So far, the social-ecological aspect of territoriality is only a marginal term within existing GPN-literature (for example Bridge and Bradshaw, 2017; c.f. also McGregor and Coe, 2021). While it was overshadowed by the "conceptual trinity" of power, embeddedness and value in GPN 1.0, it received more attention in GPN 2.0 (Alford, Visser and Barrientos, 2021; Bridge and Bradshaw, 2017, p. 219). Coe and Yeung emphasize the "organizational scales (vertical dimension) of network actors and their territorial embedding (horizontal interfaces)" (2015, p. 72). They describe the two as "necessarily interconnected because, irrespective of their vertical scales of organization, actors in global production networks must eventually 'touch down' in specific territorial ensembles – be they local, regional, or national" (Coe and Yeung, 2015, p. 72). Hence, the vertical dimension relates to the geographic reach (from global to local) of different actors. The horizontal dimension relates to the spatial-territorial forms of economic activities. Analyzing the liquefied natural gas production network and showing how actors and their relations shape a particular territorial form (a global gas market), Bridge and Bradshaw (2017) have empirically shown the potential of paying more attention to territoriality in global production networks. They focus on the on the relation between organizational structures, network practices, and territorial forms, and conclude that network territoriality not only responds to, but rather constitutes markets.

Regarding the meanings and uses of territory, territoriality and territorialization there is great heterogeneous conceptual blending and amalgamation, leading to a weakening of research results through lack of conceptual clarity. To overcome this challenge, –and starting with territory– we decipher the concepts' different accesses to highlight their potential for GPN research.

Decoding conceptions of territory

For centuries, the concept of territory has been deeply anchored in the Anglophone debate. Ever since the Early Renaissance and the spread of the modern nation-state, in first generation Anglophone literature, territory refers to a "bounded space under the control of people, usually a state" (Elden, 2013b, p. 322). Largely undertheorized (Elden, 2013b; Painter, 2010) and today often used as self-evident in meaning, Elden (2013b) gives a striking historical genealogy of the concept. In *The Birth of Territory*, he shows how cartography

and legal instruments influenced the term's modern conception. As such the concept is fundamentally associated with sovereignty and power, considering territory mostly as a fixed unit of sovereign space. The territorial state is then contemplated as a container for society, which makes society a national phenomenon (Agnew, 1994). Viewed from a Foucauldian perspective, Elden (2013) then refers to territory as a bundle of political technologies for the control of terrain. Echoing this understanding, Cox (2002) even proposed territory (and territoriality) as the defining concepts of political geography.

Thus, we see an evolution of the Anglophone concept from a *fixed-space* to a more relational understanding which was also influenced by the Francophone debate (particularly by Deleuze and Guattari, e.g. 1987; Raffestin, 1984, 2012). In 1994, Agnew warned against the conventional thinking of territory –the *territorial trap*– and made the case for including the broader social and economic structures into the debate. Building on this criticism, Paasi (1998) stresses the social construction of territories, whereby nation-states and borders are expressions of power-relations. The Francophone poststructuralist approaches influenced the understanding of territory as an "open, unbounded, relational space" (Antonsich, 2017, p. 4). Painter (2010) re-conceptualizes territory around the notion of network and emphasizes the relational production of territory. Similarly, territory is often considered as a social and historical product (Brenner and Elden, 2009; Delaney, 2005; Sassen, 2013). By adding height and depth, Elden (2013a) and Bridge (2013) invite to think territory as three-dimensional space, as volume rather than area. Instead of considering the global level, this perspective extends power by a vertical dimension, emphasizing the need for leaving conceptions of territories as bordered, divided and demarcated behind (Elden, 2013a).

Despite the opening and approximation to the Francophone debate, we can identify a recurrent state-focus in the Anglophone territory literature. Here, it is a top-down strategy of spatial control, largely independent of social change. We therefore have to make a quintessential distinction between the primarily static understanding of *territory* and the more fluxionary understanding of *territoire*. Although Anglophone territory literature considers a plurality of scales, so that any space can become a territory, boundaries are still a prevailing theme. *Territoire* enhances this perspective by considering territory as a lived space and environment that includes all forms of action (Di Méo, 2008; c.f. Deleuze and Guattari, 1987). Boundaries become indistinct and regardless of the respective size, social practices and experiences create a territoire. It is, thus, a performative category that results from everyday production (in French 'territoires du quotidien' see Di Méo, 2016). An early representative of Francophone literature, Claude Raffestin, describes territoire as an "ensemble of relations" (Raffestin, 2012, p. 123). He considers territoire as the result of territoriality, so that territoire cannot be a fixed creation, but rather has to be (re-)produced by material, discursive and everyday practices on a continuous basis (Dietz and Engels, 2014; Raffestin,

1984; Pachoud, Koop and George, 2022). The performative element accentuates the processual and horizontal character of territoire. Considering territories as the product of social lives, we can emphasize the importance of territories as key constituents of cultural identification processes (Di Méo, 2016; Pachoud, 2019). Building on these bodies of work, Dorn (2021a) argues that resistance processes not only define and create territories, but also fundamentally reinforce individual and collective territorial identification.

In a Latin American context, we can see this aspect unfold: Here, *territorio* plays a pivotal role in resistance against large-scale development projects. In Latin America, the particularly fruitful debate on territorio underlines the concept's polysemy. Here, territorio is deeply entrenched in the continent's history. For 500 years, conquest and colonization have caused the displacement and disempowerment of indigenous peoples, imposing new meanings, values and territorialities (see next section) (Rivet, 2014). Today, territorio is used in very diverse contexts: The use of territorio for border demarcations, infrastructure projects, the exploitation of resources and other large-scale development projects (conceptually influenced by Milton Santos' works; e.g. Santos, 1994) contrasts the more recent use as a tool for mobilization and struggle and as a spatialized claim of social movements (Haesbaert and Mason-Deese, 2020; López Sandoval, Robertsdotter and Paredes, 2017). Those struggles aim at re-appropriating the historical patrimony of natural resources and reinventing cultural identities and are part of an emerging emancipation process (Porto Gonçalves and Leff, 2015).

In view of the indigenous peoples of the Andes, territory is fundamentally a pluralistic concept that unites all living beings, the earth as well as immaterial dimensions, including spiritual forces (Castro-Sotomayor, 2020; Haesbaert and Mason-Deese, 2020). The deep veneration for *Pachamama* (Mother Earth) reflects this holistic and relational view: Territorio, in this context, can be described as what Radcliffe (2017, p. 220) calls geographies of indigeneity. With the *territorial turn* of the 1990s and the general re-valorization of the *indigenous* in the wake of ILO Convention 169 (Indigenous and Tribal Peoples Convention), claims for autonomy and self-determination increased. Territorio not only became an antidote to Western development ideas, but also an arena of dispute and a central dimension for analyzing social movements (see Bryan, 2012; López Sandoval, Robertsdotter and Paredes, 2017; Manzanal, 2007; Porto Gonçalves, 2002; Reyes and Kaufman, 2011; Svampa, 2008). We can thus identify territorio as the manifestation of power relations and as a bottom-up strategy of resistance of indigenous peoples.

Recently, Anglophone scholars have started to pay attention to Latin American academia and social movements. For example, Bryan (2012) argues for a reconsideration of territory as a process. Halvorsen (2019) pleads for rethinking Anglophone conceptions beyond the Eurocentric tradition. Building on Latin American scholarship, Halvorsen (2019) attempts to decolonize territory by considering it as the "appropriation of space in pursuit of political projects [...] in which multiple [from bottom-up grassroots to top-

down state] political strategies exist as overlapping and entangled" (p. 791). So far, decolonial perspectives on territory are, however, mostly limited in scope. Indigenous claims for autonomy are often channeled into the legalization of land property based on the mapping of indigenous territories. While Bryan (2012) considers the recognition of communal property rights as limited in addressing the comprehensive demands for self-determination, Penelope Anthias (2021, pp. 268-269) points out that property and territory "work together to efface alternative indigenous ontologies of land and re-inscribe state sovereignty over indigenous socio-natures". In other words, through mapping, legal terms, and the expansion of private property, indigenous peoples' claim for communal land is itself a territorialization of the state. This territorialization of the state contrasts with the logic of the commons practiced by indigenous communities. Anthias (2021, p. 270) further emphasizes that indigenous claimants are both "called on to affirm their cultural difference and to conform to a modern conception of territory". She therefore underlines that "indigenous territories must be analyzed in the context of broader processes of capitalist territorialization and associated social and environmental fixes".
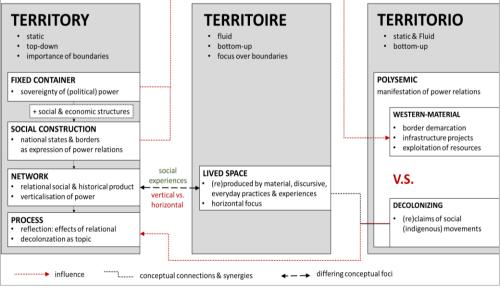
Figure 1. Anglophone, Francophone and Latin American foci on territory

Source: Own illustration.

To put it more concretely, Figure 1 shows the varying focuses and starting points of how territory is defined and used. It becomes apparent that the Anglophone has long been dominated by a static, top-down perspective, laying the focus on boundaries and state structures. This perspective becomes particularly relevant when setting up a meta-frame of analysis (macro or state level). The fluid, bottom-up perspective on the lived space of *territoire*, on the

contrast, allows viewing the same case study from a different angle, showing greater potential to include more-than-rational, more-than-human elements of rationalization and argumentation. This feature becomes clear in conflictive settings, where values- and emotion-based actions occur. *Territorio*, then allows the amalgamation of both the Francophone and Anglophone perspectives, highlighting the ambivalences and polysemic manifestations of power relations, including decolonizing aspects.

Contextualizing territoriality and territorialization

Much like territory, the understandings of territoriality and territorialization have undergone major changes. The origin of territoriality lies in investigations on animal ethology in the early 20th century. Howard (1920), for instance, uses territoriality to refer to the behavior of animals that occupy a certain territory and defend it against individuals of their own species. As of the late 1960s, the concept has been adapted to the social sciences (Antonsich, 2017). In 1986, Robert Sack published his widely recognized work on human territoriality. He defines territoriality as a "powerful strategy to control people and things by controlling area" (Sack, 1986, p. 5). In this sense, Paasi (1998, p. 86) understands territorialities as "overlapping spaces of dependencies and constellations of power". Approaching the Francophone conception, Delaney (2005, p. 12) opens up the debate to meanings and knowledge by defining territoriality as "implicating and being implicated in the ways of thinking, acting, and being in the world –as ways of world-making informed by beliefs, desires, and culturally and historically contingent ways of knowing" and as both a metaphysical and material phenomenon. Despite his references to Lefebvre, Delaney's conception is still biased towards the political organization of space, subordinating social aspects of territoriality.

Understanding territoriality as the "relational spectrum of a collectivity, group, or individual" (1984, p. 140), Claude Raffestin's perspective goes far beyond the established Anglo-American conception. Contradicting the idea of *territoriality-as-strategy*, this relational approach underlines territoriality as a processual multidimensional socio-cultural whole and influenced both Francophone and Latin American geography (Klauser, 2012). Starting from this alternative reading, territoriality opens the possibility of thinking territory and society-nature relations differently and influenced a series of work about human ontologies and the pluriverse of socio-natural configurations (Blaser and de la Cadena, 2018; Escobar, 2008, 2018).

While territoriality produces power relations, we comprehend territorialization as a strategy and process of control and power. Territorialization is used to spatialize (political) claims and to inscribe power relations into nature (Peluso and Lund, 2011). Initially serving the need to make territorial claims, protecting resources and collecting taxes, territorialization carried out by states is about controlling people and peoples'

access to natural resources within geographic boundaries (Vandergeest and Peluso, 1995). Brad *et al.* (2015, p. 101) understand territorialization as "an important means of state control over land" based on the creation and mapping of boundaries. These works focus on the (mostly internal) territorialization realized by states or similar entities. Not only states, however, conduct territorialization. Haesbaert describes that territorialization takes place "in and through movement", so that it can also operate at the level of individuals or groups (Haesbaert, 2013a, p. 152), forming both macro- and micro-territories. Although mostly used at the state level, we see, here, the fundamental influence of the territorio-concept on territorialization.

Following Haesbaert (2013a, 2013b), we can consider de-territorialization not only as the destruction or as abandonment of territory, but also as the social precarization of marginalized groups. While he recognizes the increasing levels of mobility produced by globalization, often linked to cultural hybridism, as multi-territoriality, Haesbaert points out that the concept of de-territorialization refers to the loss of territorial control, the precariousness of material living conditions or processes of disidentification and loss of symbolic-territorial references. De-territorialization cannot be dissociated from re-territorialization. Transnational corporations, for example, have pronounced controlled levels of mobility. Haesbaert (2013b) describes how their executives travel through very similar territories without leaving their bubble (standardized territories with the same network of airports, hotels, offices and stores). This is a clear example of re-territorialization by movement. Migrants and expatriates, instead, do not only have a functional, but also a cultural multi-territoriality, that differs from the fast re-territorialization of international executives.

Despite its conceptual complexity, the application of the territorialization concept varies less over space and time and shall step to the background of the subsequent analysis. In order to effectively apply and make use of territory and territoriality –from now on referred to territor(ialit)y– in GPN-research, in what follows we want to structure and operationalize the broad, numerous and complex concepts presented above. To do so, we introduce our analytical framework: the five P of territoriality.

How to work with territoriality: the five P of territoriality

The previous sections made clear that the definitions and applications of territory and territoriality vary greatly from the Anglophone, Francophone and Latin American perspective, stemming from different forms of *Erkennen* (i.e. cognition) that have been learned by researchers in their communities. Although challenging, we consider the different definitions not as hinderance but more so a greater variation of entry points and conceptual lenses for empirical research. Pivotal here, however, is a meta-theoretical embedding of how to empirically deal with the variations of territor(ialit)y. For analytical purposes, we see three preliminary scenarios:

Locating one's research and positioning in relation to the concept: Analysis of GPNs through the territor(ialit)y lenses of Anglophone (e.g. structural top-down), Francophone (e.g. with focus on local, social values) or Latin American (e.g. decolonizing) backgrounds. Hence, a pre-selection of focus is made by the researcher, highlighting respective foci and omitting others.

Using all thought style as an analytical tool to identify research subjects' positioning: Identification of GPN actors' discourses and/or actions and analyzing them according to their positioning in one of the three lenses. In so doing, the researcher keeps a conceptually open mind and does not pre-select the analytical lens. Having positioned the research subjects in case-specific categories, analyses of strategies and interactions can be understood more easily. A conceptual comparison is necessary.

Contextualizing the work of other researchers, i.e. to use the five P as a guide to situate other research and gain a better understanding of the arguments made by research colleagues.

Not to fall into the trap of *unreflected arbitrariness*, we base the selection process for the two scenarios on the works of the scientific epistemologist Ludwik Fleck (1980, 2011) who –starting from praxis– sets up a framework for comparing and contrasting so-called 'thought-styles', i.e. context- and experience-based ways of thinking of a particular group. Here, Ludwik Fleck (2008, pp. 70–86) uses the term *thought collective*, where particular thought styles develop, including their immanently transforming thoughts, interpretations and ideas. Hence, for example, within the Anglophone thought collective on territoriality the string of argumentation is coherent, while the Francophone and Latin American thought collectives' thought styles on the same matter show different starting points and contrasting argumentations while still being coherent within the respective thought collective. Thus, thought with Ludwik Fleck, the different perspectives on territor(ialit)y are equally valid but serve different purposes and underlying structures that have to be unearthed.

Consequently, the breadth of definitions and applications is not a hinderance but more so an opportunity to undertake context-based analyses; the understanding of other thought styles on territory and territoriality allows for a more holistic view on the research topic. Even though Fleck's theory, by comparing and contrasting different thought styles, has been accused of being too fluid, inconsistent and arbitrary, he sees this combination of contradicting viewpoints as an opportunity to free himself from pre-existing corsets (Schlünder, 2005, pp. 59-60). We go along with Fleck's thinking, and add one crucial structuring feature to counteract on critique of arbitrariness of use of territoriality: We take –inspired by Jazz Methodology (Hafner, 2018)– the different approaches to territoriality and break them into "small patterns, minimal structures that allow freedom to embellish – a system that balances between too much autonomy and too much consensus" (Barrett, 2012, p. 71). The result is an ontological breakdown of territoriality based on five P:

pluralistic, polysemic, process-oriented, power relations, physical space anchoring of social relations. The five P should be understood as analytical and structuring categories to identify actors' positionings and rationales.

First, the pluralistic category is considered a meta-frame to conceptually locate the respective thought styles. In this sense, the main objective in this category is to understand the underlying structures and thought style anchors of societal embeddedness of actors. The working question here is: What kind of worldviews, ideologies and societal embeddedness can be observed? Worldviews and ideologies include the cognitive orientation of an individual or a society towards values, ethics but also emotions that are subsequently expressed in goals and strategies. This category thus makes explicit reference to the actors' contexts without pre-setting normative interpretations but rather focusing on how and why actors think and act a certain way.

Second, the polysemic focuses on the attribution of meanings to territory and territoriality, based on the thought style anchorings unearthed in the pluralistic meta-frame. The most obvious example here is the polysemy of territory/territoire/territorio described above. This category embraces the systematic plurality of meanings by relying on the aforementioned thought style foci (i.e. Anglophone, Francophone, Latin American). Which underlying, often subtle, definitions and interpretations are used by respective authors? Polysemy allows, therefore, to structure, position and switch between the different sociocultural and language interpretations, and opens the possibility for a multispectral case study analysis.
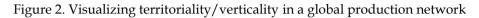
The next P deals with the interrelationship between physical and social space. How is the physical space defined and identified? Possible categorizations range from a static understanding in the form of legal-administrative entities with clear cut borders that are top-down implemented, to more fluid and lived spaces, (de-/re-) coupling the physical to the social space (e.g. Elden, 2010; Gordillo, 2021, Boyce, 2016).
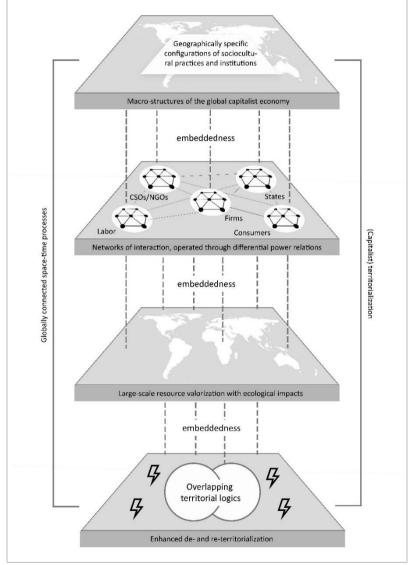
The fourth P goes along with the physical/social space and focuses on power relations. The fundamental link to power relations underlines its conceptual relation to political ecology, or, in the words of Porto Gonçalves and Leff (2015, pp. 81-82), "the triad territory-territoriality-territorialization emerges in the core of political ecology". Without having to start from a degraded environment, territory and territoriality allow us to incorporate the idea of politicized nature into GPN-research. This becomes particularly vital when dealing with indigenous groups, whose emancipation involves the politicization of territories beyond traditional struggles for land. How are power relations materialized? Is the focus on (state) boundaries, (restricted) access to resources, or on the manifestation of influence in shaping thought collectives (i.e. who has the ability to shape and steer thought styles in particular thought collectives), ultimately dominating strategies? Another key item here is the question to what extent the physical space acts as a speed booster or a slower for change of action and thinking.

And finally, the last P highlights the importance of process in territoriality. Based on its pluralistic, polysemic nature, with varying actors, their thought styles, goals and strategies that have an impact on the physical space (and vice versa), negotiations, actions and reactions are constantly evolving. Based on the previous four p-positionings, how do actors shape and are (re-)shaped by the territorialization processes? Which (temporary) outcomes are achieved and how are they interpreted by the actors involved? What are the procedural re-coupling effects thereof? This P is considered an intersectional contextualization of the other four P, putting the focus on the contestedness and continuity of change.

Taking inspiration in Ludwik Fleck's comparing of thought styles, breaking down the main interpretations of territoriality (Anglophone, Francophone, Latin American) into the five P of territoriality, the aforementioned three scenarios of analysis can be refined inasmuch as we do not only choose among three main interpretations but can combine the respective positionings alongside each P-category. The main advantage here is to tailor the analysis to the specific empirical context, while maintaining analytical transparency. To exemplify, when we are interested in a structural analysis of power relations, from a vertical top-down perspective, the application of the Anglophone lens is the most suitable; however, if we want to focus on a more horizontal, local-level case-specific analysis of values and emotions, the Francophone strand may be more useful. Additionally, the five P of territoriality can also be used to show the clash of the actor-specific interpretations of territor(ialit)y, leading to power asymmetries, thought style incommensurabilities and ultimately conflictive situations.

GPN and the five P of territoriality

Although there is some empirical evidence that a GPN's territorial form always depends on actors and their relations, GPN-literature and territory, territoriality and territorialization are still largely separate debates. We find the combination of territoriality and GPN to be *mutually* fruitful and propose the five P introduced in section 5 as concrete analytical patterns: The analytical value of territoriality helps to *ground* global production networks and allows both grasping a GPN's territorial configuration and analyzing actors' contrasting territorial logics. Particularly in the context of primary production, analyzing global production networks requires not only a decoding of territorial configurations, but also a more holistic understanding of different actors' territorial logics, their positionings, goals and interests. The *pluralistic* meta-frame shows where actors come from and why they argue and act the way they do, and allows for analyzing the conflictivity of production/extraction. The *polysemic* nature of territoriality facilitates a more holistic perspective on the *physical space* anchoring of social relations –what is the function of physical space (e.g. resource extraction site vs. place to live)? –. We recognize that the patterns of *power relations* and *process* are already

implemented in existing GPN-literature. The analysis of power relations can, however, be enriched through incorporating actors' strategies and issues of materialization through physical space. How do, for example, material properties of the physical space speed up and/or slow down processes? Acknowledging the fluid character and the continuous (re-)configuration of GPNs, we stress the potential for further explorations of *process*.

Figure 2. Visualizing territoriality/verticality in a global production network

Source: adapted from Coe *et al.*, 2008.

Finally, we can deduce two core issues: On one hand, the grounding of a GPN illustrates that all GPNs are eventually extractive (Dorn and Huber, 2020; Radhuber, 2015). On a meta level, we can thus determine that GPNs cause and intensify the de-territorialization and re-territorialization of actors. Building on more recent works on the decolonization of territory and territoriality (Anthias, 2021; Halvorsen, 2019; López Sandoval, Robertsdotter and Paredes, 2017; Manzanal, 2007; Porto Gonçalves and Leff, 2015), we assume that capitalist territorialization takes place through GPN. In this context, even counter-hegemonic-designs are often permeated by colonial thoughts and materialized in the physical space. The *territory-as-material-anchor* conception underlines the vertical dimension of global production networks, including industries as different as the extractive sector (oil and gas, metals, minerals), renewable energy production or the internet (for example cloud storage and server farms, see Sadowski, 2019 for the example of data). On the other hand, primary production –be it the beginning of a manufacturing value chain or an extractive value chain– often causes territorial conflicts and contestation around extraction projects (Dunlap and Jakobsen, 2020). By examining and deciphering the territorial logics of different actors, we can visualize overlapping territorialities. In indigenous territories, for example, overlapping territorialities can lead to processes of resistance, adaptation and (cultural) hybridity (Dorn, 2021a). Taking up Figure 2, we can distinguish actors' conceptions of territory. Government entities in Latin America, for example, often use territory as a top-down concept. This contrasts the decolonial and bottom-up territory concept of social movements (Haesbaert and Mason-Deese, 2020). Companies usually apply an understanding similar to state agencies. The GPN-approach, then, allows us to illustrate processes of territorialization, re-territorialization and de-territorialization within and alongside global value chains. While transnational companies –similar to the state– apply certain strategies of territorialization, and re-territorialize quickly in different territorial ensembles, both a company as well as the GPN itself might cause the de-territorialization of marginalized groups.

Discussion and conclusion

We see untapped potential in investigating particular GPNs with territoriality. Based on a comprehensive discussion of the definitions and applications of territor(ialit)y in the Anglophone, Francophone and Latin American debates, we have introduced our framework, the five P of territoriality. The five P serve as concrete analytical patterns, and allow analyzing a GPN's territorial configuration and actors' territorial logics. We understand territorialization then –be it intentionally or unintentionally– as the operationalization of territoriality. It is the territorial strategy that results from a unique constellation of the five P.

On a meta-level, we thus understand that capitalist territorialization takes place through GPNs. When considering extractive GPNs, we can determine that GPNs cause and intensify the de-territorialization and re-territorialization of actors. To give an example from the extractive industry, colliding interests between economic actors and non-economic actors like indigenous communities often enhance the articulation of claims. In a Latin American context, these claims for decolonization are often channeled into claims for land titles, i.e. private property. Supported by NGOs and social scientists, indigenous people apply strategies such as participatory mapping (Bryan, 2011) as attempt for alternative territorialization. While "this counter-mapping can allow indigenous people to emphasize their land claims which are often not included in government maps and may overlap with private or state land" (Brad *et al.*, 2015, p. 108), it also entails a subordination to a modern state-corset and territorial bureaucracies. Thus, even if social movements counteract territorialization processes in particular places, this would mean a subordination to state structures.

We conclude that attempts of decolonization are most commonly penetrated by colonial thinking. Thinking of Marx's work on the territorial dispossession of peasants, we understand that it is capitalism that has always caused de-territorialization; understood as the social precarization of marginalized groups. Dunlap and Jakobsen (2020, p. 76) show that "the work on land control and territorialization reveals the centrality of violence in both 'green' (intensive, forestry and conservation) and conventional (mineral and hydro carbon) forms of extraction". From this standpoint, the territorialization in global supply chains sustains and accelerates the techno-capitalist trajectory. Global supply chains constitute capitalism's (im-)material foundation, i.e. the set of inputs that culminated in a particular item, including "prior transformations, the raw materials, the transportation mechanisms, the labor input…" (Hopkins and Wallerstein, 1977, p. 128). In this context, we have shown that GPNs sensitivity to non-economic actors allows for greater engagement with decolonial approaches, epistemological socio-nature relations, and different territorialities.

The debate on state territorialization recently taken up by Anthias (2021), is influenced by pioneers such as Escobar (2008), Haesbaert (2013b) or Porto-Gonçalves and Leff (2015). Porto Gonçalves and Leff (2015, p. 82) describe how territories become "strategic areas for alternative and confronting rationalities and interests" and "front of dispute for the appropriation of their natural resources" and they all recognize that sustainable societies rely on the construction of *territories of difference* (Escobar, 2008). This refers to the *social re-appropriation of nature*, grounded "in the diverse ecological and cultural conditions of the peoples of the Earth" (Porto Gonçalves and Leff, 2015, p. 83). We therefore conclude that for constructing a sustainable new environmental rationality we need to consider and investigate the plurality of alternatives that question hegemonic models of development, and reflect the diversity of existing nature-culture worldviews. With its focus on manifold realities,

underlying power relations and their material groundings, the concept of territoriality –and, in fact, the five P of territoriality– has the potential to generate necessary knowledge for this purpose.

We have shown territoriality's potential for analyzing global production networks. For this purpose, we have defined and further illustrated the five P of territoriality: pluralistic, polysemic, process-related, power relations and physical space. These five patterns are essential for determining position and positioning in territoriality-research. We understand the five P as a tool of operationalization, adding substance to the concept of territoriality. Thinking territoriality as framework, the five patterns allow for a great level of structure and comparability. While we have shown that breaking into patterns works great for territoriality, we also emphasize the need to underpin this with empirical research in the future. The five P have evolved based on their implicit use in our previous research; a deliberate and hands-on application is currently a work in progress. However, this paper explicitly clarifies an important structuring element and introduces a tool to make the research process more transparent and accountable according to scientific criteria.

References

Agnew, J. (1994). The Territorial Trap: The Geographical Assumptions of International Relations Theory. *Review of International Political Economy* 1, 53-80.

Alford, M.; Visser, M. and Barrientos, S. (2021). Southern actors and the governance of labour standards in global production networks: The case of South African fruit and wine. *Environment and Planning A: Economy and Space 53* (8), 1915-1934.

Alimonda, H. (2015). Mining in Latin America: coloniality and degradation. In R. L. Bryant (ed.), *The International Handbook of Political Ecology* (pp.149-161). Cheltenham, UK: Edward Elgar Publishing.

Anthias P. (2021). Rethinking territory and property in indigenous land claims. *Geoforum,* 119, 268-278.

Antonsich, M. (2017). Territory and territoriality. In D. Richardson, N. Castree, M. F. Goodchild, A. Kobayashi, W. Liu and R. A. Marston (eds.), *International Encyclopedia of Geography: People, the Earth, Environment, and Technology* (pp.1-9). Hoboken, USA: Wiley-Blackwell.

Barrett, F. (2012). *Yes to the mess: Surprising leadership lessons from jazz*. Boston, USA: Harvard Business Press.

Blaser, M. and de la Cadena, M. (2018). Pluriverse. Proposals for a World of Many Worlds. In M. de la Cadena and M. Blaser (eds.), *A World of Many Worlds* (pp.1-22). Durham, UK: Duke University Press.

Brad, A.; Schaffartzik, A.; Pichler, M. and Plank, C. (2015). Contested territorialization and biophysical expansion of oil palm plantations in Indonesia. *Geoforum*, 64, 100-111.

Brenner, N. and Elden, S. (2009). Henri Lefebvre on State, Space, Territory. *International Political Sociology* 3, 353-377.

Bridge, G. (2013). Territory, now in 3D! *Political Geography*, 34, 55-57.

Bridge, G. and Bradshaw, M. (2017). Making a Global Gas Market: Territoriality and Production Networks in Liquefied Natural Gas. *Economic Geography*, 93, 215-240.

Bryan, J. (2011). Walking the line: Participatory mapping, indigenous rights, and neoliberalism. *Geoforum*, 42, 40-50.

Bryan, J. (2012). Rethinking Territory: Social Justice and Neoliberalism in Latin America's Territorial Turn. *Geography Compass*, 6.

Boyce, G. A. (2016). The rugged border: Surveillance, policing and the dynamic materiality of the US/Mexico frontier. *Environment and Planning D*, 34, 245-262.

Castro-Sotomayor, J. (2020). Territorialidad as environmental communication. *Annals of the International Communication Association*, 44, 50-66.

Ceceña, A. E. (2016). La territorialidad de las corporaciones. In A. E. Ceceña and R. Ornelas (eds.), *Las corporaciones y la economía-mundo. El capitalismo monopolista y la economía mexicana en retrospectiva* (pp.108-133). México D.F., México: Siglo XXI.

Coe, N. M.; Hess, M.; Yeung, H. W.-c.; Dicken, P. and Henderson, J. (2004). 'Globalizing' regional development: a global production networks perspective. *Transactions of the Institute of British Geographers*, 29, 468-484.

Coe, N. M.; Dicken, P. and Hess, M. (2008). Global production networks: realizing the potential. *Journal of Economic Geography*, 8, 271-295.

Coe, N. M. and Yeung, H.W.-c. (2015). *Global Production Networks: Theorizing Economic Development in an Interconnected World*. Oxford, UK: Oxford University Press.

Cox, K. R. (2002). *Political Geography: Territory, State and Society*. Oxford, UK: Blackwell Publishing.

Delaney, D. (2005). *Territory - a short introduction*. Malden, USA: Blackwell Publishing.

Deleuze, G. and Guattari, F. (1987). *A Thousand Plateaus - Capitalism and Schizophrenia 2*. Minneapolis, USA: University of Minnesota Press.

Di Méo, G. (2008). Une géographie sociale entre représentations et action. *Montagnes méditerranéennes et développement territorial*, 13-21.

Di Méo, G. (2016). *Le désarroi identitaire - Une géographie sociale*. Paris, FRA: L'Harmattan.

Dietz, K. and Engels, B. (2014). Raum, Natur und Gesellschaft. In J. Oßenbrügge and A. Vogelpohl (eds.), *Theorien in der Raum- und Stadtforschung* (pp.78-96. Münster, Germany: Westfälisches Dampfboot,

Dorn, F. M. (2021a). Changing territorialities in the Argentine Andes: Lithium mining at Salar de Olaroz-Cauchari and Salinas Grandes. *Die Erde* 152, 1-17.

Dorn, F. M. (2021b). *Der Lithium-Rush: Sozial-ökologische Konflikte um einen strategischen Rohstoff in Argentinien*. München, Germany: oekom.

Dorn, F. M. and Huber, C. (2020). Global production networks and natural resource extraction: adding a political ecology perspective. *Geographica Helvetica,* 75, 183-193.

Dunlap, A. and Jakobsen, J. (2020). *The Violent Technologies of Extraction: Political ecology, critical agrarian studies and the capitalist worldeater*. London, UK: Palgrave Macmillan.

Elden, S. (2010). Land, terrain, territory. *Progress in Human Geography*, 34, 799-817.

Elden, S. (2013a). Secure the volume: Vertical geopolitics and the depth of power. *Political Geography,* 34, 35-51.

Elden, S. (2013b). *The Birth of Territory*. Chicago, USA: The University of Chicago Press.

Escobar, A. (2008). *Territories of Difference: place, movements, life, redes*. Durham, UK: Duke University Press.

Escobar, A. (2018). *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*. Durham, UK: Duke University Press.

Faludi, A. (2013). Territorial Cohesion, Territorialism, Territoriality, and Soft Planning: A Critical Review. *Environment and Planning A: Economy and Space, 45* (6), 1302-1317.

Fleck, L. (1980). *Entstehung und Entwicklung einer wissenschaftlichen Tatsache: Einführung in die Lehre von Denkstil und Denkkollektiv*. Frankfurt am Main, Germany: Suhrkamp.

Fleck, L. (2008). Das Problem einer Theorie des Erkennens. In E. O. Graf and B. Griesecke B (eds.), *Ludwig Flecks vergleichende Erkenntnistheorie* (pp. 63-108). Berlin, Germany: Parerga.

Fleck, L. (2011). Wie entstand die Bordet-Wassermann-Reaktion und wie entsteht eine wissenschaftliche Entdeckung im Allgemeinen? In S. Werner and C. Zittel (eds.), *Denkstile und Tatsachen. Gesammelte Schriften und Zeugnisse* (pp.181-210). Berlin, Germany: Suhrkamp.

Gordillo, G. (2021). The power of terrain: The affective materiality of planet Earth in the age of revolution. *Dialogues in Human Geography,* 11 (2), 190-194.

Haesbaert, R. (2013a). A Global Sense of Place and Multi-territoriality: Notes for Dialogue from a 'Peripheral' Point of View. In D. Featherstone and J. Painter (eds.), *Spatial Politics. Essays for Doreen Massey* (pp. 146-157). Chichester, UK: Wiley-Blackwell.

Haesbaert, R. (2013b). Del mito de la desterritorialización a la multiterritorialidad. *Cultura y representaciones sociales,* 8, 9-42.

Haesbaert, R. and Mason-Deese, L. (2020). Territory/ies from a Latin American Perspective. *Journal of Latin American Geography,* 19, 258-268.

Hafner, R. (2018). *Environmental Justice and Soy Agribusiness*. London, UK: Routledge.

Halvorsen, S. (2019). Decolonising territory: Dialogues with Latin American knowledges and grassroots strategies. *Progress in Human Geography,* 43, 790-814.

Henderson, J.; Dicken, P.; Hess, M.; Coe, N.M. and Yeung, H.W.-c. (2002). Global production networks and the analysis of economic development. *Review of International Political Economy,* 9, 436-464.

Hopkins, T. K. and Wallerstein, I. (1977). Patterns of Development of the Modern World-System. *Review (Ferdinand Braudel Center),* 1, 111-145.

Howard, H.E. (1920). *Territory in Bird Life*. New York, USA: E.P. Dutton and Company.

Hughes, A.; McEwan, C. and Bek, D. (2015). Postcolonial Perspectives on Global Production Networks: Insights from Flower Valley in South Africa. *Environment and Planning A: Economy and Space, 47* (2), 249-266.

Kister, J. (2019). *Von Wachstum und Werten: Globale Wertschöpfungsketten im Fairen Handel*. München, Germany: oekom.

Klauser, F. R. (2012). Thinking through territoriality: introducing Claude Raffestin to Anglophone sociospatial theory. *Environment and Planning D: Society and Space,* 30, 106-120.

Lee, S. O.; Wainwright, J. and Glassman, J. (2018). Geopolitical economy and the production of territory: The case of US–China geopolitical-economic competition in Asia. *Environment and Planning A: Economy and Space, 50* (2), 416-436.

López Sandoval, M. F.; Robertsdotter, A. and Paredes, M. (2017). Space, Power, and Locality: the Contemporary Use of Territorio in Latin American Geography. *Journal of Latin American Geography,* 16, 43-67.

Manzanal, M. (2007). Territorio, poder e instituciones: Una perspectiva crítica sobre la producción del territorio. In M. Manzanal, M. Arqueros and B.

Nussbaumer (eds.), *Territorios en construcción. Actores, tramas y gobiernos: entre la cooperación y el conflicto* (pp. 15-50). Buenos Aires, Argentina: Ciccus.

McGregor, N. and Coe, N. M. (2021). Hybrid governance and extraterritoriality: Understanding Singapore's state capitalism in the context of oil global production networks. *Environment and Planning A: Economy and Space 0* (0), 0308518X2110481.

Paasi, A. (1998). Boundaries as social processes: Territoriality in the world of flows. *Geopolitics,* 3, 69-88.

Pachoud, C. (2019). Identity, feeling of belonging and collective action in localized agrifood systems. Example of the Serrano cheese in the Campos de Cima da Serra, Brazil. *Agricultures,* 28, 1-9.

Pachoud, C.; Koop, K. and George, E. (2022). Societal transformation through the prism of the concept of territoire: A French contribution. *Environmental Innovation and Societal Transitions,* 45, 101-113.

Painter, J. (2010). Rethinking territory. *Antipode,* 42, 1090-1118.

Peluso, N. L. and Lund, C. (2011). New frontiers of land control: Introduction. *The Journal of Peasant Studies,* 38, 667-681.

Porto Gonçalves, C. W. (2002). Da geografia às geo-grafias: um mundo em busca de novas territorialidades. In A. E. Ceceña and E. Sader (eds.), *La guerra infinita. Hegemonía y terror mundial* (pp. 217-256). Buenos Aires, Argentina: CLACSO:

Porto Gonçalves, C. W. and Leff, E. (2015). Political Ecology in Latin America: the Social Re-Appropriation of Nature, the Reinvention of Territories and the Construction of an Environmental Rationality. *Desenvolv. Meio Ambiente,* 35, 65-88.

Radcliffe, S. A. (2017). Geography and indigeneity I: Indigeneity, coloniality and knowledge. *Progress in Human Geography,* 41, 220-229.

Radhuber, I. M. (2015). *Extractive Processes, Global Production Networks and Inequalities.* Working Paper Series 89. Berlin, Germany: desigualdades.net International Research Network on Interdependent Inequalities in Latin America.

Raffestin, C. (1984). Territoriality - A Reflection of the Discrepancies Between the Organization of Space and Individual Liberty. *International Political Science Review,* 5, 139-146.

Raffestin, C. (2012). Space, territory, and territoriality. *Environment and Planning D: Society and Space,* 30, 121-141.

Reyes, A. and Kaufman, M. (2011). Sovereignty, Indigeneity, Territory: Zapatista Autonomy and the New Practices of Decolonization. *The South Atlantic Quarterly,* 110, 505-525.

Reyes Núñez, C. and Veiga, J.G. (2021). Las corporaciones trasnacionales en el centro de la destrucción del ambiente en el siglo XXI. El caso de la industria petrolera. In R. Ornelas (eds.), *Estrategias para empeorarlo todo. Corporaciones, dislocación sistémica y destrucción del ambiente* (pp. 315-358). México D.F., México: Universidad Nacional Autónoma de México, Instituto de Investigaciones Económicas.

Rivet, M. C. (2014). Territorialidad colonial en Atacama. El caso de Coranzulí (provincia de Jujuy, Argentina). *Estudios de Antropología e Historia Nueva Serie,* 2, 123-139.

Sack, R. D. (1986). *Human territoriality - Its theory and history*. Cambridge, UK: Cambridge University Press.

Sadowski, J. (2019). When data is capital: Datafication, accumulation, and extraction. *Big Data & Society* 6, 1-12.

Santos, M. (1994). O Retorno do Território. In M. Santos, M. A. Souza and M. L. Silveira (eds.), *Território: Globalização e Fragmentação* (pp. 15-20). São Paulo, Brazil: Hucitec and ANPUR.

Sassen, S. (2013). When Territory Deborders Territoriality. *Territory, Politics, Governance,* 1, 21-45.

Schlünder, M. (2005). Flüchtige Körper, instabile Räume, widersprüchliche Theorien: Die produktive Vagheit der Erkenntnistheorie Ludwik Flecks und die Geschichte der Reproduktionsmedizin. In R. Egloff (ed.), *Tatsache - Denkstil - Kontroverse. Auseinandersetzungen mit Ludwik Fleck* (pp. 57-62). Zürich, Switzerland: Collegium Helveticum.

Svampa, M. (2008). *Cambio de época: Movimientos sociales y poder político*. Buenos Aires, Argentina: Siglo XXI.

Svampa, M. (2019). *Neo-extractivism in Latin America: Socio-environmental Conflicts, the Territorial Turn, and New Political Narratives*. Cambridge, UK: Cambridge University Press.

Tups, G. and Dannenberg, P. (2021). Emptying the Future, Claiming Space: The Southern Agricultural Growth Corridor of Tanzania as a Spatial Imaginary for Strategic Coupling Processes. *Geoforum*, 123, 23-35.

Vandergeest, P. and Peluso, N. L. (1995). Territorialization and State Power in Thailand. *Theory and Society,* 24, 385-426.

Yeung, H.W.-c. (2021). The trouble with global production networks. *Environment and Planning A: Economy and Space, 53* (2), 428-438.

Notas