

Schmid, Benedikt

Article — Published Version

Hybrid infrastructures: The role of strategy and compromise in grassroots governance

Environmental Policy and Governance

Provided in Cooperation with:

John Wiley & Sons

Suggested Citation: Schmid, Benedikt (2021) : Hybrid infrastructures: The role of strategy and compromise in grassroots governance, Environmental Policy and Governance, ISSN 1756-9338, Wiley, Hoboken, NJ, Vol. 31, Iss. 3, pp. 199-210, <https://doi.org/10.1002/eet.1929>

This Version is available at:

<https://hdl.handle.net/10419/242012>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<http://creativecommons.org/licenses/by-nc/4.0/>

Hybrid infrastructures: The role of strategy and compromise in grassroots governance

Benedikt Schmid

Institute for Environmental Social Sciences and Geography, University of Freiburg, Freiburg, Germany

Correspondence

Benedikt Schmid, Institute for Environmental Social Sciences and Geography, University of Freiburg, Freiburg, Germany.
Email: benedikt.schmid@geographie.uni-freiburg.de

Abstract

Contemporary trajectories of unsustainability and injustice require a profound restructuring of political, economic, and cultural institutions not sufficiently reflected in top-down governance. Diverse bottom-up actors and organizations that attempt to practice and institute more sustainable and just relations, in turn, have to tackle unfavorable conditions and generally lack the resources to take full effect. This paper critically discusses the role of strategy and compromise in facing this cycle of institutional inertia and lack of bottom-up agency. To illustrate its argument, the paper draws on an ethnographic case study on community-led initiatives in Stuttgart (Germany). It traces the ways in which a particular arrangement—an “open workshop”—supports individuals and organizations in their engagement in sustainability-oriented activities while substantiating ethically and socially ambiguous practices. Building on these empirical insights, the paper develops a notion of strategy that revolves around the reflective construction of hybrid but transformative infrastructures to strike a balance between ethical congruency and transformative pragmatism.

KEYWORDS

degrowth, postcapitalism, hybridity, infrastructure, strategy, transformation, activist scholarship

1 | INTRODUCTION

Despite a sophisticated case made by social and natural scientists against current patterns of overconsumption and injustice, there is little agreeing (re)action from policy-makers and planners. As a consequence, much critical research shows discontent with the depth of top-down responses to issues like climate change; biodiversity loss; soil erosion; contamination of water, lands, animals, and people; exploitative economic relations; and social inequality (Blühdorn, 2017; Kenis & Lievens, 2015; Malm, 2018). To that effect, research exploring the potential of community-led organizing and bottom-up agency in the context of sustainability and justice transitions becomes increasingly important with respect to societal change (Chatterton, 2016; Fischer, Holstead, Hendrickson,

Virkkula, & Prampolini, 2017; Hardt & Negri, 2017; Seyfang & Haxeltine, 2012). The point thereby “is not to elide the role of top-down policy measures, but to revalorize the oft-dismissed role of grassroots creativity in pro-environmental [and social] transitions” (Smith, 2020, p. 5).

Progressive community-led organizations, however, generally lack influence and systematicity to effect profound change of political and economic institutions in line with their goals and missions (while their role as “corrective” is not to be underestimated). Embedded in power relations that constrain transformative practice, community initiatives need to put much effort in establishing themselves and often struggle to acquire sufficient resources for their activities (Buch-Hansen, 2018; see below). In absence of decisive top-down policy measures, the question arises how it is possible to reverse the cycle of increasing

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes.

© 2021 The Author. *Environmental Policy and Governance* published by ERP Environment and John Wiley & Sons Ltd.



pressures on social-ecological resources and the limitations of bottom-up agency to counteract these (Wright, 2010).

The paper examines strategic bottom-up organizing as a potential pathway to trigger an inverted, transformative dynamic toward grassroots governance (Hardt & Negri, 2017). Strategy, here, is linked to the ability to work creatively with and through given circumstances which frequently involves trade-offs between transformative claims and the means employed (O'Neill & Gibbs, 2016). In the following, I will refer to the (reflective) acceptance of negative effects in order to further prioritized (and generally more farsighted, that is strategic) objectives as “politics of hybridity” (Schmid, 2020). In this regard, I will also zero in on ethical issues that come with such a strategic approach. Building on these considerations around hybridity, then, the paper draws on the notion of infrastructure to describe the arrangements created by community-led groups that catalyze further pro-environmental and social activities, while also accounting for their ambiguities—“*hybrid infrastructures*.”

Overall, grassroots activism, as a matter of course, is not uniform but driven by diverse ambitions, problem diagnoses, and visions. While the type of community-led organizations that are of interest here have reference to sustainability and justice, meanings and agendas vary within and across initiatives—as does the scholarly debate surrounding these notions. For the present purpose sustainability and justice are understood to be two closely related normative claims to autonomy, democratic decision-making, recognition, (intra- and intergenerationally equitable) fulfillment of needs, and the integrity of ecological and social systems (Akbulut, Demaria, Gerber, & Martínez-Alier, 2019; Barnett, 2017; North & Cato, 2017; Walker, 2012).

Capitalism, as a form of social organization in which “decision-making processes [and the] structures of everyday life [...] all bear the stamp of a concern for the greatest possible profitability” (Gorz, 2012, p. ix; see also Boltanski & Chiapello, 2018) is fundamentally at odds with self-governance, balance, and equity (Chatterton & Pusey, 2020). The kind of transformation (or transition) *away from* heteronomous and exploitative social-ecological relations and *towards* more sustainable and just societies (in a deliberately broad sense that itself is to be determined democratically) as discussed here, involves a postcapitalist horizon. In the following, this horizon is framed using the terms degrowth and postcapitalism, both referring to a profound reorganization of socio-ecological relations *beyond* a narrow focus on (economic) profitability (Gibson-Graham, 2006; Kallis, 2018, section 2).

While offering a primarily conceptual contribution, the paper is both inspired by and uses an empirical case from Stuttgart (Germany) to illustrate its argument. The arrangement of an “open workshop”—a publicly accessible workspace used for various construction, maintenance, and repair practices—offers insights into the complexities of bottom-up transformative action. The workshop constitutes a commons in Stuttgart's community economy in the sense that it is collectively administered and used by a large group of tinkerers, activists, and casual do-it-yourselfers. However, although the workshop is a resource for sustainability-related practices, it also substantiates socially and ecologically ambiguous activities involving high-energy demands and use of conflict materials.

The paper proceeds as follows: Section 2 situates the paper within recent debates on societal change and transformative practice with a

particular focus on the variation of approaches that focus on the politics of societal change and such that emphasize feasibility and practicalities. Acknowledging both lines of debate, Section 3 introduces the notions of strategy and tactics and links the discussion to a conception of power as rooted in the alignment of everyday practices. From this vantage point, it argues for the relevance of (strategic) organizing in the context of grassroots governance. Section 4, subsequently, introduces the empirical case study involving diverse community-led initiatives among which the open workshop sticks out as hub and enabling infrastructure for other sustainability-oriented activities. Identifying the ambiguity of the activities that surround the workshop inspires and illustrates a discussion on hybridity and strategy, which are deepened in Section 5 by recourse to the paper's theoretical backdrop. Here, I outline what a (pragmatic) *politics of hybridity* entails and some of its pitfalls. The penultimate Section 6 sketches out *hybrid infrastructures* as part of a transformative strategy and discusses its relevance beyond the confines of the portrayed example. The paper closes with reflections on the role of critical reflexivity and activist scholarship.

2 | TRANSITION AND TRANSFORMATION

Geography and cognate disciplines have spawned a (spatial) research agenda on societal change beyond the current trajectories of injustice and ecological destabilization. The broader debate includes a wide range of perspectives on alternatives and transformation pathways often discussed under the umbrellas of alternative economic/political spaces and sustainability transitions, respectively. While there is no strict separation between these debates, juxtaposing the two strands highlights a tendency in research on societal change that frames this paper: the emphasis of practicality at the expense of politics and vice versa.

Scholarship on alternative economic and political spaces (Fuller, Jonas, & Lee, 2016; Leyshon, Lee, & Williams, 2003) challenges instituted social relations that produce (and demand) a continuously increasing, yet ever more unequally distributed, resource consumption, to an extent that is fundamentally destabilizing communities and ecological systems. It includes approaches such as postcapitalism (Chatterton & Pusey, 2020; Gibson-Graham, 2006), postgrowth and degrowth (Demaria, Kallis, & Bakker, 2019), commoning (Bollier & Helfrich, 2012), radical democracy (Barnett, 2017), and the social and solidarity economy (North & Cato, 2017). While drilling down thoroughly into the unsustainability of capitalist relations and proposing more just and sustainable alternatives, the literature often remains inchoate as to the practicalities of social change and its actual realization.

Sustainability transition research (STR; Loorbach, Frantzeskaki, & Avelino, 2017), on the other side, attends to questions of institutional change and the actors involved therein in greater depth. It includes writings on (socio-technical) innovation (Avelino et al., 2017; Jacobsson & Bergek, 2011; Seyfang & Haxeltine, 2012), transition management (Loorbach, 2010), and transition governance (Avelino & Grin, 2017; Patterson et al., 2017). STR, however, has been criticized for a lack of engagement with capitalism and, by extension, transition pathways that

point beyond it (Feola, 2020). This is indicative of a broader reluctance to engage with questions of (lowercase) politics which STR often addresses only in passing if at all (Lawhon & Murphy, 2012; Patterson et al., 2017).

This unobvious separation between critical but less practically oriented approaches versus more institution and actor-focused perspectives on change with a tendency to narrow the scope of transformative politics, of course, does not hold up in a strict sense. Many voices speak to both debates around (postcapitalist) alternatives and the practicalities of transition and governance (see for instance Avelino et al., 2017; Bauwens & Mertens, 2018; Vandeventer, Cattaneo, & Zografos, 2019). Still, this observation does unveil a major challenge for research on social change, mirrored in the literal meanings of the two terms it frequently uses: transformation and transition (Hölscher, Wittmayer, & Loorbach, 2018).

Transformation, literally, means to “change in shape.” Accordingly, it does not presume a particular agent or directionality at first. While this openness toward diverse trajectories provides room for the collective and democratic development of orientation, it can also turn into a negative: the lack of positioning and a tangible agenda. Among others, this critique has been directed—generally in a sympathetic and constructive way—at community economy scholarship, which has been observed to emphasize diversity and possibility at the expense of the practicalities of societal change (Castree, 1999; Collard & Dempsey, 2019; Glassman, 2003; Jonas, 2016; Schmid & Smith, 2020; Sharpe, 2014).

Transition, in contrast, is best paraphrased as “going across.” Emphasizing the passage from one state of affairs to another, transition implies both a goal and sense of agency. Transition's practical orientation, however, might come at the expense of politics, understood here as the collective, democratic, and open-ended process of struggling over the coordinates of co-existence (Gibson-Graham, 2006)—a beacon of community economy scholarship. The bracketing out of capitalism from analyses and critique as “landscape factor” by STR scholars is a case in point (Feola, 2020). Narrowing transition's orientation from the outset limits the range of possible futures to be envisioned and fought for.

Taken in a literal sense, that is, transformation and transition carry very different emphases on the development of “orientation.” While transition tends to be premature in determining its directionality—showing managerial and technocratic tendencies—transformation leaves much room for diverse possibilities and pathways—sometimes as much as to decenter targeted organization and action. A theory of societal change, of course, needs to articulate its orientation and vision *and* allow for a politics to negotiate, adjust, and correct the former. In short, it needs to avoid the pitfalls of being apolitical or ontologically naive or to lack in orientation and practicality. The subsequent section reflects on this tension more deeply by turning to the notions of strategy and tactics. Digressing into a conception of power as rooted in the alignment of everyday practices, it sets the stage to discuss both notions with respect to grassroots governance.

3 | STRATEGY AND TACTICS IN BOTTOM-UP ORGANIZING

The notions of strategy and tactics allow to productively work through the tension between orientation and politics, taking it into a

more forward-looking direction. In *Assembly*, Hardt and Negri (2017) explore the role of strategy for bottom-up social change. Strategy, here, means that collective actors see far into the social field and “articulate comprehensive long-term plans” (Hardt & Negri, 2017, p. 15). This, the authors distinguish from tactics which are limited to the immediacy of the spatial and temporal context. Calling for strategic movements, Hardt and Negri still acknowledge that there is a place for tactics: “situations which require swift response” (Hardt & Negri, 2017, p. 19). Tactics, however, need to be linked to more far-sighted (strategic) orientation which, in turn, is based on collective and open-ended exchange—politics.

Besides Hardt and Negri's distinction between strategy and tactics, to which I will return below, Wright (2010) has advanced another influential perspective on strategy. In *Envisioning Real Utopias*, he formulates ideal types of transformative strategies. Wright brings together different imaginaries of emancipatory trajectories—broadly Marxist/revolutionary, anarchist/autonomous, and social democratic—discussing their respective possibilities and limits. Symbiotic transformations, for Wright, are processes which address social issues and enhance possibilities for emancipation without challenging capitalist institutions directly. Interstitial transformations involve strategies that build alternative forms of social organizations in the “niches and margins of capitalist society” (Wright, 2010, p. 303). Ruptural transformations, in contrast, confront capitalist institutions head-on and seek to create “new institutions of social empowerment through a sharp break with existing institutions and social structures” (Wright, 2010).

To discuss the role of strategy, one first has to dig deeper into the underlying assumptions around bottom-up transformative governance. Both Wright (2010, 2019) and Hardt and Negri (2017) draw on notions of (transformative) power that rests in the organizational capacity of community. Theories of power have long included notions of coordination, cooperation, and organization to express the idea that power does not reside in individuals or institutional entities but in the *alignment* of social relations (Wartenberg, 1990). Alternative economic and political relations, in this perception, are not more or less powerful than mainstream ones. But they are embedded in social alignments that constrain activities that jar with the logics of state and capital. Thus, only a coordinated effort that mobilizes and (re)aligns the capacities of alternatives can *erode* the dominative power of capitalism (Wright, 2019). Strategic bottom-up action, then, becomes both a possibility and necessity for transformation.

To link the decentral activities of community initiatives and grassroots organizations to the challenge of a deep transformation of social relations, it is helpful to turn to a theory and language of *practices* (Nicolini, 2013). Practice-theoretical approaches describe the social world as assemblage of routinized patterns of human activity. These patterns—practices—are materialized in human bodies and minds—as conventions, habits, and norms—as well as in objects and texts such as infrastructures and laws. Through their materialization, practices condition future activities while they, themselves, are conditioned by patterns that developed in the past. Power, from this perspective, is weaved into the practices that constitute the social fabric. That is, the capacity to act and make things happen fundamentally depends on



the surrounding patterns of activity, for the way practices are aligned selectively facilitates and impedes other activities. A commodified context, say, would spur exchange based on market value rather than nonmonetized exchange. This also means, however, that patterns can be created in which the capacity to act can be radically different, say community economies in which production and exchange are based on social value and trust (Schmid & Smith, 2020).

Following theories of power that base their conceptions on notions of alignment, coordination, and organization, what becomes visible is the “double-sidedness” or “double potentiality” of power (Barnett, 2017; Hardt & Negri, 2004, 2017; Saar, 2010, 2014). On the one hand, practices can form patterns that are dominative, say by forcing individuals to sell their labor for little compensation in order to be able to survive. The individual subject has little leeway to act otherwise—power is exercised over her. On the other hand, other patterns (or alignments) can and do exist, say noncapitalist or alternative-capitalist circuits of value which enable self-determined work and fair compensation. By collectively instituting such alignments, individuals acquire the power to engage in more meaningful and autonomous activities.

This opens a perspective on how (often seemingly insignificant) patterns of practices can catalyze spaces for grassroots governance. Practices which built relations that are conducive to further transformative activities enlarge the spaces for alternative economic and political relations. Wright, Hardt and Negri, and others, along these lines, emphasize the need for strategy in order to build capacity through alternative circuits of value and emancipatory institutions as a basis for a postcapitalist transformation. A number of empirical examples echo this idea, including alternative financial infrastructures (Cutcher & Mason, 2014), open-source technologies (Mason, 2016), cooperative ecosystems (Parker, 2017), and food networks (Rosol, 2018).

The paper takes this perspective as springboard to explore the tensions that emanate from a focus on strategy. Being strategic generally implies that organizations react to external challenges weighing visions and prospects (O'Neill & Gibbs, 2016). In line with the distinction between strategy and tactics, however, there is an important (albeit thin) line between tactical compromises that are linked to a postcapitalist strategy and the instrumentalization of compromise for a greened and CSR-clouded economy. To provide more practical leverage to this rather abstract discussion, the subsequent section introduces an empirical case showing the intimate relation between compromise and transformative practice.

4 | TRANSFORMATION IN PRACTICE: HOBBYHIMMEL AND STUTTGART'S COMMUNITY ECONOMY

Hobbyhimmel—German for “hobby heaven”—is the name of a publicly accessible workspace that houses machinery and tools for tinkering, do-it-yourself practices, local (high-tech) (peer-) production, repair, and upcycling. Located in a factory hall in an industrial area of Stuttgart (Germany), the workshop accommodates 300-odd square meters of designated areas for working with wood, metals, textiles, and electronics

as well as a fabrication laboratory equipped for high-tech production. The workshop is organized as registered association and run by a community that consists of more than 40 volunteers (with varying degrees of involvement). The group works independently of public funding to provide low-threshold access to this productive infrastructure.

The founder of the workshop and many collaborators are driven by the vision to unleash the potential of bottom-up local economizing for a more sustainable future. While focused on alternative economies of sharing, repair, open source, co-working, degrowth, and commons, the organization is firmly rooted in existing material, cultural, and monetary structures, leading to a number of challenges and tensions (such as the balance between profits and common-good orientation, elaborated below). *Hobbyhimmel* and other organizations in this study are, of course, heterogeneous spaces that join a wide range of motivations, visions, and practices. To acknowledge the diversity of orientations, not all of which are necessarily postcapitalist, I will characterize them as “sustainability-oriented” when appropriate. Meanwhile, the protagonists of this study *do* have an explicitly postcapitalist orientation, which I will outline in Section 4.2.

4.1 | Methodology

Half a year after *Hobbyhimmel's* formation in October 2015, I started to engage with the workshop community. For a period of 2.5 years, I participated through active collaboration on operational and organizational processes; by acquiring trade skills and the ability to operate machinery; by taking part in digital correspondence; by attending various events such as trade fairs (interorganizational) meetings, and workshops; and through informal interviewing. This involvement was part of a study on Stuttgart's community economy between the years of 2016 and 2019, comprising a sample of 24 sustainability-oriented organizations (that means organizations that show a clear commitment to social and ecological issues). An overarching research interest of the project was the role of community activism and grassroots organizations in the restructuring of social-ecological relations (Schmid, 2020).

Methodologically, the research project was primarily based on ethnographic methods with an explicit orientation toward action research (Kendon, Pain, & Kesby, 2007). This means, aside from understanding the processes around community organization, the study's aspiration was to support the participants both practically (for instance, by taking over responsibilities and providing support) and in terms of critical reflection (of the projects themselves and societal transformation more generally) (see Conclusion). This, of course, also necessitates reflection on side of the researcher (for a detailed reflection on positionality and the tension between emotional and practical proximity on the one hand and critical distance on the other see: Schmid (2020)).

Due to its accessibility and centrality for Stuttgart's community economy, the workshop constituted the study's main site for ethnographic research. Many of the 24 sustainability-oriented organizations that were part of the research have direct links to the workshop—a significant number of them drawing on the workshop's infrastructure

for support (see Table 1). This allowed me to use the workshop as a stepping stone to observe and actively participate in a range of sustainability-oriented practices and organizations (both directly on site and at other locales throughout Stuttgart and beyond). Each field visit was documented in a research diary, coded and analyzed. In addition to the study's ethnography, I conducted interviews with all organizations that are named here to explicate, validate, and deepen the observations. Furthermore, the study included a focus group which specifically revolved around questions of collaboration and networking. Aside from the founder of the workshop, representatives of four other organizations were present, including *Relumity* and *Smarm* which are introduced below. I draw on the data from these different methods in the following to depict both the functioning of the workshop and its links to other organizations.

4.2 | Findings

The workshop, *Hobbyhimmel*, opens from Monday to Sunday, 47 hr per week, during which every person can use the spaces for a small fee starting at 2€/hr and capped with a monthly option of 35€. The majority of users are private individuals who seek a proper working space and equipment to realize their artisanal ideas and projects. In contrast to most “open workshops” and “makerspaces” (Smith, 2020) which require users to become a club member or pay a permanent fee, *Hobbyhimmel* deliberately provides a low-threshold access to enable a broad range of individuals to use the workshop and make it (financially) worthwhile to engage in repair and do-it-yourself practices. Admission to the workshop, in other words, is not market driven but deliberately kept low.

Well you surely could charge more money, that would not be a problem. But the question is who do you reach then. If you say you want the workshop to be accessible for people with little income, then this is the right approach... (I_A01a).¹

Aside from private users, the workshop is also used by a number of groups and organizations. This includes using the workshop's productive infrastructure for manufacturing and maintenance; making recourse to its spaces more generally (say, for meetings); and drawing on the workshop's community and larger public for support and outreach. Broadly speaking, three kinds of organizations use the workshop. First, organizations that have a social or environmental purpose—including sustainable consumption, gardening, recycling, education, open source, repair, and a more general critique of growth-based economies. Although they range from for-profit to charitable legal forms, these organizations generally have little financial resources and, given their sustainability focus, fit the workshop's orientation. Second, organizations that do not follow social or environmental objectives directly but constitute small (often one-person) start-ups revolving around artisanal production. Frequently, they involve individuals which are engaged in the workshop's organization

TABLE 1 Organizations in Stuttgart's Community Economy that draw on Hobbyhimmel's infrastructure

Organization	Description	Relation to the workshop
Grünfisch	Associating building and operating aquaponics	Construction of aquaponic systems, courses in the workshop to spread idea of aquaponics
Lastenrad	Project promoting car-free urban mobility; provision of a free cargo bike lending system	Use of the workshop to service bikes, lending station for cargo bikes
Foodsharing	Association organizing against food waste	Food sharing point in the workshop, safe space for fridge to comply with hygiene regulations
Repair Café	Project organizing free exchange of repair services and skills on a regular basis	Use of space, tools, and machinery for regular repair events
Open Source Ecology	Association working toward an open-source economy	Use of the infrastructure to construct open-source models, meeting space
Smarm	Fully automated sale of regional and organic food	Use of tools and machinery to construct parts of the automated supermarkets
Relumity	Development, production, and sale of sustainable and repairable LED lights	Manufacturing of parts of a lamp series, draws on repair café in the workshop to ensure and demonstrate reparability of lamps
Economy for the Common Good	Group advocating a common good-oriented economy	Workshop is audited, promotes idea of ECG
Others	Diverse eco-social-oriented organizations in and around Stuttgart	A number of other organizations use the workshop as working and meeting space and/or as a multiplier for sustainability-related projects

or have close ties to the *Hobbyhimmel* community. The workshop, then, provides an affordable locale for their (business) activities (generally, they pay the rates of private users). Third, organizations that neither have any personal ties to the workshop (in the sense that they contribute to its operation) nor do they follow an environmental or social purpose. The latter ranges from small local enterprises to large corporations.



On that score, the workshop community distinguishes between profit-oriented organizations and those that follow sustainability-related objectives. Important to note is that this is not oriented on for-profit/nonprofit legal forms but on the organizations' social or environmental purpose. Commercial users (type 3) have to pay considerably higher rates of 10€ per hr. Organizations addressing social and/or environmental issues (type 1), in contrast, can use the workshop free of charge or on a donation basis.

We support others who say 'we do not accept the status quo'. They are people from all kinds of different projects ... And they all do something within their area of focus, an action or a business or whatever. And we can support them in doing that (I_A01b).

In the following, I focus on the first type of organizations, which exhibit a clear environmental and/or social orientation, and expound some examples. *Lastenrad*, for instance, is a local project that provides (mostly electrically powered) cargo bikes that can be used free of charge. The organization provides a low-carbon mobility commons that aim to substitute for patterns of car-based transportation. Originally launched and financed with project money, the initiative continues to operate with volunteers and on a low budget. *Lastenrad* draws on the workshop's infrastructure in three major ways. First, as a space to service (some of) its bikes; second, as one of *Lastenrad*'s lending stations which are scattered throughout the city; and third, as community that supports *Lastenrad*'s ideas and objectives and functions as a multiplier for their activities.

Another project is *Grünfisch*, an initiative for urban food production developing and running a small number of aquaponic systems (a combination of aquaculture and hydroponics). Similar to *Lastenrad*, *Grünfisch*'s operations are largely demonetized and based on volunteering. With little financial resources, the ability to draw on the workshop's infrastructure supports *Grünfisch* in their efforts to construct aquaponic systems and demonstrate the potential of (semi)closed nutrient cycles in urban food production. As with *Lastenrad*, it is not only the material infrastructure of the workshop but also its broader community that backs the projects in various ways (for instance, providing skills, knowledge, and links to potential collaborators).

Aside from nonmarket organizations, (technology-focused) eco-social enterprises make recourse to the workshop's infrastructure as well. *Relumity*, an enterprise developing and selling sustainably sourced, repairable, and long-lasting LED lights used to workshop in the context of an open-source project called Relumity #LED1. Here, *Relumity* drew on *Hobbyhimmel*'s capacity for three-dimensional (3D)-printing to manufacture parts of the light locally in the workshop.

I can actually say that the spares are locally available. Not necessarily as tangible objects, but they can be produced [by means of 3D printing] and reproduced locally. The materials are available and the means of production are available through the open workshop (I_E2bii).

Going against the grain of cheapened globalized production, organizations like *Relumity* face uncompetitive production costs. Open local productive infrastructures, thereby, constitute a crucial leverage to counteract and relocalize production. This is also true for *Smark*, a technology-focused eco-social enterprise promoting sustainable food consumption. *Smark*'s business model revolves around the simplification of the sale of organic and local foodstuff by setting up small, fully automated supermarkets, best expressed in their slogan "making sustainable consumption the easiest." Using technology as a means to create more efficient processes grants the organization a competitive advantage. The company, however, is slow in being able to exhaust this advantage, facing common issues of small (eco-social) start-ups, such as limited financial resources. Particular in *Smark*'s early phase—starting out on a stipend and without investors—the workshop was an important backdrop *Smark* could draw on to manufacture parts of their automated stores.

We were able to benefit greatly from the entire infrastructure. The same way, we have used it again for the current project...we can draw on the machines that are already there and that we can simply use without having to buy them ourselves (I_E06a).

The workshop constitutes a supportive infrastructure to these and other sustainability-oriented organizations and might be described as a (partial) commons in Stuttgart's community economy. Organizations or individuals who engage in socially and environmentally meaningful activities but have strongly limited resources at their disposal can draw on the workshop's spaces, tools, and machinery without the monetary equivalent a market economy requires. This is explicitly linked to the broader agenda of social and economic change:

Our practical case is about, first, people sharing quality tools rather than each buying cheap ones ... second the topic of repair ... and third, the topic of do-it-yourself. [...] Beyond the activities of private users, we also support local initiatives that deal with sustainability issues. They can use our workshop very cheaply, usually for free, and thus implement their projects and actions more easily, which also build towards a degrowth economy (Interview with founder of Hobbyhimmel).

Although not all individuals working for or using the workshops share this vision (see below), the orientation toward alternative economies is explicitly stated in promotional material and reports from the workshop:

We want to bring the problems and causes [of social and environmental issues] to light and point out possibilities how everyone can contribute to change. The open workshop, for us, is a central tool to do so, for it combines and realizes important approaches such as

sharing economy, open source, co-working, degrowth and commons (excerpt from workshop flyer).

Regardless of this orientation toward alternative economies, money is still a central concern. *Hobbyhimmel's* infrastructure comes at a price. Absent any public funding, the workshop has to find ways to cover monthly expenses to the tune of 5000€ adding up through rent, insurance, tax, and maintenance. As a consequence, the focus partially shifts away from alternative projects and toward the creation of a stable revenue through a combination of donations and market activities. Project commissions, team-building events, and the collaboration with for-profit enterprises that draw on the workshop's productive capacity play a crucial role for its financing. Commercial users have to pay considerably higher rates than private users and sustainability-oriented organizations. Bottom line, the open workshop cross-subsidizes low-threshold access to workspaces for private users and sustainability-related projects through revenues from commercially oriented services.

What is special to me is that we try to strike a balance between profits and common-good orientation. Because we say: there has to be enough money to be independent and able to expand. And then, of course, the social-ecological orientation. (I_V01b)

To that effect, business partners and private customers enable the workshop to exist in capitalist economic relations. Through revenue from projects and events the workshop is entangled with large for-profit corporations deeply entrenched into some of the practices and relations the workshop intends to counteract. Indirectly, thus, the workshop depends on and profits from the very relations it seeks to counteract. The following notes that I took after a meeting in which we explored a potential partnership with a (for-profit) company are exemplary for the rationale behind these forms of cooperation.

From the workshop's side, the main interest is that this is an opportunity to acquire important resources to push its agenda. At the same time, the workshop does not depend on Tool-Store² (as S. has conveyed at the end of the meeting). TS could, however, be a way to do this quicker and on a larger scale. [...] We left with a firm intention to further develop the ideas for cooperation. However, some doubts remain as to in how far that could compromise some of the projects (B_E05).

Another important pillar of the workshop's financing is private users who are not related to the abovementioned organizations. Private users, however, do not necessarily use the infrastructure in line with the workshop's objectives and intentions. In other words, the workshop houses a large number of activities that neither replace unsustainable practice nor contribute to the generation of possibilities to do so in the future. Instead, the workshop's infrastructure enables

individualized forms of consumption in the form of resource-intensive leisure activities around 3D printing, laser cutting, and to a lesser extent also around woodworking and metalworking.

The people who use this here rarely have this train of thought [about sustainability]. Only between 10 and 20 percent of the users use the workshop for reasons like: 'I'm saving resources', 'I don't need to buy the device', 'I can manufacture a spare part', or 'I can rebuild the thing to last longer' (I_A01a).

That the workshop nevertheless enables users who do not share its intentions is not purely economically motivated but also culturally.

We actually want everyone to use this workshop and share and repair things...and if you narrow it down too much in a certain direction, then I just think you're limiting the circle of people you appeal to [...] They [potential users] are also afraid of being confronted with their part and responsibility in these [social and ecological] problems (I_A01a).

In sum, *Hobbyhimmel* has limited control over the value chains that enter and travel through its spaces. It is fair to say that although the workshop follows clearly articulated goals and supports like-minded individuals and organizations, the practices that constitute the organization are ambiguous. This ambiguity, however, is not accidental but, at least in part, a result of deliberate decisions. In this context, it is important to outline the workshop's internal governance structures. Key questions are democratically decided at monthly team meetings, whereas smaller decisions are made decentrally according to the principles of self-managed organizations (in this regard, the workshop explicitly draws on the writings of Frederic Laloux (2014)).

To this effect, (ab)uses of the workshop (and related organizations) that are not in line with (or aligned with) a postcapitalist orientation are, at least in part, consciously accepted. In other words, (some) members of the workshop, here, reflect on and accept the divergence between ethics and practice in the context of a prospective *strategy* guided by a long-term visions and plans. Hybridity, consequently, is not solely an effect of the contradictions between sustainability-orientation and capitalism but the result of reflection and debate against the background of an alternative vision. It can thus be said to be *political*.

5 | FROM DIVERSITY TO A POLITICS OF HYBRIDITY

Reading Stuttgart's community economy in general and the workshop in particular through a diverse economy perspective reveals a variety of capitalist, alternative-capitalist, and noncapitalist practices (Gibson-Graham, 2006). Volunteer work, trust-based transfer, and (informal) local circuits of value exist side-by-side with individualized



consumption, nontransparent global value chains, and capital accumulation. Portraying Stuttgart's community economy as a site of difference reveals multiple possibilities and identities beyond capitalist relations. At the same time, it shows that diversity can and does include exploitative and unjust relations (Samers, 2005).

Diverse economy scholars maintain that the combination of capitalist and noncapitalist activities is nothing out of the ordinary. Many small- and medium-sized enterprises (SME), for instance, are driven by a wide range of motivations and engage in a number of more-than-capitalist practices (North, 2016). This is particularly true with respect to social enterprises (Houtbeekers, 2018). Indeed, the very notion of social entrepreneurship, which is frequently used to describe a blend of market and social orientation, builds on the idea of hybridity (Huybrechts & Nicholls, 2012). Social enterprises combine different "institutional logics" (Thornton, Ocasio, & Lounsbury, 2012) by infusing an economic orientation with social values. Hybridity, then, results from trading-off and balancing resource acquisition and social mission, leading to tactics such as "compromising, avoiding, denying and manipulating ... to respond to competing external demands ... and deleting, compartmentalizing, aggregating and synthesizing to cope with internal identity struggles" (Doherty, Haugh, & Lyon, 2014, p. 427).

For the bulk of social enterprises and cognate organizations—let us call these "alternative-additional" organizations (Jonas, 2016, p. 7)—the existing institutional landscape remains outside of their focus. Hybridity, in this case, is a reaction to the immediate context (of a market economy) that enables social enterprises to link their social mission to dominant institutions—tactics. There are other organizations—let us call these "transformative organizations"—that also employ different tactics in response to the contradictions between their values and institutional frameworks, however, against the background of a more far-sighted agenda. They integrate, as in the workshop example expounded above, immediate tactical decisions, say the balance between profits and common-good orientation, with a more far-sighted strategy, such as the workshop as a tool and element of a degrowth economy. Hybridity, then, is deliberately and reflexively employed to build alternative and independent organizations within a capitalist economy rather than accepting the (seemingly) given set-up of market-oriented organizing and integrating (eco-)social objectives accordingly.

As the example of the open workshop shows, such a *politics of hybridity* turns out to be a crucial element of transformative practice. By reacting to the immediate economic and cultural context, for instance, in terms of monetary resources or cultural appeal, the workshop can increase its capacity in working toward a postcapitalist horizon. In this sense, I use the notion of politics of hybridity to refer to *deliberate compromising in individual or organizational activities in the name of a desired future while accepting the substantiation of exploitative and unjust social relations*.

Needless to say, such a politics can be as dangerous as it can be effective. For this reason, much scholarship on transformation, in particular anarchist-inspired writings, emphasizes prefiguration—the experimental anticipation of social relations free of domination in the

here and now. A prefigurative politics contests the temporal continuation and legitimation of power relations of a "politics of waiting" (Springer, 2016) or a "transitional stage" (Price, 2012). Advocates of a strongly prefigurative approach to transformation are wary of pragmatism and compromise. Understandably so, the acceptance and justification of injustice and unsustainabilities also pave the way for a greened and CSR-clouded economy that continues to exploit lives and natures.

Actors concerned with harmonizing means and ends generally favor interstitial strategies that aim to build alternative forms of social organization in the "niches and margins of capitalist society" (Wright, 2010, p. 303; see above). Instead of confronting or collaborating with the political and economic establishment, activities following an interstitial path remain outside and often out of sight for capitalist institutions. Prefiguration alone, however, can be impractical and problematic for two reasons. First, the activities of interstitial organizations in and of themselves might not be able to pose a significant threat to dominant institutions. That means, as long as interstitial activities exist quietly side-by-side with capitalist relations, they are prone to remain peripheral. And second, while, the consequential enactment of postcapitalist practices by interstitial organizations can make a strong case that things can be done differently, interstitial organizations generally lack the resources (and sometimes the aspiration) to spread and disseminate their innovations and ideas.

What we are left with, then, are a range of questions related to the tensions that a politics of hybridity creates: can the violation of ethical principles be weighed against the prospect for more just relations in the future? What is the required depth of politics and (self) reflection? What compromises are legitimate, when and how? Is the conscious acceptance of compromise better/different from the omnipresent (and largely unconscious) reproduction of patterns of injustice and unsustainability? Although these questions elude clear answers, the next and penultimate section proposes a constructive path out by specifying the quality of strategy.

6 | TRANSFORMATIVE INFRASTRUCTURES

Let us return to the empirical case of Stuttgart's community economy. The open workshop, *Hobbyhimmel*, can be described as a constellation of diverse practices involving individualized consumption, globalized trade, volunteer work, trust-based transfer, and (informal) local circuits of value. From the standpoint of justice and sustainability, the activities surrounding (and constituting) the workshop are ethically ambiguous. Less so, some of the organizations that draw on the workshop's infrastructure. Two of those presented above are *Lastenrad* and *Grünfisch*. Both are decommodified projects following a largely interstitial pathway. That means, they are relatively consequential in prefiguring alternative social relations while drawing on the workshop's infrastructure for support. What is important here is that the workshop constitutes a setting that enables—or at least facilitates—the more prefigurative practices of these organizations.

To cast this in more abstract terms: the resilience and proliferation of transformative practices are connected to the availability of corresponding relations' interstitial activities can insert themselves into. This is directly linked to power: practices align in particular ways and conduce certain activities while impeding others (see Section 3). Relations based on price, property, and competition, say, exert significant influence on the use of urban space. Rent is a major expense for the workshop and one of the main reasons why it has to collaborate with financially strong corporations. In doing this, however, the workshop provides practical resources, norms, moral support, and spaces for experimentation that encourages and enables individuals and organizations to escape dominant routines and cognitive frames (see also Longhurst, 2015). As portrayed above, *Hobbyhimmel* provides a space shielded from market influences and, in doing so, helps to build capacity for further action. In other words, it functions as an underlying or "infra" structure for sustainability-oriented practices.

Boyer (2018, p. 226) understands infrastructure as an "energopolitical" process [that] allows something to happen." Infrastructures store energy or potential which is then released to enable or conduce particular processes. To consider infrastructures in terms of flows of energy and political negotiations provides a clearer picture of their (potential) role in processes of transformation. Infrastructures can be understood both as performance and as entity. Infrastructures-as-performances³ refer to the situated and specific enactments that (re)produce particular settings, say the workshop. To establish and uphold infrastructures, an expenditure of energy is required. For a lack of resources, this might require to draw on incumbent institutions, engaging in market practices, for instance, to obtain the monetary resources to then mobilize materials and labor. Infrastructures-as-entities, in turn, describe infrastructural configurations as a material context which affects other practices, say by enabling sustainability-oriented activities. Here, contingent on the configuration of the infrastructure, energy is released to facilitate specific activities, for instance, local repair and production.

To stay with a perspective on flows of energy: by compromising with incumbent institutions, the organization (here the workshop), so to speak, branches off energy to build an infrastructure for potentially transformative practices. This infrastructure, however, also enables a range of activities which are not in line with emancipatory societal trajectories. In a way, it "passes back" energy to incumbent institutions. While we would need a host of qualifications and specification to even start to "measure" actual flows of energy, using it as a metaphor, here, helps to hone the role of hybridity for transformative strategy.

Interstitial strategies, as discussed above, are not only concerned with emancipatory alternatives but also put a focus on avoiding activities that are not in line with their principles. Flows of energy to and from incumbent alignments are strongly limited, for instance, when an organization like *Lastenrad* establish nonmonetized relations. As a consequence, interstitial strategies often face difficulties in mobilizing enough resources to "scale out" and stabilize their endeavors but, at the same time, are strong in resisting cooptation and integration. Symbiotic strategies, in contrast, are largely based around synergies

between transformative activities and incumbent institutions. To that effect, symbiotic organizations can mobilize ("branch off") energy and resources, say labor which they are able to pay for due to participation in markets, in order to build (potentially transformative) infrastructures. A focus on synergies, however, leaves symbiotic activities closely linked to business-as-usual and often unable to dissociate from incumbent institutions.

Organizations successfully combining symbiotic and interstitial strategies through compromises that allow for (larger) "energy flows" from and (smaller) flows to incumbent alignments, then, can store increasing transformative potential. In a slightly different sense, Hardt and Negri (2017, p. 36) imagine the building of "constituent potential"—accumulated capacity for resistance and action—that can release in form of collective struggle. To call for strategy, then, means that movements see far into the social field in order to build material and social nexuses that constitute an enabling backdrop for emancipatory practices. Due to the trade-offs and compromises involved in building transformative infrastructures, they are likely to remain hybrid. Hybrid infrastructures, in this sense, are *deliberately produced (but) inconsistent spatialities that constitute resources for transformative practice while potentially substantiating exploitative and unjust social relations*.

A strategy around hybrid infrastructures does not live up to the ideals of horizontality, immediate results, and prefiguration (see above). While appreciating the reservations against pragmatic tactics, it accepts the ethical ambiguities that come with compromise in favor of transformative efficacy. A critical transformative strategy, in this sense, has to be both pragmatic *and* wary of the instrumentalization of a politics of hybridity for purposes averse to a just and sustainable future. The building of constituent potential is a central pillar of such a transformative strategy. Hybrid infrastructures—as one form how constituent potential materializes—create patterns alternative practices can insert themselves into and thus broaden the scope of post-capitalist organizing. The final section, now, concludes by returning to the role of critical reflexivity and sketching an agenda for an engaged scholarship.

7 | CONCLUSION: A CALL FOR CRITICAL REFLEXIVITY AND ACTIVIST SCHOLARSHIP

Top-down governance does not answer adequately to global ecological and social challenges, neither does it provide conditions within which the community initiatives which *do* challenge trajectories of unsustainability and injustice can thrive. Critical research, to this effect, debates lines of action to reverse the cycle between institutional inertia and the limitations of bottom-up agency. This involves both the tactical and practical arrangement with top-down governance and capitalist circuits of values *and* a strategic politics to reflectively employ resources to build alternative economic and political spaces.

Inspired by a rich empirical example, this paper develops and explores such arrangements as *hybrid infrastructures*. By means of the complex tensions and ambivalent everyday practices which constitute the open workshop *Hobbyhimmel*, it reflects on the role



of compromise and strategy in grassroots governance and organization. The paper draws out the importance of a *politics of hybridity* for societal change while warning against a pragmatism that opens the gate for smart capitalism's greened and CSR-clouded economy. Tactics, it concludes, need to be embedded in transformative strategies which critically interrogate organizations for their capacity to enlarge the potential for emancipatory change. A strategy around a politics of hybridity deliberately accepts the ethical challenges of pragmatism in the hope that it contributes to the building a more just future—an expectation which inevitable remains speculative (however far from arbitrary).

Critical reflexivity, then, is a key element of a politics of hybridity, necessitating a close interaction between transformative practice and critical research. This paper, therefore, closes with a call for activist scholarship which it deems pivotal for a postcapitalist strategy around hybridity. This call comprises and builds on a number of aspects and arguments. First, many activists do not have enough time and resources to provide the comprehensive reflection on all their activities and their possible consequences which this paper alludes to (which is not to say that many do not go to great lengths in assessing their practices). This is one side of the coin. Second, on the other side, critical scholars should not rest on their traditional role as observer—the current state of the world demands engagement. However, scholars need to be careful not to lose distance and critical reflectivity over this engagement. There is a compelling body on engaged research and activist scholarship that should (continue to) inspire critical research (Kindon et al., 2007). Third, then, such a critical alliance should do (at least) four things. (a) Attempt to link the activities of activists, sustainability-oriented organizations, and scholars to broader practice alignments in order to reflect on their consequences and effects. Only against the background of a bigger picture it is possible to assess the politics and ethics of compromise. (b) Not pave over adverse effects of individual and organizational activities and instead allow for a confrontation and examination of their ethical consequences. (c) Identify synergies and possible leverage points to build constituency and infrastructures for postcapitalist transformation. (d) And stay open to and link different modes of transformation—prefigurative and pragmatic including top-down and bottom-up elements—without overemphasizing or ignoring the problems of either one. Transformation must be a “constitutive process that on the basis of our social wealth creates lasting institutions and organizes new social relations, accompanied by the force necessary to maintain them” (Hardt & Negri, 2017, p. 295).

ACKNOWLEDGMENTS

I thank the Economic Geography Group of the University of Zurich and participants of the “Governance at the edge of the state” summer school in Ghent (2018) who commented on previous versions of the paper. I am also grateful to Tom Smith for his editorial support and to two anonymous reviewers for their thorough engagement with the paper and valuable comments. Open access funding enabled and organized by Projekt DEAL.

ENDNOTES

- ¹ All direct quotes were translated from German to English by the author. Wherever possible, quotations are translated literally while considering contextual and cultural specificities, metaphors and potentially misleading formulations.
- ² Name changed.
- ³ See Shove, Pantzar, and Watson (2012) for a distinction between practices-as-performances and practices-as-entities.

REFERENCES

- Akbulut, B., Demaria, F., Gerber, J.-F., & Martínez-Alier, J. (2019). Who promotes sustainability? Five theses on the relationships between the degrowth and the environmental justice movements. *Ecological Economics*, 165, 106418. <https://doi.org/10.1016/j.ecolecon.2019.106418>
- Avelino, F., & Grin, J. (2017). Beyond deconstruction. A reconstructive perspective on sustainability transition governance. *Environmental Innovation and Societal Transitions*, 22, 15–25. <https://doi.org/10.1016/j.eist.2016.07.003>
- Avelino, F., Wittmayer, J. M., Pel, B., Weaver, P., Dumitru, A., Haxeltine, A., ... O'Riordan, T. (2017). Transformative social innovation and (dis)empowerment. *Technological Forecasting and Social Change*, 145, 195–206. <https://doi.org/10.1016/j.techfore.2017.05.002>
- Barnett, C. (2017). *The priority of injustice: Locating democracy in critical theory*. Athens, Georgia: The University of Georgia Press.
- Bauwens, T., & Mertens, S. (2018). Social economy and polycentric governance of transitions. In I. Cassiers, K. Maréchal, & D. Méda (Eds.), *Post-growth economics and society: Exploring the paths of a social and ecological transition*. Abingdon & New York: Routledge.
- Blühdorn, I. (2017). Post-capitalism, post-growth, post-consumerism? Ecopolitical hopes beyond sustainability. *Global Discourse*, 7(1), 42–61. <https://doi.org/10.1080/23269995.2017.1300415>
- Bollier, D., & Helfrich, S. (2012). *The wealth of the commons: A world beyond market and state*. Amherst, MA: Levellers Press.
- Boltanski, L., & Chiapello, E. (Eds.). (2018). *The new spirit of capitalism (New updated edition)*. London: Verso.
- Boyer, D. (2018). Infrastructure, potential energy, revolution. In N. Anand, A. Gupta, & H. Appel (Eds.), *The promise of infrastructure* (pp. 223–244). Durham: Duke University Press.
- Buch-Hansen, H. (2018). The prerequisites for a degrowth paradigm shift: Insights from critical political economy. *Ecological Economics*, 146, 157–163. <https://doi.org/10.1016/j.ecolecon.2017.10.021>
- Castree, N. (1999). Envisioning capitalism: Geography and the renewal of marxian political economy. *Transactions of the Institute of British Geographers*, 24(2), 137–158. <https://doi.org/10.1111/j.0020-2754.1999.00137.x>
- Chatterton, P. (2016). Building transitions to post-capitalist urban commons. *Transactions of the Institute of British Geographers*, 41(4), 403–415. <https://doi.org/10.1111/tran.12139>
- Chatterton, P., & Pusey, A. (2020). Beyond capitalist enclosure, commodification and alienation: Postcapitalist praxis as commons, social production and useful doing. *Progress in Human Geography*, 44(1), 27–48. <https://doi.org/10.1177/0309132518821173>
- Collard, R.-C., & Dempsey, J. (2019). Two icebergs: Difference in feminist political economy. *Environment and Planning A: Economy and Space*, 52(1), 237–247. <https://doi.org/10.1177/0308518X19877887>
- Cutcher, L., & Mason, P. (2014). Credit unions. In M. Parker, G. Cheney, V. Fournier, & C. Land (Eds.), *The Routledge companion to alternative organization* (1st ed., pp. 253–266). New York: Routledge. <https://doi.org/10.4324/9780203725351>
- Demaria, F., Kallis, G., & Bakker, K. (2019). Geographies of degrowth: Nowtopias, resurgences and the decolonization of imaginaries and places. *Environment and Planning E: Nature and Space*, 2(3), 431–450. <https://doi.org/10.1177/2514848619869689>

- Doherty, B., Haugh, H., & Lyon, F. (2014). Social enterprises as hybrid organizations: A review and research agenda: Social enterprises as hybrid organizations. *International Journal of Management Reviews*, 16(4), 417–436. <https://doi.org/10.1111/ijmr.12028>
- Feola, G. (2020). Capitalism in sustainability transitions research: Time for a critical turn? *Environmental Innovation and Societal Transitions*, 35, 241–250. <https://doi.org/10.1016/j.eist.2019.02.005>
- Fischer, A., Holstead, K., Hendrickson, C. Y., Virkkula, O., & Prampolini, A. (2017). Community-led initiatives' everyday politics for sustainability – Conflicting rationalities and aspirations for change? *Environment and Planning A*, 49(9), 1986–2006. <https://doi.org/10.1177/0308518X17713994>
- Fuller, D., Jonas, A. E. G., & Lee, R. (2016). *Interrogating alterity. Alternative economic and political spaces*, New York: Routledge.
- Gibson-Graham, J. K. (2006). *Postcapitalist politics*, Minneapolis: Minnesota Press.
- Glassman, J. (2003). Rethinking overdetermination, structural power, and social change: A critique of Gibson-Graham, Resnick, and Wolff. *Antipode*, 35(4), 678–698. <https://doi.org/10.1046/j.1467-8330.2003.00345.x>
- Gorz, A. (2012). *Capitalism, socialism, ecology*, London: Verso.
- Hardt, M., & Negri, A. (2004). *Multitude: War and democracy in the age of Empire*, New York: The Penguin Press.
- Hardt, M., & Negri, A. (2017). *Assembly*, New York: Oxford University Press.
- Hölscher, K., Wittmayer, J. M., & Loorbach, D. (2018). Transition versus transformation: What's the difference? *Environmental Innovation and Societal Transitions*, 27, 1–3. <https://doi.org/10.1016/j.eist.2017.10.007>
- Houtbeckers, E. (2018). Framing social enterprise as post-growth organising in the diverse economy. *Management Revue*, 29(3), 257–280. <https://doi.org/10.5771/0935-9915-2018-3-257>
- Huybrechts, B., & Nicholls, A. (2012). Social entrepreneurship: Definitions, drivers and challenges. In C. K. Volkmann, K. O. Tokarski, & K. Ernst (Eds.), *Social entrepreneurship and social business* (pp. 31–48). Wiesbaden: Gabler Verlag. https://doi.org/10.1007/978-3-8349-7093-0_2
- Jacobsson, S., & Bergek, A. (2011). Innovation system analyses and sustainability transitions: Contributions and suggestions for research. *Environmental Innovation and Societal Transitions*, 1(1), 41–57. <https://doi.org/10.1016/j.eist.2011.04.006>
- Jonas, A. E. G. (2016). “Alternative” this, “alternative” that...: interrogating alterity and diversity. In D. Fuller, A. E. G. Jonas, & R. Lee (Eds.), *Interrogating alterity. Alternative economic and political spaces*, New York: Routledge.
- Kallis, G. (2018). *Degrowth*, Newcastle upon Tyne: Agenda Publishing.
- Kenis, A., & Lievens, M. (2015). *The Limits of the Green Economy. From reinventing capitalism to repoliticising the present*, Abingdon, New York: Routledge.
- Kindon, S., Pain, R., & Kesby, M. (2007). *Participatory action research approaches and methods connecting people, participation and place*, London & New York: Routledge.
- Laloux, F. (2014). *Reinventing organizations*, Brussels: Nelson Parker.
- Lawhon, M., & Murphy, J. T. (2012). Socio-technical regimes and sustainability transitions: Insights from political ecology. *Progress in Human Geography*, 36(3), 354–378. <https://doi.org/10.1177/0309132511427960>
- Leyshon, A., Lee, R., & Williams, C. C. (Eds.). (2003). *Alternative economic spaces*, London & Thousand Oaks: Sage Publications.
- Longhurst, N. (2015). Towards an ‘alternative’ geography of innovation: Alternative milieu, socio-cognitive protection and sustainability experimentation. *Environmental Innovation and Societal Transitions*, 17, 183–198. <https://doi.org/10.1016/j.eist.2014.12.001>
- Loorbach, D. (2010). Transition management for sustainable development: A prescriptive, complexity-based governance framework. *Governance*, 23(1), 161–183. <https://doi.org/10.1111/j.1468-0491.2009.01471.x>
- Loorbach, D., Frantzeskaki, N., & Avelino, F. (2017). Sustainability transitions research: Transforming science and practice for societal change. *Annual Review of Environment and Resources*, 42(1), 599–626. <https://doi.org/10.1146/annurev-environ-102014-021340>
- Malm, A. (2018). *The progress of this storm: Nature and society in a warming world*, London: Verso.
- Mason, P. (2016). *Postcapitalism. A guide to our future*, London: Penguin Random House.
- Nicolini, D. (2013). *Practice theory, work, and organization: An introduction (First Edition)*, Oxford: Oxford University Press.
- North, P. (2016). The business of the Anthropocene? Substantivist and diverse economies perspectives on SME engagement in local low carbon transitions. *Progress in Human Geography*, 40, 437–454. <https://doi.org/10.1177/0309132515585049>
- North, P., & Cato, M. S. (2017). *Towards just and sustainable economies: The social and solidarity economy north and south*, Bristol: Policy Press.
- O'Neill, K., & Gibbs, D. (2016). Rethinking green entrepreneurship. Fluid narratives of the green economy. *Environment and Planning A*, 48(9), 1727–1749. <https://doi.org/10.1177/0308518X16650453>
- Parker, M. (2017). Alternative enterprises, local economies, and social justice: Why smaller is still more beautiful. *M@n@gement*, 20(4), 418. <https://doi.org/10.3917/mana.204.0418>
- Patterson, J., Schulz, K., Vervoort, J., van der Hel, S., Widerberg, O., Adler, C., ... Barau, A. (2017). Exploring the governance and politics of transformations towards sustainability. *Environmental Innovation and Societal Transitions*, 24, 1–16. <https://doi.org/10.1016/j.eist.2016.09.001>
- Price, W. (2012). The anarchist method. An experimental approach to post-capitalist economies. In A. J. Nocella & J. Asimakopoulous (Eds.), *The accumulation of freedom. Writings on anarchist economics*, Oakland: AK Press.
- Rosol, M. (2018). Alternative ernährungsnetzwerke als alternative ökonomien. *Zeitschrift Für Wirtschaftsgeographie*, 62(3–4), 174–186. <https://doi.org/10.1515/zfw-2017-0005>
- Saar, M. (2010). Power and critique. *Journal of Power*, 3(1), 7–20. <https://doi.org/10.1080/17540291003630320>
- Saar, M. (2014). *The immanence of power: From Spinoza to “radical democracy.”*, Voorschoten: Uitgeverij Spinozahuis.
- Samers, M. (2005). The myopia of “Diverse Economies”, or a critique of the “Informal Economy.”. *Antipode*, 37(5), 875–886. <https://doi.org/10.1111/j.0066-4812.2005.00537.x>
- Schmid, B. (2020). *Making Transformative Geographies. Lessons from Stuttgart's Community Economy*. Bielefeld: transcript.
- Schmid, B., & Smith, T. S. J. (2020). Social transformation and postcapitalist possibility: Emerging dialogues between practice theory and diverse economies. *Progress in Human Geography*, Online First, 1–22. <https://doi.org/10.1177/0309132520905642>
- Seyfang, G., & Haxeltine, A. (2012). Growing grassroots innovations: Exploring the role of community-based initiatives in governing sustainable energy transitions. *Environment and Planning. C, Government & Policy*, 30(3), 381–400. <https://doi.org/10.1068/c10222>
- Sharpe, S. (2014). Potentiality and impotentiality in J. K. Gibson-Graham. *Rethinking Marxism*, 26(1), 27–43. <https://doi.org/10.1080/08935696.2014.857842>
- Shove, E., Pantzar, M., & Watson, M. (2012). *The dynamics of social practice. Everyday life and how it changes*, London & Thousand Oaks: SAGE.
- Smith, T. S. J. (2020). ‘Stand back and watch us’: Post-capitalist practices in the maker movement. *Environment and Planning A: Economy and Space*, 52(3), 593–610. <https://doi.org/10.1177/0308518X19882731>
- Springer, S. (2016). *The anarchist roots of geography: Toward spatial emancipation*, Minneapolis: University of Minnesota Press.
- Thornton, P. H., Ocasio, W., & Lounsbury, M. (2012). *The institutional logics perspective: A new approach to culture, structure and process*, Oxford: Oxford University Press.
- Vandeventer, J. S., Cattaneo, C., & Zografos, C. (2019). A degrowth transition: Pathways for the degrowth niche to replace the capitalist-growth regime. *Ecological Economics*, 156, 272–286. <https://doi.org/10.1016/j.ecolecon.2018.10.002>



- Walker, G. P. (2012). *Environmental justice*, London & New York: Routledge.
- Wartenberg, T. E. (1990). *The forms of power: From domination to transformation*, Philadelphia: Temple University Press.
- Wright, E. O. (2010). *Envisioning real utopias*. London, England: Verso.
- Wright, E. O. (2019). *How to be an anticapitalist in the twenty-first century*, London: Verso.

How to cite this article: Schmid B. Hybrid infrastructures: The role of strategy and compromise in grassroot governance. *Env Pol Gov.* 2021;31:199–210. <https://doi.org/10.1002/eet.1929>