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MAKING TRANSFORMATIVE GEOGRAPHIES: LESSONS FROM STUTTGART'S COMMUNITY ECONOMY

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Introduction

"Something largely unnoticed is happening in cities across the world," Paul Chatterton (2019, p. 1f.) notes in his recent book *Unlocking sustainable cities – A manifesto for real change.* "There are countless projects where people from all walks of life and city sectors are creating, resisting, and intervening in their unfolding urban story. In spite of the overbearing weight of corporate power, loss of public space, bureaucratic hierarchies, ingrained inequalities and even the presence of war and violence, people and projects are emerging to lay down markers for very different urban futures." A few years before, Paul Mason (2016, p. xv) popularized the term "postcapitalism" to describe this development: "almost unnoticed, in the niches and hollows of the market system, whole swathes of economic life are beginning to move to a different rhythm. Parallel currencies, time banks, cooperatives, and self-managed spaces have proliferated." Chatterton and Mason are in good company of numerous scholars that draw attention to old and new forms of community economies (Gibson-Graham, 2006; Gibson-Graham, Cameron, & Healy, 2013), alternative economic spaces (Leyshon, Lee, & Williams, 2003), social and solidarity economies (North & Cato, 2017), commoning (Bollier & Helfrich, 2012), and reconsiderations around well-being and the good life (Gudynas, 2011; I.L.A. Kollektiv, 2019; Rosa & Henning, 2018).

These hopeful gestures, however, contrast with an incessant flow of bad tidings. Global climate continues to destabilize; species extinct; rainforests and other ecosystems turn into wastelands; soils erode; pesticides, plastic, nuclear waste, and a panoply of chemicals contaminate oceans, freshwater, lands, animals and people "all feeding into a multi-dimensional sustainability crisis that leaves politicians (as well as the market) utterly helpless" (Blühdorn, 2017, p. 42). Lately, four of nine planetary boundaries have been crossed, threatening to change the earth's ecosystems uncontrollably and irreversibly (Steffen et al., 2015). Economic growth and progress, in the name of which parts of humanity exploit nature and lives (Patel & Moore, 2018), thereby, fail the mass of population. Billions lack clean drinking water, sanitation, nutrition, shelter, safety, access to education, and political participation. Others work "bullshit jobs" (Graeber, 2018) to keep alive an extractive economy that deepens inequality (OECD, 2011; Piketty, 2017) and entangles existences in ways that pitch interests against each other so one person's well-being becomes another person's exploitation (Brand & Wissen, 2017).

While all this is going on, daily routines in the Global North persist seemingly unperturbed by the possibilities and threats of planetary futures. Judging by the continuation of business-as-usual, transition to sustainability appears to be little more than a small nuisance that requires the shift of some habits, market expansion to hitherto non-marketized natures, and the technological innovation

of not-yet-so-smart cities. The green economy – like its predecessors ecological modernization and sustainable development – sets out to reconcile capital accumulation with social justice and earth's live systems. Virtually no government in the Global North seriously questions the instituted economy based on self-interest and dependent on continuous growth, ignoring the evidence that makes an absolute decoupling of growth and resource consumption highly implausible and employing economic metrics that have limited significance for general social well-being (Jackson, 2017).

Taking a sincere look at things raises a number of profound questions. What is the real scope of the global social and ecological crisis? Can progressive politics reconcile markets and states with the requirements of a truly sustainable future? Or does humanity need a revolutionary break with growth economics and interest-driven politics? Will community-based initiatives and peer-to-peer economies creepingly replace a rampant global capitalism? Can autonomous, democratic and decentralized associations oust corrupt governments? Should we be hopeful to realize the possibilities of other forms of economic organization and togetherness? Or does optimism veil the difficulties and contradictions of community activism? Should we be devastated, horrified, and furious in view of the sweeping contempt for human and non-human lives? Or does pessimism turn into paralyzing nihilism and cynicism? Are we responsible to change our lives dramatically to avoid emissions and exploitation? Or is it the responsibility of politicians and managers to enable a sustainable lifestyle for everyone? Who should we vote for, address, judge, and organize with?

Geography and other disciplines cannot provide clear answers to these questions (and if they attempt to, one should be rather careful). They do, however, provide a number of conceptual and methodological tools to approach the complexities of transformative processes. Situated between natural sciences and the humanities, geography, in particular, links social practices and ecological processes to capture the complex spatialities of more-than-human interaction. It sheds light on both sides of transformation. Transformation as the fundamental change of ecological, technological, cultural, and institutional relations that unfolds seemingly removed from anyone's sphere of influence. And transformation as the engagement, struggles, and promises of activists, communities, eco-social organizations, and progressive politicians for a more just and sustainable future. Transformative geographies, consequently, unfold through and between global change and local agency, collective engagement and individual resubjectivation, grant narratives and small actions. In this vein, a perspective on transformative geographies captures the changing spatialities of power-laden human co-existence set in a more-than-human world.

This work explores the forces and possibilities of transformation in a polarized world of encouraging community economies and an ostensibly overwhelming global capitalism. It looks at 24 eco-social organizations, projects, and groupings – at some of them closer than others – in the city of Stuttgart

(Germany) and its vicinity. By means of qualitative exploratory research methods, the study develops an understanding of the complex interplay of possibilities and constraints, individual efforts and community organizing, politico-economic coercion and windows of opportunity, place-based practices and politics beyond place that feed into processes of transformation. Drawing on the processual ontologies of community economy and practice theory scholarship, the thesis develops a perspective that acknowledges agential and structural moments of transformation and articulates inspirations for hope as well as reasons for concern. The remainder of this introduction elaborates on the study's focus and research question, as well as its contributions and limitations. It concludes by giving an overview of the structure of this work.

Focus and research question

Thematically, this work situates itself within the discussion of degrowth and postcapitalism in critical geography and cognate disciplines (Chatterton & Pusey, 2019; Gibson-Graham, 2006; Kallis, 2018; Latouche, 2009). Degrowth convenes a number of theoretical and practical approaches that seek to abandon economic growth and related narratives of development, innovation, and progress as guiding principles of human co-existence and instead propose a reflective recalibration of economic, political, and social institutions to support a temporally and spatially equitable, sustainable, and dignified survival of human and nonhuman species. The challenging of growth involves perspectives on a postcapitalist future that abandons the societal project of "accumulation of surplus value, individualization, commodification and enclosure" (Chatterton & Pusey, 2019, p. 15). Both degrowth and postcapitalism entail critiques of incumbent social institutions and dialogues about values that guide potential futures.

The question '*How can community activism and civil engagement shift transformative geographies towards a degrowth trajectory?*' summarizes the main orientation of this work. It is interested in the diverse and often ambiguous practices of community-led initiatives, activists, eco-social enterprises, and progressive politicians who devote energy and reflection to social and ecological issues and devise strategies to have a positive effect. Notions of sustainability, thereby, vary as much as the approaches to remedy grievances. The study's interest translates into three connected research questions:

a. What practices follow from and accompany (radical) critiques of unsustainable social relations?
b. How do facilitating and constraining moments become relevant in sustainability-related practice?
c. How can a deeper understanding of transformative geographies contribute to a degrowth transition?

Research question a. focusses on different notions of sustainability and "narratives of change" (Avelino et al., 2017, p. 3) as well as the way in which individuals and organizations translate these ideals into

practice. The main focus, thereby, is on organizations that advocate a shift away from a narrow perspective on economic growth and are skeptical of current neoliberal attempts on market-based sustainability transitions. Research question b. builds on that by carving out various internal and external factors that facilitate and catalyze or inhibit and blight sustainability- and particularly degrowth-oriented practices. In doing so, the study attempts to paint a differentiated picture that includes the possibilities of a postcapitalist future and the forces that militate against it alike. c. eventually takes this work in a more hopeful direction. Instead of getting bogged down in quarrels over the probability of change in the magnitude required, the thesis develops a degrowth research agenda that takes both possibilities and constraints serious to devise strategies for a degrowth transition.

Geographically, the study's focus primarily pertains to the Global North. I use this established but partially misleading term to refer to spaces of a relative (material) wealth that is generally related to the exploitation of social and environmental conditions elsewhere (the Global South). The Global North does not necessarily map onto national territories (Trefzer, Jackson, McKee, & Dellinger, 2014), but rather encompasses the places, bodies, and networks which profit materially from currently instituted global economic relations. Consequently, while global relations continue to be important for the study's argument, and, in fact, constitute a major aspect of the crises it addresses, the study's conceptual and empirical thrust revolve around the role of the Global North.

Empirically, this orientation translates into the focus on 24 eco-social organizations, projects, and groupings in the city of Stuttgart. Stuttgart is located in the South of Germany, in a prosperous region with a strong manufacturing sector and home to a number of global players and long-standing tradition of small and medium sized enterprises. Stuttgart's landscape of alternative organizations and actors provides a compelling window into the possibilities of alternative economizing. It is a highly dynamic case which shows a number of substantial social and technological innovations in conjunction with degrowth-oriented practices and strategies. Above all, a strong interconnectedness between several sustainability-related organizations opens a perspective beyond individual projects. A prominent role of supra-organizational connections, furthermore, feeds into the study's interest on the possibilities of broader institutional change.

Conceptually, this thesis turns to processual and relational perspectives that reject the ontological privileging of spatial hierarchies. Practice theory and community economy thinking, each in their own way, renounce and counter determinative conceptions of structures, systems, and globalism. Instead they turn to performances and practices in and through which the social world is (re)enacted, bringing the diverse routines and possibilities of social coexistence to focus. Bonded over a processual ontology, both perspectives, however, acknowledge the world in quite different ways. Community economy scholarship (Gibson-Graham, 1996, 2006; Gibson-Graham & Community Economies Collective, 2017;

Roelvink, St. Martin, & Gibson-Graham, 2015) cuts capitalism's ground by exposing economic relations as a site of radical difference. Drawing on a wide inspiration from feminism, poststructuralism, queer theory and antiessentialist Marxism, community economy thinking deconstructs capitalocentric narratives and subjectivities, and seeks to resocialize and repoliticize economic practice. In doing so, the focus is on becoming and difference of postcapitalist subjectivities. Critics, however, see community economy's research agenda around the disidentification with capitalism as attempt to think away its institutions, materialities and power relations (Castree, 1999; Glassman, 2003). A gap which practice theoretical perspectives can help to fill.

Practice theory is grounded in a long genealogy of thought around the writings of Marx, Heidegger, Wittgenstein, Dewey, Bourdieu, Giddens and others (Geiselhart, Winkler, & Dünckmann, forthcoming; Nicolini, 2013; Reckwitz, 2002). While community economy scholarship localizes the social primarily in discursive orders and epistemes, practice theory turns away from representationalism towards rountinized performances that assemble bodies, artefacts, meanings, and discourses into relative stable patterns of activity that establish, order, and uphold social co-existence (Reckwitz, 2002; Schatzki, 1996; Shove, Pantzar, & Watson, 2012). Practice theory advances a perspective on the materialization of social performances that productively speaks to community economy's focus on contingency and diversity. The study sees merit in combining both approaches to join perspectives on the possibilities of economic difference, opened by community economy's ontological politics, with practice theory's appreciation of routinized activities that institute, condition, and channel transformative practice.

Methodologically, the thesis turns to ethnographic research methods and interviewing. Participant observation, in a way, is the methodological counterpart of practice theory (Reckwitz, 2016). It allows the researcher to capture the 'silent' part of practices – the supposedly irrelevant, the take-for-granted, the clandestine, the ineffable, the routinized, and the unconscious. Participant observation, however, faces a number of limitations around accessibility, temporality, and expenditure. Interviews partly make up for these shortcomings, in particular by easing access and providing orientation. Furthermore, the thesis follows participatory action research (PAR) methodologies in their rethinking of data collection, knowledge production, and research objectives along notions of empowerment and social justice. While truly collaborative co-production of knowledge faces a number of issues such as the limited availability of co-researchers, PAR informs the study's active participation in Stuttgart's community economy.

Contributions

This thesis contributes both conceptually and empirically to the research and activism of transformative geographies. In joining a community economy perspective with practice theorizing, it combines two strands of scholarship that explore possibilities of a societal shift towards more sustainable trajectories, but hitherto lack productive interaction (Schmid & Smith, resubmitted). Community economy's ontological politics and practice theory's grounding of change in the repetitive enactment of conventionalized patterns of activity inspires the work to formulate a research agenda around the materialization of postcapitalist possibility. Such a research agenda reacts to critiques of community economy's emphasis that to change our understanding of the world is to change the world (Gibson-Graham, 2006). The thesis makes an elaborate argument that emancipatory research requires the consideration of both possibilities and restrictions to formulate strategies for societal change. In doing so, it speaks to pertinent debates in the literature on transition, in particular to the tension between antagonism and imagination – that means opposition against 'undesirable' practices on the one side and the emphasis of plurality, possibility, and openness on the other side – as different modalities of resistance (Zanoni, Contu, Healy, & Mir, 2017; see also R. Lee, 2016; North & Cato, 2017).

Furthermore, this thesis develops an analytical framework that operationalizes a degrowth research agenda through a perspective on the diverse patterns of practices' relatedness ('logics'). As such it reacts to spatially naïve approaches that focus on locally bound community activism on the one hand, and an aspatial globalization on the other hand. Following relational notions of space such as Massey's (2005, 2008) demand for a politics of place beyond place, the 'diverse logics perspective' embeds empirical findings in a conceptually grounded notion of practices' broader alignments. In doing so, the study develops notions around degrowth practices and degrowth politics that describe *conventionalized patterns of activity that reflectively relate to practices' broader alignments in ways that found the assumption that these activities have an – however minor – effect in line with degrowth's principles.* The work, thus, makes an important contribution to bridge the conceptual and methodological chasm between context-specific enactments of alternatives and broader notions of social change.

Empirically, the thesis investigates a highly dynamic case in a prosperous context in the Global North. In contrast to places with a longer trajectory in alternative organizing, such as Berlin in the German context, the case of Stuttgart is relatively inconspicuous at first. Lacking a significant 'alternative milieu' (N. Longhurst, 2015) until recently, a contemporary generation of activists and organizations create a rather undogmatic and pragmatic landscape of alternatives, addressing a broad range of issues around social inequality and environmental unsustainability. In terms of its empirical focus, the study stands out in at least two ways. First, it covers the dynamic unfolding of alternative forms of economic

organization in a place without a long-standing tradition. By capturing both enabling and constraining moments in that development, the thesis sheds light on the possibilities to build alternative economies outside and beyond the 'usual' places. Second, the thesis pays close attention to the links between organizations which is crucial for the development of an alternative milieu beyond disparate hubs of alternative organizing. Both aspects broaden the focus and contribute to a better understanding of transformative processes.

Last, the study contributes to activism in place. In vein of an action research methodology, one of its objectives is the production of useful knowledge and the collaboration with alternative organizations. Since the organizations include predominantly individuals (often white males) who voluntarily engage in alternative practices, the 'community' does not qualify as marginalized in a conventional sense. Nevertheless, marginalization is relevant in two respects. On the one side, the engagement in alternative forms of production, consumption, and transfer moves the organizations to the fringes of incumbent economic and political institutions. On the other side, the organizations' activities leverage support of less fortunate individuals and communities directly or indirectly by disengaging from exploitative practices. During the course of the study, the position as researcher allowed me to contribute theoretically and practically to some organizations by providing ideas, feedback, or establishing links to other groupings.

Limitations

Research on transformation in general, and this study in particular, faces a number of limitations that require further reflection. First, due to its orientation towards possible futures, research on transformation inevitably involves speculation. This thesis takes on this challenge by grounding future-oriented assumptions in conceptually and methodologically sound argumentation. It finds an optimistic and hopeful tone, while aware of, and transparent about, the hypothetical character of its forward-looking orientation. Second, research on transformation involves a politics. While research is never simply neutral or objective, the prospective character of research on transformation renders it distinctly normative. As a consequence, any articulation needs to be transparent about its origin and intend. I do acknowledge this circumstance at different points throughout this work. Specifically in part I, which establishes the study's critical stance against growth-based economic and political institutions, and in part III, in which I reflect on the study's methodology and my own positionality. Finally, research on transformation deals with complex processes that involve dispersed moments and places. It needs to engage the limited resources at its disposal to generate useful and empowering knowledge. This last point needs further elaboration to explain the study's approach.

Broadly speaking, there are two basic strategies how research can mobilize its limited resources to account for the complexity of transformative geographies. On the one hand, it can focus on a particular object or practice and its relations across and between different places and times. On the other hand, it can look at the complex interplay of objects, practices, and relations in a specific geographical context. The former enables the research to gain insights into the effects, tendencies, and interdependencies across dispersed sites. It can, however, only make limited assertions about the processes and interdependencies outside of the relations in focus. The latter, in turn, works to capture the complexity of relations in place. It can, however, only make limited assertions about the relations beyond that geographical and temporal context. Of course, there also numerous combinations of both strategies.

This work primarily follows the latter strategy, but seeks to include the former by creating conceptual and methodological tools to link its empirical focus to moments and places beyond. In concrete terms that means, although the work's empirics are geographically and temporarily bound to the context of Stuttgart between 2016-2018, it considers the relations beyond place which remain outside of its direct focus. This 'outside' is a simplified and homogenized space that emerges through literature and experience – sometimes on/of specific sites, sometimes on social relations more generally – such as analyses of value chains, research on social and environmental injustice, and involvement in translocal networks. My discussion of transformation, consequently, is grounded in rich empirical data from a specific site squared with the many-sided (and sited) but less empirically grounded insights beyond place. This work spends much time on providing a thematic overview and developing conceptual tools to enable a perspective on a politics of place beyond place (Massey, 2005; 2008), as reflected in its structure.

Structure

This work structures into five parts that follow the classical trajectory of literature review, conceptual framework, methodology, findings, and discussion. Each part divides into a number of chapters that are consecutively numbered for simpler orientation and cross-referencing and build towards the question 'how community activism and civil engagement can shift transformative geographies towards a degrowth trajectory.' Part I contours the field of tension between (economic) growth, capitalist cheapening, sustainable consumption, and community economies which activism and civil engagement challenge, co-create, and navigate. Part II, then, advances a conceptual argument how different sites interlink in practice and works towards the development of a research agenda to trace the complex processes of transformation and transition. Part III translates the foregoing considerations into methodological tools to guide data collection and analysis of transformative practice. Part IV presents empirical evidence on alternatives, as well as enabling and constraining moments thereof.

Part V, finally, returns to the initial question and examines the (im)possibilities of a degrowth transition in practice. The remainder of this introduction gives a more detailed overview that looks at the individual chapters.

Part I discusses social and ecological crises in the context of growth-based economic, political, and cultural institutions in the Global North and traces the various responses of scholars, activists, policy-makers, and entrepreneurs. Chapter 1, thereby, exposes both the unsustainability and the institutionalization of economic growth. It outlines the ensuing contradiction that modern societies depend on growth which, at the same time, runs up against social and ecological limits. Approaches around sustainable development and green growth that continue along present trajectories, the chapter concludes, ultimately deepen social and ecological crises and are implausible as orientation for a sustainability transition. Chapter 2, then, scans the landscape of alternative political and economic spaces for approaches that question existent relations of work, property, and decision-making more profoundly. It drills down into degrowth and postcapitalism, two approaches that oppose economic growth and capital accumulation, as guidance for a radical (as in addressing the root cause) theory and praxis. Chapter 3, finally, turns to transformation and its agents. It traces the diverse actors involved in translating more or less radical critiques into social practice, including community grassroots initiatives, eco-social enterprises, and policy makers. Furthermore, it sets up the conceptualization of transformative geographies – deepened in part II – by proposing an etymologically grounded distinction between transformation and transition. While transformation means to 'change in shape' which, at first, does not imply a particular agent or directionality, transition emphasises the (strategic) passage from one state of affairs to another and thus includes both the notion of an orientation and the active connotation of an agent.

Part II formulates a conceptual agenda of transformative geographies around politics and its disagreements, encounters and identities; space and its materialities; and the dynamic unfolding of the social through its routines, shifts and ruptures. Chapter 4 propounds a political sensitivity by exploring the inherent togetherness of human co-existence. It follows the philosophical though of Jean-Luc Nancy – brought into Geography most prominently by the writing partnership of Kathrine Gibson and Julie Graham – to ground economic practice in an ontological sociality. From the vantage point of a 'community economy', the chapter explores the contingency and politics of economic being-in-common alongside the limitations of poststructural transformative imaginaries. Chapter 5, in response, turns towards the materiality of social life. Drawing on practice theory, it traces how human togetherness materializes in bodies, artefacts and things, stabilizing across time and space. The notion of practice, with its processual and materially grounded ontology, adds to a perspective on social reproduction and change in the vein of a poststructuralist materialism. Chapter 6 deepens this

perspective on the materiality of social coexistence, by looking at concepts of scale and power. This crisp chapter prepares the operationalization of transformative geographies, an issue the last chapter of part II turns to. Taking up the conceptual grounding of space, politics and change, chapter 7, then, translates transformative geographies into a perspective on concrete practices. Based on notions of degrowth practices and politics, this chapter proposes to consider diverse logics – patterns in practices' relatedness – to structure the research on transition.

Part III expands the study's thematic and conceptual thrust of a poststructural-materialist perspective on degrowth transitions with methodological and empirical deliberations. Chapter 8 outlines the implications of the study's conceptual orientation for its methodological and analytical set-up. Against the background of practice theory's non-dualistic sensitivity, the chapter conceptualizes implicitness/explicitness and discourse/practice along continua of explicitness and material engagement. Chapter 9, then, translates the general methodological considerations into a research design that guides this thesis empirically. It schematically presents the different methods this thesis draws on – desktop research, semi-structured interviewing, participant observation, and focus groups – and relates them both methodologically and chronologically. Chapter 10 takes a more reflexive angle and contemplates research itself as practice, exposed to, and imbued with, cultural, political, ethical, and economic parameters. After situating the present study within participatory action research methodologies, the section turns to issues around positionality and normativity. Chapter 11, finally, weaves in foregoing critical reflexivity with the study's thematic and conceptual deliberations to formulate an elaborate coding scheme. It details the procedures around data analysis to bare the study's handling of the different kinds of data collected through different methods.

Part IV presents the study's findings. In continuation of the conceptual and methodological considerations which find expression in the study's coding scheme, presented in the previous section, this part structures into four chapters – alternatives, constraints, enablement, and compromise. Chapter 12 focuses on the ways in which individuals and organizations diverge from incumbent practice. Oriented by the diverse logics identified in parts II and III – economy, governance, communality, subjectivity, and technology – the chapter exposes a range of instances that jar with prevailing norms and rules. Chapter 13 continues by highlighting moments of constraint that impede the enactment and stabilization of heterodox practices. Like the subsequent chapter 14, which traces moments that enable and encourage alternative practices, its substructure follows the five aforementioned logics. Chapter 15, then, brings together alternatives, constraints, and enablement by tracing the compromises that characterize the everyday practices of sustainability- and degrowth-oriented organizations. Part IV closes with some considerations on transformation sounding the bell for the ensuing discussion.

Part V discusses the findings and the study's insights along three questions that recourse to the study's research interest and structure the final section. Chapter 16 (re)turns to the question of politics of place beyond place and combines the study's conceptual and contextual insights with its empirical findings to sketch tendencies around a degrowth transition. Chapters 17 and 18, then, propose more nuanced perspectives on practices and organizations, respectively, to elaborate on the concepts of degrowth practices and degrowth organizations. Against the background of a notion of degrowth politics, these chapters discuss how practices and organizations reflectively relate to practices' broader alignments in ways that found the assumption that they have an effect in line with degrowth's principles. Finally, chapter 19 discusses the difficulties to identify, let alone single out, transformative processes of a degrowth transition. Rather than losing itself in the hybridity, contingency, diversity, and processuality of transition, it traces the development of possible strategies for a degrowth transition around 'hybrid infrastructures'. This work wraps up with a reflection on its contributions and limitations as well as the major leverages it identifies. Transformation towards a sustainable future, it concludes, while still involving much speculation and hope, is most likely to come about through tactical compromising – informed by socio-spatial strategies – to build constituent potential for alternative organizing.

Part I: From a growing economy to a-growth economies

Growth is a lynchpin in current debates on economic futures. 'Realists' of one sort point towards the progress and prosperity that (only) economic growth can bring, or, if that argument feels under threat, reiterate the lack of workable alternatives. 'Realists' of another sort point out that the societal fixation on continuous and endless growth is about to destroy irreversibly humanity's own means of subsistence. And, while at it, the latter tackle other forms the faith in progress takes alongside with economic growth – individual self-enhancement, political expansion, technological advancement, and a general inquietude that characterize modern societies. The debate on growth, green-growth, degrowth, and a-growth, however, is more complicated than that. Advocates of the green economy promise a decoupling of economic growth from ecological destruction, and social entrepreneurs work to rectify social issues. Yet others remain agnostic about the advantages and disadvantages of growth and the possibilities of its decoupling, arguing for a-growth or a 'preventive post-growth position' (Petschow et al. 2018). Beyond the theoretical discussion in academic, public (and to a severely limited extent political) arenas, a wide variety of community-born initiatives, projects, and enterprises implement and experiment with economies that deviate from the conventional entrepreneurial focus on profits and growth. Although they alternately align with, position against, remain agnostic to or simply ignore growth narratives, a perspective on their diverse practices strains narrow conceptions of economy, fuels questions on social and environmental justice, inspires debate on economies' objectives and sparks hope for transformative politics.

Part I lays the foundations for a critical perspective on transformative geographies. It starts out by tracing current social and ecological crises as outcomes of the ways capital positions humans in relation to each other and the more-than-human world. Drawing on pertinent literature, the first chapter contextualizes growth in the fields of political economy, world ecology, and social theory. In doing so, it aims to disentangle the diverse accounts of growth's inevitability, flexibility, promises and its failures. It touches on the structural necessity of growth, the escalatory tendencies of the continuation along present trajectories, their ecological and social limits and systemic responses. Chapter 2 continues by sketching the landscape of alternatives that question existent relations of work, property, and decision-making and shift practices of production, consumption, distribution, financing and governance towards sustainability, equity and justice. Contouring the breath of approaches, it scopes out degrowth and postcapitalism as radical (in a literal sense) alternatives that address some of the root causes of the multiple crises. Chapter 3, then, discusses transformation and transition, that means (1) the fundamental shifts in social and ecological systems that comprises multiple interacting dimensions including political, economic, demographic, cultural, juridical, technological, climatic, biological, aquatic, and pedological moments and (2) the purposive responses to ecological and

societal issues involving changes in the configuration of policy, industry, mobility, technology, and supply towards more sustainable alignments. It emphasizes the diverse actors involved in translating more or less radical critiques into social practice, including community grassroots initiatives, eco-social enterprises, and policy makers. By proposing an etymologically grounded differentiation of transformation and transition, this section sets up the conceptualization of geographies of change that follows in part II. In this vein, the chapter closes with a translation of transformation into spatial terms.

Chapter 1: Growth in the Capitalocene

> Moderne Gesellschaften sind dadurch gekennzeichnet, dass sie ihre Teilbereiche und ihre Sozialstruktur nur noch dynamisch zu stabilisieren und reproduzieren vermögen; sie gewinnen Stabilität gleichsam in und durch Bewegung, wobei diese Bewegung genauer als eine Steigerungsbewegung bestimmt werden kann. (Rosa, 2016, p. 673)

Anthropocene marks an epoch of considerable human influence on earth systems. The term was first proposed by Crutzen & Stroemer (2000, p. 17) to "emphasize the central role of mankind in geology and ecology" and has since been discussed in various disciplines including geography (Castree, 2014). Speaking of the Anthropocene, however, is misleading in two respects. First it suggests that the current transgression of "planetary boundaries" (Rockström et al., 2009) at alarming rates is "just humans being humans in the way that kids will be kids or snakes will be snakes" (Patel & Moore, 2018, p. 2). Second, and related therewith, it veils that it is by no means humankind as such that dramatically threatens its own base of existence. Environmental impacts distribute highly unevenly alongside racial and socio-economic divides. Patel & Moore (2018, p. 3), therefore, go on to argue that rather than humankind as a whole, it is the particular way of "organizing the relations between humans and the rest of nature" that is destabilizing the climate, eradicating species, and destroying ecological balances from food chains to nutrient cycles: capitalism.

Instead of speaking of the Anthropocene, then, it seems more appropriate to speak of the *Capitalocene* (Moore, 2016) – the epoch of capital. Before thinking about a conception of capitalism and the peril of singling it out as name giver for a whole epoch, it seems prudent to start with a definition of capital. At it's very basic, capital refers to money that is "put into circulation in order to get more money" (Harvey, 2010, p. 76), or to use Marx' familiar formula: M-C-M' (Marx, 1981 [1867], p. 251). Capital, therefore, is predicated upon a particular organization of production, exchange, and consumption that allows the extraction of surplus and its reinvestment to generate further surplus (accumulation of capital). The ways in which capital*ist* forms of organization are institutionalized differ across time and space. At this point, however, I am not interested in the particularities of capitalist institutions and their spatiality (see for instance Peck & Theodore, 2007 for the notion of "variegated capitalism"). Rather, I am interested in a minimal definition of capitalism as a form of temporal and spatial organization of society. Capitalism, at its very basic, is a set of social relations that generate an

"imperative to unlimited accumulation of capital by formally peaceful means" (Boltanski & Chiapello, 2018, p. 4).

Capital, thereby, neither determines social relations nor is it the only way how people relate to each other and the more-than-human world (Gibson-Graham, 2006; see part II). In capitalism, however, accumulation and circulation of capital are deeply inscribed into mental infrastructures, social institutions and the built environment. To use Adorno's notion of real abstraction: by continuously engaging in capitalist practices, capitalist relations are 'made real' and reproduce the material basis in which social practice is grounded (Belina, 2013; Swyngedouw, 2012). In other words, capitalist relations are both the basis and the outcome of a dialectical dynamic (see part II). This has profound consequences for the individuals of capitalist societies. Although their actions are not determined by capitalism, individuals are continuously coerced to participate in capital's accumulation and thus in the reproduction of capitalist social relations. Reproduction, of course, entails a diverse range of economic and non-economic moments (Althusser & Balibar, 1977). For now, it suffices to acknowledge, for instance, the demanding if not impossible challenge of foregoing products from profit-oriented enterprises and relying fully on alternative circuits of value or self-provisioning (see below).

Capital, therefore, while not determining, is nevertheless a driving force in modern societies. Capturing the essence of capital in the pointed equation M-C-M', Marx goes on to remark: "But in buying in order to sell … the end and the beginning are the same … and this very fact makes the movement and endless one." (Marx, 1981 [1867], p. 252). Capitalist accumulation does not have a target, final purpose or endpoint – for example when an appropriate level of material wealth is reached or negative externalities threaten the bedrock of humankind. Instead, accumulation has to continue; infinitely. This is not just a (mis)perception of neoclassic economic theory. Rather, social institutions are set up in a way that they are deeply dependent on the continuation of accumulation and thus economic growth[1]. Recessions can throw millions into poverty; state support depends on fiscal revenue; and pension, health, education and other social systems are growth-dependent (Seidl & Zahrnt, 2010a). Furthermore, progress and the expectation of a continuous increase in options of consumption are firmly fixed in mental infrastructures (Welzer, 2011). Rosa et al. (2017, p. 54), this vein, speak of dynamic stabilization – the notion that "modern societies [require] (material) growth, (technological) augmentation and high rates of cultural innovation in order to reproduce its structure and to preserve the socioeconomic and political status quo". What's at issue beyond economic growth – the

[1] Accumulation, here, refers to the "reproduction of capital on an expanding scale through the reinvestment of surplus value" (Andreucci & McDonough, 2015, p. 60). It is therefore distinct from economic growth, generally considered to refer to the increase in the aggregate of all goods and services produced in a set time period as expressed by GDP. But the latter reflects the former, which is implied when speaking of (de)growth in the following.

continuous accumulation of capital – then, is also acceleration in general in its various shapes and forms: as progress, augmentation, self-optimization, expansion, development and inquietude.

The positioning of individuals, groups, and societies within global capitalist relations, however, is highly uneven. The societies that scholars variously refer to as 'modern' or 'capitalist' are primarily located in the Global North. The term Global North, here, is a coarse descriptor for the places, bodies, and networks which profit materially from currently instituted global economic relations. Consequently, while capital is grounded in global relations, the subsequent focus revolves around the institutions and the role of the Global North. Before turning to the consequences of capitalism's "escalatory tendencies" (Rosa et al., 2017) that continuously push its "frontiers" (Patel & Moore, 2018), therefore, the next section reviews some arguments on growth-dependency of the Global North.

Why are we growth addicted?

A basic but tautological answer to the question of why capitalist societies need to growth is: capitalist societies have to grow because they are capitalist. As outline above, capital is predicated on growth. That means, "an economic system in which capital no longer accumulates is no longer capitalism, whatever one might want to call it." (Skidelsky & Skidelsky 2012, cited in D'Alisa et. al. 2015, p. 11).

To move beyond this tautology, however, one need to look at how capital materializes in socio-economic relations. Richters and Siemoneit (2017) group arguments that identify growth drivers into six categories: (1) individual aspirations; (2) credit and interest; (3) property; (4) competition and capital; (5) technological progress; (6) state institutions. The arguments differ widely as to which of these factors are causal drivers of a growth imperative, in how far they can be substituted, and to what extent this substitution is desirable. Reviewing the debate in its entirety is beyond the scope of this work. In the following, however, I will review growth imperatives on three levels that are relevant for the further argument: First, formal economic structures; second, state institutions; and third, subjectivities and mental infrastructures.

Formal economic structures

Money mediates practices of the formal economy. This ranges from individuals' and households' consumption of basic goods and services such as food, housing or mobility to large-scale production of cars or trade of financial derivatives. Economic agents who do not have enough money at their disposal to finance their endeavor – be it buying a car or setting up an automobile factory – enter a credit relation (or abandon their endeavor). Credit relations enable the acquisition of goods or the investment in economic activities. Whereas the former – the consumer – enters the credit relation to purchase a good or service, the latter – the capitalist – enters it to invest the money as *capital*. The former, in turn, generally depends on an income source through labor and thus on the profitability of

the activities of the latter. An economy that is shot through with credit relations does not only allow for growth but imposes it (van Griethuysen, 2010).

> Debtors who fail to meet those constraints [solvency, profitability, time pressure] will be eliminated from the property-based economy (through the seizure, foreclosure or acquisition of their property). This also means that any economic behavior motivated by alternative criteria will be discouraged, even eliminated by the capitalist requirements." (van Griethuysen, 2010, p. 591)

A fundamental driver of growth, thereby, lies in the structuring of the monetary system itself. Through fractional reserve banking, banks create money "out of thin air" when issuing credits (R. A. Werner, 2014, p. 1) that eventually have to be repaid with interest (H. C. Binswanger, 2013). As a consequence, debt and money supply are continuously misbalanced which can only be compensated through further loans starting the circle anew. In the aggregate, then, there is a flow of money from firms to credit institutions that requires an increase in money supply to compensate for this loss. "But only a growing economy can sustain a continuous inflow of new money by credit expansion, which compensates for the increase in bank owner's capital" (M. Binswanger, 2009, p. 725). A credit-based economy, therefore, needs continuous growth to remain stable.

State institutions

For the most part, there is a consent across political parties for economic growth. Seidl and Zahrnt (2010) identify three major relationships between state finances and economic growth. First, economic growth is meant to increase fiscal revenue. Second, it ought to decrease the expenses for social welfare. Third, and tautological from a degrowth perspective, it is supposed to increase investor confidence to stimulate further growth. Considering the close nexus of state and capital, however, the third aspect makes perfect sense because in the absence of growth "companies close down, jobs are lost, and, by consequence, public revenues decrease and expenditures increase, and the ensuing monetary and fiscal crisis can put political legitimation at risk, too." (Rosa et al., 2017, p. 54).

Furthermore, on a more basic level, states are debtors themselves and face the threats of bankruptcy and concomitant dispossession. This can be seen in recent developments in Greece and many countries of the global South. Programs of 'structural adjustment', thereby, create relations in which states are even more dependent on growth to continue functioning (Brand & Wissen, 2017).

Subjectivities

Mental infrastructures are solidified patterns of thinking and being. Irreducible to a conceptual level, ways of being, thinking and perceiving co-constitute with unconscious and even biological parameters. Welzer (2014, p. 36) thus speaks of the mind as "biocultural organ". Growth and progress are deeply inscribed in Western cultures and constitute their raison d'être. Without tracing the history of the idea of progress and its role in capitalist relations – which has been done from cultural (Konersmann, 2015), state-cantered (Scott, 2017), economic (Wood, 2017), and ecological (Patel & Moore, 2018)

perspectives elsewhere – it suffices for the present purpose to acknowledge a deeply embodied cultural-ideological norms that drive economic growth. Concretely, this translates into expectations of continuously increasing consumption options (Rosa, 2016), a feeling of entitlement to, and defense of, resource-intensive high standards of living (Brand & Wissen, 2017), forms of self-optimization (W. Brown, 2015) and naïve techno-optimism (Kerschner, Wächter, Nierling, & Ehlers, 2018).

Rosa (2018, p. 42) captures the subjectivities of modern societies through the triple-A approach: "the modern way of acting and being-in-the world is geared towards making more and more of its qualities and quantities available, accessible and attainable". Individuals are driven by a fundamental desire to expand their reach and scope and to maximize the part of the world available to them. Money, as universal means of exchange, represents the potentiality of goods and services. An increase of money, then, equals an increase in the share of the world that is available, accessible and attainable. Since expansion itself is the imperative, there is no target or endpoint in the desire for accumulation. The endless pursuit of more in order to reach the "good life", ironically renders the latter an impossibility by definition. Rather "we end up turning the business of increasing our scope and horizon of the available, attainable and accessible, and collection resources into an end in itself, into an endless, escalatory cycle which permanently erode its own basis and thus leads nowhere" (Rosa, 2018, p. 45).

Escalation

In its current form, formal socio-economic institutions depend on growth. Stagnation or recession destabilizes formal political, economic, social, and mental structures. Due to the close relation between capital, state, and social subsistence, economic downturns are not just a problem for capital but for society as a whole. On a surface-level this tight linkage has forged a false coalition of capital and public welfare, which is, however, trapped in a "spiral of escalation" (Rosa et al., 2017, p. 60). For growth to continue capital has to penetrate non-capitalized spaces ever further. Capital has to find new strategies of cheapening natures including humans and thus continuously transgressing its frontiers (Patel & Moore, 2018). Cheapening, "a strategy, a practice, a violence that mobilizes all kinds of work – human and animal, botanical and geological – with as little compensation as possible … makes possible capitalism's expansive markets" (19-22).

Precarity, as a result, is not an exceptional state – that which "'drops out' from the system" (Tsing, 2015, p. 20) – but it is the very condition of capital at work. Global value chains incorporate different forms of "salvage accumulation" in strategies of cheapening. Tsing (2015, p. 63) defines salvage accumulation as "the process through which lead firms amass capital without controlling the conditions under which commodities are produced". Examples abound, not least the sourcing of lithium and tantalum in the recent boom of electro-mobility where slave and child labour are everpresent. In general, it is close to impossible to purchase high-tech products requiring the use of

materials such as tantalum, tin, and gold without contributing to the salvage accumulation of capital. Even *Fairphone*, a company whose focus is explicitly on sustainably-sourced materials and goes to great lengths to trace its supply chain, is only able to set up transparent supply chains for a fraction of the 40 materials it uses.

> While many of the materials evaluated deserve more attention, the findings of our materials scoping study helped us to create a shortlist of 10 materials to examine more closely: tin, tantalum, tungsten, gold, cobalt, copper, gallium, indium, nickel, rare earth metals. These materials are all frequently used in the electronics industry, have a range of mining-related issues, and are not likely to be substituted in the near future. While we certainly won't be able to improve all these supply chains, these minerals currently represent the most compelling potential to make a lasting impact. We have already set up transparent supply chains for some of these minerals. For the rest, we'll continue to evaluate options for improvement one material at a time.[2]

Economic relations in place are tightly interwoven with global capital, making it highly challenging to establish production, transfer, and consumption practices that withdraw from salvage accumulation. While it is important to say that capitalist social relations are neither the only (Gibson-Graham, 1996; Roelvink et al., 2015), nor the preferred form (White & Williams, 2016) how people relate economically to each other and the more-than-human world, it is also true that for most of humanity everyday life depends on global capital one way or another. From the perspective of the global North this finds expression in the fact that it is almost impossible not to partake in the exploitation of close and distant "earth others" (Plumwood, 2002) – as the example of electronics and conflict materials shows. Brand & Wissen (2017, p. 43) describe the fact that everyday life in capitalist centres is based fundamentally on the appropriation of human and ecological relations elsewhere as "imperial way of life". Like Patel and Moore's notion of cheapening it exposes the social and environmental injustices that accumulation on an expanding scale – growth – implies.

Limits

> Capital against the earth – one or the other may survive but not both (Hardt & Negri, 2017, p. 167)

Accumulation and economic growth face social and ecological limits. Socially, capital accumulation is bounded by the interlinked moments of discursive-ethical limits on the one hand and counter-movements and social unrest on the other hand. The cheapness of nature, work, care, and lives in capitalism begs questions about their intrinsic worth. Quite diverse schools of thought reiterate democracy, justice, equality and responsibility as central values of modern societies. Capital's transgression of moral boundaries and the erosion of democracy (W. Brown, 2015; Rancière, 1998), freedom (Shannon, Nocella, & Asimakopoulos, 2012), and rights – including the right not to partake in the imperial way of life (I.L.A. Kollektiv, 2019) – undermine these values and thus the central moral and political institutions of modern societies. Justice and rights are a slippery ground, in particular from

[2] https://www.fairphone.com/en/project/understanding-materials-mobile-phones (accessed March 9, 2019).

a postfoundational perspective that navigates the ridge between essentialism and relativism. Barnett (2017, p. 248), against this background, emphasises the "priority" of the sense of injustice which is "independent from a prior formulation of a universal principle of justice". The conceptual priorization of injustice shifts the focus to the multiple emergent sites of "felt experiences of injustice" (Barnett, 2017, p. 237) that arise in social struggles. These are the places and moments when capital encounters, contests, or defers to its social limits.

Social limits to accumulation, then, materialize in social movements, disobedience, resistance, unrest or simply withdrawal from capitalist production and exchange that slow-down, hinder or outright challenge capital circulation. While social struggles can ensue from a sense of injustice, they can be quite different in their focus, scope, strategy, and tactics. Particularistic struggles address, for instance, animal rights, environmental protection, or wages, opposing and limiting capital's exploitation of nature, work, and lives. Broader movements might follow when the cost of capital surviving [its own contradictions] becomes unacceptable to the mass of the population" (Harvey, 2014, p. 264). Yet, capital is not idle pushing back and dismantling resistance through counterrevolution (Marcuse, 1972), appropriation (Rosa et al., 2017), conventionalization (Kjeldsen & Ingemann, 2016) cooptation (Zanoni et al., 2017), innovation (Hardt & Negri, 2017), and commodification of progressive ideas, practices and projects. This double movement – here in a broader sense than Polanyi's (2001 [1944]) two opposing movements of disembedding economy from and reembedding it in society – is crucial for understanding both capital's persistence and the possibilities of postcapitalist politics.

While moral and social frontiers are negotiable – in the sense that they are subject to ethical and political debate – capital also encounters ecological limits. Pushing capital's frontiers deep into global ecologies sets offs mechanisms that are beyond human control (Malm, 2018). Rockström et al. (2009) identify nine planetary boundaries – climate change, ocean acidification, stratospheric ozone depletion, atmospheric aerosol loading, biochemical flows: interference with phosphorus and nitrogen cycles, global freshwater use, land-system change, rate of biodiversity loss, and chemical pollution – which human activity has to respect if it does not want to risk abrupt and possibly catastrophic global environmental change. Three boundaries – rate of biodiversity loss, biochemical flow boundary of nitrogen, and climate change (in order of severity of transgression) – have already been crossed at the time of publication. Since then, the trend has continued. Adding land-system change, an updated version from 2015 considers four out of nine planetary boundaries as crossed (Steffen et al., 2015).

Numerous metrics, furthermore, show the scope of current resource consumption and its unsustainability. Most fundamentally the "earth overshoot day" – the day of each year when all the amount of resource use exceeds earth systems' ability of renewal. Since the 70s, the earth overshoot day has moved from December to early August, signaling a global resource use of 170% of earth's

carrying capacity. Similarly, the ecological footprint or the material footprint describe the amount of resources necessary to sustain a particular lifestyle. The concept of ecological footprint was developed by Rees & Wackernagel to calculate the surface area required, while the material footprint reflects the amount of resources and materials in weight measures. All metrics can be scaled differently – globally, nationally, regionally, locally, individually – showing fundamentally different results alongside north/south, racial and class divides.

Attempts to abstract nature and human impact face a number of issues. Apart from the inherent problem in converting "heterogeneous forms of data into the single metric of carbon or physical land units, thus often replacing rigor for simplified headline figures" (T. S. J. Smith, 2019, p. 26), rendering nature and society calculable, shades a number of other issues. Numbers easily veil power relations and injustices such as the export of dirty industries and the greatly unequal distribution of causation of, and suffering from, environmental destruction. On a deeper level, the abstraction through numbers does violence to the concrete and everyday of human and more-than-human togetherness. Taylor Aiken, for instance, criticizes the instrumentalization of community through a focus on numbers noting "once accountancy and numbers became a core means, the end of a community of belonging, togetherness and living justly with environmental others was sidelined" (Taylor Aiken, 2015a, p. 88).

Despite the need to tread these metrics with caution, they clearly point towards the fundamental unsustainability of human activity in earth's ecosystems. Beyond moral and social limits to growth that are deferred through institutionalized injustice, ideology and violence, capitalist expansion runs up against ecological frontiers whose transgression increasingly destabilizes earth's support systems. The present, near and far future impacts of this transgression are difficult to ignore and pressure to act comes from both scientific and non-scientific communities. Global politics of late pushes a range of agendas to face ecological and social challenges, in particular climate change. Yet, growth itself remains sacrosanct and shall not be touched. Instead it is further enshrined into institutional frameworks such as UN's sustainable development goals. With goal number 8 – decent work and economic growth – the international community commits itself to "sustained economic growth, higher levels of productivity and technological innovation"[3]. Capital, then, remains at the core of global politics disguised as green, smart or sustainable growth.

Green growth – an oxymoron?

Green economy comprises a range of strategies and policy measures that aim to reduce negative environmental impacts and resource consumption while maintaining economic growth (Bina, 2013; C.

[3] http://www.undp.org/content/undp/en/home/sustainable-development-goals/goal-8-decent-work-and-economic-growth.html (accessed March 9, 2019).

Schulz & Bailey, 2014). By and large, green growth strategies are based on technological innovation for efficiency and productivity gains, as well as marketization of ecosystem services. Green growth, thereby, is premised on two assumptions that are not subject to further debate, rendering the green economy a largely technocratic and postpolitical project (Kenis & Lievens, 2015). First, capitalist economies based on the private property, deregulated markets, and competition are the most efficient way to meet social and ecological challenges and are without considerable alternatives. Second, economic growth is needed to counteract social inequality and can be reconciled with planetary boundaries through technological innovation and dematerialization. To understand and finally challenge these assumptions, I will shortly digress into different notions of sustainability, before taking a closer look at decoupling of growth and resource consumption.

Digression: Conceptualizing sustainability

Sustainability has been conceptualized widely different for different purposes. A main distinction is between conceptions based on an overlapping and those based on a nested model of sustainability. The former places economy, society and environment on equal footing as dimensions of equal value. Sustainability, then, means targeting a triple bottom line by balancing society, environment and (a capitalist) economy. This endeavor, however, often "turns out to be a 'good old-fashioned single bottom line plus vague commitments to social and environmental concerns'" (Norman & Macdonald, 2004, p. 256).

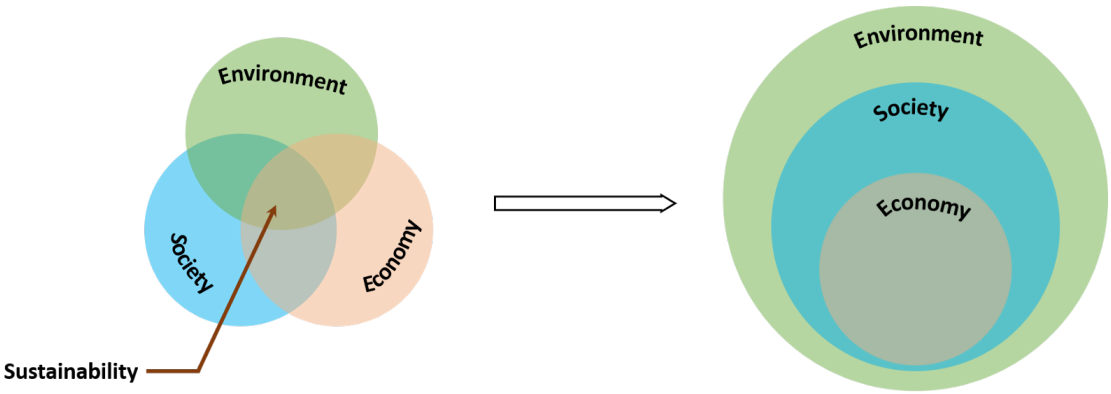

Figure 1: From overlapping to nested model of sustainability; source: medium.com

The skewed priorities set in the name of an overlapping model of sustainability lie in the conception as such. Placing economy, society and environment on equal footing ignores the fundamental asymmetries between these dimensions. Nested conceptions of sustainability, instead, acknowledge that society is embedded and ultimately dependent on ecologies while economy is socially produced and can only be a subset of the totality of social relations. As a result, sustainability – as ability to sustain human existence and activity – is deeply

hierarchical[4]*. That means, sustaining human activity is premised on maintaining ecologies. Economy in turn premises functioning social relations that are non-economic (for a definition of economy see part II).*

Nevertheless, green economy continues the project of sustainable development that proposes more of the same to solve current crises. Market mechanisms, privatization, competition and growth are the ingredients for sustainability's recipe. Or as Nyberg, Spicer and Wright (2013, p. 450) put it: "the only solution to the problems of capitalism is more capitalism". The tenacious adherence to growth is premised on an overlapping conception of sustainability. The Global Green Growth Institute, for instance, is "founded on the belief that economic growth and environmental sustainability are not merely compatible objectives; their integration is essential for the future of humankind" (cited in Kenis & Lievens, 2015, p. 4). In this vein, green economy is heralded as opportunity to create further growth and jobs, or in other words, to continue the transgression of capitalism's frontiers. For instance, through carbon trading and ecosystem services as business opportunities. This also deepens the abstraction of ecologies whose life-sustaining balances are torn into a set of priced commodities. It is, then, not nature or community as such that has (intrinsic) value. For capital their worth is determined by and imposed through markets, fragmenting human and more-than-human relations and ultimately rendering them replaceable (Kenis & Lievens, 2015; T. S. J. Smith, 2019)

Green growth advocates claim to be able to reconcile economic growth and planetary boundaries, basing their argument on increasing gains in efficiency which allegedly allow for a decoupling of growth from resource consumption. There is, however, a crucial distinction between absolute and relative decoupling. Relative decoupling refers to the decrease in use of materials or greenhouse gas emissions *relative* to GDP (growth). Absolut decoupling, instead, refers to the total decline of resource consumption and greenhouse gas emission independent of GDP growth (in the green economy debate, of course, with a GDP rise) (Jackson, 2017). While examples for relative decoupling abound, absolute decoupling is not only out of sight but also highly unlikely (Hickel & Kallis, 2019). Only focusing on climate change – leaving aside the multiple other ecological challenges – an absolute decoupling would require rates of reduction of GHG emissions per unit GDP that are 50 times higher than they have been within the last 10 years (Jackson, 2017). Green growth's basic premise, consequently, is highly problematic. Nevertheless, proponents cling firmly to this "decoupling myth" (Paech, 2010). But even if growth were to be reconciled with planetary boundaries, there remains the question whether continuous growth is actually desirable and for whom.

[4] Radical constructivist, hybridist and new materialist research contradicts this claim. Although I subscribe to some of their arguments later in the text, I argue with Malm (2018) that an equation of human and other-than-human is deeply problematic – in particular so in the face of current social and ecological crises.

Why grow in the first place?

Above, I have traced some arguments why capitalist societies depend on (economic) growth. Capitalist societies cannot simply stop growing and, if they do, they face a number of consequences. The fact that current economies need to grow, however, does not explain why growth is desirable in general. Neither does it respond to the question why – in the face of ecological destruction with the highly unlikely chance of absolute decoupling – global society should not embark on the strategy to reshape economic, political and social institutions to become independent of growth. In this section, I will deconstruct some pro-growth arguments green economy approaches are based on.

Political and public debates generally associate economic growth, as measured by GDP, closely with prosperity (Rosa & Henning, 2018). A growing economy, so the assumption goes, leads to an increase in prosperity and quality of life. GDP, however, is a very partial and poor measure for several reasons, of which I will only detail the most important ones. First, GDP aggregates *all* traded good and services irrespectively of their social and environmental desirability. A fairly sourced and produced, climate-neutral product is registered exactly like a same-priced product produced with child labor. For GDP, exporting weapons is equal to exporting solar panels. Storms, floods and accidents and other disasters might contribute positively to GDP if the ensuing follow-up costs exceed the economic outages.

Second, GDP *only* aggregates commodified goods and services and does not reflect the quality of social and ecological relations. Intact ecosystems and communities, trust, friendships, unconditional help and altruism are indifferent to GDP. In contrast, GDP might actually grow when social relations are destroyed. For instance, when neighbors don't help each other out but hire professionals, or a unique forest ecosystem is destroyed and commodified.

Third, GDP is an aggregate that ignores inequality. Although it is often accounted per-capita, it is an average measure that does not reveal the actual distribution. Actually, in many countries, income inequality is currently higher than anytime during the 20th century (Jackson, 2017). The wealthiest profit disproportionally from economic growth, while marginalized populations are often worse off due to stagnating incomes and rising price. Piketty (2017) propounds a detailed account of the increasing concentration of wealth and the concomitant inequality in the second half of the 20th century in parallel to economic growth – a tendency that can be observed throughout many countries of the Global North and South (OECD, 2011). Rather than a trickle-down effect, economic growth causes a trickle-up effect (Jackson, 2017). Economic growth consequently intensifies social inequality and (relative) poverty rather than (dis)solving it.

GDP, therefore, is a poor measure of well-being in contemporary advanced capitalist societies (Rosa & Henning, 2018; Wilkinson & Pickett, 2010). A frequently cited example is the Easterlin paradox (Easterlin, 1974). According to Easterlin's work, GDP per capita "does not correlate with happiness

above certain levels of satisfaction of basic needs" (Schneider, Kallis, & Martinez-Alier, 2010, p. 512). Although some criticize Easterlin's findings for difficulties associated with the measurement of subjective well-being (J. O'Neill, 2018) others take their cue to explore alternative measures of well-being (Hayden & Wilson, 2017). Proponents of alternatives to GDP often turn to Bhutan's measure of gross national happiness. Bhutan applies a metric that quantifies the collective happiness of Bhutan's citizens. The metric is calculated on the basis of general indicators and subjective well-being, the latter being survey-based. While alternative metrics such as Bhutan's gross-national happiness have potential to radically challenge the role of GDP in current politics, they remain subject to the limits and perils of quantification. Smith (2019, p. 49) states that "the realization of research explicitly referring to concepts of 'wellbeing' and 'happiness' in recent decades has been noted to have been one-sided, tending towards what has been called a 'science of happiness' perspective which prioritizes the quantitative measurement of happiness." Critical perspectives, in this vein, need to remain wary of the reduction inherent in the abstraction of numbers.

Interim conclusion

Thus far, chapter 1 has problematized the growth paradigm – "a worldview institutionalized in social systems proclaiming that economic growth is necessary, good, and imperative" (Kallis et al., 2018, p. 45) – both on ecological and social grounds. At the same time, it has acknowledged that modern societies depend on growth and can only stabilize through the perpetual transgression of capital's frontiers, cheapening nature, work, and lives. Continuing pushing capital's social and ecological limits, however, (further) dismantles societal values such as democracy, justice, and (more-than-) human rights, and ultimately threatens the natural basis of human activity itself. Taking into account the failed promises of growth as well as the unlikeliness of reconciling growth with social and ecological sustainability, then, raises the question why political and public discourses tenaciously adhere to growth. Institutional inertia and mental infrastructures explain part of the story. Another part are power relations that adapt and stabilize capital's accumulation regimes.

Growth and current modes of economic organization, however, are not unanimously accepted. Different approaches challenge business-as-usual and propose, practice, and institute "alternative economic spaces" (Krueger, Schulz, & Gibbs, 2017). The subsequent chapters explore the diverse individuals, organizations, and institutions that alter, challenge, resist, and withdraw from capital accumulation. Within the wide variety of approaches, chapter 2 foregrounds projects and practices that transition towards "an era in which the societal project is redefined beyond the pursuit of economic growth" (Cassiers & Maréchal, 2018, p. 2). In this vein, it explores the two (partly interweaving) schools of thought of degrowth and postcapitalism. After tracing alternative forms of production, transfer, and governance in degrowth and postcapitalist economies, chapter 3 works

towards the question how societal trajectories might shift from growth-dependence to sustainability and justice.

Chapter 2: Alternative economies

Alterity and diversity

Alternatives[5] – more specifically alternative economic and political spaces and practices – refer to the "performance and enactment of economies and polities through socio-spatial relations and networks that are to a greater or lesser degree distant or disengaged from global capitalism and the system of territorial states." (Fuller, Jonas, & Lee, 2016, p. xxiii). While I am particularly interested in alternative *economies,* they cannot be severed from alternative politics, and in fact move closer in and through the theories and practices presented below. Alternative economies, thereby, is an umbrella term for a range of approaches including degrowth, post-growth, steady-state economy, post-capitalism, diverse economies, solidarity economy, and commons (Bollier & Helfrich, 2012; Cassiers & Maréchal, 2018; Gibson-Graham, 2006; Johnsen, Nelund, Olaison, & Meier Sørensen, 2017; Kerschner, 2010; North & Cato, 2017; Schneider et al., 2010; Christian Schulz, Affolderbach, & Krüger, forthcoming; Zademach & Hillebrand, 2013). Green economy approaches and the related notions of green growth, smart growth, ecological modernization and sustainable development, in contrast, do not fall within the notion of alternatives – although their proponents portray them as such – since these approaches remain strongly rooted within capitalist growth-based institutions. The role of sharing economy, collaborative economy, collaborative consumption, circular economy, and social economy, furthermore, is ambiguous in that they comprise a broad range of practices that differently relate to mainstream economies (Cohen & Muñoz, 2016; Hobson, 2016; Martin, 2016a; Richardson, 2015).

Alternative economy approaches reimagine present form(s) of socio-economic organization and, in various ways, shift practices of production, consumption, distribution, financing and governance towards sustainability, equity and justice. In doing so, they differently question existent relations of work, property, and decision-making. Although Marxist, anarchist, feminist, postcolonial and queer theory(ies) are pivotal references, there is no common alternative economies framework (Notz, 2011). As a consequence, tensions and contradictions ensue and there is no sharp dividing line separating alternative from non-alternative approaches. The distinction between green economy and alternative economy approaches as suggested above, rarely fits onto actually existing alternatives. Rather, it is a normative and often tactical question of drawing the line between business-as-usual and progressive pathways.

[5] Parts of chaper 2 draw on a research paper currently under review with Geography Compass.

A number of authors have suggested typologies to capture the width and breath of alternative economies or putting them into relation to more conservative concepts. Schulz & Affolderbach (2015) differentiate between weak ecological modernization, strong ecological modernization and alternative economies, presenting a continuum that increasingly moves from an efficiency orientation to politics of sufficiency. In a similar vein but with a stronger institutional focus, Bina (2013) distinguishes between almost business-as-usual, greening and 'all change' policy responses to the double crisis of economy and ecology.

Fuller and Jonas (2003) are interested in different degrees of alterity and distinguish between alternative-additional, alternative-substitute, and alternative-oppositional forms (see also Jonas, 2016; R. Lee, 2016). Alternative-additional refers to alternatives that exist in addition to – respectively in symbiosis with – a capitalist economy and do not question its underlying relations of property, work, or governance. Example are fair trade markets, corporate social responsibility and similar measures. Alternative-substitute forms emerge from the necessity when capitalist sustenance fails. This is particularly visible in the context of austerity politics (Amanatidou, Gritzas, & Kavoulakos, 2015). Alternatives that are a substitute can also become an opposition to existing economic relations. Alongside deliberately set-up alternative forms of production, consumption, transfer and governance, then, they oppose capitalist relations and practice alternative values, organizational and allocation principles and thus constitute alternative-oppositional forms (R. Lee, 2016).

Scholars have proposed concepts such as variegated capitalism (Peck & Theodore, 2007), the ordinary economy (R. Lee, 2006) and diverse economies (Gibson-Graham, 2008) to challenge both the uniformity of the *formal* economy and the narrowing of economic practice to the former. The present work takes up the notion of diverse economies, in particular, to acknowledge that economies are "intrinsically heterogeneous spaces composed of multiple class processes, mechanisms of exchange, forms of labor and remuneration, finance and ownership" (Healy, 2009, p. 338). Gibson-Graham's heuristic of capitalist, alternative-capitalist and non-capitalist forms of labor, transactions, and enterprises has been used widely to explore the diversity of economic practices beyond wage labor, commodity exchange and for-profit enterprises (see also Gibson-Graham, Cameron, et al., 2013). Gibson-Graham (2006, p. 60) introduce a language of economic diversity to widen "the identity of the economy to include all of those practices excluded or marginalized by a strong theory of capitalism". In doing so, Gibson-Graham explicitly avoid presenting a "'ready-made' alternative economy" (ibid.) in order to "resist the closures that come with every positive economic articulation" (Miller, 2013, p. 521). Gibson-Graham's notion of diverse economy will play a pivotal role in chapter 4. Here, I am mainly interested in their thrust to problematize the notion of "alternative".

The concept of diverse economies raises an important issue about the notion of alternative. The word alternative "underscores a fundamental insight from modern linguistic theory – that no term derives its meaning self-referentially" (Healy, 2009, p. 338). Economies that are described as alternative, then, appear to derive their identity primarily from what they are an alternative to – a seemingly homogenous and omnipresent 'norm(al)' (capitalist) economy. Yet, although alternatives do emerge as substitution in cases where capitalist relations fail (see Fuller and Jonas' notion of alternative-substitute), they are much more than a fill-in for capitalist relations. On the contrary, the practices and institutions discussed as alternatives are frequently the "preferred and desired way to get tasks undertaken" (White & Williams, 2016, p. 6). Alternative economic practices, therefore, are not marginal phenomena but different expressions of 'economic being-in-common' (see chapter 4) in their own right. In contrast to the connotation of alternatives as an inferior choice to the mainstream economy, alternative economies, here, refer to "[p]rocesses of production, exchange, labor/compensation, finance and consumption that are intentionally different from mainstream (capitalist) economic activity" (Healy, 2009, p. 338). This implies also that counter to frequent perception, alternative economies are "neither less structured (stabilized), less important for human (re)production, nor less spatially or temporally extensive" (Schmid & Smith, resubmitted) than capitalist economies.

Emphasizing diversity over alterity, however, eclipses moments of evaluation and opposition towards undesirable economic practices and relations. Jonas (2016, p. 22) argues that critical scholarship should approach alternatives with a "healthy skepticism". He points out that alternatives are not desirable *per se*. Samers (2005) makes a similar point, problematizing that non-capitalist practices are not necessarily less exploitative than capitalist practices. Lee (2016) furthermore, points to the political significance of alterity (see also Glassman, 2003). Complementary-, additional-, substitute-, and oppositional-alternative practices exhibit an increasing distance from capitalist economies – and thus still imply an 'other' from which they are distanced.

> As an alternative is defined in terms of something else, it is its 'other' – or, at least, an 'other' – and thereby legitimates and maintains the centrality of something else. By contrast, the notion of diversity simply implies that there are many possibilities. However, the political significance of alternative versus diversity is also crucially important. (R. Lee, 2016, p. 276)

Acknowledging the economy as diverse, therefore, does not suffice in the identification of alternative economies. Instead, the issue requires discussions on what alternatives are desirable and how they can shift societal trajectories away current patterns of unsustainability. The notions of alterity and diversity both have political implications. Diversity "opens up ways of thinking about the circumstances under which such decisions are made and thereby turning them into alternative political spaces" (Jonas, 2016, p. 14). Alterity, in turn, dissociates particular economic activities from an 'other' and thus

distances, for instance, from exploitative, ecologically destructive forms of economizing. The notion of alternative economies, then, includes both a broadening and a narrowing moment. Alternatives are more than capitalism's 'other' and include a wide variety of imaginaries and practices that exist(ed) before, aside, with and despite of capitalist relations. On the other hand, alternative economies do not refer to an arbitrary collection of diverse imaginaries and practices, but to those that position against exploitation, dominion, injustice, and ecological destruction. This narrowing excludes, for instance, the technological and marked-based green economy approaches that continue along the trajectories of commodification and economic growth as well as undesirable non-capitalist alternatives like state-socialism. Alterity and diversity, hence, lead to two different "modalities of resistance – through antagonism and social imagination, respectively" (Zanoni et al., 2017, p. 578), frequently seen as contradictory but most productive – as I argue below – when put into a co-constitutive relation.

Still, the question what constitutes (desirable) alternative economies remains a political and ethical one, leading to blurred boundaries and ambiguous allies. Greening, modernization and to some extent also alternative-additional approaches, for instance, might provide short-term remedies to ecological and social issues but perpetuate the escalatory tendencies of dynamic stabilization in the long run. Sharing economies, social enterprises, cooperatives and non-profit organizations, furthermore, might challenge some aspects of capitalist relations of work, property, and appropriation of surplus while endorsing others. Against the background of the previous analysis on capital and growth, I will now turn to two strands of thought and practice in more detail, namely degrowth and postcapitalism. Both traditions are grounded in radical critiques of capitalist social relations and propose a range of linked concepts and practices to challenge social and environmental issues.

Degrowth

Degrowth is both an activist slogan and an academic debate challenging the hegemony of growth as economic, political and social imperative. In recent years, degrowth has emerged as quilting point for a wide range of approaches from disciplines and fields as diverse as environmental sciences (Kallis, 2018), economics (Jackson, 2017; Paech, 2012), geography (Krueger, Schulz, & Gibbs, 2017), and sociology (Rosa & Henning, 2018) questioning economic growth and related notions such as development and progress (Bendix, 2017; Demaria & Kothari, 2017; Latouche, 2009). Rather than simply opposing growth, development, and progress, degrowth scholars combine a variety of approaches that are concerned with alternative imaginaries, principles, practices and institutions of socio-economic organizing centering around well-being, justice and sustainability. In this vein, degrowth aims for an "equitable downscaling of production and consumption that increases human well-being and enhances ecological conditions at the local and global level in the short and long term" (Schneider et al., 2010, p. 512).

Degrowth's roots go back to the 1970s which witnessed a number of events and interventions – partly related and partly independent – that shape the emergence of today's degrowth debate. In 1972, Donella Meadows and colleagues presented their work on the *Limits of Growth* to the Club of Rome. The year before Nicholas Georgescu-Roegen had published a thermodynamic rethinking of economics entitled *Entropy and the Economic process* (Georgescu-Roegen, 1971). The integration of ecological conditions and economic theory led some ecological economists and scholars from other disciplines to question "growthmanship" (Kallis et al., 2018) and propose alternatives. Quite influential for today's degrowth debate is also the work of Herman Daly on a "steady-state economy" (Daly, 1973; see also Kunkel & Daly, 2018).

The French intellectual André Gorz was the first to use the term *décroissance* in posing the question: "is the earth's balance, for which no-growth – or even degrowth [*décroissance*] – of material production is a necessary condition, compatible with the survival of the capitalist system?" (Gorz 1972, cited in Kallis, Demaria, & D'Alisa, 2015, p. 1). However, apart from some notable exceptions – such as the title of the French translation of a collection of Georgescu-Roegen's work *demain la décroissance* – the term gained little traction beyond a small circle of activists and academics until the early 2000s. In 2002, then, Bruno Clémentin and Vincent Cheynet edited a special issue of *Silence* in tribute to Georgescu-Roegen, which "was probably the starting point for today's degrowth movement" (Kallis et al., 2015, p. 2). Both, activists and academics – arguably the most influential being Serge Latouche with his post-developmental critique of Western economism – mobilized *décroissance* as slogan in the years to follow. The English translation of *décroissance* – degrowth – officially emerged in 2008 with the first international degrowth conference in Paris, signaling the consolidation of an international exchange (Kallis et al., 2015).

Décroissance originates in the spirit of a radical critique of consumerism, development and capitalism (Demaria, Schneider, Sekulova, & Martinez-Alier, 2013; Martínez-Alier, Pascual, Vivien, & Zaccai, 2010). With the recent development and spread of the debate, however, a range of understandings has emerged that do not retain this critical stance. The term degrowth is often narrowed to GDP degrowth, consumption degrowth, work-time degrowth, or physical degrowth (van den Bergh, 2011). It is problematic, though, to reduce degrowth to a particular area or metric. Degrowth "should not be understood in its literal meaning (i.e. negative growth of GDP) or just as shrinking of material throughput" (Asara, Otero, Demaria, & Corbera, 2015, p. 377). Currently, most economic and social institutions are based on continuous growth and destabilize or break in times of recession (Rosa et al., 2017; Kallis, Kerschner, & Martinez-Alier, 2012; see above). Degrowth, therefore, loses its critical purchase if decontextualized from a broader critique that seeks to transform growth-based institutions.

The strategies, priorities and scope of transformative ambitions vary between different degrowth approaches. Proponents of a moderate degrowth propose reforms of growth-based economic, political and social institutions for instance through eco-taxes, basic-income schemes, internalization of costs and alternative indicators for prosperity (Seidl & Zahrnt, 2010a). By and large, moderate degrowth holds on to the institutions of market and state as central pillars of societal organization while aiming for a restructuring of health care, pension, education, tax systems, financial markets and others to be growth-independent. Existent political institutions are central actors in this vision. On the other end of the "degrowth spectrum" (Eversberg & Schmelzer, 2018) are advocates of a radical shift beyond capitalist forms of work, transfer, and property relations as well as state institutions. Proponents of a 'radical degrowth' question the ability of state and market institutions to work in the name of social and environmental justice. While institutional reforms are part of the repertoire, radical degrowth focuses on social movements and community initiatives as central agents of transformation that prefigure radical alternatives that push beyond market and state (see below).

Irrespective of specific orientations within the degrowth debate, opposing growth as economic and political objective entails the abandonment of the institution of capital. Degrowth questions (infinite) capital accumulation as basis of economic organization, instead privileging economic practices that address social and ecological needs. Degrowth moves beyond social institutions that enforce and secure the "unlimited accumulation of capital by formally peaceful means" (Boltanski & Chiapello, 2018, p. 4; see above). It's vision, foundation, and ambition, thus, is essentially postcapitalist. Nevertheless, some degrowth scholars eschew an explicit stance *against* capitalism. Andreucci & Mc Donough (2015) identify three principal reasons for this reluctance. First, degrowers want to avoid the reification of capitalism as unified, ubiquitous and powerful object. Second, many degrowth scholars and activists propose decentralized, autonomous and horizontal projects that evade the imaginary of a centralized revolutionary struggle against a uniform opponent. And third, to facilitate the spread of degrowth across academic and political spheres, degrowth advocates avoid adopting an explicitly anticapitalist language. All three reflect aforementioned unease with alterity and opposition (see above) and beg further investigation of the relation between degrowth and anti- or postcapitalism.

Postcapitalism

The foregoing analysis identifies antagonism and social imagination as different modalities of resistance. Arguing for the integration of both, Zanoni et al. (2017, p. 578) argue that critical scholars should integrate both by "keep developing sophisticated critique that fosters antagonism and become more proactively performative of alternatives". In a similar vein, Miller (2015, p. 364) caricatures the apparent juxtaposition between postcapitalism and anticapitalism before arguing for the necessity to blend both dynamics.

> We are asked, it seems, to choose: be an anticapitalist revolutionary, building organized political power by marching arm in arm with the unified force of the new Communist party; or be a postcapitalist ethical subject, eschewing critique, disavowing capitalism, and strengthening emerging communal practices through engaged research.

Postcapitalism, anticapitalism and degrowth share significant common ground, yet there is only limited mutual reference between the debates around the former two and the latter. Anticapitalism, comprises theories, movements and groupings that stand in opposition to capitalism (Tormey, 2012). Anticapitalists are primarily defined by what they stand against – capitalism, neoliberalism, globalization and trans-national corporations (Morland, 2018). Despite this shared opposition, anticapitalism is not a coherent movement or fixed ideology. Anticapitalist thought builds on a rich tradition around thinkers like Rousseau, Godwin and Marx (Tormey, 2012) of which the latter in particular sticks out for his systematic critique of capitalism. Harvey asserts that "the contributions of Marxism in general and Marxist political economy in particular are foundational to anti-capitalist struggle. They define more clearly what the struggle has to be about and against and why" (Harvey, 2015, p. 2). Marxism, of course, has diversified into a plethora of approaches that exceed the label anticapitalist.

Here, it is illuminating to track the post-Marxist critique of figures like Laclau and Mouffe and Gibson-Graham (see also part II), to understand the sensitivities of postcapitalism and its relation to anticapitalism. Gibson-Graham criticize the Marxist representation of capitalism as unified singular totality and – inspired by poststructural feminist thought – seek to establish a *post*capitalist, rather than an anticapitalist, politics around performativity, plurality and hope. In line with aforementioned turn from alterity to diversity, the emphasis shifts from opposition to difference.

Postcapitalism is also used by other schools of thought. Chatterton and Pusey (2019) identify post-work and autonomous perspectives as further strands of the postcapitalist debate in addition to the community economy literature sparked by the writing partnership of Kathrine Gibson and Julie Graham. The post-work perspective imagines technological progress as way out of capitalism. Mechanization and automation in conjunction with basic income schemes are proposed to lead to a "fully automated luxury communism" (Bastani, 2018; see also Srnicek & Williams, 2016). In this vein, post-work scholars seek to accelerate technological innovation. Along similar lines but less 'accelerationalist', Mason (2016) argues that the rise of information technology and collaborative production surmount capitalism's ability to adapt and thus open the possibility (or rather necessity) of postcapitalism.

Autonomous perspectives, as third strand of postcapitalism, focus on "autonomous social forms and practices and their potential to build methodologies of organization and social (re)production that challenge capitalism" (Chatterton & Pusey, 2019, p. 11). Autonomous perspectives emphasize self-

managed projects that exist and thrive within capitalism's temporal, spatial, and institutional interstices. Theory and practice of autonomous postcapitalist literature stresses prefiguration – the pursuit of micro-political tactics and the creation of alternative spaces in the here and now – as opposed to a "politics of waiting" (Springer, 2014b, p. 262; see also Pickerill & Chatterton, 2006) that is often associated with Marxist and anti-capitalist positions. It is within the strand of autonomous postcapitalism that Chatterton himself can be located (Chatterton, 2016, 2019; Chatterton & Pickerill, 2010; Pickerill & Chatterton, 2006).

The (false) antagonism between anticapitalism and postcapitalism that Miller (2015) and others observe links to the debate between Marxism and anarchism that characterizes large parts of the history of the socialist left (Kellermann, 2011, 2012, 2014) and is reiterated recently in human geography (Harvey, 2015; Springer, 2014b, 2017). This debate is largely between the more utilitarian, institutional, oppositional, and ruptural imaginaries of Marxism and the prefigurative, spontaneous, pluralistic, and interstitial imaginaries of anarchism. Arbitrating voices such as Pickerill (2017, p. 255) redirect the conversation towards the real issues at stake: "the central question remains: how can we stop the hegemony of capital and capitalism?" The diverse approaches of anticapitalism, postcapitalism and degrowth might provide different answers. But at the end, their commonalities (should) prevail. Any emancipatory project needs to reflectively negotiate between orientation (a directionality that includes a horizon and knowledge of what it aims to get away from), strategy (a method and plan how to affect change including the anticipation of opposition and constraints), and possibility (the hopes, dreams, desires, and creativity needed to imagine a different future). Different approaches have different focal points. But none has the ability to predict the future and decide on a master plan. In their extreme – and that is what critics jump at – degrowth, anticapitalism, postcapitalism, and other approaches overemphasize one dimension at the expense of others. Most thinking and practice, however, transcends the narrow confines of labels.

Following Chatterton (2016, p. 404f.), postcapitalism "points to a desire to reinvent and reinvigorate the revolutionary process away from older top-down, elite-led models of change" while it remains "deliberately open and provocative [since] as soon as we begin to deal with what comes next, we enter the terrain of speculation, conditionality and advocacy, as well as hope and imagination" (405). And yet postcapitalism's agenda is not arbitrary.

> If the capitalist system generates deep social and spatial unevenness, then postcapitalism has to work towards the opposite. Postcapitalist social and spatial formations should inhibit the accumulation of surplus value, individualization, commodification and enclosure, as well as build commons, socially useful production and doing" (Chatterton & Pusey, 2019, p. 15)

In this vein, postcapitalism refers to both a critique of, and opposition to, capitalist hegemony as well as a vision of a future beyond capitalism and the prefiguration of hopes and imaginations in the here and now.

Towards a radical theory and praxis

Postcapitalism speaks to the aforementioned reluctance of degrowth scholars to explicitly position themselves against capitalism. First, in the vein of Gibson-Graham's post-Marxist critique, postcapitalism seeks to make visible the diversity of provisioning and (re)productive practices in order to disidentify with capitalism as only form of economic relatedness. Second, postcapitalism is an open and plural process that provides a horizon rather than a universalistic counter project to capitalism. And third, postcapitalism joins different strategies and paths towards an alternative future that range from the "ruptural desire to break the system [to] symbiotic moves to work within existing institutions, and interstitial activities that break free and lay down prefigurative future markers" (Chatterton & Pusey, 2019, p. 15).

Degrowth and postcapitalism also speak to each other through the practices they manifest in and draw on. Associations, collectives, enterprises and individuals experiment with different forms of ownership, collective processes of decision-making, voluntary simplicity and non-monetary forms of exchange (Alexander, 2013; Burkhart, Schmelzer, Treu, & Konzeptwerk Neue Ökonomie, 2017; Chatterton & Pusey, 2019; Demaria et al., 2013; Johanisova & Wolf, 2012; Sekulova, Kallis, Rodríguez-Labajos, & Schneider, 2013). In doing so, they differently oppose capitalist hegemony, prefigure alternative economies and sketch the possibilities of other forms of economic being-in-common. Experimentation spans a wide diversity of economic activities – such as production, work, property, transactions, decision-making, finance, and surplus allocation – and arenas – food, housing, energy, mobility, consumer goods.

Both in theory and in practice, degrowth and postcapitalism overlap with a range of other perspectives. Approaches such as steady-state economy (Buch-Hansen, 2014; Kerschner, 2010), participatory economics (Hahnel & Wright, 2016), solidarity economy (Miller, 2010; North & Cato, 2017), Buen Vivir (Acosta & Brand, 2018; Gudynas, 2011), commons (Bollier, 2015; Bollier & Helfrich, 2012; Caffentzis & Federici, 2014) – and concepts – such as social and spatial justice (Peet & Watts, 1996; Soja, 2010), sufficiency (Schneidewind & Zahrnt, 2014), and conviviality (Illich, 1973; Vetter, 2018) are used by, alongside, or in lieu of degrowth and postcapitalist perspectives[6]. Depending on theoretical take,

[6] Approach, here, refers to a broad take on alternative economies (such as solidarity economy), while concepts are more selectively applied within alternative economy literature alongside other concepts (such as sufficiency). The distinction between approaches and concepts is not clear cut. Commons, for examples, is both an approach in itself (e.g. Bollier & Helfrich, 2012) and used as concept alongside others (e.g. in the degrowth debate).

research agenda, and empirical focus, many scholars impose their viewpoint onto alternative projects and practices. In this vein, empirical examples are studied from and sometimes claimed by a number of approaches simultaneously. Co-housing, for example is investigated from degrowth (Lietaert, 2010), postcapitalist (Chatterton, 2016) and commons (Noterman, 2015) perspectives, with considerable overlaps. Some practitioners and activist themselves use labels such as degrowth, postcapitalism, sharing economy, circular economy, or social entrepreneurship (see below), sometimes in quite diverse ways, sometimes several labels at once. Others engage in alternative practice, but do not subscribe to particular traditions, discourses, or movements.

Digression: Commons

The notion of commons is central to both degrowth and postcapitalist perspectives, but constitutes also an approach on its own (Bollier, 2015; Bollier & Helfrich, 2012; Caffentzis & Federici, 2014; Helfrich & Bollier, 2019; Noterman, 2015). Enclosure of common resources, in particular land, is at the heart of capitalist development (Wood, 2017), with capital building on the ensuing dispossession and social dislocation. Yet, enclosure is not just a historical phenomenon associated with primitive accumulation (Harvey, 2011, p. 58ff.; Marx, 1981 [1867], p. 914ff.) but occurs to this day with city space, animal and plant species, or knowledge (Linebaugh, 2014). (Re-)asserting collective ownership beyond market and state institutions, then becomes a crucial means of resistance that withdraws capital foundation of private property.

Commons are collectively owned and administered goods, ideas, resources or land. Commoning – the process of collectively managing, negotiating, using and maintaining commons – incorporates property relations that are beyond the binary of private and public. Due to the intimate relation between a community, its rules, patterns and institutions (Helfrich, 2015; Ostrom, 2010) and the materiality of artefacts and things, „commons cannot be conceived as a pre-existing object or good" but are instead „fundamentally rooted in praxis" (Enright & Rossi, 2017, p. 7). Commons, therefore, premise a community that regulates access, use, conditions and participation. As commonly administered resources, commons dissolve the division between owners and users or producers and consumers, along with the concomitant forms of alienation and heteronomy. The common regulation of basic goods and services opens up possibilities beyond market and state relations. Hardt and Negri (2009, p. 273) write in Commonwealth "what the private is to capitalism and what the public is to socialism, the common is to communism" – referring to a third way besides socialism centered on state-property and capitalism based on private property.

The complex and diverse landscape of alternatives renders any rigid categorization a futile endeavor. Yet, there are tendencies within and between the various approaches that help both practitioners and scholars to navigate and communicate. Different approaches highlight different aspects and add various qualities and subtleties to both theories and practices of alternative economizing. Sharing economy, social economy, circular economy, and collaborative economy all propose a particular form of praxis – for instance the *sharing* of resources, use, access, and ownership; or the *circulation* of resources and materials through production, consumption and recycling – to address social and ecological issues. Degrowth, postcapitalism, commons, instead, target fundamental capitalist institutions – such as property, accumulation, and economic growth – that cause social and spatial unevenness. Alongside approaches such as Buen Vivir, they remain quite general in their ideas and propositions. This does not preclude links to yet other approaches such as the economy for the common good, participatory economics, some strands of degrowth and of the social and solidarity economy that propose quite concrete blueprints for alternative economic institutions (Felber, 2018; Hahnel & Wright, 2016; Paech, 2009).

Differences in the approaches and concepts vivify the landscape of alternative economizing. The rather particular focus of sharing economy and circular economy, for instance, does not mean that these approaches are irrelevant for alternative futures. In fact, they constitute empirically highly relevant contributions for that very reason. Compromises, hybridity, and particularism are commonplace in actually existing alternative economies (see below). Approaches that do not challenge the fundamentals of capitalist institutions, therefore, are still important allies for degrowth and postcapitalist perspectives. However, mainstream economies frequently rope in innovative concepts for the purposes of capital. Circular economy, for instance, echoes the promises of efficiency narratives (Hobson & Lynch, 2016), and highly flexible on demand platform economies claim the progressive ring of the sharing economy (Frenken & Schor, 2017). Approaches that lack a radical orientation, then, merge easily into mainstream economic practice without asserting opposition and distance to capitalist institutions.

The remainder of this work draws on a range of the aforementioned approaches and concepts. Degrowth and postcapitalism, however, remain the primary perspectives and guiding frameworks of this project. Since degrowth and postcapitalism have considerable overlaps, they feature interchangeably at times. Yet, both perspectives carry different sensitivities that thread their way through the following chapters. I use degrowth primarily to refer to the contours of an agenda or proposal of change that addresses different issues by way of how they relate to growth (causing growth, affected by growth etcetera). Degrowth, in this vein, is close to the notion of transition that the next section establishes as (strategic) passage from one state of affairs to another. On the other

hand, I use postcapitalism to refer to ontologies, politics, and geographies of change. This is related to the notion of transformative geographies as changing spatialities that emerge from the power-laden struggles of human co-existence (see part III). Chapter 3, now, turns to the question how change unfolds and looks at the politics, ontologies, geographies, agents, and strategies of change to further clarify the notions of transformation and transition.

Chapter 3: Transformative geographies: sustainability, transition & agency

Chapter 3 tackles two questions that remain implicit in the preceding chapter, namely that of transformation and transition and that of their agents. Transformation is a widely used term in recent debates on sustainability, global change and alternative economies. For the most part, however, the notion remains rather vague. Generally, transformation refers to fundamental shifts in social and ecological systems that comprises multiple interacting dimensions including political, economic, demographic, cultural, juridical, technological, climatic, biological, aquatic, and pedological aspects. Perspectives on transformation commonly take one of two perspectives. On the one hand, a passive perspective, in which transformation in ecological, economic and social systems challenges individuals, communities, companies, nations and the international community to adapt. On the other hand, an active perspective, in which individuals, communities, entrepreneurs, and organizations steer economic, political, cultural, technological change towards sustainability and justice or away from it. Both directions, of course intersect, raising questions of governance, politics, and power to channel the social and ecological dynamics into a desirable direction (Schneidewind, 2018).

Transition, meanwhile, emerges as twin concept to transformation, most notable in sustainability transition research (Hansen & Coenen, 2015; Loorbach, Frantzeskaki, & Avelino, 2017; Markard, Raven, & Truffer, 2012). Before discussing the notions of transformation and transition side-by-side (see below), I will drill deeper into the literature on sustainability transitions, with a particular focus on different conceptualizations and pathways of change as well as the modes and agents thereof. In reviewing the debate, a critique of depoliticized perspectives on transition rediscovers the chasm between business-as-usual and critical approaches to 'alternatives'. On the base of this critique, the subchapter closes with notes on the politics of transformation and transition.

Sustainability transition research

Sustainability transition research encompasses a wide range of conceptual and empirical perspectives that inquire into the inertia of unsustainable socio-technical alignments and trace – often actively advocate – transformations, de- and re-alignments, substitutions, and reconfigurations of technology, policy, markets, industry, science and culture towards more sustainable arrangements (Geels & Schot, 2007; Loorbach et al., 2017). Transition, consequently, involves "far-reaching changes along different

dimensions: technological, material, organizational, institutional, political, economic, and socio-cultural" in the course of which "new products, services, business models, and organizations emerge, partly complementing, partly substituting for existing ones" (Markard et al., 2012, p. 956). Despite a number of different conceptual takes, focal points, and topics, transition literature shares a number of basic assumptions about socio-technological change.

Transition literature, by and large, follows a processual and emergent notion of change that plays out through the dialectic of agents and the configurations that structure their activities. Apart from some notable exceptions developing around practice-theoretical thinking (see chapter 5), large parts of transition research see change as unfolding through the dynamic interaction of different levels of structuration – commonly referred to as niche, regime and landscape – in the course of which less institutionalized, formalized, and experimental technologies, practices, or organizational modes replace, modify or infuse with incumbent configurations. Furthermore, different types of changes, elements, sectors or regimes interact in the processes of stabilization and destabilization rendering transition a highly complex, non-linear, and co-evolutionary dynamic (Loorbach et al., 2017).

In conceptual terms, a number of theoretical frameworks and lenses constitute the field of transition research including the multi-level perspective [hereafter: MLP] (Geels, 2011; Geels & Schot, 2007; A. Smith, Voß, & Grin, 2010), transition management [TM] (Loorbach, 2010), strategic niche management [SNM] (Seyfang & Haxeltine, 2012; Seyfang & Smith, 2007), technological innovation systems [TIS] (Bergek, Jacobsson, Carlsson, Lindmark, & Rickne, 2008; Jacobsson & Bergek, 2011), and significant contributions from social practice theory [SPT] (Hargreaves, 2011; Shove & Walker, 2010; Spaargaren, 2011; Strengers & Maller, 2015). Pertinent reviews often do not include the latter in the field of sustainability transition research (Hansen & Coenen, 2015; Markard et al., 2012). I will do so for two reasons. First, SPT follows the thrust of sustainability transition research in proposing a perspective on the non-linear, complex, and co-constitutively structured dynamic of change (Gram-Hanssen, 2011; Hoffman & Loeber, 2016; Shove, Watson, & Spurling, 2015; Warde, 2005). Second, there is a vivid debate on the synergies and differences of SPT and the MLP in particular (Hargreaves, Longhurst, & Seyfang, 2013) and transition literature more broadly (Shove & Walker, 2007, 2010). For reasons of scope, I will focus on the two approaches most relevant for the argument of this work in the following – MLP and SPT – only touching upon other approaches – such as SNM – where appropriate.

The multi-level perspective conceptualizes (sustainability) transitions as interplay between different levels of structuration: niches, regimes, and landscape (Geels, 2011; Geels & Schot, 2007). Regimes are dynamically stable configurations of practices and rules that are relatively coherent while interpenetrating and co-evolving with other regimes. The trajectories of socio-cultural, market, science, policy, and technological regimes are thus characterized by lock-ins and path dependencies.

Niche and landscape are defined in relation to regimes. Niches are protected spaces of experimentation such as small market niches, laboratories, subsidized projects, or community activism. Through different processes – for instance articulation (and adjustment of visions), building of social networks, and learning processes (Kemp, Schot, & Hoogma, 1998) – niches can develop to challenge incumbent regimes. In conjunction with pressure form the level of landscape – external, long-term trends and ideologies, values and economic patterns – niche innovations might change the configuration of regimes.

Geels and Schot (2007) propose four transition pathways which they derive from the possible combinations of timing of landscape pressure and niche development on the one hand and the relation between niche-innovation and regime on the other. Transformation, according to Geels and Schot's (2007, p. 406) typology, results from "moderate landscape pressure at a moment when niche-innovations have not yet been sufficiently developed". This leads to the modification of development paths but does not cause major changes. De- and re-alignment, instead, follows from major landscape changes at a time of insufficiently developed innovations. As a result, multiple niche-innovations compete with one eventually asserting dominance. Technological substitution ensues if niche-innovations have developed at the time of strong landscape pressure. A technology, for instance, substitutes another during the "window of opportunity" opened through the external shock (Geels & Schot, 2007, p. 410). Reconfiguration, last, ensues from developed symbiotic innovations at times of moderate landscape pressure resulting in adjustments of the regime.

The multi-level perspective and the transition pathways it envisions are primarily focused on technological innovations. Geels and Schot's (2007) examples of transitions from cesspools to sewage systems, from horse-drawn carriages to automobiles, from sailing ship to steamships and from traditional factories to mass production, which they use to illustrate aforementioned transition pathways, evidence this narrow focus. Accordingly, much application of MLP is in line with eco-modernization and green economy approaches. Particularly problematic here, however, is the notion of landscape as external or residual category. Landscape dynamics – macro-economic trends, societal values or political patterns – are removed from the range and scope of agency and largely left out from the influences of innovations. MLP only allows for secondary effects of new regimes on landscape, which, however, it hardly thematizes. This external force of landscape is highly misleading and risks determinative and essentialist notions of social reproduction and change.

Social practice theorists take issue with both the narrow focus on technological innovations and the hierarchical ontology of niche, regime, and landscape (Shove & Walker, 2010). The focus on practices – patterns of doing that exist through the interconnectedness of materials, meanings, and

competences (Shove et al., 2012) – introduces a different angle to transition research.[7] In contrast to the verticality of the multi-level perspective, SPT foregrounds the horizontality of practices, their elements, and links with other practices (Hargreaves et al., 2013). "In emphasizing the horizontal circulation of elements and in arguing for a flatter model characterized by multiple relations (rather than hierarchical levels) of reproduction across different scales" social practice theory counters MLP's tendency to "overemphasize processes of (market) competition and selection resulting in stabilizing levels or moments of provisional closure" (Shove & Walker, 2010, p. 474).

Theories of practice, therefore, seek change in practices' circuits of reproduction – the "processes of enactment which simultaneously limit or facilitate the transformation of the practice in question, its integration with other practices and the reproduction of elements" (Pantzar & Shove, 2010, p. 450). A first circuit of reproduction lies in the ways practices' materials, meanings and skills hang together and cohere. Second, like the elements of practice, practices themselves interconnect and form systems of practice. Finally, a third circuit ensues from practices' temporality and the evolvement from past practices through the ways they shape future practice. A perspective on practices, rather than niches, regimes and landscape opens different avenues for policy intervention. Spurling & Meekin (2015, p. 79ff.), for instance, suggest three "intervention framings", that is ways in which policy can intervene to shift towards more sustainable trajectories. First, recrafting practices: changing the elements that make up resource intensive (or more generally undesirable) practices. Second, substituting practices: replacing unsustainable practices with other practices. Third, changing how practices interlock: intervention in the patterns that practices form. In a similar vein, Shove et al. propose four routes how change in practice occurs. First, configuring elements of practice – which corresponds to Spurling & Meekin's first proposition (who draw on Shove et al.'s conception of materials, meanings, and competences). Second, configuring relations between practices. This is close to Spurling & Meeking's point on substitutions, where one practice becomes more prevalent in relation to another. Third, configuring careers, that is the recruiting and defection of the carriers of practices. And fourth, configuring connections: intervening in the "social networks through which practices circulate and develop" (Shove et al., 2012, p. 160).

Transitions in practice differ fundamentally from MLP's conception of different levels. While Shove and colleagues try to replace MLP's verticality with SPT's horizontality (Shove et al., 2012; Shove & Walker, 2010), others argue for the merits of an integration of both perspectives (Hargreaves et al., 2013). The former, however, maintain that the 'levels' of MLP are at unease with the flat plane on which elements, practices and practice formations form and interact. Niche, regime, and landscape divide practices,

[7] Here, I am primarily interested in the relation between MLP and SPT. A deeper conceptualization of the latter follows in part II.

technologies, institutions, and actors at the outset into more densely and more loosely structured realms and thus fail to "capture the complexity and contingency of sustainable and unsustainable developments" (A. Smith et al., 2010, p. 443). Furthermore, although MLP's levels are not 'spatial levels' as such, their temporal and structural scaling jars with practice theory's relational ontology. Some authors even conflate MLP's levels with territorial boundaries such as nation states and international or local spaces (Raven, Schot, & Berkhout, 2012). Spatially sensitive conceptualizations of transition, therefore, are crucial to refine the multi-level perspective and incorporate important criticisms by SPT and other theories (Coenen, Benneworth, & Truffer, 2012; Hansen & Coenen, 2015; Raven et al., 2012; A. Smith et al., 2010).

Social and grassroots innovations

Innovation research is a major intellectual root of the sustainability transition literature (Loorbach et al., 2017). The MLP, in particular, was significantly developed around technological innovations in niches that act as "incubation rooms" from which "radical novelties emerge" (Geels & Schot, 2007, p. 400). Transition scholars who criticize this narrow focus on technological innovations seek to broaden transition's scope through a perspective on strategic niche management (Seyfang & Smith, 2007), by extending the application of the MLP (Vandeventer, Cattaneo, & Zografos, 2019) or by taking an altogether different theoretical lens (Shove & Walker, 2010). In doing so, they propose alternative notions such as social innovation (Marques, Morgan, & Richardson, 2017; Moulaert, MacCallum, Mehmood, & Hamdouch, 2013; Moulaert, Martinelli, Swyngedouw, & Gonzalez, 2005; Westley et al., 2013), transformative social innovation (Avelino et al., 2017), system innovation (Rauschmayer, Bauler, & Schäpke, 2015), grassroots innovation (N. Longhurst, 2015; Seyfang & Smith, 2007), and conceptual innovation (N. Longhurst, 2015). Avelino et al. (2017, p. 2), for instance, broaden the focus by defining social innovation as "any initiative product, process, program, project, or platform that challenges and over time contributes to changing the defining routines, resources and authority flows of beliefs of the broader social system in which it is introduced; successful social innovations have durability, scale and transformative impact". *Transformative* social innovation, then, is "the process through which social innovation challenges, alters and/or replaces dominant institutions" (ibid.).

A wider perspective brings transformative agents and dynamics into view that traditional transition perspectives miss. The notions of grassroots innovations (Seyfang & Haxeltine, 2012; Seyfang & Smith, 2007) and alternative milieus (N. Longhurst, 2015) foreground the role of community and civil society in sustainability transitions. Community actors differ significantly from the policy makers and market actors that stand in the center of much transition literature. Since community actors are situated outside of market economics and state bureaucracy – in the sense that they do not represent market or state institutions – they do not necessarily align with the rules and dynamics of incumbent

institutions. For Seyfang and Smith (2007), grassroots innovations develop in the context of the social economy rather than the market economy. This is insofar important insofar as the "social economy differs from the market economy; appropriation of profits by capital under the latter is suspended in favor of reinvesting any surplus into the grassroots under the former" (Seyfang & Smith, 2007, p. 591). Instead of reproducing the principles and values of markets, grassroots innovations "emphasize different social, ethical, and cultural rules" (ibid.). A perspective on grassroots innovations, then, both broadens the scope of transition research to include non-market and non-state agents, and challenges the apolitical assumption of markets, states and other institutions as given (landscape).

Digression: The social economy

Social economy and a range of other terms such as third sector, solidarity economy, voluntary sector, and non-profit sector refer to economic activities that divert from the market-state duopoly of public provision and private (profit-oriented) enterprises. Using them interchangeably, however, neglects their diverse genealogies and differences in meaning across space and time (see Moulaert & Ailenei, 2005 for an overview). The term 'third sector', arguably, reflects this idea most straightforwardly, describing a sector that is "different from the traditional public 'general interest serving' and the private market sectors, that combines: formal and informal elements at the level of organization (market, state, volunteering, self-help and the domestic economy), market and non-market-oriented production and valorization of goods and services, monetary and non-monetary resources at the level of funding" (Moulaert & Ailenei, 2005, p. 2042). Consequently, the third sector might be portrayed as middle ground of a tri-polar economy with three types of agents – public agencies, households and private firms – that represent three major forms of transfer – redistribution, reciprocity and markets (ibid.). Combining these different logics, the third sector transcends the boundaries of public/private, formal/informal and profit/non-profit.

Social economy follows this thrust in hybridizing market, alternative-market, non-market, and non-monetized economic practices. On a basic level, the prefacing of economy with the qualifier social emphasizes that "the relationship of embeddedness between society, economy and nature is an inevitable feature of the socioecological metabolism, and that any attempts to make the real-world economy autonomous of social and political control will produce […] destructive outcomes" (Coraggio, 2017, p. 19). More profoundly, social economy reiterates the intention of 'oikonomia' – the management of resources and enabling of subsistence – that capitalism replaced with 'chrematistics' – a term Aristotle used to critique the 'unnatural' practices of accumulation and enrichment (Felber, 2018). Social economic activity, therefore, is directed at providing "services to its members or to a wider community, and not serve as a

tool in the service of capital investment" (Defourny et. al. 2000, cited in Huybrechts & Nicholls, 2012). The social economy, consequently, comprises the "voluntary, non-profit and co-operative sectors that are formally independent of the state" (Moulaert & Ailenei, 2005, p. 2042).

Although the co-operative sector is not necessarily non-profit, there is a tendency to define the social economy through legal forms or even alongside the for-profit/non-profit divide (Huybrechts & Nicholls, 2012; Johanisova, Crabtree, & Fraňková, 2013). This is problematic in so far as, due to difficulties finding adequate legal forms and issues in common public interest law, organizations' legal status does not reflect well their orientation towards the common good (see chapter 13). By fitting into legal categorizations, the concept furthermore feeds capitalist imaginaries of a 'real economy' on the one hand and subsidized, donation-, and voluntary-based alternatives on the other. Some see social economy therefore as a compliment to market economies rather than a transformative force and propose concepts such as the solidarity economy instead (Miller, 2010). North and Cato, for instance, discuss the social and solidarity economies side by side maintaining that while the former mainly addresses issues of including those ignored by the market, the latter raises more fundamental questions such as "how can we live in inclusive ways, with dignity, safeguarding the needs of the environment and future generations, give that mullions currently cannot do so" (North & Cato, 2017, p. 8)?

Actors

In view of the third sector, sustainability transitions involve at least three groups of actors: (social) enterprises, public institutions, and civil society. Social and solidarity economy perspectives, furthermore, show the former can be driven by a range of motivations and goals beyond pure profit-maximization (North, 2016). Hybrid organizations (Doherty, Haugh, & Lyon, 2014; Dufays & Huybrechts, 2016) that combine different institutional logics weaken the boundaries between enterprises, public institutions, and civil society, marking the contingency of this distinction. Institutional logics, thereby, refer to "socially constructed, historical patterns of cultural symbols and material practices, including assumptions, values, and beliefs, by which individuals and organizations provide meaning to their daily activity, organize time and space, and reproduce their lives and experiences" (Thornton, Ocasio, & Lounsbury, 2012, p. 2). Of course, each actor group also includes counterforces. In the following, however, I will foremost focus on possible carriers and allies of sustainability transitions. First, I turn to community-led initiatives and social movements primarily engaging in protest and non-commodified alternative economies. They overlap significantly and blur with, second, social entrepreneurs, ecopreneurs and others who engage in market activities as means

to further ecological and social ends. Last but not least, politicians and planners who are committed to push back capital to privilege non-economic objectives are important allies for transformation.

Community-led initiatives and social movements

Communities-led initiatives comprise actors, organizations and networks that create spaces for sustainability-related activities and in doing so practice and prefigure alternative economies. The labels community activism, community-based initiatives or grassroots initiatives are often used interchangeably. Seyfang (2009, p. 64) defines grassroots initiatives as "networks of activists and organizations generating novel bottom-up solutions for sustainable development and sustainable consumption; solutions that respond to the local situation and the interest and values of the communities involved". This definition, however, exposes two common difficulties with respect to defining community initiatives. First, community is often equated with the local (Taylor Aiken, 2017). While most networks commonly referred to as community initiatives are indeed place-based and their activities are mainly bound-up with local processes, they are frequently part of broader trans-local movements (such as for example the Transition Town Movement). Reducing their activities to the local misses the trans-local significance of their practices (Brickell & Datta, 2011). In addition, many are concerned with narratives and practices that are beyond place (Schmid 2018). Second, when acknowledging the different thrust of green economy approaches on the one hand and degrowth or postcapitalist ones on the other hand, framing community initiatives one-sidedly either as sustainable development or degrowth (respectively postcapitalist) is problematic. Many authors insufficiently consider "divergences, contestation and struggle within initiatives" (Fischer, Holstead, Hendrickson, Virkkula, & Prampolini, 2017, p. 1988). Furthermore, the practical implementation of (radical) alternatives generally comes with a range of internal and external compromises. This makes it particularly difficult to lump community initiatives into either category from the onset.

Community-led initiatives cover a wide variety of different areas and include community-supported agriculture (Bloemmen, Bobulescu, Le, & Vitari, 2015), open source projects (Mason, 2016), time banking (Amanatidou et al., 2015; Seyfang, 2016), Transition Towns (Aiken, 2012; Hopkins, 2014), repair cafés (Schmid, forthcoming), collective energy projects (Kunze & Becker, 2015), open workshops and hackerspaces (Lange & Bürkner, 2018; T. S. J. Smith, 2017), alternative currencies (North, 2014), ecohousing (Pickerill, 2016), community-led cohousing (Chatterton, 2016), alternative food networks (Rosol, 2018), food sharing (Morrow, 2019), and eco villages (Lockyer, 2017). Across these examples, communities experiment with alternative forms of organizing, production, consumption, transfer, property, and financing.

Community-supported agriculture [CSA], for example, is based on the cooperation between consumers and producers. The consumers guarantee the financial resources for fair production and

thereby share the risks as well as the fruits of a good or bad harvest. CSA schemes often also incorporate solidarity amongst the participants based on needs and possibilities. Individual contributions, then, are proposed in bidding rounds until the designated amount is reached. Collective and politically motivated renewable energy projects, again, link sustainable energy production with "participation [,] collective legal ownership, a collective benefit allocation mechanism, or collective decision-making processes." (Kunze & Becker, 2015, p. 426). On the basis of inclusive organizational set-ups, communities push both ecological and social alternatives through decentralized and collectively-owned means of energy production. Other organizations are less branch specific and work more broadly on issues such as climate change or social exclusion. The Transition Town Network [TTN], for instance, connects Transition initiatives world-wide that identify with the network's general principles around resource limits, social justice, subsidiary, learning and collaboration (Hopkins, 2014). TTN describes itself as "community-led response to the pressures of climate change [and] fossil fuel depletion" (cited in Aiken, 2012, p. 92).

Digression: The maker movement

The term 'maker movement' refers to a broad range of communities that form around practices of 'making' and engage in decentralized forms of value creation and organization (C. Anderson, 2012; Bürkner & Lange, 2016; Davies, 2017b; T. S. J. Smith, 2017). The spaces in which these communities operate are variously referred to as hackerspaces, Fab Labs, makerspaces and open workshops – depending on author's emphasis and the communities' orientation. Although there is no common value system that unifies the heterogeneous movement, a range of topics reoccur in different patterns and intensities such as do-it-yourself and do-it-together, open-source (Baier, Hansing, Müller, & Werner, 2016b), use of high-technology (Walter-Herrmann & Büching, 2013), haptic interaction with materials and reskilling, local (sustainable) production (Simons, Petschow, & Peuckert, 2016) and (technological) democratization (Hielscher & Smith, 2014; Lange, 2017).

The maker movement's proximity to locality, community and "geographies of making" (Carr & Gibson, 2016) has sparked a scholarly discussion relating its practices to geographies of sustainability transitions (e.g. Baier et al., 2016b; Bürkner & Lange, 2016; Davies, 2017a; Hansing, 2017; Lange, 2017; T. S. J. Smith, 2017). Local production, construction, repair, and hacking are discussed in relation to sustainability, degrowth and postcapitalism. Various authors argue for or against the potential of 'commons-based peer production' for sustainability transitions (M. Bauwens, Kostakis, & Pazaitis, 2019; Lange, 2017; Petschow & Peuckert, 2016). In particular the use of high technology such as 3D printing attracts much attention in recent debates. While some herald 3D printings' potential to disrupt global value

chains and re-localize production (Baier et al, 2016), others note its limitations in actual practice (Hielscher & Smith, 2014).

Civic engagement also takes explicitly oppositional forms in protest and social movements. While aforementioned alternative practices can be part of social movements and (intended as) forms of protest, collective action can also become explicitly contentious (Tarrow, 2011). Tarrow (2011, p. 9) defines social movements around four properties: collective challenge, common purpose, social solidarity, and sustained interaction. Social movements, consequently, are expressions of "collective challenges, based on common purposes and social solidarities, in sustained interaction with elites, opponents and authorities". Whereas social movement research as such is beyond the focus of this paper, the organizational forms contentious politics take, are of relevance here.

Della Porta and Diani (2006, p. 145ff.) distinguish between three types of social movement organizations. Professional movement organizations, such as Greenpeace or Amnesty International, command the resources to finance a management structure. These organizations often include a complex (and often costly) bureaucracy. Members are largely donors rather than active participants. Della Porta and Diani put this in contrast to participatory movement organizations which they further divide in two subcategories. Mass protest organizations combine "attention to participatory democracy with certain levels of formalization of the organizational structure" (2006, p. 147). Grassroots organizations, as third type, are even more strongly orientated towards participation while exhibiting low levels of formal structuration. In contrast to the former two, grassroots organizations' existence hinges upon the active contribution and engagement of members.

(Eco-) Social enterprises

> Social entrepreneurship, true to its social democratic roots, does not question the rule of property and the sources of social inequality but instead seeks to alleviate the worst suffering and make capitalist society more humane. This is certainly a noble task in itself, but it makes social entrepreneurs blind to the potentially autonomous circuits of cooperation that emerge in the relationships of social production and reproduction. (Hardt & Negri, 2017, p. 145)

Social entrepreneurs and (just) ecopreneurs (Affolderbach & Krueger, 2017; Huybrechts & Nicholls, 2012; K. O'Neill & Gibbs, 2016) managing and working for (eco-) social enterprises (Defourny & Nyssens, 2012; Johanisova & Fraňková, 2017) comprise a heterogeneous group of actors and organization that play a difficult-to-define role in sustainability transitions. On the one hand, green and social entrepreneurship are the epitome of the market-based solutions to social and environmental issues that a green economy proposes. Introducing business models to yet non-commodified areas perpetuates capital's encroachment into social and ecological relations. On the other hand, (eco-) social enterprises de-emphasize profit maximization and thus benefit communities and ecologies (Johanisova et al., 2013). They are a means to divert financial resources towards social and ecological

ends while implementing more just economic relations. In addition, social entrepreneurs can be "effective change agents" (North & Nurse, 2014) by showcasing alternative forms of economizing. Research on (eco-) social enterprises and entrepreneurship reflects these diverse expectations and framings, discussing social enterprises alternatively as means to "deliver sustainable new social value" and bring about "systemic change" (Nicholls, 2006, p. 3), as providers of failed state welfare (Nyssens, Adam, & Johnson, 2006) and means of creating new markets (Karamchandani, Kubzansky, & Frandano, 2009).

Huybrechts & Nicholls (2012, p. 33) link the different terms by stating that "'social entrepreneurship' is the dynamic process through which specific types of individuals deserving the name of 'social entrepreneurs' create and develop organizations that may be defined as 'social enterprises'". This apparently simple coupling, however, cannot be extended to the 'social economy'. In contrast to the social economy which is often defined in a static way alongside largely non-profit legal frameworks (see above), social entrepreneurship generally includes a distinct orientation towards markets. Social entrepreneurship literature emphasizes hybridity as characteristic that "allows the coexistence of values and artefacts from two or more categories" (Doherty et al., 2014, p. 418). Social enterprises "have a continuous production of goods and/or services and take economic risks – bankruptcy is always a possible outcome" (Huybrechts & Nicholls, 2012, p. 35). At the same time, social enterprises mark themselves off traditional businesses by putting social and environmental outcomes over profit maximization. The combination of market orientation on the one side and social and ecological purposes on the other side requires technological and social innovations such as "new organizational models and processes [,] new products and services, [or] new thinking about, and framing of societal challenges" (Huybrechts & Nicholls, 2012, p. 34).

Defining (eco-) social entrepreneurs through their ecological/social orientation, innovation, and market orientation alone, however, restricts considerations of their transformative agency to green economy imaginaries. Markets, in this frame, are a given – located on the landscape level – that are merely a means of transformation but never its objective. In other words, by defining social entrepreneurship through its market-orientation without considering the ways in which social entrepreneurs challenge and shift economic frameworks themselves, fails to address more fundamental issues as exposed by scholarship on degrowth and postcapitalism (see chapter 2). Literature on social enterprises largely accepts the "capitalist growth paradigm and its theoretical underpinnings and sees social enterprises merely as a vehicle for generating employment and providing services to socially excluded groups" (Johanisova & Fraňková, 2017, p. 509). This does not mean that market-orientation *per se* thwarts any ambitions for radical transformation. Parts IV and V of this work consider the role of compromise in more detail. At the present stage, however, it means

that social entrepreneurship needs a framing that accommodates more radical orientations beyond markets and the imaginaries of a green (growth) economy.

Two notions that propose such a framing are that of "eco-social enterprises" (Johanisova & Fraňková, 2013, 2017) and of "post-growth organizations" (Rätzer, Hartz, & Winkler, 2018; Schmid, 2018). Johanisova and Fraňková (2017, p. 511) define eco-social enterprises through five characteristics: First, other-than-profit goals; second, the use of profits for social and ecological purposes; third, democratic and local ownership and governance; fourth, rootedness in place and time; and fifth, non-market production, exchange or provisioning patterns. In emphasizing democratic control and embeddedness as criteria, Johanisova and Fraňková decenter the role of markets as allocative (and governing) mechanisms and turn towards community (see also chapter 4). Eco-social enterprises' engagement in non-market practices furthermore challenges the market logic and thus the deeper economic ontology that social enterprise literature fails to challenge.

Building on Johanisova and Fraňková's definition of eco-social enterprises, elsewhere I propose the notion of post-growth organizations as "organizational associations that (1) address social and environmental concerns and (2) simultaneously engage in post-growth politics – the initiation and support of parallel and mutually enforcing processes of cultural and institutional change within the diverse meanings of post-growth" (Schmid, 2018, p. 283). Post-growth organizations include social enterprises that go beyond market-based solutions for ecological and social problems and innovate new organizational structures, technologies, and modes of operation, through which they reflectively relate to and challenge the broader conditionalities of economizing. In this vein, I do not reject the notion of social entrepreneurship but follow Arthur et al. (2016, p. 219) who explore social enterprise as potential agents for radical transformation: "social enterprises can be seen to be alternative social spaces and, as such, can contend transgressively". Chapter 18 below further develops this notion and, for reasons of terminological continuity speaks of 'degrowth organizations'

'Postcapitalist entrepreneurship' (Cohen, 2018), in a similar vein, addresses and challenges the rule of property and the sources of social inequality that Hardt and Negri problematize in the introductory quote. Capturing the notion of entrepreneurship as the creation of "new combinations among already existing workers, ideas, technologies, resources, and machines" (Hardt & Negri, 2017, p. 140) for postcapitalist trajectories opens new and creative paths towards resistance and alternative futures. Hardt and Negri (2017, p. 145ff.) call for an entrepreneurship of the multitude: "Once these neoliberal notions of entrepreneurship are cleared away, we can begin to glimpse some characteristic of a potential (or even already existing) entrepreneurial multitude, that is, a multitude that is author of 'new combinations' that foster autonomous social production and reproduction." The sensitivity of

creative and strategic bottom-up organizing runs through this study and guides in particular the discussion in part V.

Politics and planning

A third group of transition agents comprises policy-makers and planners. I touch on this group only briefly, since the key focus of this works lies with community initiatives and eco-social enterprises.

A number of contributions to transition literature explore and evaluate policy interventions and their role in sustainability transitions (Hendriks & Grin, 2007; Macrorie, Foulds, & Hargreaves, 2015; Spurling & McMeekin, 2015), often under the label of "transition management" (Loorbach, 2010; Loorbach & Rotmans, 2010). In line with MLP's focus on regimes, perspectives on policy are generally sectoral, for instance on housing (Macrorie et al., 2015), mobility (Spurling & McMeekin, 2015), or energy (van der Laak, Raven, & Verbong, 2007). By and large, the sectoral focus excludes more fundamental questions that transgress the market- and state-centered imaginaries of green economy perspectives. More radical proposals remain an exception, especially since they are rarely found in actual policy.

Radical research on transformative policy and planning, consequently, is often theoretical and speculative. Some perspectives largely ignore state institutions as potential allies in transformative politics (Gibson-Graham, 2006; see also Fickey, 2011; Jonas, 2016), while others aim to change state institutions in ways to prepare and facilitate more radical transformation (Adler, 2017). Adler (2017, p. 27f.), for instance, notes three criteria to devise degrowth politics: First, degrowth politics are structurally compatible with degrowth approaches but (legally) enforceable under the present socio-economic conditions of capitalist relations. Second, degrowth politics limit the causes and conditions of the (re)production of alienated desires and concomitantly the corresponding imaginaries of prosperity and progress to facilitate the transition towards a degrowth culture. Third, degrowth politics ought to address not only progressives and avant-garde milieus, but should appeal to a broader audience and their political representatives as form of social improvement. Concrete proposals for transformative policy include universal basic income schemes (van Parijs & Vanderborght, 2017; Van Parijs & Vanderborght, 2018), working time reduction (Schor, 2010), ecological and green taxes (Daly, 1996), egalitarian taxes (Piketty, 2017), and taxes on financial transactions (Latouche, 2009). For an overview and additional degrowth policy proposals see Kallis (2018, p. 128).

Although, thus far, aforementioned proposals for radical transformative policy fail to materialize, formal politics remains an important potential ally in sustainability transitions. Policy unfolds on multiple intersecting levels – local, regional, national, international, and global. While much top-down policy does not promote, indeed rather stifles radical transformation, it is not the only means of policy intervention. Place-sensitive approaches to sustainability stress the role of local (policy) contexts in facilitating transformative practice (Hansen & Coenen, 2015; Späth & Rohracher, 2012). The crucial

question, then, is twofold: “what institutions … must be established in order to create and support the necessary collective actions?” (T. Bauwens & Mertens, 2018, p. 45) and how can they be established? Polycentric notions of governance entail two key ideas. First, (the rehabilitation of) localism as meaningful source of governance. Second, the appreciation of self-organization and actors’ capacity thereof (T. Bauwens & Mertens, 2018). Transition governance, therefore, exceeds the narrow realm of formal politics and plays out through interactions of all actor groups – civil, entrepreneurial, and political – that increasingly blur, merge and hybridize the deeper we dig into the complex processes of transformative geographies.

Transition governance

Transition literature lacks critical perspectives on the question of who actually shapes socio-technical transitions (Avelino, Grin, Pel, & Jhagroe, 2016; Lawhon & Murphy, 2012; Patterson et al., 2017). Politics and power remain largely underexplored and “elites such as corporate and state leaders, innovates, and scientists appear to have only progressive, environmentally responsible interests or values.” (Lawhon & Murphy, 2012, p. 363). Scoones, Leach and Newell (2015, p. 11) infer that “a deeper understanding of processes of knowledge politics, political conflict and accommodation, bargaining and disciplining, as niche experiments challenge existing regimes is clearly highly pertinent”. In this vein, a number of recent contributions carve out the micro-politics of transformation (Avelino & Wittmayer, 2016; Hoffman & Loeber, 2016). In line with critiques around the neglect of community as a site of innovative activity (Seyfang & Smith, 2007) the focus shifts from markets, policy and technology towards grassroots, activism, and bottom-up organizing.

Approaches such as political ecology (Lawhon & Murphy, 2012), community economy (Gibson-Graham, 2006) or earth system governance (Patterson et al., 2017) are crucial to politicize transition studies. These approaches help to address questions around governance, politics, and power that remain undeveloped in much transition literature: “who is (or is not) represented and included in transition decisions; where and at what scale decisions are made; whose knowledge counts and why; how power relations influence regime dynamics, landscape features, and the prospects for niche innovations; what checks are in place to qualitatively evaluate the representativeness and fairness of transition processes; what are the expected social consequences of the adoption of particular technologies; and how these can be better predicted, shaped, and/or mitigated” (Lawhon & Murphy, 2012, p. 371).

Part II develops a perspective on transformative geographies as *changing spatialities that emerge from the power-laden struggles of human co-existence materializing in the antagonistic, divergent, adjusting and synergistic practices of its everyday (re)production*. It draws on Gibson-Graham’s work on a diverse community to conceptualize a postcapitalist politics which it materialized and grounds in power by

means of practice theory. It then returns to the diverse actors that engage in transformative practice. Meanwhile, the remainder of this part sets the stage by drilling deeper into the notions of transition and transformation.

From transformation to transition

Transformation and transition both "express the ambition to shift from analyzing and understanding problems towards identifying pathways and solutions for desirable environmental and social change" (Hölscher, Wittmayer, & Loorbach, 2018, p. 1). For the most part, both terms are used interchangeably. Yet, different research communities tend to privilege either transformation or transition to describe processes of change, with some putting them in relation – such as Geels and Schot (2007) for whom transformation is one amongst several pathways for transition (see above). Hölscher et al. (2018) consider transition's and transformation's etymological differences that hint at diverging emphases they express. As detailed below, this thesis orients on these etymological cues to sharpen both notions and propose, although not sharply delimited, still nuanced conceptual differences that tie in with the broader sensitives of the respective literatures on transition and transformation.

Transformation, etymologically, means to 'change in shape' which, at first, does not imply a particular agent or directionality. This is in line with aforementioned two-sidedness of the notion of transformation, both as fundamental shift through multiple interacting dimensions that include political, economic, demographic, cultural, juridical, technological, climatic, biological, aquatic, and pedological moments, as well as the individuals, communities, entrepreneurs, organizations, planners, and policy makers that are enlisted in and differently shape unfolding changes. Transformation, therefore, does not presuppose a sustainability orientation. Yet it can – and often does – include the aspiration to channel social and ecological dynamics towards social and environmental justice and/or break with particular undesirable infrastructures, institutions and routines. It is necessary to disentangle three different 'meanings' of transformation that closely interrelate, overlap, and implicate each other: transformation as adaptation, the analysis and understanding of transformative processes, and transformation as emancipatory project.

A large body of literature around global change, climate change, adaptation and resilience discusses transformation as reaction to the profound destabilization and stress in ecological and social systems (Bouzarovski & Haarstad, 2018; K. Brown, 2014; Cretney, 2014). Brown (2014, p. 112) notes that "it is argued…that global environmental change will enforce radical, unplanned and detrimental transformation, especially through impacts of climate change." Environmental changes, in this perspective, cause and force social institutions to fundamentally transform and adapt resulting in "different controls over system properties, new ways of making a living and often changes in scales of crucial feedbacks" (ibid.). Transformation, in this sense, is a reaction or adaptation to environmental

change. Since shifting control also implies shifting power relations, different forms of transformation are differently desirable for various individuals or groups. O'Brien concludes that "transformation means different things to different people or groups, and it is not always clear what exactly needs to be transformed and why, whose interest these transformations serve, and what will be the consequences" (O'Brien, 2012, p. 670; see also Lawhon & Murphy, 2012, p. 371 quoted above).

Transformation, therefore, has strong political implications. However, calls for a "great transformation" (WBGU, 2011) – as, for instance, from the academic advisory council for the German Federal Government – generally remain unspecific and leave aside deeper perspectives on the underlying rationales, interests, and power relations (Brand & Wissen, 2017). By using the term 'great transformation' the academic advisory council draws on the economic historian Karl Polanyi's (2001 [1944]) who traces the transformation to industrial capitalism in the 19th century. His analysis of the metamorphosis of capitalist social relations exposes capital's encroachment on nature and work compromising its own foundation. Despite this apparently radical reference, the public and political discourse on transformation remains stuck in analyses and propositions that remain superficial. Brand and Wissen (2017, p. 37 author's translation) criticize that this "new critical orthodoxy considers itself critical towards the dominant developments, however, remains fixated on the existing institutional system and confides in the realization [Einsicht] of the elites".

Critical scholars, in contrast, employ transformation in a more emancipatory sense, tracing possibilities for radical intervention. Dussel, for example, understands transformation as "a change in the form of the innovation of an institution or the radical transmutation of the political system in response to new interventions by the oppressed or excluded" (cited in Barnett, 2017, p. 29). This emancipatory notion of transformation emerges throughout the literature on community-based activism and alternative economies (i.a. Gibson-Graham, Cameron, et al., 2013). Wright (2010), thereby, advances one of the most sophisticated accounts on radical transformation. For him, the elaboration of a theory of social transformation is a key task of emancipatory social science, next to a critique of society and a theory of alternatives (25).

The widely divergent notions of transformation show two aspects that need further theorizing in order to develop a conceptual grounding for transformative geographies. First, transformation can mean quite different things and serve disparate interests. A theory of transformation, therefore, needs to articulate how it uses transformation and to what ends. This work follows critical scholarship in advancing an emancipatory notion of transformation. By raising the question how resistance, intervention, and emancipatory struggle can (re)direct social dynamics, it opens a critical-reflexive dimension. Transformation, thereby, is neither about the discovery or formulation of an utopian blueprint or an "end point, some universal sister-brotherhood of human perfection waiting over the

hill" (Chatterton & Pickerill, 2010, p. 488), nor about the mere description and analysis of processes of change. Rather it is about opening political and ethical spaces in which new 'becomings' can be imagined, negotiated, experimented and practiced. A key focus of the conceptualization of transformative geographies in part II, therefore, revolves around the question of politics.

Second, a theory of transformation premises an ontology of social dynamics. Wright's theory of transformation consists of four interlinked components: (1) A theory of reproduction that provides an account of the obstacles to emancipatory transformation; (2) a theory of the gaps and contradictions of reproduction that shows the real possibilities of transformation; (3) a theory of trajectories of unintended social change that specifies the future prospects of both obstacles and possibilities; and (4) a theory of transformative strategies that informs radical practice for building emancipatory alternatives. In order to conceive of the possibilities and constraints of transformative politics, part II explores practice-theoretical perspectives to account for stability and change in social dynamics. Transformation, from a practice-theory perspective, is an "emergent, nonlinear, polycentric, and complex" process revolving around the "rise, stabilization, and decline of various practices and their broader alignments" (Schmid & Smith, resubmitted). Such a perspective accounts for the relative stability and path dependency of social institutions while staying open to the possibilities of radical change.

Taken together, transformation's politics and its ontology of social dynamics allow for the development of "strategies of transformation" (Wright, 2010, p. 303). Identifying possibilities and constraints, moments of stability and of change, the dynamics of revolution and counterrevolution, reformist and revolutionary alternatives raises the question "what sort of collective strategies will help us move in the direction of social emancipation?" (ibid.). Wright (2010; see also Hahnel & Wright, 2016) proposes three strategies he refers to as symbiotic, interstitial and ruptural. Symbiotic transformations are processes which address social issues and enhance possibilities for emancipation without challenging capitalist institutions as such. Interstitial transformations involve strategies that build alternative forms of social organizations in the "niches and margins of capitalist society" (Hahnel & Wright, 2016, p. 101). Ruptural transformations, finally, confront capitalist institutions head-on and seek to establish "emancipatory institutions through a sharp break with existing institutions and social structures" (Hahnel & Wright, 2016, p. 100). Wright, then, envisions an interlocking of all strategies to channel the dynamics towards postcapitalism.

> I think the best prospect for the future in developed capitalist countries is a strategic orientation mainly organized around the interplay of interstitial and symbiotic strategies, with perhaps periodic episodes involving elements of ruptural strategy. Though interstitial strategies, activists and communities can build and strengthen real utopian economic institutions embodying democratic-egalitarian principles where this is possible. Symbiotic strategies through the state can help open up greater space and support for these interstitial innovations. The interplay between interstitial and symbiotic strategies

could then create a trajectory of deepening social elements within the hybrid capitalist economic ecosystem. (Hahnel & Wright, 2016, p. 103)

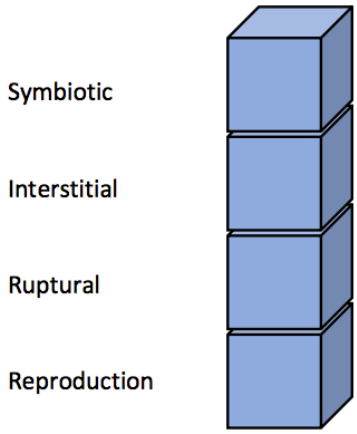

Figure 2: Strategic dimensions of transformation and social reproduction

Wright's typology segues into the notion of transition. While transformation focuses on the unfolding human and more-than-human dynamic and the negotiation of its directionality, transition emphasizes the (strategic) passage from one state of affairs to another. Transition, etymologically, means to 'go across' (Hölscher et al., 2018) and hence carries both the notion of an orientation and the active connotation of an agent. In contrast to transformations' primacy of politics and ontology of social dynamics, transition already knows where it is headed. Sustainability transitions, for instance, are "goal-oriented or 'purposive'… systemic changes [that] involve alterations in the overall configuration of transport, energy, and agri-food systems, which entail technology, policy, markets, consumer practices, infrastructure, cultural meaning and scientific knowledge" (Geels, 2011, p. 24f.). Transition, as it is used here, is concerned more with getting from status quo to a defined other than with the politics of transformation. Consequently, this work uses transition to refer to the ideas, strategies and practices of directed change in a particular field – such as energy transition, food transition, mobility transition or the transition towards a repair society.

Transition without transformation runs the risk of being apolitical or ontologically naïve (see criticism on sustainability transition research above). Transformation without transition, on the other hand, might lack practicability or relevance. Using either term in the following, therefore, implies an awareness of the respectively other. Aside from terminological issues, however, transformative and transitional geographies require a conceptual foundation that establishes an ontology of social dynamics and a politics of transformation as well as a materiality and practicality of change. In part II, I turn to the development of such a conceptual framework.

Interlude: Geographies of change

Transformation and transition are fundamentally spatial notions, as this section will argue. Change unfolds in places, connects close and distant sites, shifts horizontal and vertical relations, and negotiates territories and boundaries. A number of recent contributions explore the spatialities of transition and transformation (i.a. Bouzarovski & Haarstad, 2018; Chatterton, 2016; Chatterton & Pickerill, 2010; Coenen et al., 2012; Hansen & Coenen, 2015; N. Longhurst, 2015; Raven et al., 2012; A. Smith et al., 2010; Vandeventer et al., 2019). Yet, most argue that transition and transformation research still lacks genuinely geographical theorizing. Hansen and Coenen (2015, p. 105), for instance, argue that

> most studies on the geography of transitions have primarily layered on top of existing theory in the transitions literature, relying largely on concepts and frameworks such as MLP, TIS and SNM yet adding spatial sensitivity. Few studies in the geography of transitions field suggest alternative frameworks to study sustainability transitions and thus challenge current theorizations of transitions and its geographies

This thesis responds to Hansen and Coenen critique insofar, as it attempts to develop a fundamentally spatial perspective of transformative geographies (see also part II). In order to prepare such a perspective, this interlude sketches geographies of change alongside different spatial concepts. In their seminal paper *Theorizing Sociospatial Relations*, Jessop, Brenner, and Jones (2008) emphasize four concepts – territory, network, place and scale – that each refer to a distinct form of social spatiality. While Jessop et al. acknowledge other spatial concepts that are not part of their framework (such as environment/nature or positionality), they identify the aforementioned as "most salient in work on contemporary political-economic restructuring" (Jessop et al., 2008, p. 392). Viewing transformative processes through a heuristic of different socio-spatial relations makes visible their complexity.

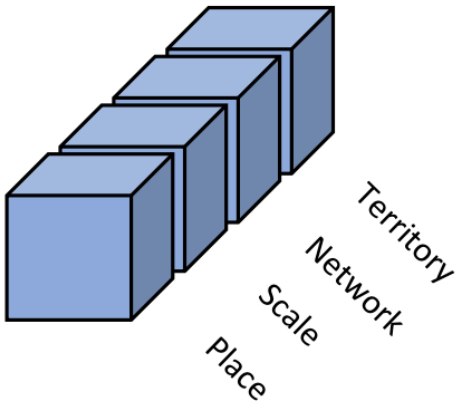

Figure 3: Spatial dimensions of transformation

Places are ensembles of bodies, artefacts, things, meanings, and practices that meet in time and space. Places, therefore, are meaningful locations where historical trajectories arise, meet, interact, stabilize and transform. Transformation is always bound up with concrete temporal and spatial contexts – moments and places. Understanding these contexts is important for understanding transformation and its processes, possibilities and obstacles. Longhurst (2015, p. 184), for instance, emphasizes the importance of a "localized density of countercultural institutions, networks, groups, and practices" that he calls "alternative milieu" for a sustainability transformation. Alternative milieus are protected places which allow new ideas to emerge, invite experimentation, support alternative practices and spawn imaginaries about the place itself as locality for radical innovation (N. Longhurst, 2015, p. 184). Authors that stress the importance of proximity also speak of "informal local institutions" as crucial factor for transformative practices (Coenen et al., 2012; Hansen & Coenen, 2015; Späth & Rohracher, 2012). With this they refer to the norms, values, trust, social networks, and cooperation cultures that catalyze (or constrain) social and technological innovation.

Some scholars describe transformative politics as "politics of place" (Gibson-Graham, 2006, p. xxiv). Such a politics is situated in the "here and now" of everyday practice (Beveridge & Koch, 2018; Gibson-Graham, 2006; Pickerill & Chatterton, 2006). Place, here, has both spatial and temporal significance. Akin to anarchist imaginaries transformation is not deferred to an elsewhere (for instance the abstraction of a national or global 'level') or an else-when (an indefinite future) but inscribed into prefigurative practices of the everyday. Politics of place, then, materialize in local economies (Parker, 2017), place-based activism (Gibson-Graham, 2006) and (local) communities (Taylor Aiken, 2015b). A focus on place, however, has to be wary not to equate place, community, and the 'local' (Taylor Aiken, 2015b) neglecting other spatialities and succumbing to place-centrism (Jessop et al., 2008). Still, the notion of place contextualizes (global) power relations that are always produced in concrete sites. A critical appreciation of the local, then, extends a politics of place to a politics of place *beyond place* (Massey, 2008).

A politics of place beyond place considers the diverse trans-local connections. While a lens on place-specific contexts is important to understand the constellations of values, communities, and technologies from which transformative practices develop and radiate, it is equally important to consider the people, ideas and goods that travel through places connecting them to other close and distant sites. The horizontal spatiality of network metaphors is a recurrent figure of thought in recent theorizing of transformative geographies (Chatterton, 2016; Springer, 2014a). Transformation is imagined as shifting discourses or assemblages *connected* through "webs of signification" (Gibson-Graham, 2006, p. xxiv) and diverse performances (Roelvink et al., 2015). These imaginaries "shift strategy away from merely scaling-up niches towards a multiplicity of ways to corrode the overall

regime and landscape through more networked forms and distributed social relations (Chatterton, 2016, p. 405). In doing so, scholars and activists "cultivate a politics of horizontal extent, reach, and association rather than a 'politics of scale'" (Roelvink et al., 2015, p. 16).

Places, people, and communities also connect through organizations and institutions. Umbrella organizations, city networks, conventions and other forms of trans-local institutions coordinate and support the exchange and diffusion of ideas, values, and technologies. The *Verbund offener Werkstätten* [German network of open workshops] for instance, supports organizations that revolve around local production and associated practices (see digression on maker movement above) both through the connection with other projects that pursue similar strategies and encounter the same difficulties as well as through the centralization of services such as insurance and counselling. The networks that emerge from trans-local activities can consist of both denser and looser connections creating proximity across (Euclidian) space. Coenen et al. (2012, p. 969) note that "regular interactions between actors can built up into more solid connections, institutions and networks which in turn can support further 'remote' relationships".

While there is an emancipatory moment in horizontal perspectives that think space relationally, some geographers redirect attention to the different practical or institutional densities and relational forms of power that "constrain and structure space" (M. Jones, 2009, p. 493). Scale, for them, remains an important spatial category. Jonas (2006, p. 399) warns that "to reject 'scale' altogether would be to miss out on an important dimension of thinking about and acting upon contemporary economic, political, social, and environmental change". Irrespective of the nuances of this debate (see also part II), there is a fundamentally scalar moment in different imaginaries of transformation as 'upscaling', diffusion, polycentric shifts in meanings and practices and any idea of spread, dissemination or expansion of alternative (economic) practices.

Although the 'levels' of the MLP do not refer to a spatial scaling, they include temporal and structural notions of scale (Raven et al., 2012). There is, then, a significant link with relational thinking of space. In his attempt to establish an ensemble ontology, Jones (2009, p. 498) argues that socio-spatial relations are produced through "a mutually transformative evolution of inherited spatial structures and emergent spatial strategies within an actively differentiated continually evolving grid of institutions, territories and regulatory activities". Jones' conception connects temporal (historical), structural and spatial scales in the relational ontology of a processual materialism that I will go onto explore in detail in part II.

Structured and differentiated space brings us to the notion of territory. Territories, are generally understood as bounded portions of space. Critical scholars, thereby, emphasize the production of territory and processes of territorialization (Belina, 2013; Elden, 2010; Painter, 2010). Territory,

consequently “is not the timeless and solid geographical foundation of state power it sometimes seems, but a porous, provisional, labor-intensive und ultimately perishable and non-material product of networked socio-technical practices (Painter, 2010, p. 1116).

Territories are highly relevant for transformative processes, both in their effects, as well as in their production. Administrative territories generally constitute a ‘reality’ for transformative practice. Local, regional, national and international policy can facilitate or constrain sustainability-related practice. Territory, then, is relevant in its effects on transformation. At the same time, actors tactically draw on different administrative territories and levels to navigate policy, obtain funding, and spread alternative practices to other places. Scalar, networked, place-, and territorial spatialities intersect and co-constitute each other in the complex politics of transformative geographies

This thesis provides a detailed argument for the importance of acknowledging transformation’s spatialities. Conceptually, thereby, notions of scale are of particular importance. While it is clear that transformation requires some sort of spread, diffusion, expansion, dissemination, or ‘growth’ of sustainability-related practices, simplified concepts of ‘upscaling’ have proved problematic (see chapter 3). A challenge I take on in part II, then, is to further deconstruct the problem of assuming different (temporal, structural, or spatial) levels a priori and the development of alternative concepts thereto. Relational perspectives that emphasize horizontal networks in lieu of hierarchical spatialities (M. Jones, 2009; Marston, Jones, & Woodward, 2005) support this endeavor. Relational thinking is also crucial to complement place by the concept of site (Schatzki, 2003). Territory, however, will remain underexplored for reasons detailed in interlude III, which, in a concluding manner, pulls together different forms of socio-spatial relations once again.

Part II: Transformative geographies: space, politics & change

Transformative geographies describe the *changing spatialities that emerge from the power-laden struggles of human co-existence materializing in the antagonistic, divergent, adjusting and synergistic practices of its everyday (re)production*. Space, politics and transformation, thereby, are intimately bound up with each other. Laying a conceptual foundation for the exploration of transformation requires the consideration of each: space and its materialities, politics and its disagreements, encounters and identities and the dynamic unfolding of the social through its routines, shifts and ruptures.

Starting from the claim that human existence is inherently plural – in the sense that being is always a being with an 'other' – chapter 4 traces the political implications of the idea of 'togetherness'. This vantage point exposes the contingency of the ways in which humans coexist with each other and the more-than-human world, opening a space of possibility for different arrangements of common survival and well-being. Against the background of critical voices that challenge the primarily discursive thrust of community economy scholarship – a primary source of inspiration of thinking through a politics of (economic) possibility – chapter 5 turns towards the materiality of social life. Human togetherness materializes in practices constituting the spaces in which political subjectivities exist and act. Transformative geographies are shown to emerge through a complex dynamic of resistance and cooptation, politics and submission, endeavor and coercion, conditioned and conditioning moments, constituent and constituted power. Understanding transformation, consequently, premises a notion of the social dynamics itself. The notion of practice with its processual and materially grounded ontology provides such a perspective on social reproduction and change. Chapter 6 continues to develop the emergent synthesis of community economy and practice theory scholarship around the concepts of scale and power. This crisp chapter prepares the operationalization of transformative geographies, an issue the remainder of part II turns to. Taking up the conceptual grounding of space, politics and change, chapter 7 translates transformative geographies into a perspective on concrete practices. Based on the foregoing criticism of capitalism's escalatory tendencies in part I, it explores practices that withhold and repress the capitalization of nature, lives, and social relations. In developing the notions of degrowth politics and practices, chapter 7 formulates a research agenda to trace a possible degrowth transition.

Chapter 4: Reimagining togetherness

Capitalism is a mode of social existence in which human and more-than-human relations are substantially organized around the continuous movement of capital. Capitalist social relations are sedimented across mental, social and material infrastructures and institutions leaving little leeway to

individual withdrawal from participation and reproduction. Nevertheless, capital is neither omnipresent nor inevitable. That means, first, waged labor, the commodity market and capitalist enterprises are not the only way of organizing provision, transfer, compensation, surplus allocation and governance (Gibson-Graham, 2006, p. 53ff.). A range of theoretical lenses and a vast number of empirical examples makes perspectives that describe the world solely in terms of capitalist relations untenable (i.a. Fuller et al., 2016; Gibson-Graham, 2006; Krueger et al., 2017; R. Lee, 2013; North & Cato, 2017; Roelvink et al., 2015; White & Williams, 2016). Second, other-than-capitalist modes of social and economic organization do not constitute inferior, less relevant or secondary choices *per se* but include practices that exist(ed) before, aside, with, despite and instead of capitalist relations.

Although a capitalist mode of organization challenges and sidelines alternative forms of economic relatedness, capital (and state) are no totalizing forces, but themselves products of and abstractions from human practice and organization. A conceptual grounding of transformative geographies, then, cannot start with individual actions or the structuredness of economic and political institutions. While the former easily conceals the broader relations which condition, curtail, force and prohibit human activities, the latter closes off the agency, autonomy and plurality of subjectivities and groups that question, subvert and confront hegemonic structures. Transformative geographies, rather, are grounded in dynamic unfolding of human togetherness itself: community.

Community is the "never-ending process of being together, of struggling over the boundaries and substance of togetherness, and of coproducing this togetherness in complex relations of power" (Gibson-Graham & Community Economies Collective, 2017, p. 5). Community, much like transformation, is not emancipatory in and off itself (Taylor Aiken, 2017). But it can be mobilized as emancipatory concept that denaturalizes capitalist organization and opens spaces for alternative visions and practices of togetherness. Drawing on the philosophy of Jean-Luc Nancy (1991, 2000, 2016) – brought into geographies by figures like Gibson-Graham (2006, 2008) and Dikec (2015) – the next section explores what it means to be *in-common* as well as the political consequences of togetherness for processes of transformation.

Community

Being in the world is radically common. Inverting the Western metaphysics which subordinates plurality within an abstract singularity, Nancy (1991, 2000) argues that a singularity is always spaced by something surrounding it and singling it out. "A single being", he notes, "is a contradiction in terms. Such a being, which would be its own foundation, origin, and intimacy, would be incapable of Being, in the very sense that this expression can have" (Nancy, 2000, p. 12). Consequently, there cannot be "a singular being without another singular being" which leads Nancy to assume an "ontological

'sociality'" (Nancy, 1991, p. 28). Togetherness, consequently, is a basic condition of human existence. To be, then, means always to be together with an 'other'.

Existence, therefore, always entails an exposure to others (Dikeç, 2015). The "mode of existence and appropriation of a 'self'", in Nancy's words, "is the mode of an exposition in common and to the in-common" (Nancy, 1991, p. xxxvii). This ontology of being-in-common as mutual exposure suggests that human existence is fundamentally political. Rancière, in a similar vein, seeks the political in human coexistence as "equals" – in the sense of a shared capacity for appearance in common spaces (Rancière, 1998; see also Dikeç, 2015). Exploring the nexus of community and the political, Taylor Aiken (2017, p. 4) notes that "for Rancière, politics begins with community". Nancy, however, separates the domains of politics and common, so that for him "the common is not immediately political (Nancy 2000 cited in Dikeç, 2015, p. 62). Nevertheless, he grants that "the political is the *place* where community as such is brought into play" (Nancy, 1991, p. xxxvii). It is, then, qua the spatiality of community that the common and the political are imbricated (Schmid & Taylor Aiken, under review).

Individualistic ontologies, by contrast, foreclose politics. A community that is built on pre-constituted subjects brings individuals together in a "constructed oneness" (Gibson-Graham, 2006, p. 85). That means, community is reduced to a common substance or identity around which commonness is set-up. Nancy (1991, p. 38) speaks of a "common being" in contrast to being-in-common. Conceiving of the common as essence instead of outcome precludes conflict over the common itself and thus disagreement (Rancière, 1998, 2004, 2011). Common being consequently, produces closures that limit the possibilities of different becomings. As such it is also a closure of the political.

Still, essentialist notions of community – of a "communitarian being" (Nancy 1991, 15) – are widespread in economic and political thought, for instance in neoclassic theory, liberalism, or individualist anarchism. Individualistic ontologies, however, suppress and conceal the commonality of being and thereby the "togetherness implied in any singularity, any identity or concept of being" (Gibson-Graham, 2006, p. 82). Pertaining to economic discourse, the closure of the political manifests in the hegemony of an "asocial economic atomism" which seeks to represent economic interaction as devoid of "the sticky ties of culture and social allegiance" (ibid. 83). By obscuring the sociality and interdependence of economic relations, their social character is de-socialized and de-politicized. This is particularly visible in the reduction of the notion of freedom (in economic and political discourse) to negative freedom, that means freedom from the society or community (Dierksmeier & Küng, 2016; Loick, 2017). Negative freedom abstracts from the social relations that allow for (individual) participation in social practices, and thus the primacy of togetherness.

Digression: Homo oeconomicus and post politics

Neoclassic theory – the foundation of mainstream economics – is the paragon of an individualistic ontology. A broad range of writings challenge the highly problematic assumptions, reductionisms and gaps in neoclassical economics (Kallis, 2018; F. Lee, 2009; Raworth, 2017; Treeck & Urban, 2017). A recently influential critique is Kate Raworth's (2017) Doughnut economics which systemically juxtaposes misconceptions in mainstream economics with alternative proposals. In her introduction, Raworth quotes an open letter from the International Student Initiative for Pluralism in Economics which summarizes the detrimental consequences of uncritical reductionism:

> *The teaching of economics is in crisis…and this crisis has consequences far beyond the university walls. What is taught shapes the minds of the next generation of policymakers, and therefore shapes the societies we live in…We are dissatisfied with the dramatic narrowing of the curriculum that has taken place over the last couple of decades…It limits our ability to contend with the multidimensional challenges of the 21st century – from financial stability, to food security and climate change. (Isipe 2014, cited in Raworth, 2017, p. 2f.)*

Homines oeconomici – "solitary, calculating, competing and insatiable" (Raworth, 2017, p. 95) individuals – inhabit the neoclassic world. Let us draw a short sketch what that world looks like: Populated by self-centered and instrumental beings, this world requires "responsible self-investor[s] and self-provider[s]" (W. Brown, 2015, p. 84) because, as we know from Margaret Thatcher: there is no such thing as society. Instead, through the "bizarre mechanism" of the invisible hand, homo oeconomicus functions "as an individual subject of interest within a totality which eludes him and which nevertheless founds the rationality of his egoistic choices" (Foucault, 2008, p. 278). Instead of building and engaging in relations of co-dependence, the rational economic man (and woman) "accepts reality" (Foucault, 2008, p. 269) – the "truth"' of the market (W. Brown, 2015, p. 67). Rationality, here, is economic rationality, that negates any other system of reference as legitimate.

By implication, it is irrational to refuse the truth of the market. While liberalism saw the economic sphere next to politics and others dimensions of society, neoliberalism generalizes economic principles. That means, "neoliberal rationality disseminates the model of the market to all domains and activities – even where money is not at issue – and configures human beings exhaustively as market actors, always, only and everywhere as homo oeconomicus" (W. Brown, 2015, p. 31). Homo oeconomicus thus eliminates homo politicus. To rehabilitate the latter the intimate co-dependency of humans on each other and the more-than-human have to be reinvigorated.

Essentialist notions of individuality, identity, and community, however, are not solely a function of liberalism or neoclassic economics. Counterhegemonic projects frequently mobilize an 'other' – the

evil banks, governments or wrong-headed initiatives – in constituting a common being. Similarly "equating community economic development only with growing the local capitalist economy, *or* with attempts to establish 'small-is-beautiful' green self-sufficiency, *or* with achieving community self-determination through promoting homegrown, locally oriented community business" (Gibson-Graham, 2006, p. 86; emphasis in original) narrows the possibility of economic being-in-common and forecloses alternative becomings. Against this background, some scholars advance critiques on static and reified notions of community in social and environmental activism (for a discussion pertaining to the Transition Town Movement see Taylor Aiken, 2017).

Community economy

> If we wish to emphasize the becoming of new and as yet unthought ways of economic being, we might focus on the multiple possibilities that emerge from the inessential commonality of negotiating our own implication in the existence of others. (Gibson-Graham, 2006, p. 88)

Gibson-Graham propose an approach to economic practice that recognizes its interdependence, plurality, and possibility without specifying the substance of an alternative economy. Taking their cue from Nancy's philosophy of community, Gibson-Graham (2006, 86) resist the urge to conceive of the properties of an "ideal economic organization" before acknowledging the communitarian dimension of economy. Taking economic being-in-common as the starting point has (at least) two major consequences for Gibson-Graham's rethinking of 'the economy'. First, in affirming co-dependence, the notion of economic being-in-common opens a discursive space to negotiate the key coordinates of a community economy. Gibson-Graham (2006, 88), thus, "resocialize" and "repoliticize" the economy. Second, by not assuming a predisursive commonness, Gibson-Graham avoid excluding 'other' forms of economic practice. Community economy, therefore, is a heterogeneous field radically open to new possibilities, identities and becomings.

Through their notion of community economy, Gibson-Graham deconstruct the discursive dominance of economic imaginaries that revolve around capitalist forms of transfer, work, and organization. Capitalocentrism, the reduction 'the economy' to the capitalist practicalities of commodity exchange, wage labor and for-profit enterprises, manifests in the pervasive claim in political and public debates that the current (neoliberal growth-based capitalist) economy is without alternative, also known as TINA. TINA (there is no alternative) expresses the 'truth of the market' in neoliberal ideology that further solidified with the demise of the planned economy of the Soviet Union – for some even marking the end of history itself (Fukuyama, 2006). While there are and always have been criticisms and counter projects to capitalist economies, Gibson-Graham (1996, p. 41) problematize the representation of capitalism as the "central or dominant identity" in relation to which non-capitalist spaces are defined (see part II). Gibson-Graham's postcapitalist critique, therefore, is fundamentally also a critique of Marxist political economy that tends to "theorize capitalism as totality and all-

encompassing entity" (Fickey, 2011, p. 238). "Capitalocentrism…situate[s] capitalism at the center of development narratives, thus tending to devalue or marginalize possibilities of noncapitalist development" (Gibson-Graham, 1996, p. 40). Defining alternatives in relation to capitalism denies them an own and independent identity which, in a roundabout way, reproduces the hegemony of capitalocentric discourse.

In deconstructing this discourse, Gibson-Graham see a way to destabilize economic identity and disidentify with capitalism as natural form of economic being-in-common. By "widening the identity of the economy to include all of those practices excluded or marginalized by a strong theory of capitalism" (Gibson-Graham, 2006, p. 60), other subject positions can emerge. Following Nancy's postfoundationalist take on community, Gibson-Graham rid economy of "all essential content" (Miller, 2013, p. 522) and in doing so propose an economic ontology that is perhaps the closest it can come to non-essentiality "without rejecting the term 'economic' itself" (Miller, 2013, p. 522). Gibson-Graham speak of a "weak theory" (Gibson-Graham, 2014), that means a theory that intentionally stays open to new becomings by not foreclosing other forms of (economic) being-in-common. Methodologically, a 'thick description' (Geertz, 2003) accompanies this weak theory, capturing the diversity of practices and articulations without imposing a particular interpretative frame or (capitalist) identity onto them (Gibson-Graham, 2014). The community economy, thus, provides an "emptiness" that "awaits filling up by collective actions in place" (Gibson-Graham, 2006, p. 166) and therefore allows the negotiation of how to shape and design economic being-in-common. Community economies, consequently, "refers to a praxis of coexistence around which economic decisions are negotiated and made" (Roelvink et al., 2015, p. 9)

Radical deconstruction and the opening of the discursive space to allow for new becomings and un-fixed imaginaries has its limits. To be relevant as "a politics of collective action" (Gibson-Graham, 2006, p. xxxvi), community economy has to involve a closure. That means a standpoint or horizon that guides collectives struggle and excludes unjust alternatives. Excluding slave labor, for instance, as legitimate economic practice seems self-evident, but constitutes a closure of possibilities. In his reading of community economy, Miller (2013) traces three constitutive moments: the ontological moment (CE1), the ethical moment (CE2), and the moment of politics (CE3) to elaborate the movement between deconstruction and reconstruction of economic being-in-common.

CE1, the "ontological moment"**,** emphasizes the openness of the concept, that is the anti-essentialist ontologies of economy and community. CE2 and CE3, by contrast, are "movement[s] towards a positivity" (Miller, 2013, p. 525) – the emergence of desire and the articulation of possibilities. CE2, the "moment of ethical exposure"**,** revolves around a "preliminary affirmation" (ibid.). Rather than stipulating any concrete values and norms for such a process, it demands the space for ethical

negotiation itself. Hence it is the site of multiplicity, diversity and possibility coming close what others have called the political (Rancière, 1998). The “moment of politics” (CE3) is the moment in which a political construction occurs and is thus the collective enactment of positivity (Miller, 2013, p. 525). The moment of politics, here, expresses the necessity to make decisions and develop concrete practices. Besides creativity, connection and transformation this moment also entails struggle and exclusion. While being essential to fix certain values, ideas, relations and identities in order to perform economies at all, it is also crucial to move back to CE1 and CE2. In other words, to keep the moments “in constant play, affirming positive practice yet always returning to an explicit recognition of its dangers" (Miller, 2013, p. 529). As such community economy attends to particular desires while excluding others, but never doing so against the backdrop of universal principles but the temporary and open affirmation of inclusive ethical decision-making.

The diverse economy research program

Developing a language of economic diversity is the principal strategy to cultivate community economies (Gibson-Graham & Community Economies Collective, 2017). The iceberg model and the diverse economy framework – probably the most widely known pieces of Gibson-Graham’s work (see figure 5) – provide a heuristic to represent economic practice as a variegated and heterogeneous field involving a “wide range of people, processes, sites, and relationships” (Gibson-Graham & Community Economies Collective, 2017, p. 10).

Figure 4: The iceberg model (Gibson-Graham and the Community Economies Collective 2017)

Below the surface of paid wage labor, production for markets and capitalist businesses – the capitalocentric representation of economy – there are alternative and non-capitalist activities and sites that fundamentally contribute to well-being and survival and thus constitute economic relations (see digression 'what is economy?'). While these remain invisible for capitalocentric perspectives and thus widely ignored in economic discourse they "possibly keep…us afloat as a society" (Gibson-Graham, Cameron, et al., 2013, p. 11).

Inspired by the iceberg, a more systematic framework breaks down the diverse economy into capitalist, alternative-capitalist and non-capitalist forms of labor, enterprise, transactions, property and finance (older versions are without the latter two). This results in a three by five – or respectively three by three – matrix that guides the examination of a field, a community, or an organization, portraying its activities beyond a narrow formal economy (see figure 6). A range of studies have applied the diverse economies framework in different cases such as social enterprises (Houtbeckers, 2018), rural municipalities (Gibson, Cahill, & McKay, 2015), and local initiatives (K. Werner, 2015). Representing the economy as inherently diverse has two quite practical consequences for the repoliticization of economic being-in-common. First, it shows that individuals and communities already employ on a broad range of non-capitalist forms in everyday practice. Second, it sketches to breadth of possibilities and help to identify "building blocks" (Gibson-Graham & Community Economies Collective, 2017, p. 11) of postcapitalist economies.

ENTERPRISE	LABOR	PROPERTY	TRANSACTIONS	FINANCE
CAPITALIST Family firm Private unincorporated firm Public company Multinational	**WAGE** Salaried Unionized Non-union Part-time Contingent	**PRIVATE** Individually owned Collectively owned	**MARKET** Free Naturally protected Artificially protected Monopolized Regulated Niche	**MAINSTREAM MARKET** Private banks Insurance firms Financial services Derivatives
ALTERNATIVE CAPITALIST State owned Environmentally responsible Socially responsible Non-profit	**ALTERNATIVE PAID** Self-employed Co-operative Indentured Reciprocal labor In-kind Work for welfare	**ALTERNATIVE PRIVATE** State-owned Customary (clan) land Community land trusts Indigenous knowledge	**ALTERNATIVE MARKET** Fair and direct trade Alternative currencies Underground market Barter Co-operative exchange Community supported agriculture, fishing etc.	**ALTERNATIVE MARKET** State banks Cooperative banks Credit unions Govt. sponsored lending Community-based financial institutions Micro-finance Loan sharks
NON-CAPITALIST Worker cooperatives Sole proprietorships Community enterprise Feudal enterprise Slave enterprise	**UNPAID** Housework Family care Volunteer Neighbourhood work Self-provisioning Slave labor	**OPEN ACCESS** Atmosphere Water Open ocean Ecosystem services Outer Space	**NON-MARKET** Household sharing Gift giving State allocations/appropriations Hunting, fishing Gleaning, gathering Sacrifice Theft, piracy, poaching	**NON-MARKET** Sweat equity Rotating credit funds Family lending Donations Interest-free loans Community supported business

Figure 5: Dimensions of a diverse economy (Gibson-Graham 2014))

Digression: What is economy?

The concept of diverse economy is situated within a broader genealogy of approaches that struggle over (re)defining economy. Quite profound and influential is the debate between formalism and substantivism, the initiation of which is if often attributed to Karl Polanyi (Peck, 2013). Substantivists describe actually existing or real economies, in doing so prioritizing the empirical content over abstract – formal – models. In contrast to the formal economy that "operates in a time and space vacuum … the substantive economy is situated in both time and place" (Halperin 1994, cited in Peck, 2013, p. 1554). Identifying different patterns of economic organization – reciprocity, redistribution, exchange and house holding – Polanyi prepared a perspective on economies as "combinatory sites of multiple rationalities, interests and values, rather than as spaces governed by singular and invariant economic laws" (Peck, 2013, p. 1555).

Economic geography itself reflects the turn from formalism to substantivism. Polanyi's critique on the formalism and methodological individualism of neoclassic theory resonates with important turns in (primarily Anglophone) economic geography away from spatial science to a more political and theory-based approaches. The figure of David Harvey, who withdrew his support for the "mathematically abstract and narrow conception of economic geography" (Sheppard & Barnes, 2017, p. 5) in favor of the import of Marxist theory into the discipline, reflects this shift quite vividly. In the late 1980s and 1990s, then, the cultural turn increasingly led economic geographers to include further, hitherto non-economic, dimensions such as meanings, identities, trust and knowledges (Faulconbridge & Hall, 2009). While drifting further apart from economics, dominated by neoclassic theory, new points of contact with anthropology, sociology and other social sciences opened up. In this vein, a notion of economy emerges as "culturally inflected, institutionally mediated, politically governed, socially embedded and heterogeneous" (Peck, 2013, p. 1546).

These developments lead to new understandings of economy beyond capitalist relations (Leyshon et al., 2003). In sum, two tendencies interweave to disentangle capitalism and economy. First, capitalism is relegated to a contingent, spatiotemporally limited form of social organization embedded in political and cultural institutions. Rather than equating capitalism with the economy, capitalism is an "imperative to unlimited accumulation of capital by formally peaceful means" (Boltanski & Chiapello, 2018, p. 4) that exists besides, adds onto, appropriates and corrodes other modes of subsistence. We might call this first tendency a narrowing of capitalism. Second, economy is liberated from its reduction to capitalism. Inspired by thinkers like Polanyi, economy, then, is grounded in the diversity of human relations. "Economy is the instituted process of interactions between humans and their environments, involving the use

of material means for the satisfaction of human values" (Kallis, 2018, p. 17). We might call this second tendency a broadening of the economy.

Representing economy as diverse field illustrates the importance of more-than-capitalist practice for human coexistence. Apart from Gibson-Graham's iceberg model, scholars have proposed other conceptions of a varied economy. Lee (2006, p. 414), for instance, speaks of the "ordinary economy" that is "an integral part of everyday life, full of the contradictions, ethical dilemmas and multiple values that inform the quotidian business of making a living". Raworth (2017, p. 44) represents the economy as doughnut which symbolizes the navigation of a "save and just space for humanity" between the "social foundation of well-being and ecological ceiling of planetary boundaries". And Henderson's (1999) model of economy is a three-layer cake with icing, on which the private sector (the icing) is only the visible topping that rests on the public sector, the "social cooperative caring economy" and on "nature's layer" (cited in Johanisova et al., 2013, p. 9). While all these approaches have different emphases, they demonstrate that economy comprises diverse and historically changing patterns of co-dependent human organization within more-than-human ecologies around the satisfaction of needs and wants.

Poststructural transformative geographies

By suggesting 'community economy' as a discursive nodal point around which alternative meanings and practices can convene, Gibson-Graham follow a "feminist political imaginary" (Miller, 2013, p. 531). Inspired by second-wave feminism, they envision transformation not around (centralized) organizational structures but through ubiquitous shifts in discourses and practices that involve processes of dis-identification (with capitalocentric discourse) and re-identification around new nodes of signification. Transformation, then, does not come about through 'upscaling' of local initiatives or new global institutions, but through dispersed shifts in many places that are "related analogically rather than organizationally and connected through webs of signification" (Gibson-Graham, 1996, p. xxvii). To better understand Gibson-Grahams strategy to take back the economy by "dislodge[ing] the discursive dominance of capitalist economic activity" (Gibson-Graham, 2006, p. 54), this section tracks Gibson-Graham's reception of Laclau and Mouffe's 'post-Marxist' project to formulate a 'politics of hope'.

In *Hegemony and Socialist Strategy*, Laclau and Mouffe (2001) develop a notion of politics as discursive field in which structures and subjects are not pre-given "but constituted and reconstituted through debate in the public sphere" (Laclau & Mouffe, 2001, p. xvii). Discourse, at the center of politics, shapes subjectivities and social relations through temporary fixations in meaning. Hegemony, against this background "is best understood as the organization of consent – the processes through which

subordinated forms of consciousness are constructed without recourse to violence or coercion" (Barnett 1991, cited in Jorgensen & Phillips, 2002, p. 32). Discursively sedimented relations appear as quasi-natural, masking their contingency and foreclosing alternatives. "A poststructural theory of politics that situates discourse (and therefore language) at the center of any political project" (Gibson-Graham, 2006, p. 55), consequently, has to unfix economic identity and liberate difference from its subsumption under a capitalocentric logic.

Transformation, then, centers around a shift in meaning. Knowledge is performative, or as Gibson-Graham (2012, p. 33) expound the post-structural twist of Marx's 11th thesis on Feuerbach: "to change our understanding [of the world] *is* to change the world in small and sometimes major ways". Cultivating subjectivities that disidentify with capitalism as dominant way of organizing social relations, opens spaces of community economies that acknowledge and develop 'other' forms of economic-being-in-common.

> How we construct stories or narratives of transformation is important. These narratives have what some social theorists call 'performative effects'. In other words, our narratives help to bring into being the worlds they describe… It is therefore crucial that we cultivate representations of the world that inspire, mobilize, and support change efforts even while recognizing real challenges" (Gibson-Graham & Community Economies Collective, 2017, p. 4)

Speaking about the world – including the articulations of scholarship – then, is not purely descriptive but also performative. Foregrounding possibility creates "other images of the present" (B. Anderson, 2017, p. 595) that render the diverse economy visible and encourage subjectivities to build community economies. A hopeful representation of the world in general and the economy in particular, thus, is a central tenet of Gibson-Graham's transformative imaginary of ubiquitous shifts that are linked through webs of signification.

Such a 'politics of hope' (Gibson-Graham, 2008; Roelvink et al., 2015) has consequences for community economy's notion of space. It decenters verticality and privileges a non-hierarchical spatial ontology. From a scalar perspective, capitalocentrism is a form of "macro-mystification" (Marston et al., 2005, p. 427). Capitalocentrist discourse draws on an abstract globality and creates the image of an objective structure that is removed from the access through everyday practice. A vertically structured or scalar representation of social relations might serve as "distraction" (Springer, 2014a, p. 7) that obscures the "sites of ordering practices, as well as the possibilities for undoing them" (Marston et al., 2005, p. 427). Community economy scholarship, consequently, turns away from the apparent verities and constraints of vertical structures and towards the possibilities of a relational and flat spatiality.

In lieu of different scalar 'levels', community economy thinking focuses on place as the site of politics, new becomings, and transformation. Place, thereby, is not reducible to the local but convenes

activities of potential "global reach" (Gibson-Graham, 2006, p. xxvi). Inspired by Massey's (2005, 2008) 'ethics of place beyond place', Gibson-Graham (2008) emphasize the relationality of place as

> … a meeting-place, of jostling, potentially conflicting, trajectories. It is set within, and internally constituted through, complex geometries of differential power. This implies an identity that is, internally, fractured and multiple. Such an understanding of place requires that conflicts are recognized, that positions are taken and that (political) choices are made. (Massey 2007, cited in Gibson-Graham, 2008, p. 622)

Emergence and relationality are key parameters in the ontological reframing of capitalism. Both, the deconstruction of hierarchical scale and the appreciation of place with its multiple relations work towards abandoning the "ontological privileging of systemic or structural determination" (Gibson-Graham, 2008, p. 623). Poststructural transformative geographies, then, emerge from the cultivation of political subjectivities in diverse localities that embrace a plurality of values and engage in encouraging and nurturing forms of economic being-in-common that foreground openness and justice.

Epistemic fallacy?

In conceptualizing transformation as emergent discursive project, Gibson-Graham shift the focus from the substantive to the performative. (Often sympathetic) critiques of the community economy project problematize that a hopeful focus on resubjectivation runs the risk of ignoring the engine, mechanisms, and machinations of capital (Sharpe 2014). Community economy's focus on possibilities is said to neglect the institutions, materialities and power relations which transformative practices are situated in and constrained by. Castree (1999, p. 145) problematizes the idea that to "change our understanding is to change the world" (Gibson-Graham, 2008, p. 615) as "epistemic fallacy" (drawing on Bhaskar 1989). In doing so, he claims, community economy scholarship conflates epistemology with ontology and thus mistakes thinking about the world for the world itself.

By attempting to think away capitalism (North, 2008), community economy also fails to notice the powerful entanglement of capital and state institutions (Jonas, 2016). State power is crucial for the understanding of capitalist economies, for instance through the stabilization of institutions such as private property and markets, as well as through regulation, intervention and subsidies. At the same time, opposition to the state, pragmatic use of state institutions, and their subversion are part of postcapitalist resistance and struggle. Jonas (2016, p. 18) argues that "geographies of the state can play an important role in framing the tactics and strategies of alternative social and political movements." Lacking a theory of the state, community economy scholarship fails to contextualize postcapitalist struggle.

Alternatives – another important point of critique runs – are not necessarily preferable to capitalist practices. Samers (2005) observes a lack of critical examination into the economic relations that constitute alternative economies. This calls for a more selective appreciation of different forms of

production, labor, transfer, and surplus allocation which are not all desirable from the perspective of social justice (Fickey, 2011). Even if projects appear to be non-capitalist on the surface, they might turn out to be deeply involved with capital's reproduction. Kiribati – a small Micronesian island and former British colony – for instance inspires Gibson-Graham (2006, p. 187) to think about (postcapitalist) options for consumption. The island is fairly self-sufficient and defies export-oriented resource extraction. This is mainly due to the comfortable position of having some 508 million US$ in an overseas account gained from mining its phosphate deposits. Currently, "all fund assets are invested offshore by two London-based fund managers in an equal balance of equity and fixed-income investments" (Gibson-Graham, 2006, p. 186). It seems highly questionable, however, to pass off an arrangement heavily based on the M to M' circuit of financial capital as example to promote different economic imaginaries. By neglecting capital and state – not as reified powerful antagonists but as sets of relations that possibly undermine, divert, and incorporate postcapitalist ambitions – community economy scholars run the risk of losing sight of their everyday reproduction.

In a different vein, overemphasizing the role of language and processes of resubjectivation tends to sideline the material relevance of alternative economies for human co-existence and survival. Gibson-Graham's (2006, p. 160ff.) example of a workshop for Christmas decoration in Latrobe Valley, for instance, which they use to track processes of encounter certainly contributes to the cultivation new forms of community and subjectivity. Yet it possibly diverts attention and capacities away from more substantial projects for postcapitalist transformative geographies. Inflating strongly localized and self-referential projects is liable to neglect the more fundamental inequalities these and other communities face.

Community economy thinking, however, acknowledges relations of power, indeed. Gibson-Graham maintain that their...

> orientation toward possibility does not deny the forces that militate against it – forces that may work to undermine, constrain, destroy, or sideline our attempts to reshape economic futures but we should deny these forces a fundamental, structural, or universal reality and instead identify them as contingent outcomes of ethical decisions, political projects, and sedimented localized practices, continually pushed and pulled by other determinations (Gibson-Graham 2006, cited in Gritzas & Kavoulakos, 2016, p. 922).

In addition, community economy scholarship increasingly draws on assemblage thinking and other approaches to account for the material, non-discursive, and more-than-human (Roelvink et al., 2015). Nevertheless, the prioritization of possibilities over constraints has fundamental consequences that need further exploration (Schmid & Smith, resubmitted). While scholarship on community economy and postcapitalism elaborates politics of hope, there is insufficient consideration about the consequences of side-lining constraints. Barriers and pushback are crucial moments in the everyday resistance of individuals, community initiatives and eco-social enterprises as well as degrowth oriented

politics. The reasons for including constraints into the analysis of transformative geographies are at least threefold.

First, although capitalist forms are not the only means of relating economically to each other and for many not a preferred choice there is little leeway for individuals to (completely) withdraw from the participation in possibly violent and exploitative practices. Commodity chains of most electronics, for instance, abound with examples of "salvage accumulation" (Tsing, 2015; see chapter 1). A social enterprise that uses electronic components continuously has to weight the harm and misery it reproduces against the possibility of shifting economic practices. Constraints, here, include the awareness of exploitation and violence needed to navigate contradictions and adjust postcapitalist politics.

Second, acknowledging constraints is important in counteracting neoliberal ideologies of responsibilization and sacrifice (Brown, 2015). Community initiatives often include individuals that take on a disproportionate burden of duties and functions leading to stress and in extreme cases also burn out. While it is admirable that numerous activists and social entrepreneurs work long hours for (partially) altruistic purposes with (usually) little compensation, it reproduces the tendencies of individualized responsibility and withdrawal of state welfare. Strategic niche management, in this vein, sees "widely shared, specific, realistic and achievable" (Seyfang & Haxeltine, 2012, p. 190) expectations as crucial for niche development. While I have problematized the notion of niche upscaling above (see part I), it is important to contextualize individual and group efforts by considering constraints.

Third, and most central to the thrust of this work, tactical interventions and postcapitalist strategies premise knowledge about transformation's obstacles. Only if critical activists, entrepreneurs and politicians assess and evaluate their scope of action, they can devise appropriate strategies to enlarge alternative economic and political spaces. Finding (institutional) levers and tipping points proves to be a demanding task that requires conscious trade-offs and a constant negotiation of possibilities and constraints. Transformation, therefore, is a delicate interplay of possibility/diversity – a utopian moment expressed in a politics of hope and the appreciation of difference – and the acknowledgment of constraints/alterity – sedimented power relations that stabilize an exploitative, violent and ecological destructive capitalism which activism needs to oppose and position against. Privileging either moment a priori predetermines a particular strategy for activism cantered either around the opening of possibility and the appreciation of diversity or the positioning against capitalism and the focus on alterity (see chapter 2). The following section, therefore, grounds the community economy perspective in materialities and relations of power to open a field for postcapitalist strategy *in practice*.

Chapter 5: Materialization

The community economy concept is based on poststructuralist feminist thought that is fundamentally anti-essentialist. Subjectivities, communities and economic relations, from this perspective, are contingent outcomes of diverse performances. Poststructuralism veers away from the ideas of truth, essence, and autonomous subjects (Kuhn, 2005) and instead turns towards difference and becoming. Processuality, as poststructuralism's central tenet, "challenges structuralism's binary abstractions – such as nature−culture, emotion−reason, space−time, nonhuman−human" (Woodward, 2017, p. 1) which merge in the constant becoming of a dynamic world.

Processuality, of course, is not particular to poststructuralism. Postructuralism builds on and turns against Marxist thought (Kuhn, 2005). Marx' well-known assertion that "men make their own history, but they do not make it as they please; they do not make it under self-selected circumstances, but under circumstances existing already, given and transmitted from the past" (Marx, 1852) refers to the continuous (re)production of social relations. In contrast to poststructuralism's focus on contingency and difference, Marx(ist) thinking[8] is based on a strong materialism that foregrounds the circumstances – in particular the 'economic base' – which condition social practice. It has, consequently, a strong emphasis on institutions and heteronomy taking effect as structures. In critique of an structuralist Marxism, geographical-historical materialism – significantly developed through the work of figures like David Harvey (1982, 2011) and Henri Lefebvre (1991, 2014) – marks a revised strand of Marxism that is supposed to "retain the powerful insights emergent from Marxian analysis while absorbing and adapting to the post-structuralist and postmodern critique" (A. Jones, 2009, p. 480).

Gibson-Graham, however, disagree that Marxism can be reconciled with its poststructural critique (A. Jones, 2009) – at least not a Marxist conception of the capitalist class process (Gibson-Graham, Erdem, & Özselçuk, 2013). Much of the disagreement between Marxism and poststructuralism can be cast as a positioning vis-à-vis structure and contingency, determination and possibility, lack of reconstruction and lack of deconstruction. Critics of poststructuralist thought maintain that the dissolution of all verities ultimately leaves scholars without the categories needed to critique social relations in capitalist societies (Castree, 1999; Glassman, 2003). Perspectives that assume "a world where power is putatively highly fluid and dispersed" tend to ignore or overlook the forces constraining and conditioning human activity, limiting "the ability of studies of resistance to articulate the conditions under which political and social struggles might transcend resistance and succeed in liberating groups

[8] Marxism does not identify a uniform or even consimilar school of thought. Detailing the historical development and breadth of Marxist inspired literature is beyond the scope of this work (for overviews see Cumbers, 2009; A. Jones, 2009). In the following, I draw primarily on spatial thinkers that develop Marx' philosophy into historical-*geographical* materialism (Swyngedouw, 2012; Wiegand, 2016).

of humans from oppressive conditions against which they struggle" (Glassman, 2003, p. 695). Although poststructuralist thought seeks to overcome the dichotomization of materiality and sociality, the sacrifice of fixity – and with it any notion of structure, system, or truth – in favor of becoming, floating signifiers, contingency and discourse runs the risk of overemphasizing the latter. What is at stake, therefore, is materiality in a broad sense as the stabilization of social relations.

Social theory of late has (re)turned to the question of materiality and its relation to the social, developing postructuralist-materialist approaches around actor-network-theory (ANT) and practice thinking (Gherardi, 2016, 2017; Murdoch, 2006; Reckwitz, 2002, 2016). The remainder of this chapter examines practice-theoretical approaches as way to conciliate poststructuralist with materialist perspectives. At first, it takes a step back and sketches the field of social theories within which these different approaches are situated. Tracing different types of social theories and their critiques, situates community economy scholarship with respect to practice theory – as the two variants of poststructuralist and materialist thought this work is interested in. Subsequently, this chapter surveys the field of practice theories, working towards a notion of practice as conventionalized patters of activity that integrate material arrangements, competent bodies, and configurations of meaning. Finally, it returns to broader nexuses of human activity – namely organizations and institutions – conceptualizing both from a practice theory perspective. In sum, chapter 5 prepares a poststructuralist-materialist perspective on transformative geographies which the remainder of part II further develops and operationalizes.

From regimes of signification to practice

Reckwitz (2003) distinguishes between various types of social theories that differ with respect to how they conceptualize sociality or, in other words, where they "localize" (Reckwitz, 2002) the social: structural theories, individualist approaches, and cultural theories. Structural theories – to which Reckwitz counts historical materialism – localize the social in supraindividual material regularities (structures). In contrast therewith, individualist approaches conceive of the social as produced by individual actors to whom they grant considerable agency. Culturalist theories, drawing on a broad range of inspirations such as structuralism, poststructuralism, phenomenology, hermeneutics, pragmatism, and radical constructivism (Reckwitz, 2003, p. 287), take a middle way and foreground the question of how social 'orders' are produced that enable subjects to partake in their (re)production. Language, meaning and symbolic interactions gain importance for the "meaningful orders and their symbolic organization of reality" (Reckwitz, 2002, p. 288, author's translation). Culturalist theories themselves differ with respect to the localization of the social. Reckwitz, here, distinguishes between four forms of culturalist theories: mentalism, textualism, intersubjectivism, and practice theory. "On a very basic level these schools of thought offer opposing locations of the social

and conceptualize the 'smallest' unit of social theory differently: in minds, discourses, interactions and 'practices'" (Reckwitz, 2002, p. 245).

Textualism or more specifically discourse theoretical approaches – which for Reckwitz are a sub-variant of textualism and within which we can situate Gibson-Graham – locate the social in the complex supra-individual discursive orders, in communication, and in epistemes. Discourse theories foreground "regimes of signification" (Reckwitz, 2016, p. 53; author's translation; see also chapter 8) by focusing on "sets of ideas 'and' practices that give statements, texts, rhetoric, and narratives particular kinds of meanings" (Berg, 2009, p. 215). Language is the central condition "under which we know reality" (ibid.). Discourses, therefore, might be conceived as texts – understood in a very broad sense – that can be analysed, deciphered and read. This privileging of ideas, meanings and knowledges through which sociality is (re)produced, led critics to accuse discourse theoretical approaches of conceptual intellectualism and dematerialization of the social (Reckwitz, 2003).

The world of discourse theorists, however, is not completely devoid of artefacts, bodies, infrastructures and things. Community economy thinking – as the perspective of interest – is well aware of embodied capitalist relations, material and technical elements, and more-than-human assemblages (Roelvink et al., 2015). And poststructuralist feminist theory which is crucial to Gibson-Graham's thought draws on the (female) body as primary "site of resistance" (Gibson-Graham, 1996, p. 96). Yet, there is a strong tendency to conceptually, methodologically and empirically privilege regimes of signification. The community economy project, in this vein, revolves primarily around a 'politics of language', 'language of economic diversity', 'imaginaries of possibility', and 'representations of the economy' (Gibson-Graham, 1996, 2006; Roelvink et al., 2015)

Critiques of community economy's focus on language and meanings are situated within a broader dissatisfaction with representationalism. As a consequence, human geographers turn to more-than-representational theories (Cadman, 2009; Simpson, 2017) and the material grounding of social life (Everts, Lahr-Kurten, & Watson, 2011). More-than-representational, here, does not mean that the discourses, texts, ideas, identities and signs are irrelevant for the complex constitutional processes of human existence. Instead it criticizes any perspective that "reduces the world to, and fixes and frames it within, text or discourse alone" (Simpson, 2017, p. 1). More-than-representational lines of thinking, therefore, turn to the practical unfolding of the world that is "composed of a complex ecology of human and nonhuman things" (ibid.).

The "practice turn" (Schatzki, Knorr-Cetina, & Savigny, 2001), against this background, is a response to representationalism that seeks to rectify the dematerialization and intellectualization of the social. Various authors draw on practice theory to rekindle materiality with culturalist theorizing (Hui, Schatzki, & Shove, 2017; Nicolini, 2013; Reckwitz, 2002, 2016; Schäfer, 2016b; Schatzki, 2003, 2010a,

2010b; Shove, Pantzar, & Watson, 2012). In the diverse lines of thinking under the labels of practice theory or praxeology, two moments stick out that express their positioning in the field of social theories: (1) materiality of the social and (2) its implicit and informal logic (Reckwitz, 2003). Practice theories are characterized by an anti-intellectualism that seeks to explain social life through bodily and materially grounded activities instead of representational models (Geiselhart et al., forthcoming). Practice theories, therefore, constitute a promising conceptual grounding for transformative geographies. In this vein, I will explore practice theorizing as possible response to, and complement of, the discourse theoretical thrust of the community economy project.

Practice theories

Practice[9] theories are grounded in a long genealogy of thought that stretches from Marx, Heidegger, Wittgenstein, Dewey, Lyotard, Taylor, Bourdieu and Giddens – amongst many others that are not named here – to contemporary thinkers like Schatzki, Reckwitz and Shove. Influences and directions as diverse as pragmatism, phenomenology, structuration theory, ethnomethodology, actor-network theory and neo-Marxism, therefore, shape contemporary practice theories (Geiselhart et al., forthcoming; Hillebrandt, 2014; Hui, Schatzki, & Shove, 2017; Nicolini, 2013; Reckwitz, 2016). This variegated legacy is important to understand the genealogy and diversity of practice theorizing (Nicolini, 2013) which (partially) merges these different traditions, terminologies, and assumptions. Some scholars, therefore, stress that practice theory is not a homogenous school of thought and avoid using the singular when taking about theories of practice in general.

Despite conceptual and genealogical differences, practice theories share an identifiable family resemblance (Hillebrandt, 2014; Nicolini, 2013). Most importantly, here, is their fundamentally processual ontology. The world, from a practice theory perspective, is an ongoing habitual accomplishment. “The appeal of what has been variably described as practice idiom, practice standpoint, practice lens, and a practice-based approach,” Nicolini (2013, p. 2) emphasizes “lies in its capacity to describe important features of the world we inhabit as something that is routinely made and re-made in practice using tools, discourse, and our bodies. From this perspective, the social appears as a vast array or assemblage of performances made durable by being inscribed in human bodies and minds, objects and texts, and knotted together in such a way that the results of one performance become the resource for another”. Processuality is also an important point of commonality with community economies thinking, which I will expand upon below.

[9] Parts of this chapter have been published as a research paper (Schmid, B. (2018). Structured Diversity: A Practice Theory Approach to Post-Growth Organizations. *Management Revue*, *29*(3), 281–310. https://doi.org/10.5771/0935-9915-2018-3-281) or are currently under review with Geography Compass. The fragments from both papers have been considerable reworked and expanded on for the purposes of this work.

Practices, then, are recurring patterns of activity that establish, order, and uphold social co-existence. They constitute a historically and spatially situated cultural repertoire of types of behavior, such as driving or bookkeeping, that can be taken up by individuals who become carriers, reproducers and architects of these patterns (Geiselhart et al., forthcoming). Practices are supra-individual in character but only exist through their continuous enactment by habituated bodies (ibid.) who take part in their performance (Nicolini, 2013; Shove et al., 2012). Human coexistence, then, materializes in bodies and their relations to material things which are enrolled in the continuous process of social production and thus central elements of practice. A widely used definition, in this vein, defines practice as a "routinized type of behavior which consists of several elements, interconnected to one another: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge" (Reckwitz, 2002, p. 249). This definition advances two different foci that have been key in the development of a notion of practice as well as its operationalization. First that which binds different activities together to form an intelligible and contiguous set. Second the elements that constitute a set of activities. Focusing on either of the two, two approaches have gained prominence in recent practice theorizing. One the one hand, Schatzki's notion of practices as open-ended sets of activities that are organized by practical understandings, rules, teleoaffective structures and general understandings (Schatzki, 2003, 2008, 2010b). On the other hand, Shove, Pantzar and Watson's conceptualization of practices as the active integration of materials, competences and meanings (Shove et al., 2012).

Schatzki identifies four dimensions through which activities are linked to each other and constitute intelligible nexuses. (1) Practical understandings refer to the knowledge and skills involved in performing a set of activities. Activities are linked through a practical understanding to constitute a practice when "most participants agree on what it makes sense to do" (Nicolini, 2013, p. 165). (2) Rules, furthermore, are "explicit formulations" (Schatzki, 2003, p. 191f.) that guide human activity. They constitute elements that people consider when engaging in activities. (3) Teleoaffective structures describe the motivations, affects and emotions that are involved in activities. As "a range of normativized hierarchically ordered ends, projects and tasks" (Schatzki, 2003, p. 192) they link activities. Last but not least, (4) general understanding – which Schatzki only adds to his earlier tripartite of practical understandings, rules, and teleoaffective structures – refers to a reflective understanding of the context in which activities are set.

Shove et al., in contrast to Schatzki, focus on the connection of different elements that constitute a practice. In a simplifying move, Shove and colleagues (2012, 22ff.) collapse the various dimensions Reckwitz proposes in the abovementioned definition into three broad categories: material, competence and meanings. Materials refers to artefacts, things, objects, infrastructures as well as

bodies. Outstanding a more detailed conceptualization of these components – which Shove et al. provide only partially – materials comprise all tangible and physical parts enrolled in human activity. Competences, second, refer to the skills, practical understandings and abilities involved in human activity. In short, all the capabilities socialized bodies (need to) possess to perform a practice. Finally, meanings comprise mental activities, beliefs, emotions, moods, affects and objectives. This is probably the most elusive of Shove et al.'s categories including both explicit and implicit moments. Practices, then, are "defined by interdependent relations between materials, competences and meanings" (Shove et al., 2012, p. 24). They come into being, shift, and fall apart by linking, substituting, altering or decoupling these elements.

A crucial difference between Reckwitz and Shove et al.'s conceptualization of practice on the one hand and Schatzki's on the other is that while the former include materials as element in their notion of practice, Schatzki places "humans, artefacts, organisms, and things of nature" (Schatzki, 2010a, p. 129) outside of practice (Gram-Hanssen, 2011). Schatzki speaks of practices *and* material arrangements. Although Schatzki emphasizes that practices are "inevitably and often extricably bound up with material entities" and uses the notion of „practice-arrangement-bundle" (Schatzi 2015, 2), his terminology introduces an analytical distinction between practices and materials. The separation of practices and arrangements allows Schatzki to conceptualize four different forms of relatedness between them: causality, prefiguration, constitution, and intelligibility (Schatzki, 2010a, p. 139). Other practice theorists, in particular those close to posthumanism and actor-network thinking, maintain that human activity and materiality co-emerge, which they emphasize by speaking of "intra-action" between things and people (Gherardi, 2016, p. 5).

Digression: The role of actor network theory for practice-theoretical thought

Although[10] processuality and materiality are important points of contact between ANT and practice-theoretical approaches, there are different opinions on how they relate to each other (Nicolini 2013; Schatzki 2002; Everts et al., 2011). Reckwitz (2003) and Nicolini (2013), for instance, draw on Latour as important pioneer of practice thinking, while Schatzki (2002) problematizes ANT's symmetry of human and non-human entities in relation to their capacity to act. This leads Schatzki to exclude ANT as form of practice theory. For him, the networks of ANT resemble his notion of 'arrangements'. "Arrangements, however, are only one of the two principle sorts of phenomena that make up social phenomena. The second is practices, which have no pendent in actor-network theory" (Schatzki 2010a: 134). As a consequence, Schatzki

[10] This digression is in part a translation of a contribution of mine to the following book chapter: Schmid, B., Reda, J., Kraehnke, L., & Schwegmann, R. (forthcoming). The Site of the Spatial. Eine praktikentheoretische Erschließung geographischer Raumkonzepte. In J. Everts & S. Schäfer (Eds.), *Praktiken und Raum*. Bielefeld: transcript.

claims, ANT lacks the means to explore how materialities and social activities hang together. Nicolini (2013: 180) in contrast, notes that Schatzki's complex theoretical architecture is fairly prescriptive and thus risks hampering rather than facilitating empirical explorations. Latour's simple principle 'follow the actor', in turn, constitutes a more open methodology which is a valuable addition to the issues „left unsolved by Schatzki and many of his colleagues" (ibid.). While it is beyond the scope of this work to trace the commonalities and differences of ANT and practice theory in more detail, it is important to note that both approaches converge around notions of processuality and materiality and thus productively speak to each other. For differences between ANT and assemblage thinking, furthermore, look at Müller (2015).

The remainder of this study uses a concept of practice that builds on Reckwitz' and Shove et al.'s notion of several interconnected elements. Adapting Shove et al.'s tripartite model, it slightly twists and regroups the elements into (1) competent bodies, (2) meanings, and (3) materials. (1) Competent bodies, here, refer to physiological and cognitive abilities, competences and skills, to tacit knowledge, desires and habits. That means bodily qualities and capabilities that are physical and/or largely unconscious. For instance, the ability to ollie a skateboard, or handle a stressful situation. (2) Meanings refers to sense, ideas, ideologies, identities, explicit knowledge, and reasoning. Meanings can be explicated such as a political standpoint or the information on directions to the next supermarket. (3) Materials refers to infrastructures, documents, goods, animals, ecosystems and the like, which can be grouped into artefact and things. Artefacts designate "physical objects made or shaped by human hand" (Scholar, 2017, p. 4) while things to refer to the physical world that exists largely independent of human work. The latter, thereby, is a particularly tricky category. While there are sophisticated arguments against the separation of nature and culture (Latour, 1993) and its political consequences (Patel & Moore, 2018), others maintain that hybridity erodes radical environmentalist politics (Malm, 2018). Lacking space to engage in a deeper discussion, this work acknowledges things as existing and unfolding independently of human activity while primarily relevant in their enrolment into human practice – for example in practices of observation, abstraction, pollution, sustenance, and so forth.

Competent bodies, meanings, and materials are closely intertwined and depend on each other. Meanings, for instance, do not exist outside of bodies capability of memorizing and reproducing information, political ideologies, and articulating creative ideas. Bodies shape artefacts and in turn use clothing, cell-phones, and prison walls to convey meanings to, share information with, and exert physical power over other bodies, and things. Materials such as documents or computers allow for new abilities to develop, such as reading or using the internet, and meanings to emerge, such as the aesthetics of a well-written novel or the notion of trolling. While there is analytical merit in

distinguishing between different elements (Shove et al., 2012) one needs to be well aware that social phenomena are always the result of their complex interaction.

Two other analytical distinctions that are helpful for further practice theorizing are those between practice (non-countable) and practices (countable), and between practices-as-performances and practices-as-entities. The non-countable noun 'practice' refers to the bodily effectuation of social phenomena in their entirety. Practice, therefore, describes the "whole of human action (in contrast to theory and mere thinking)" (Reckwitz, 2002, p. 249). Practices, in turn, are individuated segments of that 'whole' that are identified by an observer, often using everyday verb forms (Hirschauer, 2016). The world of practice theorists, consequently, is constituted through an infinite number of 'doings and sayings' (Schatzki 2012).

The analytical distinction between practices-as-performances and practices-as-entities (Shove et al., 2012), emphasizes practices' double character as pattern and activity. Reckwitz (2002, p. 250) states that "a practice is a pattern which can be filled out by a multitude of single and often unique actions reproducing the practice" (see also Schatzki, 1996). The notion of practice-as-entity, consequently, abstracts from the idiosyncrasy of individual enactments in favor of a general pattern or type of doing. The focus is then, for instance, on the practice of driving as a cultural technique rather than a singular instance of movement. Yet, the pattern only exists by means of multiple individual and idiosyncratic enactments that fill out the pattern and thus (re)produce driving as cultural technique. Practice-as-performance, ergo, refers to the always specific actualizations of a practice. The distinction between practices-as-entities and practices-as-performances, furthermore, sharpens the perspective on the interaction of performance and materialization. Practices-as-performances are situated and specific enactments of practice while practices-as-entities refer to materialized sets of interconnected elements. While the former focusses on the performance of a practice which is context specific and therefore subject to certain conditions, the latter focusses on the materialization of a practice that - while conditioned - is itself part of a material context and affects other practices in turn. In their performance, practices are inevitably embedded within broader alignments of practices and, therefore, to some extent, conditioned. At the same time, each performance is a materialization of social dynamics, conditioning other practices in turn.

Locating the social in practices – conventionalized patterns of activity materialized in competent bodies, artefacts and things which are reproduced as well as transformed through their recurrent enactment – breaks with agency and structure as explanantia. Practice theory conceives social phenomena in their historical genesis as contingent yet material performances. Human activity, from this perspective, transpires spatially and historically dispersed nexuses of practices. Structures, then, consist in the "routinization" of practice (Reckwitz, 2002, p. 255), while individual agents are its

carriers, participants, and architects. Neither agency nor structure determine practice, rather both emerge from the continuous movement of practice. Practice theory's central tenet, then, is that dualisms – such as structure/agency, culture/materiality, stability/change, mind/body, micro/macro – merge in this recurring making of the world. Such a non-dualist ontology has a number of consequences that I will shortly reflect on in the following.

First, practices as locus of the social, rather than material structures, regimes of signification, or the minds and bodies of individuals, put the co-constitution of cultural/mental and material/bodily moments on equal footing without privileging one over the other ex-ante. Practice theory, then, assumes an ontological sameness of the various elements of practice which become relevant in and through processes of intra-action. Social life transpires through the imbrication of objects, texts, bodies, knowledges, and meanings that are bounded together in the unfolding of human activity. Discourse and culture are always material – inscribed into competent and habituated bodies – while artefacts and things are socially mediated.

Second, this 'flat ontology' (DeLanda, 2006) has profound spatial consequences (Schatzki, 2016b). Practice theory sees practice formations – for example markets, the education system, organizations, or friendship – as constellations or aspects of practices (ibid.). Like the elements of practice, all constituent parts of social phenomena, therefore, share an ontological sameness. Scalar differences – as suggested by the terminology of micro/macro or local/global – are not a function of distinct planes of reality but are made in practice (including discursive practice, in reference to community economy scholarship). Instead of a (hierarchically) layered reality, practice theory proposes a 'site ontology' (Schatzki, 2003; Marston et al., 2005; Everts, 2016). Site refers both to a more metaphorical interconnectedness of different moments of practice as well as the temporal and spatial localities in which human co-existence unfolds. Site, therefore, spatializes the processual materiality of the social (see below).

This brings us to the third aspect, that of movement. Stability and change, in practice theory, are two sides of the same coin. In conceptualizing the world as dynamic, social phenomena are always in the making. Markets, states and other practice-formations are premised on their recurrent enactment and thus conceptualized through "routines of social practice" (Reckwitz, 2002, p. 255). This, however does not make them "less solid" (Nicolini, 2013, p. 3). Being routinely reconstituted and re-enacted, social phenomena gain stability (see subsequent section). Still, the necessity to continually produce social phenomena anew opens possibilities for change. Schäfer proposes to conceptualize the continuous (re)enactment of practice as repetition – implying simultaneous processes of difference and sameness (Schäfer, 2016a). "That is, repetition does not only lead to the materialization and stabilization of

practice in bodies, artefacts, and ecologies but, at the same time, to mutations, shifts, and ruptures" (Schmid & Smith, resubmitted).

Finally, practice theory reflects on the practice of research itself (Geiselhart et al., forthcoming). Research is inevitably contextual which renders universal and decontextualized claims highly problematic. Practice theory, therefore, takes into account the concrete spatio-temporalities in which research practices are situated and to which they pertain. This is another strong point of contact with community economy scholarship which practices a weak form of theory that refuses to "know too much" (Gibson-Graham, 2008, p. 619). Reflecting on research as practices has particular consequences for methodological considerations (see chapter 10).

As "poststructural materialism" (Hillebrandt, 2016, p. 72), practice theory integrates poststructuralism's anti-essentialism, anti-universalism and orientation towards difference with materialism's accentuation of socio-spatial-historical patterns of human relatedness. Processual and relational thinking defuses the reductionist tendencies of structural and agential perspectives. Neither structure nor agency, materiality or meaning, possibility or constraint precede human activity and provide a privileged perspective onto the world. Instead structure and agency, materiality and meaning, possibility and constraint transpire through the process of human and more-than-human activity (practice).[11] A conception of transformative geographies, therefore, cannot build on either category alone but needs to be grounded in a perspective of social dynamics. Nevertheless, it needs to be able to account for stability, an issue that I turn to in the subsequent section.

Stability: institutions and organizations in practice

Practices and institutions are two sides of the same coin. While 'practice' implies the doing of something and therefore activity, 'institution' signals stability and fixity. Institution derives from the from the Latin 'institutum' which is the "noun use of neuter past participle of instituere" and literally means "thing set up" (etymonline.com). This nominalization already hinds at the conceptual, discursive and material fixation of a process rather than a stable entity in and of itself. In this vein, practice theory's processual ontology conceives of stability as the result of repetitive or routinized enactments. Institutions, for instance taxation, only exist as long as they are actualized in practice, for instance, tax collection, accounting, control, punishment for tax evasion. Practices are anchored (materialized) in bodies, artefacts, things, and in their positioning in relation to each other. Bodies and minds, for instance, remember – in a broad sense – meanings, bodily movements, patterns of behavior, manners, and reactions. Books, documents, films, and computer store images, sounds, writings and other forms

[11] I include the more-than-human here to acknowledge that also animal behaviour, for instance, plays an important role for social processes. I distance, however, from perspectives that equate human agency with that of animals, plants or things, the discussion of which is beyond the scope of this work.

of text. Cleared woodland materializes mining for coal and oceanic ecosystems a rise in CO_2 levels, the use of plastic, and practices of (over)fishing. Practices' enactment always builds on the materialization of (previous) activities and is therefore not presuppositionless but shaped, conditioned and enabled. Human activities, therefore form "chains of actions" (Schatzki, 2016a; Everts, 2016) and "chains of practices" (Nicolini, 2013) – linking activities across time and space.

Taxation, for instance, is an institution that developed over millennia during which its practices have continuously shifted in combination with spatio-historical contexts. From the tithe on peasants' yield revolving around royal directives, travelling tax collectors, and the estimation of harvest and possessions, to a complex system of added-value tax, income tax, dividend tax, environmental taxes and multiple other forms revolving around accounting, bookkeeping, tax offices and tax declarations. In any point in time, these practices hang together with multiple other activities such as searching a pen, filling out forms, walking to the post office, waiting at the crosswalk, rummaging for coins, buying stamps, hoping for return payments, forming complex chains of actions. The introduction of new elements can also fundamentally change these nexuses, as computers, internet, and programs for electronic tax declaration. All these activities hang together forming chains of action which make and remake the institution of taxation.

Chains of action, in turn, materialize in bodies – that are capable of filing a tax form, break out in sweat at the thought of it, or rage against the greedy state – and artefacts – pay slips, data-bases, and statute books. Processuality and materiality are constantly at play, conditioning, causing, necessitating and obstructing each other. Aforementioned distinction between practices-as-entities and practices-as-performances is helpful to disentangle analytically both moments. To recap: practices-as-entities are materialized sets of interconnected elements, while practices-as-performances refer to situated and specific enactments of practice. A practice-as-entity, then, is a snapshot of practice in time. It stops and fixates the continuous unfolding of social life analytically and looks at the elements that compose a practice, for instance, false tax statements, motivations to evade payments, and bodies capable of committing fraud and the pattern that constitutes it. Practices-as-performances, in turn, describes the "immediacy of doing" through which "the 'pattern' provided by the practice-as-an-entity is filled out and reproduced" (Shove et al., 2012, p. 7), for instance a specific act of fiscal evasion.

In the same vein, we can contemplate institutions-as-entities and institutions-as-performances. As entities, institutions consist of heterogeneous elements including materials, meanings, and socialized bodies. As performances, institutions are actualized in a range of activities that themselves might be conceptualized as practices. Institutions, therefore, do not exist outside of practices but "as forms of ongoing and relatively stable patterns of social practice based on mutual expectations that owe their existence to either purposeful constitutions or unintentional emergence" (Bathelt & Glückler, 2014, p.

346). Taxation, therefore, indeed is a complex nexus that binds together laws, regulations, statute books, state administrators and accountants. But it only exists through the innumerable practices of accounting, filling out forms, controlling, and punishing. Like practice, institutions are conventionalized patters 'filled out' through concrete performances.

Organizations, on a similar note, constitute a form of instituted practice. They are "constantly in the process of becoming – dynamic, multiple, performative and open-ended – resulting from networks of different practices of organizing and knowing" (Pallett & Chilvers, 2015, p. 151). Like institutions, organizations are practice-formations that consist of multiple interweaving practices hanging together and forming co-dependent constellations of human activity. An accountancy firm, for instance, is not a 'thing' but a complex of communicating, accounting, filing, marketing, and a host of other practices. From a practice theory perspective, then, organizations "have to be materially produced time and again through 'eventful' practices" (Hillebrandt, 2016, p. 72; author's translation). Both, organizations and institutions "can only be understood as materializations of practices *in actu*, and are *per definitionem* events" (ibid.).

Considering organizations (and institutions) as practice-formations blurs their boundaries. An organization, say a capitalist enterprise, is not a self-contained entity but a porous constellation that hinges on a vast number of performances marginal to or outside of organization's formal core. For instance, the cooking and care practices that enable a worker to regenerate after a day's work, the sharing of information on knowledge commons like Wikipedia that allow a manager to skim an issue, or more broadly speaking relatively stable social relations and political enforcement of framework conditions such as private property rights. A processual view of organizations, therefore, "has motivated a shift away from a focus on purely internal organizational trends and changes to an awareness of broader trends and influences external to any given organization" (Pallett & Chilvers, 2015, p. 149). The same applies to institutions, say markets. Conceiving of markets as practice formations that depend on a vast number of non-market performances (re)embeds market institutions into social relations (Polanyi, 2001 [1944]).

Organizations (and institutions), then – and here it is helpful to draw on ANT and assemblage terminology (Latour, 2005; Müller, 2015) – are heterogeneous assemblages of bodies, artefacts, motivations, teloi, information and other elements that act in networks. Activity, then, is a function of a non-bounded network of elements that escapes action theory's focus on intentionality. A practice theory perspective identifies patterns of activity that constitute an organization as a constellation of practices through which it materializes. This is important insofar, as references such as organization's practices or organizational practices by no means construe a homogenous entity let alone an intentional actor. Rather, organizational practices refer to the diverse conventionalized activities that

(re)produce a given organization. In this respect, practice theory aligns with community economy in emphasizing the multifacetedness and performativity of organizations and institutions, an aspect the subsequent chapter turns to in more detail.

Chapter 6: Scale and power in transformative geographies

Practice[12] theory resonates with the community economy project in several ways. Both practice theory and community economy scholarship seek to "abandon the ontological privileging of systemic or structural determination" (Gibson-Graham, 2008, p. 623). In doing so, both focus on performance and advance a fundamentally processual view of the social. Furthermore, the language of practices goes to the heart of the community economy project. Distancing from totalizing notions of economy, the market, and other capitalist institutions, community economy scholars turn towards the diversity of *economic practices*. They do so using a weak form of theory and a thick description of economic practice (Gibson-Graham, 2014), which resonates with practice-theoretical approaches conceptually and methodologically (see part III).

Despite these commonalities, there are fundamental points of divergence between both schools of thought. As outlined above, community economy scholarship focuses primarily on shifts in meaning, in particular the disidentification with and dissociation from capitalocentric discourse. Although community economy scholars acknowledge that what "pushes back" (Gibson-Graham, 2006, p. 23) at transformative political projects, they do so primarily in the realm of meaning. Gibson-Graham (2006), for instance, look at the numbers (27ff.), vocabularies (33ff.), and grids of visualization (41ff.) that constitute instruments of subjection. Their perspective on economic practice, consequently, lacks considerations around the infrastructures, resources, and bodily routines that are involved in, facilitate, and push back at transformative geographies. Practice theory, principally compatible with community economy, helps to sharpen the focus on transformative practice. The remainder of this chapter explores possible synergies on the basis of conceptualizations of scale and power.

Scale

Practice theory and diverse economies both turn towards horizontality and a flat ontology in their conceptualization of the social. Turning to assemblage thinking, Roelvink et al. (2015, p. 16) reason that "the local and global are outcomes of particular networks and associations rather than inherent qualities or capacities." Notwithstanding the differences between practice theory and assemblage

[12] Parts of this chapter have been published as a research paper (Schmid, B. (2018). Structured Diversity: A Practice Theory Approach to Post-Growth Organizations. *Management Revue*, *29*(3), 281–310. https://doi.org/10.5771/0935-9915-2018-3-281) or are currently under review with Geography Compass. The fragments from both papers have been considerable reworked and expanded on for the purposes of this work.

thinking (Gherardi, 2016 see also digression above) they share a processual conception of practice, organizations, institutions, and ultimately the social itself. “This view makes untenable old ways of theorizing that postulate separate levels of reality and the existence of superstructures and similar paraphernalia. Practice theories are inherently relational and see the world as a seamless assemblage, nexus, or confederation of practices – although not all having the same relevance” (Nicolini, 2013, p. 3).

Geographers long have thought space relationally (M. Jones, 2009; Massey, 2005; Thrift, 1996). Relationality, here, refers to the idea that space does not exist for itself but only through material objects and their relations. That means “objects are space, space is objects, and moreover objects can be understood only in relation to other objects – with all this being a perpetual becoming of heterogeneous networks and events that connect internal spatiotemporal relations” (M. Jones, 2009, p. 491). Turning towards the continuous becoming of space, theories of relational space reject the notion that space is hierarchically structured in and of itself. Space, for thinkers like Thrift (2004, p. 59) does not constitute “a nested hierarchy moving from ‘global’ to ‘local’” the notion of which is “absurd”. Instead horizontal metaphors such as connectivity, flows, network, assemblage, and entanglement, describe the geographies of relational thought. Some geographers, therefore, turn to a site ontology (see chapter 5) and propose the elimination of scale as a concept in human geography (Marston et al., 2005).

Drawing a dividing line between hierarchical and non-hierarchical notions of space, however, would be misleading. In fact, many geographers would agree that scale is socially produced and not a spatial a priori and still disagree with Marston et al.’s call for abandoning scale. Jonas (2006, p. 404) identifies a false “’site-versus-scale’ dualism” in the debate around spatial hierarchy. “Many so-called ‘scalists’”, Jones maintains, “are not writing about ‘scales-as-fixed-structures; nor are they treating scalar territories as ‘vertical structures’; or ‘rational abstractions’ in the realist sense”. What is of concern here, instead, in the *social production* of scale or hierarchy. While some rightly criticize a nonreflective application of scalar categories and seek to deconstruct hierarchical space, others justifiably maintain that scale continues to have effect within social practice and constitute an important spatial category. The latter critique that “the advocates of thinking space relationally seriously overstate their case. Despite the multiple potentials of space flagged in relational thinking, factors can constrain and structure space. All things considered potential does not necessarily become an actual” (M. Jones, 2009, p. 493).

There is a profoundly political moment in the site-versus-scale debate. The opposition of hierarchical and non-hierarchical space translates as tension between a politics of hope and possibility on the one hand and a focus on institutions, routinization and material constraints on the other hand into the

literature on transformation (more often so implicitly than explicitly). A focus on possibility, thereby, frees itself from the identification with capitalism (Gibson-Graham, 2006) and other forms of "macro-mystification" (Marston et al., 2005, p. 427). Instead it focuses on the sites of alternative practices that prefigure "other worlds" (Roelvink et al., 2015) and "autonomous geographies" (Pickerill & Chatterton, 2006). Skeptical approaches, in contrast, remind that although hierarchies are socially produced, transformation inevitably originates from within the given socio-spatial relations and is thus conditioned by present institutional orders (Buch-Hansen, 2018; Joutsenvirta, 2016; van den Bergh, 2011).

Practice theory neither privileges scale's constructedness nor its materialization and conceptualizes scale through the links, dependences, and tensions of practices. Practices form "arrays that can be thinner or thicker, more compact or spread out, continuing and fleeting, and patterned or scattered" (Schatzki, 2016a, p. 6). That means, practices transpire through different densities, coherences, and solidities that exert influence on other practices. Constellations or complexes of practices, thus, create hierarchies in the sense that they order or structure the social world (see also notion of power below). These hierarchies are not ontologically grounded but emerge from the interplay of multiple elements situated on a single plane of reality. Schatzki (2016) develops a nested terminology – activities, practices, practice-arrangement bundles, constellations (which are "nothing but larger bundles"), large social phenomena ("far-flung constellation of practices"), and the plenum, which are practices and arrangements in their entirety – thus providing a vocabulary of different extents without reverting to higher of lower orders.

Schatzki provides an approach that takes seriously the existence of extensive and tightly knit constellations of mutually reinforcing, dependent and stabilizing practices – say, taxation, administrating, accounting, policing, and lawmaking – without locating the institutions they create – say, governments or the state – on a higher echelon. Governments, transnational corporations, and world markets, for Schatzki, are 'large social phenomena' that result from complex and interwoven chains of mutually dependent actions and practices (see also Everts, 2016; Nicolini, 2013). Large social phenomena are real in their effects but socially produced through their continuous enactment in practice. This conceptualization does not reify constellations and large phenomena as independent entities existing outside of practice. But it acknowledges the solidities and densities that emerge from chains of actions and practices.

The neat terminology of bundles, constellations, and large social phenomena, however, runs the risk of slicing the social world into convenient building blocks that abstract from its complexity and emergence. In particular the term 'large social phenomena' is problematic is several ways. Speaking of phenomena suggests the existence of bounded empirical entities independent from an observer's

perspective. Chapter 7, in this vein, turns to the issue of typing practices and constellations. Furthermore, the notion of 'large' evokes the spatial hierarchizing problematized by practice theorists. Upon a closer look, it is not the spatial extent of a practice or practice-formation that is of relevance but the ways it summons and orders other practices. From the relational perspective of a site ontology, then, scale works through the reach, scope, and relevance[13] of practices and their constellations. A concept of scale, therefore, premises a notion of power, to which I will turn next.

Power

In aforementioned description Nicolini depicts the social world as "vast array or assemblage of performances made durable [materialized] by being inscribed in human bodies and minds, objects and texts, and knotted together in such a way that the results of one performance become the resource for another" (Nicolini, 2013, p. 2). Whereas I have focused on the first part of his description above in discussing the materialization of performances in bodies, artefacts, things, and chains of action, I turn to the latter half in the following: the conditions of practice.

Practices are always conditioned by a temporal and/or spatial 'elsewhere'. I use 'elsewhere' in the sense that the enactment of a practice is always situated in a larger context that is beyond the direct control or influence of its practitioners. Elsewhere is both temporal – the historical trajectories that have formed subjects, discourses, and institutions – and spatial – the positioning of subjects, discourses, and institutions in relation to each other. This is what the concept of site expresses (see chapter 5). Any performance, therefore, has a *site* of enactment that includes the interconnectedness with other practices as well as their geographies. Grasping conditioning moments of practice premises a notion of power compatible with practice theory's processual ontology.

Power is generally used in a twofold sense (Allen 2017). "Power over" refers to the ability of individuals or groups to force, coerce, persuade or nudge someone to engage in or abstain from particular activities which would not have happened without the exercise of domination. "Power to" in contrast refers to the ability to "get things done" or "make things happen" (Allen, 2017, p. 1). In practice theory's non–hierarchical conception of space, agency and structure both emerge from the ongoing performance of the social and thus drop out as source of power. That means subjects, objects, organizations or institutions cannot possess power in and off themselves. Rather, power, from a practice theory perspective, is fundamentally relational. Practices' conditioning emerges from the historically shaped positioning of subjects, discourses, and institutions in relation to each other. Power, therefore, is "situated and produced in innumerable interactions among humans and between humans

[13] I borrow the notions of scope, reach, and relevance from a working paper (with Simon Runkel, Klaus Geiselhart & Susann Schäfer) that is currently still in the process of writing. The paper critiques Schatzki's notion of large social phenomena and develops an alternative conception around the notions of scope, reach and relevance.

and the non-human world" (Ahlborg & Nightingale, 2018, p. 383). It "must be understood as an effect of performances of practices, not as something external to them" (Watson, 2017, p. 171). That means, while practice theory acknowledges that individuals and groups can exercise 'power over' someone or something – respectively have 'power to' accomplish something – this capacity does not reside within subjects themselves. Instead, power is highly contextual and emerges from particular *alignments* of socialized bodies, meanings, artefacts and things in subjects, discourses and institutions.

Conceptualizing power through alignments corresponds with practice theory's tenets of processuality and materiality. Wartenberg (1990, p. 149), in this vein, uses alignment "to refer to the structure of social relationships that are necessary for constituting a situated power relationship". In doing so he emphasizes the "'relative positioning' of social others" (ibid.). Although Wartenberg does not argue from a practice theory perspective, his notion of alignment is helpful for the further theorizing of power. Understanding social positioning as something that happens in and through practice, exposes power as both emerging from and taking effect on practice. A practice's 'elsewhere', then, translates into the positioning of other practices in relation to it. Or, more general, power emerges from the way practices are aligned with and towards each other. For instance, "the alignment […] of practices of production, distribution, and regulation through price, profit-interests and property relations produces constraints and possibilities for subjects' material sustenance. The power relationship between capitalist and non-capitalist forms of material sustenance, then, can only be understood when taking into account the ways in which alignments condition subjects' options to make a living. Capitalism *per se* does not have power over non-capitalist practices. But within capitalist social relations, practices are aligned in ways that impede other forms of sustenance and thus limit the options for non-capitalist production and distribution." (Schmid & Smith, resubmitted).

While acknowledging the situated power that emerges from capitalist social relations, this example simultaneously decenters power. Power does not reside in the structure of capitalism or in the subject of the capitalist, but in the ways in which economic practices relate to each other. When power emerges from the alignments of practices, a shift in practices can affect shifts in power relations. As community economy scholarship shows, practices are not solely aligned alongside markets and profit interest but also alongside trust, volunteering, gratitude, solidarity, and dignity. In this vein, transformation through other modes of production, transfer, and governance is a possibility – beyond a coherent and coordinated large-scale shift that structuralist perspectives envision – but one that is severely constraint by current alignments of practices – which overly optimistic perspectives tend to overlook. The final section of this chapter continues to explore how transformation in practice might unfold through changes in practices, their elements, and their alignments.

Chapter 7: From transformative geographies to a degrowth transition

So[14] far, part II has lain a conceptual foundation for transformative geographies. Starting with the reimagination of togetherness, it continued by grounding transformation materially, in the bodies, artefacts and things of everyday practice. Subsequently, it proposed an understanding of scale, power and transformation against the background of a 'poststructural materialism'. Chapter 7, now, returns to the distinction between transformation and transition established in part I. While transformation focusses on the unfolding human and more-than-human dynamic and the negotiation of its directionality, transition emphasizes the (strategic) passage from one state of affairs to another. Transition, therefore gives the abstract deliberations on transformation more practical leverage. In this vein, chapter 7 operationalizes the conceptual considerations for empirical research of a degrowth transition. It starts out by taking a look at interventions in practice. The second section, then, turns towards degrowth as scholarly and activist debate that can inform a transformative strategy and elaborate on the notions of degrowth practice and degrowth politics. Finally, the third section passes over to the study's methodology by proposing a diverse logics perspective to research degrowth transition.

Intervention in practice

Transformation from a practice-theory perspective is a nonlinear and complex process revolving around the emergence, stabilization, and decline of practices and their broader constellations. Practices are anchored in bodies, artefacts and things, stabilizing over time and space through habitual and repetitive performances. While accounting for the relative stability and path dependency of social institutions, a perspective on the recurrent enactment of practices stays sensitive and open to change. It is through the grounding of sameness and otherness in the routinized movement of practice that practice theory captures the performativity and contingency as well as the repetitiveness and materiality of social phenomena (Hillebrandt, 2016; Schäfer, 2016a).

Targeted interventions can destabilize individual practices and their alignments and in doing so catalyze change. Spurling & Meeking (2015) and Shove et al. (2012) suggest different 'intervention framings' into practice (see chapter 3). While these framings are concerned with policy specifically, interventions can occur in different areas and have other initiators apart from policy makers such as social movements, social enterprises, and civil society in general. Still, the aforementioned proposals

[14] Parts of this chapter have been published as a research paper (Schmid, B. (2018). Structured Diversity: A Practice Theory Approach to Post-Growth Organizations. *Management Revue*, *29*(3), 281–310. https://doi.org/10.5771/0935-9915-2018-3-281) or are currently under review with Geography Compass. The fragments from both papers have been considerable reworked and expanded on for the purposes of this work.

provide an entry point to consider interventions in practice. By and large, these 'intervention framings' group into two broad categories. First, interventions that target individual practices and revolve around changing their elements or substituting practices as a whole. For instance, changing the materials of driving by switching to electric cars or promoting the practice of cycling instead. Second, interventions that target nexuses of practices. For instance, by changing practices associated with driving, such as work and grocery shopping, or by promoting communities that take up alternative sustainability-related practices such as cycling.

Intervention on the level of individual practices expresses itself either as the reconfiguration of practices' elements or the shift towards other practices entirely. Both aspects are closely related and require some reflection on the typing of practices, an issue that I will turn to below. A change in materials, say the substitution of cars with combustion engines by electric cars or the conversion of car lanes into cycling paths can modify driving practices or support the replacement of driving by cycling. A shift of meanings, similarly, can engender a modification of driving, for instance by problematizing CO_2 and other emissions of fossil mobility, or the realization that car-centered mobility is irreconcilable with social and environmental justice. Changes in the constitution of competent and habituated bodies, furthermore, can facilitate a turn to e-mobility – for instance by training and adapting to different driving patterns compatible with electric cars – or encourage a shift to cycling – say, by getting used to use the bicycle for grocery shopping.

A focus on individual practices and their elements, however, neglects the wider constellations and formation practices are embedded in. Without considering the relations of power that transpire through practices' alignments, such a perspective risks to lose sight of transformative tendencies at large. Incumbent economic and political institutions, for instance, for which the automobile industry is 'system-relevant'[15] are likely to prevent a fundamental shift away from car mobility. Current politico-economic alignments are heavily based on car-centered mobility practices and, above all, the purchasing of new vehicles. Policy interventions that support a shift in driving practices, for instance through subsidies of electric cars[16], however, ignore a range of other issues, such as extraction of conflict materials, that surround electromobility. In doing so they stabilize rather than transform incumbent constellations of practices, ranging from car-centered urban planning to human rights violations. A substitution of driving by cycling, one the other hand, addresses some of these issues more profoundly. Nevertheless, it lacks sufficient consideration of the wider constellations cycling practices are embedded in.

[15] see for instance https://www.zeit.de/wirtschaft/2017-07/kartelle-autoindustrie-deutsche-wirtschaft-daimler-vw (accessed March 10, 2019).

[16] https://www.bundesregierung.de/breg-de/themen/energiewende/kaeufer-koennen-praemie-beantragen-369482 (accessed March 10, 2019).

While particular practices or their elements are entry points for intervention, a perspective on transformation cannot be restricted to practices in isolation. Spurling & Meekin (2015, p. 88) – to stick with the example of mobility practices – explore how mobility interlocks with other practices such as working, shopping, or leisure. In doing so, they consider interventions that change the patterns of mobility practices such as e-shopping and working from home. An intervention framing that transcends the reconfiguration of isolated practices and attends to the ways in which (multiple) shifts affect practices' broader nexuses, provides a perspective for wider change. In order to formulate a degrowth transition research agenda, however, this approach needs further development for three reasons. First, the interventions required for a transition beyond growth-dependence are considerably more comprehensive than the reconfiguration of nexuses around, say, mobility practices. Second, a perspective on more profound realignments of social practice requires the awareness of power relations. A degrowth transition is likely to be met by antagonism and resistance. Accordingly, central impulses, at least at an early stage of transition, presumably originate from outside of formal politics and economy. Third, due to the previous points, intervention requires a more profound and radical framing. That means, it requires a plausible conception of how practices' alignments fundamentally change.

Wright's (2010) typology of symbiotic, interstitial, and ruptural strategies, introduced in chapter 3, provides such a radical framing. Wright envisions a transformation beyond capitalism through the interaction of different strategies. To recap: symbiotic transformations are processes which address social issues and enhance possibilities for emancipation without challenging capitalist institutions as such. Interstitial transformations involve strategies that build alternative forms of social organizations in the "niches and margins of capitalist society" (Hahnel & Wright, 2016, p. 101). Ruptural transformations, finally, confront capitalist institutions head-on and seek to establish "emancipatory institutions through a sharp break with existing institutions and social structures" (Hahnel & Wright, 2016, p. 100). There is considerable conceptual purchase in combining Wrights' tripartite strategy with the practice-theoretical perspective on social dynamics developed above. Mapping symbiotic, ruptural, and interstitial strategies onto a practice-theoretical notion of institutions (see chapter 5) opens different pathways for institutional change. In this vein, Wright's typology, sheds light on the ways changes of practices and practice-formations alter the alignments they are embedded in and thus shift, confront, and substitute social relations (or not).

Symbiotic transformation suggests a shift through which the overall fabric of practices' alignment stays intact. This is for instance the case when consumption practices shift to fair trade and organic food. This shift does not challenge practices' alignment as markets themselves but move from a price-driven consumption to one that includes ethical considerations (Huybrechts, 2013). Ruptural transformation,

in contrast, (partially) breaks existing alignments through confrontation. For instance, the expropriation and communization of private property or the obstruction of production and trade through blockages (Chatterton, 2006) disrupt market practices. Interstitial transformation side-lines existing alignments by constructing new possibly competing ones. This is less of a confrontational endeavor and results in the substitution of existing alignments. Examples, here, include the set-up of parallel arrangements such as time banks and skill-sharing networks that (partially) withdraw from market exchange of labor and services (Seyfang, 2016). Figure 6 summarizes the different dimensions of transformation with respect to the example of markets as incumbent alignment of practices of production, consumption, and exchange.

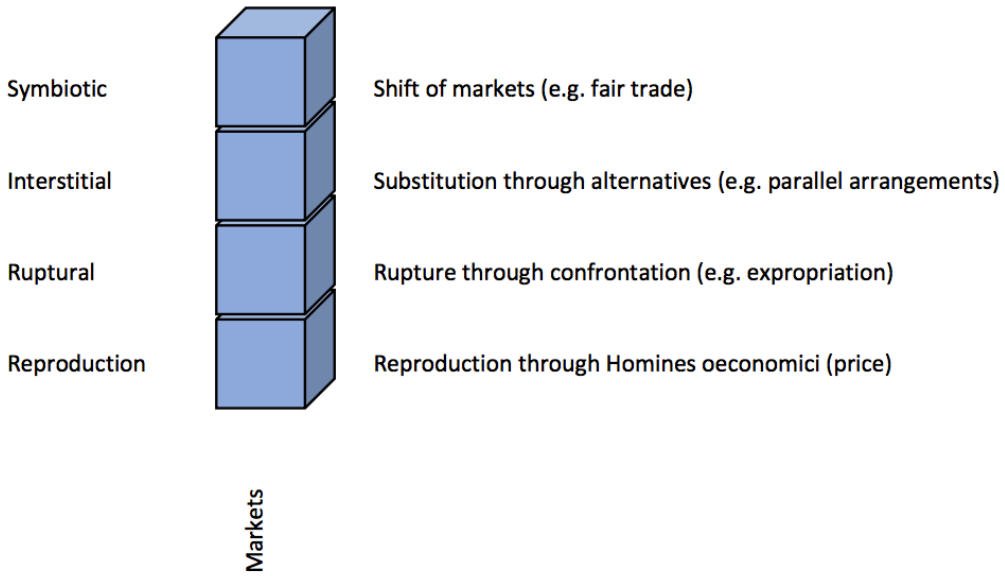

Figure 6: Different dimensions of transformation of markets in practice

Degrowth practices and politics

Interventions in practices and their alignments, for instance in patterns of mobility or relations of production, consumption, and exchange, require political articulations and the collective enactment of positivity. That means, interventions premise an (at least temporary) fixation of values, ideas, relations and identities (see chapter 4). Transformation, consequently, receives a directionality. So far, however, this part follows a broad notion of emancipatory politics without a more concise definition of its parameters and their consequences for social change. To address this disjuncture, I return to the etymologically grounded differentiation between transformation and transition chapter 3 develops. While transformation foregrounds the ontology of social dynamics and its politics – issues that the previous chapters explore – transition is concerned with goal-oriented and purposive change. To push this work along more practical lines, the remainder of this chapter integrates the considerations

around growth in part I with perspectives on transformation to formulate a research agenda around a degrowth transition.

Degrowth, thereby, provides a program that is broad and flexible enough to maintain a transformative politics and tangible enough to devise strategies and guide transitional dynamics. It combines a range of imaginaries, principles, practices and institutions of socio-economic organizing centering around well-being, justice and sustainability rather than accumulation and profit. Kallis (2018, p. 118ff.) proposes nine principles that capture the political articulations and fixations of sustainable degrowth. First, degrowth is based on the vision of an egalitarian and classless society without exploitative economic relations. Second, degrowth envisions processes of direct democracy through assemblies at different levels that substitute and complement forms of representation. Third, production, trade and consumption are regionalized and localized as well as reduced through reuse and recycling. Fourth, communities share resources, work, infrastructures, knowledge and space by organizing them as commons. Fifth, prosperity and well-being are defined primarily through healthy relationships rather than material possessions. Sixth, in contrast to the logic of return on investment, many resources are allocated to "unproductive expenditures" for the sake of aesthetics and meaning instead of gain. Seventh, care work is valued as collective responsibility and purpose that is evenly distributed and not skewed along gender or class lines. Eight, degrowth economies are constituted through diverse forms of work, exchange and organization. And ninth, land, labor and value are decommodified.

Degrowth's principles, by and large, are in line with other alternative approaches that convene around the notions of postcapitalism and commons (see chapter 2). The principles' scope and openness, thus, render them suitable to guide transitional practice in line with the political and ethical coordinates established in part I. A perspective on a degrowth transition in practice, however, requires criteria through which appropriate interventions, movements, and strategies can be identified. Two questions arise: *what patterns of activity need to be established and conventionalized to translate degrowth's principles into practice*? And *how can degrowth practices shift social alignment towards a degrowth trajectory*? In order to approach these questions, the remainder of this section needs to develop preliminary notions of 'degrowth practices' and 'degrowth politics' for subsequent chapters to build on.

Degrowth's principles enroll and touch upon diverse dimensions of social co-existence including work, mobility, housing, production, and consumption. Each area contains numberless (partially overlapping) activities that can be more or less in line with degrowth's principles. To single out particular practices that activate transitional dynamics is problematic for two reasons. First, the relation of, say, consumption, mobility, and driving shows that the typing of practices significantly differs with respect to its frame of reference. While driving is a type of mobility and a type of consumption, the latter

include much more activities. The question, then, arises how practices can be typified. Second, most practices that are associated with degrowth, such as cycling – "socialism can only arrive on a bicycle" (Jose Antonio Viera Gallo) – do not challenge growth-based economies per se. Both aspects need further deliberation.

Practices are generally described through the use of everyday verb forms such as driving, cycling, eating, and running.

> Practices […] can be identified when action is considered a cultural technique. Only an observer can typologize practices into individual forms. Practices are (like complex actions or discourses) an observer's scheme, namely one identifying formal patterns, which means ways of doing. For a start, observers draw on a rudimentary individuation through everyday verb forms (running, counting…). (Hirschauer, 2016, p. 60; author's translation).

Everyday verb forms, however, are too general a template to characterize degrowth practices. Cycling, for instance, can substitute driving. But it can also occur in the context of a global championship for which cyclist fly around the world. Or repair – another practice that is frequently discussed with reference to postcapitalist economies (Baier et al., 2016b; Schmid, forthcoming) – can contribute to material sustenance, reduce resource consumption, or be a source of revenue and accumulation. Degrowth practice, therefore, can only be a relational notion that takes into account how practices relate to their context (see above). A preliminary definition, therefore, might describe degrowth practices as *conventionalized patterns of activity that translate degrowth's principles into practice.*

To take effect on social alignments in a magnitude that would constitute a degrowth transition, furthermore, degrowth needs to devise political strategies. Politics, from a practice theory perspective, transpires through practices that "explicitly or implicitly attend to, question, or put to the test […] the plenum of practices itself or slices and aspects thereof" (Dünckmann & Fladvad, 2016, p. 29). In other words, politics expresses the (deliberate) interference with practices' broader alignments. Dünckmann and Fladvad (2016) describe politics as "the practice of changing the rules of practice". This entails two moments, first that of reflexivity, and second that of relatedness. Practices, consequently, are political when they reflectively relate back to the plenum of practices (reflexivity) and, however minutely, direct the plenum of practices or slices thereof (relatedness)[17]. Degrowth politics, then, is the *practice of changing the rules of practice to support parallel and mutually enforcing processes of cultural and institutional change in line with degrowth's principles.* Degrowth politics like degrowth practices, however, cannot be defined in the abstract. The next section turns, therefore, towards considerations around an empirical research agenda of degrowth transition.

[17] My use of the notions of reflexivity and relatedness, here, differs from Dünckmann & Fladvad's use. It is, nevertheless, inspired by their conceptualization of political practices.

Operationalization: the diverse logics perspective

The study's ambition to trace possibilities and constraints of a degrowth transition poses a major empirical challenge. This section concretizes and operationalizes the foregoing conceptual considerations around a degrowth transition in practice and points towards the study's methodology. As the foregoing section on degrowth practices and degrowth politics, it leaves some loose ends that require an empirical grounding. Parts III and IV, in this vein, space the conceptual discussion to turn towards empirical knowledge and evidence before part V revisits unresolved issues in light of the empirical insights.

Transformative geographies enroll a vast number of diverse sites linked in complex webs of practices that enter relationships of dependence, causation, obstruction, enablement, and prefiguration. Broadly speaking, there are two strategies how research can mobilize its limited resources to account for this complexity. On the one hand, it can focus on a particular object, practice, or relation across and between different places and times. On the other hand, it can look at the complex interplay of objects, practices, and relations in a specific geographical context. The former enables the research to gain insights into the effects, tendencies, and interdependencies across dispersed sites. It can, however, only make limited assertions about the processes and interdependencies outside of the relations in focus. The latter, in turn, works to capture the complexity of relations in place. It can, however, only make limited assertions about the relations beyond that geographical and temporal context. Of course, there also numerous combinations of both strategies.

Empirically, this work follows the latter strategy to capture the breadth and scope of transition in place. The sites it researches, however, convene multiple practices that link to a temporal and spatial elsewhere (see chapter 6). Transformative processes enroll diverse geographies beyond place which a perspective on degrowth transition needs to take into account. Conceptually, therefore, the thesis requires sound tools that allow it to grasp practices' relations beyond their sites of enactment. The remainder of this section develops a concept to trace practices' relatedness beyond place in three steps. First, I will contemplate ways to 'structure' the diversity of practices' relatedness by analytically separating different realms of social life that enable a clearer perspective on transition. Second, I will reintegrate this perspective with a non-hierarchical ontology. Finally, I develop the notion of diverse *logics* to trace practices' various forms of relatedness across time and space.

Social theorists have structured society into "systems" (Luhmann, 1998, 2015), "institutional orders" (Thornton, Ocasio, & Lounsbury, 2012), and "worlds" (Boltanski & Thévenot, 2006). Without being able to discuss the extensive conceptual arguments behind the respective theories, I use them as inspiration to systematize diversity. Following Luhmann's system theory, Roth and Schütz, for instance, identify ten function systems of society: the political system, economy, science, art, religion, the legal system, sport,

the health system, education and mass media (Roth & Schütz 2015). Thornton et. al. conceptualize the inter-institutional system made up of the institutional orders of family, community, religion, state, market, profession and corporation. And Boltanski & Thévenot's society is constituted through six different worlds of common use: the inspired world, the domestic world, the world of fame, the civic world, the market world, and the industrial world. Each of these approaches opens avenues to distinguish different realms of social life. Yet the language of 'systems', 'institutional orders' and 'worlds' cannot be integrated smoothly with practice theories' ontological assumptions (see chapters 5 and 6).

To integrate a structured notion of diversity, as inspired by perspectives on systems, institutional orders and worlds, with a non-hierarchical ontology, I draw on the discussion of power and scale from a practice theory perspective. Above, I have conceptualized power as relational category that emerges from practices' alignments. While hierarchies exist *in practice,* they are not a quality of space itself. All practices and their larger nexuses are situated on the same plane of reality. Hierarchies *in practice* that unfold in a non-hierarchical spatiality confront practice theory with the challenge to operationalize scale. In response, Nicolini (2013, p. 213ff.) proposes the metaphor of 'zooming'. Iterative zooming in and out enables a focus on practices' constellations and patterns without recourse to a layered reality. Zooming in on (possibly degrowth) practices exhibits the components, interrelations but also differences and tensions within and across practices in specific times and places. Zooming out, on the other hand, enables the researcher to expand the scope, tracking broader connections and interactions with practices across time and space.

A structured notion of diversity, then, can guide this process. It provides a frame to trace practices' relatedness beyond their immediate context, while zooming enables us to refrain from layered conceptions of scale and operationalize a flat ontology. Combining both perspectives facilitates an empirical study of degrowth transitions by linking practices with their broader alignments. *Patterns in the relatedness of practices* that are identified by means of such a structured notion of diversity are henceforth referred to as *logics*.

A diverse logics perspective, therefore, looks at the ways practices hang together rather than focusing on particular practices or practice-formations. This has two advantages with respect to a perspective on transition and a flat ontology. First, by looking how practices hang together and form patterns, the diverse logics perspective avoids attributing transformative potential to single practices or organizations, or denying them such – which in a roundabout way would mean to fall back into categories of structure and agency. Instead, the focus on practices' relatedness foregrounds the effect practices have *in context*. Second, by focusing on *patterns in the relatedness of practices* rather than constellations, practice-formations or large social phenomena, the diverse logics perspective avoids

the reification of organizations or institutions. Logics describe the ways in which practices hang together rather than the outcome of this congruence. For instance, it identifies practices that connect and interact through calculation and reciprocity rather than tracing the practices that constitute the large social phenomenon of the market. I therefore define logics as patterns of practices' relatedness rather than patterns of practices, patterns in practice or simply practices.

Defining logics as patterns of practices' relatedness, then, means that there is something to be gained from looking at the diverse ways particular practices interact, intertwine and conspire together. Practices of collaborating, tinkering, documenting, manufacturing, uploading, repairing and engaging can hang together in a way that new (repairable, long-lived, modular, open source) products enter the market and engender a shift towards more sustainable supply chains or a more localized production. The *very same* practices of collaborating, tinkering, etcetera can hang together in other ways, for example as generating a new form of community that shares knowledge and support, develops friendships or disagrees about the role of technology. Furthermore, while the constellation of said practices might shift social relations in one way, they can also constitute nexuses that reproduce incumbent alignments. In line with technological optimism and imaginaries of decoupling, practice formations around collaboration, repairing, and tinkering might give leverage to green economy approaches.

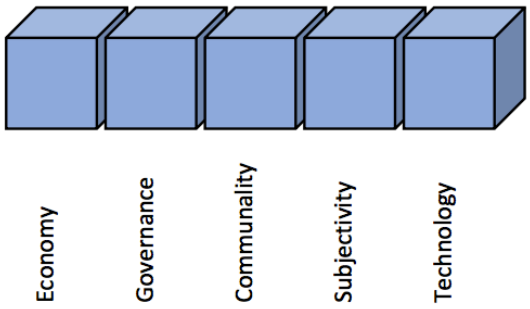

Figure 7: Social dimensions of transformation

In conversation with empirical data, the study identifies five forms of practices' relatedness: economy, governance, communality, subjectivity, and technology. These five logics, in turn, guide the analysis and interpretation of data. The identification of patterns, or *logics,* however, premises further conceptual-methodological considerations. This work follows an abductive approach that links the development of conceptual perspective and empirical data. It is only through the "continuous interplay between theory and empirical observation" (Dubois & Gadde, 2002, p. 559) that the diverse logics perspective evolves, which in turn is used to analyze the project's data. Chapter 11 returns to considerations around the development of the diverse logics perspective. Chapters 8-10 of Part III, in

the meantime, introduce the study's methodology more generally before continuing to operationalize the diverse logics perspective for data analysis.

Part III: Researching transformative geographies

Research from a practice-theoretical perspective needs to reflect two key criteria that have fundamental methodological implications. Reckwitz (2016, p. 52) refers to them as "criterion of materiality" and "criterion of the implicitness of meaning". Both criteria distinguish practice-theoretical methodologies in particular from methodologies informed by discourse-theoretical approaches. The criterion of implicitness states that social and cultural forms are highly implicit and substantially (re)produced through tacit knowledge that is rarely verbalized. Praxeological methodologies face the challenge of comprehending and explicating that which is implicit in non-verbal activities and routines. Practices, furthermore, are inextricably bound up with and transform bodies, artefacts and things, which brings forth the criterion of materiality. Both criteria are closely related and require praxeological methodologies to acknowledge the silent, clandestine, taken-for-granted, unconscious and seemingly natural part of social phenomena. Practice theory's aspiration to attend to the implicitness and materiality of socio-cultural formations, then, needs particular conceptual, methodological and analytical tools as well as appropriate reflection in research design that this part will introduce.

Chapter 8 digs deeper into the implications of the criteria of implicitness and materiality that guide praxeological methodologies. In vein of aforementioned non-dualistic sensitivity, it conceptualizes implicitness/explicitness and discourse/practice along continua of explicitness and material engagement. Chapter 9, then, translates the general methodological considerations into a research design that guides this thesis empirically. It schematically presents the iterative unfolding of conceptual and empirical moments and concomitant methods in five steps. Chapter 10 contemplates research as practice, engaging in a critical reflexivity on positionality and normativity. Against this background, I situate the present thesis within participatory action research methodologies. Chapter 11, finally, elaborates on data analysis and coding, tracing the development of the coding schemes that link to the conceptual discussion. It closes with an auto critique and reflection of potential shortcomings.

Chapter 8: A practice theory methodology

Implicitness, as the first of two key criteria for a practice-theoretical methodology, challenges qualitative research to move beyond the level of language. The explicit surface of written, verbalized or documented qualitative data does not necessarily reflect that which lays beneath in any straightforward manner. Analysis, therefore, demands the researcher to drill down below the shell of words, sentences and explicit meanings through methodologically grounded interpretation. Discourse-theoretical approaches, in turn, foreground the cultural and social signification of actions and things

that might be elicited from both verbal and non-verbal data. From this perspective, the social can be located in regimes of signification (Reckwitz, 2016). For practice theory, then, discourse is a specific observational category that foregrounds the representational side of practices (ibid.). Practices, however, are be characterized by a high degree of practical and unconscious knowledge that exceeds representation. Furthermore, the social, for practice theorists, is located (materialized) in bodies, artefacts, and things (chapter 5). Materiality, as the second criterion for a practice-theory methodology, challenges the researcher to acknowledge the inscription of (tacit) knowledge, competences, and habits into bodies and their relations with non-human materials.

Discourse- and practice-theoretical approaches, still, are not opposing perspectives but can constructively amend each other. From a praxeological perspective, it would be counterproductive to single out practices that are highly implicit while ignoring practices of representation. To avoid the construction of a false dichotomy between explicit and implicit or material and immaterial practices, this study recognizes all of these dimensions as constitutive of social phenomena. Practices of speaking are anchored in bodies, make use of a speech apparatus, interact with nervous systems, might involve technological mediation, frequently take direct or indirect reference to physical objects and other bodies, and can profoundly affect subjects and collectives. At the same time bringing attention to highly implicit and unconscious practices such as breathing can become imbued with meaning – for example in discourses on mindfulness, meditation and yoga – while materializing in the production of self-help books and mushrooming of yoga retreats.

Representation, therefore, does not oppose practices' criteria of materiality and implicitness. Instead it can be a more or less prominent part of practice. Repair, for instance, can involve a high degree of reflection, explication and explanation – one of the corner pillars of the phenomenon of repair cafés (Baier, Hansing, Müller, & Werner, 2016a) – and still restore the functionality of artefacts. In other words, while repair practices transform artefacts, they might spread awareness around the wastefulness of modern consumerism and thus be loaded with signification. Nevertheless, a practice-theory methodology needs to acknowledge the disparate roles materiality plays in different practices. Talking about repair engages differently with the (material) world than repairing, say, a mobile phone. And representing the possibility of alternative organizational forms is quite different from enacting them.

Issues around implicitness and materiality, therefore, pose a fourfold challenge for a practice-theory methodology. First, some practices can only be observed but are not explicated by participants. Second, some representational practices lack the counterpart they purport to represent. Third, between aspects one and two, practices exhibit a wide variety of different degrees or forms of explicitness and spread. Fourth, there is considerable interpretative leeway for practices' description,

typing and understanding. All four issues require conceptual and methodological reflections. As first step, I introduce continua of explicitness and material engagement that chapters 9 and 11 further operationalize for the study's research design and analysis. The continua help to grasp practices' differences in material grounding and explicitness without resorting to "pure" states or dichotomies and instead accepting the "impurities and messiness of the social" (Schäfer, 2016b).

The Continuum of explicitness (Hirschauer, 2011, 2016) captures the range of practices' explication from direct expressions to implicit statements and habitual movements. Speaking of a continuum emphasizes that there is no clear-cut difference between discursive practices (or practices of representation) and non-discursive practices. Instead practices involve different degrees of explicitness and can stand in a more or less consistent or contradictory relation to the things their purport to represent. As illustrated by means of examples above, a high level of explicitness does not mean that practices lack a material grounding. Neither, however, does it allow to infer the material existence of that to which discursive practices refer. Methodologically, this means that although formal and informal interviewing can be important methods to deduce practices' meanings, the researcher needs to assess the coincidence of practices of representation and observable activities. A first question that practice theory methodology needs to consider, therefore, is: *how well does the representation correspond to that which is represented?*

Practices, including practices of representation, involve materials (bodies, artefacts and things) but do so very differently. The continuum of material engagement, hence, does not distinguish material from immaterial practices (which would be oxymoronic) but captures the *qualitative differences between practices' material grounding*. Practices can differ from each other in the degree to which they involve bodies, artefacts and things, as well as in the form or quality of this involvement. Repairing a phone and talking about repair over the phone might involve quite similar materials, yet there is a fundamental difference in materials' involvement in practices representing repair and practices enacting repair. Whereas in the latter case the phone has an "infrastructural relation" (Shove, 2017, p. 158) to repair and stays in the background, in the first instance, repair revolves around the materiality of the phone and radically transforms it. Material involvement, consequently, refers to the *degree to which materials are exposed to the possibility of transformation through their enrolment in practices*. This distinction, again, is not clear cut and is consequently set up as conceptual tool in form of a continuum between materials as passive backdrop on the one end and as transforming or transformed protagonist on the other end of the spectrum. A second question that practice theory methodology needs to consider, therefore is: *how does a practice relate to the materials it involves?*

Taken together, the continua of explication and material involvement allow to capture the differences between claiming "I advocate more social justice", partaking in an intellectual exchange on the notion

of social justice or enacting practices of solidarity, mutual help and inclusion 'on the ground'. Practices can remain within a discursive realm without taking significant effect on bodies, artefacts and things (e.g. a simple statement that is not followed by action). Practices can be foremost discursive but be part of a cultural transformation (e.g. politicizing economic practice). Practices also might involve a bodies and artefacts in ways that they are transformed (e.g. sharing food with someone to prevent him from suffering hunger). This distinction sheds light on the epistemic fallacy of community economy's ontological politics (chapter 4) and reiterates the added value of a practice theory perspective. While the disidentification with capitalist social relations can have profound bodily and thus material effects, community economy scholarship lacks the conceptual tools to account for practices' material involvement. It overstates the case that changing the representation of the world equals changing the world itself. A practice theory methodology provides the tools to ascertain that talking about the world is not the world itself, although it is certainly an important part of it.

The continua of explication and material involvement allow to carve out differences as well as imbrications of narrating, theorizing, planning and thinking about sustainability on the one hand and building, implementing, and enacting sustainability on the other hand. They provide a heuristic to grasp practices' different forms of involvement with social phenomena such as expressing that repair is important for postgrowth economies, explaining how to repair a mobile phone, and repairing a mobile phone. In the following, I use the terms 'discursive practice' and 'material practice' when reference to the respective ends of the spectra supports analytical objectives. Discursive practices are practices with a relatively high level of explication. As practices of representation, discursive practices do not allow for inferences beyond the narration itself. Material practices, on the other hand, are practices with a relatively high level of material engagement. Frequently they do not involve explicit moments, but might be explicated upon request, for example in an interview situation. Discursive and material practices often form counterparts whereas the former is the explication or narration of the latter. While both are relevant to analyze transformative geographies, they can play quite different roles in the processes of social change. Awareness of the differences between discursive and material practices is crucial for the study's methodological set-up to which subsequent chapter turns.

Chapter 9: Planning and conducting research on a degrowth case study

Chapter 9 introduces the study's empirical focus as well as its research approach. Before translating the foregoing considerations into a concrete research design, the first section of this chapter introduces the case study, its context, and the rational for choosing this specific case to explore transformative geographies.

The case of Stuttgart

The[18] case study comprises 24 sustainability-oriented organizations as well as political and administrative representatives of the city of Stuttgart. The organizations vary with respect to their economic-orientation, legal form, degree of institutionalization, mode of financing, and, on a more methodological note, the depth to which they feature in the study's data collection. Table 9 in the annex details all organizations with respect to their focus, legal form, while table 8 details the study's empirical coverage. The selection of the 24 organizations is a methodological decision. Beyond the 24 organizations, a number of individuals and groupings feature prominently in Stuttgart's community economy but were not considered explicitly in order to maintain a manageable sample. 3 of the 24 organizations, furthermore, were not available for interviewing or participant observations. Due to their importance for the case, however, they are included through secondary accounts, informal interviewing, and desktop research.

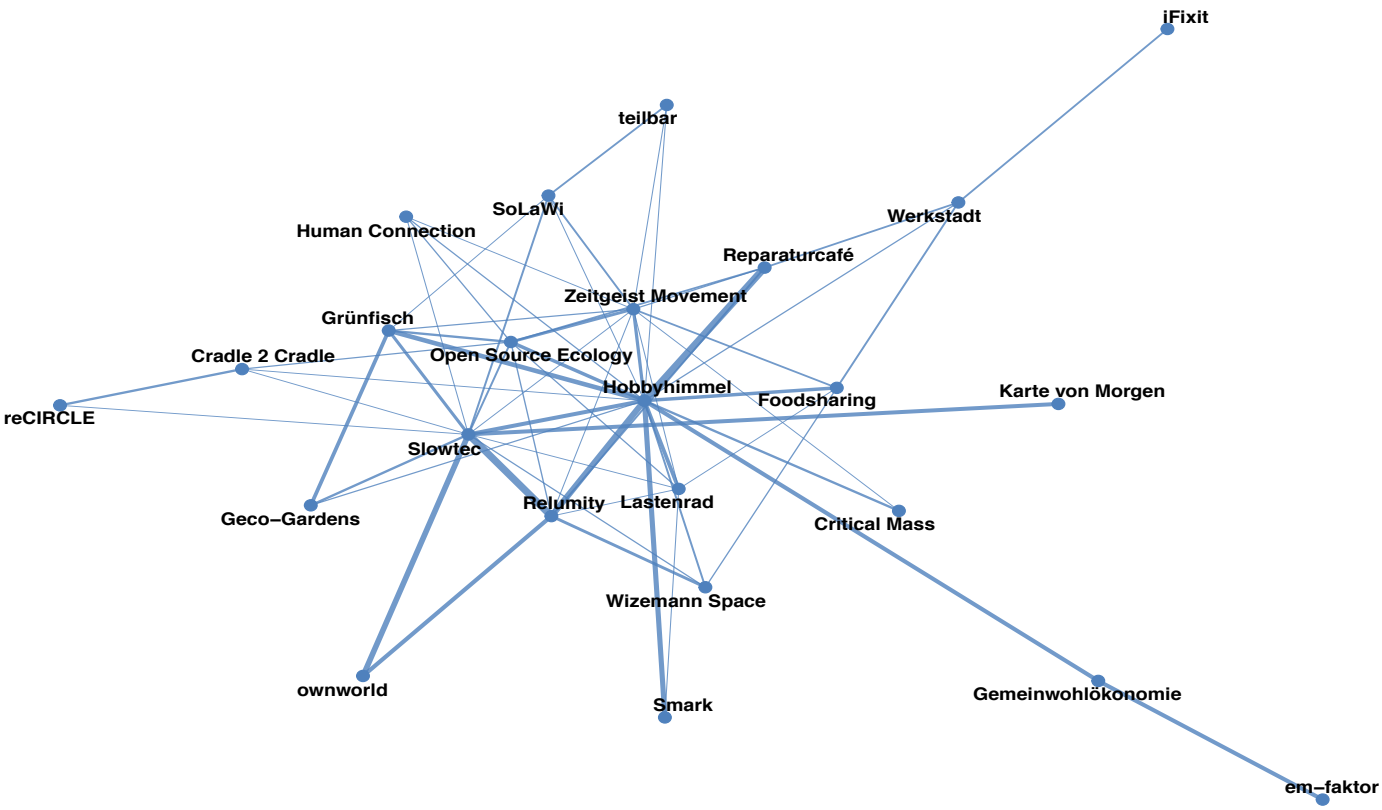

Figure 8: Links between 24 eco-social organizations and projects based on cross-referencing in interview data (created by Nils Riach using R)

[18] Parts of this section are forthcoming in a research paper in Ephemera: Schmid, B. (forthcoming). Repair's diverse transformative geographies – lessons from a maker community in Stuttgart. *Ephemera: Theory and Politics in Organization*.

On the other side, a handful of organizations feature exceptionally prominent. They are central nodes in the network and/or are of outstanding relevance for a number of participants and groupings. Figure 8 illustrates the interconnectedness between the organizations this thesis features. Mind, however, that the illustration is not based on systematic network analysis, but on cross-referencing from interview data (see chapter 11). Rather than being a quantitatively-grounded representation of the interconnections in Stuttgart's community economy, it reflects the thesis' perspective on the case study. Some organizations that appear peripheral in figure 8, have ties to organizations that are not included in the empirical sample. Furthermore, the illustration might miss or underestimate links that are beyond the primary focus of data collection. Still, despite the lack of a systematic network analysis, the figure outlines important links that are crucial to further analysis and interpretation in parts IV and V.

Aside from the criteria this thesis applies for the selection of organizations – which I explore in the subsequent section – the links portrayed in figure 8 also reflect the acquisition process. An activist group provided the primary access point into the field in spring 2016. Well-connected in the local context, it supported the establishing of contacts for an initial sample. Ten interviews and a first round of participant observation traced out the field and established further contacts through snowballing (Morgan, 2008). In addition to snowballing, the study's sample is based on an extensive mapping of and outreach to sustainability-, and in particular degrowth-oriented organizations in the local context of Stuttgart through desktop research. Since embeddedness in the local context is of interest for this thesis, organizations with ties to the emerging network were selected preferably. The open workshop *HOBBYHIMMEL*, thereby, proved a particularly suitable and connected venue that features prominent in the sample. It shows connections to the majority of organizations. Due to its accessibility, the workshop also constituted an expedient site for participant observation. Beyond its ties to other sustainability-related organizations, the workshop is well-connected within the local context, to which I turn next.

Context

Stuttgart is located in the South of Germany, in a prosperous region with a strong industrial sector. The city and region rank amongst the top locations in Germany by per-capita income. Stuttgart, furthermore, has one of the lowest unemployment rates in Germany with around 3%.[19] Automobile industry, engineering, information technology and creative industries are the key economic branches.[20] Although a number of global players such as the Daimler AG and Bosch have they

[19] https://www.statistik-bw.de/Arbeit/Arbeitslose/am.jsp (accessed March 25, 2019).
[20] https://www.region-stuttgart.de/die-region-stuttgart/wirtschaft-arbeit/uebersicht.html (accessed March 25, 2019).

headquarters in the city and region of Stuttgart, small and medium sized enterprises, account for a significant proportion of employment and turnover. In metal production, metal processing, electronic & computing devices the bulk of revenue is generated by corporations between 50-500 employees. Engineering and automobile manufacturing, in turn, is dominated by enterprises with 1000+ employees.[21]

A considerable proportion of participants in this case study are employed by, have contact to, or receive support from technically-oriented enterprises. Consequently, there are interconnections between some alternative organizations and (traditional) enterprises that transpire through an exchange of skills, an exchange of materials and interorganizational cooperation. Contextualizing the case study is important in at least four ways that I will formulate as hypotheses, since no systematic comparative analysis was conducted. (1) Specialized knowledge and skills enable a semi-professional operation of some alternative organizations, in particular providing a broad availability of skills and knowledge that are shared within the broader community. (2) Material support through more solvent enterprises helps some alternative organizations to operate. (3) Cooperation, for example through commissions or team building events provides a further source of revenue with which sustainability-related practices can be cross-subsidized. (4) Last but not least, and on a more speculative note, the broader community can be characterized by a pragmatic and non-dogmatic take on issues of sustainability and economic growth. In conversations and interviews, this was repeatedly attributed to the technologically-oriented context by the participants themselves.

Case study selection

Reasons for selecting this case study include (1) the pragmatic orientation of most participants, (2) the focus on localization of productive processes by a significant number of organizations, and (3) the case's accessibility. (1) By pragmatic orientation I mean that most participants are not concerned with political affiliations or particularistic perspectives and have a relatively undogmatic, technical and analytical take on sustainability. Although, at times, this stance turns into a naïve techno-optimism and managerialism (see part IV), pragmatic, here, does not imply a post-political orientation. Rather, pragmatic refers to the tendency that most organizations and activities are not overly shaped by a particular partisan standpoint. This pragmatic orientation translates into a tendency to test and experiment with organizational forms, technologies, and other economic practices, rendering the case quite dynamic and multifaceted.

(2) The localization of productive processes, here, is part of a broader set of attempts to reduce dependency on globally sourced and produced goods through sufficiency-oriented technologies, open

[21] https://www.statistik-bw.de/Industrie/Struktur/VG-GK-BBEU.jsp (accessed March 25, 2019).

source, modular construction, and likewise local design, construction, assembling, maintenance, and repair. While there are both elaborate schemes and a long tradition of (re)localization in some sectors such as food production (in particular in form of community-supported agriculture), housing (for instance housing cooperatives), and community-oriented activities (spaces for encounter and support), the substitution of global value chains around durable consumer goods poses a significant challenge to degrowth perspectives. In contrast to food, housing, and community spaces, there are few localized alternatives for durables such as electronics or clothes. A range of technological and social innovations, however, provide compelling prospects to build viable alternatives for a localization of productive processes. The thesis, consequently, puts a particular focus on technology-oriented organizations for which Stuttgart constitutes a (comparatively) conducive context for the reasons detailed above.

(3) Accessibility, furthermore, provide a third reason for the selection of this case study. After an extensive desktop research including major and mid-sized urban areas in Germany and Switzerland, I selected Cologne and Stuttgart for small scoping studies. In addition to the aforementioned aspects, Stuttgart, stood out with respect to its accessibility. A local activist group and an open workshop provided good starting conditions for further empirical work. Related therewith, Stuttgart's landscape of alternative organizations and actors presents a middle ground between the extremes of a strong community-orientation on the one hand and fragmentation and dispersal, that means little connectedness between actors and organizations, on the other hand. In other words, while a 'community' or network around alternative economies exists, it is not closed off for outsiders and thus accessible for research (as long as it has a genuine interest in the case).

All three aspects – pragmatic orientation of participants, the focus on local production and repair, and the organizations' connectivity – speak to the thesis' thrust to investigate degrowth transitions with a particular focus on enabling and limiting moments thereof. Pragmatism, by and large, translates into variegated processes of negotiation and compromise, shedding light on the possibilities and constraints of practicing alternative economies within a given institutional framework. Local production and related practices, moreover, attend to crucial questions around the rescaling of globalized value chains that pertain to a majority of everyday goods. Connectivity amongst the organizations, finally, opens a perspective beyond isolated undertakings that focus on an exclusive audience and provides a perspective on cooperation between and beyond alternatively-oriented organizations and projects.

Research design

The research design reflects foregoing deliberations on a practice-theoretical methodology, in particular by attending to different levels of explicitness and material involvement. Using a

combination of desktop research, interviewing, group discussions and ethnographic methods, the study combines methods that focus on representational practices with such that foreground observation. The reasons for doing so are fivefold. First, to capture both discursive and non-discursive practices, providing insights into the translation of narratives and strategies into practice. Second, to scoop out the advantages of the different methods that lay particularly in the high explicitness of interviewing – allowing systematic access to much information within relatively short time – and the high material engagement of participant observation – allowing to develop a tacit knowledge of the activities and deeper insights into the practices that are not, or (necessarily) only partially explicated. Third, to account for discrepancies between verbalized accounts and actually observable practices. Fourth, to make up for some – but by no means all – of the shortcomings of the respectively other methods. And fifth, to make the most of the resources available for this thesis.

The different methods build on each other and can be expressed in a five-step succession. Table 1 gives an overview of the different stages this research follows and how they relate to different levels of explicitness and material involvement. Yet, before elaborating on the various methods and the way they interlink in greater detail, a note on the practice of doing empirical research is needed. Due to dynamics within the case study and its broader context, scheduling of events, new insights, shifting priorities, conceptual and methodological (re)considerations, difficulties in the availability of interview partners and the accessibility of organizations' practices for participant observation, as well as various other factors, actual research was not straightforward but often complicated and fragmented. Presenting the methods as five-step succession, therefore, reflects the study's methodological coherence, but is not a strictly chronological representation.

Step	Method	Explicitness/Materiality	Description
1	Desktop research	Medium level of explicitness/difficult to draw conclusions for material engagement.	Digital research is used to scout interesting organizations, prepare further steps of data collection and amend information, e.g. through tracing the development of individual organizations over time (newsfeed, current information on homepage)
2	Semi-structured exploratory interviewing	High level of explicitness/ Difficult to draw conclusions for material engagement.	This stage of empirical data collection establishes contact to the organizations' protagonists, provides an overview over the organizational landscape and connections between organizations, provides insight into different narrations of sustainability and into the strategies to address sustainability-related issues.
3	Participant observation	Both low and high level of explicitness (e.g. informal interviewing) / deeper insights into material engagement.	Participant observation allows the researcher to experience the everyday practices that constitute the various organizations. The researcher develops a tacit knowledge of the communities' practices beyond the insights generated through interviewing.
4	Focus groups	High level of explicitness / conclusions for material engagement in reaction to explication of tacit	This stage questions, validates and amends the data collected through interviewing and through ethnographic methods. It also enables insights into the dynamics of the community. Furthermore, the focus group serves as means

		knowledge that was acquired during ethnographic fieldwork.	to disseminate preliminary findings and initiate, consider, and prepare further collaboration towards sustainability
5	Semi-structured follow-up interviewing	High level of explicitness / conclusions for material engagement in reaction to explication of tacit knowledge that was acquired during ethnographic fieldwork.	The last stage serves four purposes: explication, validation, deepening and update. Besides allowing for further elaboration of emergent themes of prior stages of data collection as well as their validation, in-depth interviewing is used to collect updated information to provide a longitudinal perspective.

Table 1: Succession of research methods

Furthermore, each step has to be understood within a broader movement between theory, empirical data and methodological deliberations. In contrast to the linear structure of this text (and academic writing in general) the research process behind it is best characterized as iterative and cyclical. Instead of moving from theory to methodology to data collection, this research project developed through a flexible and contingent process in which theory, methodology and empirics interact and fertilize each other. Action researchers stress iterative cycles of action and reflection to allow theory and (research) practice to inform each other (Kemmis & McTaggart, 2005). I elaborate on the study's relation to action research methodologies below. At this point, however, the iterative development of theory, methodology and field work are of importance. The research design, as presented in this section, is not a preconceived framework but an emergent result of aforementioned iterations. While the separate steps in table 1 complement each other from an ex post perspective, one needs to keep in mind that this succession was not established from the outset. The remainder of this section explores the five methods individually before it returns to deliberations on their interconnectedness.

Stage 1: Desktop research

The thesis uses the internet as tool to collect information and interact with participants at a distance (Markham & Stavrova, 2016). Due to profoundly different methodological and ethical implications, the latter is discussed below in the context of participant observation. In the following, desktop research refers to use of internet technology to collect information and, in doing so, to prepare and assist other means of data collection – for instance interviews and participant observation – as well as to amend, validate and revise collected data. Of the methods above, desktop research is the most difficult to pin down chronologically. Initially, digital research allowed a first overview of organizations' objectives, structure, financing, legal form and other basic information, if provided online. This was helpful in assessing the organizations' suitability for the thesis, preparing for interviews and following up on information provided through formal and informal interviewing. At a later stage of the study, digital research allowed to track organizations' development through updates on their internet presence, or newsletters. Digital research plays a role throughout the project but is most prominent in the initial phase of this study.

Stage 2: Semi-structured exploratory interviewing

Interviews provide detailed information about organizations and participants. In rendering stories, descriptions and intentions visible, they capture foremost that part of social phenomena with a high level of explicitness, privileging narratives and knowledges over bodies and objects. In this study, semi-structured exploratory interviews were used as entry point into the landscape of practitioners and organizations and were crucial for the selection process for follow-up research (see subsequent sections). By exploratory I mean that the interview practices root in a certain curiosity expressed through an openness towards the conversational trajectories. All exploratory interviews were informed by a flexible guide composed of questions and topics based on preliminary research questions as well as on the digital research preceding the interviews (see example of interview guide in the annex). Insofar, semi-structured exploratory interviews differ from both unstructured interviews that might only be guided by a "general area of interest and concern" (Robson, 2009, p. 270) on part of the researcher, as well as structured interviews that do not allow for flexible design (ibid.). The main objective of exploratory interviewing is to gain insights into the practitioners' narratives on alternatives and on the strategies pursued to translate these into organizational practice. Furthermore, interviewing allows to partly substitute for limitations of participant observation that is quite resource intensive. Triangulating interview data with ethnographic data enables a broadening of the scope beyond what would have been possible with participant observation alone. Nevertheless, the study exercises caution in the treatment of different kinds of data, avoiding the conflation of accounts with actual practice (see chapter 11).

The initial set of exploratory interviews looked at ten sustainability-related organizations. Like all subsequent interviews, they were conducted with founders or main representatives of the respective organizations. On occasion, two or more interviewees were present. Through this first sample, more contacts became available, and ten more organizations were explored in detail through interviewing during the course of the project. Some, however, only during later stages. Reasons for this delay include difficulties to get hold of the interviewee and the dynamic development of the case. Aside from new information that brought organizations into focus which were overlooked during desktop research, or which did not seem relevant at the time, some organizations consolidated only after the initial stage of exploratory interviewing. Still not all organizations relevant to the study were available for formal interviewing. Some compelling examples, therefore, are included through informal interviewing – discussed in the next section on participant observation – and digital research (see table 8 in annex). Depending on relevance, accessibility and availability, furthermore, organizations interviewed during stage two were explored through the ethnographic methods the subsequent section turns to.

Stage 3: Participant observation

Ethnographic participant observation is, in a way, the 'natural' method for practice theoretical perspectives (Reckwitz 2016). It allows to capture the 'silent' (part of) practices – for example the supposedly irrelevant, the taken-for-granted, the clandestine, the ineffable, the routinized or the unconscious. According to DeWalt & Dewalt (2011, p. 1), "participant observation is a method in which a researcher takes part in the daily activities, rituals, interactions, and events of a group of people as one of the means of learning the explicit and tacit aspects of their life routines and their culture." Participant observation is often used synonymously with ethnography, whereas, however, the latter refers more generally to a research approach or strategy that aims at "understanding and representing how people – together with other people, nonhuman entities, objects, institutions, and environments – create, experience and understand their worlds" (Till, 2009, p. 626). Here, I am concerned with participant observation as particular research method and its connection to a practice theory methodology. I reflect on ethnography in more general terms below when discussing its relation to participatory action research.

First-hand data collection; participation; sensual, emotional, and embodied experience; and a focus on the concrete situatedness of bodies, artefacts, things, and their interactions are core aspects of participant observation (Balsiger & Lambelet, 2014; DeWalt & DeWalt, 2011; Walsh, 2009). In vein of abovementioned criteria of implicitness and materiality, practice theoretical approaches take a particular interest in activities themselves rather than their (discursive) representations (Walsh, 2009). First-hand, rather than verbally-mediated data gained through interviewing, enables a more direct access to the practices of the organizations in question. In this respect, participant observation is a key methodological feature of more-than-representational approaches (Cadman, 2009). As outlined above, however, this is not a dualistic juxtaposition. Practices, certainly, are not devoid of meaning. Rather meaning is socially produced in, through and with practices, but does not necessarily exist in the form of explicit (verbalized) knowledge. Participant observation, allows to acknowledge and approach both the implicitness of (tacit) knowledge and the materiality of practice.

According to Robson (2009, p. 314), a "key feature of participant observation is that the observer seeks to become some kind of member of the observed group". Experience becomes a prime means of observation. In stark contrast to the passive observer advocated in "pure observation" approaches (Walsh, 2009, p. 77), the self and her bodily experiences become an active part of observation. In that, the researcher acquires a more profound, so to speak *more-than-conceptual* knowledge of the situation. At the same time, the complex nature of the researcher's involvement poses the challenge of extract oneself from the situation to (re)built a critical reflexivity.

Participant observation, consequently, moves between theory-driven and field-driven moments. Through this iterative movement between theoretical reflection and observations an understanding emerges that "begins with a set of connected ideas that undergo continuous redefinition throughout the life of the study until the ideas are finalized and interpreted at the end" (Schensul et. al. 1999, cited in Balsiger & Lambelet, 2014). With tacit knowledge develops an intuitive understanding for practices, interactions, possibilities, constraints and obstacles. Through this situated awareness, insights are generated to answer questions such as: what practices are common? What does it feel like to participate in particular practices? Who participates in which practices and why? What are external constraints and what practices' creative leeway? What practices are most relevant, most exciting, most difficult to grasp? A major challenge, however, remains in the continuous explication of tacit knowledge – first in practicing "reflexivity" (Sultana, 2017) and second in sharing research results through different channels. Both require repeated questioning of the own positionality (chapter 10) as well as a systematically developed framework for analysis (chapter 11).

Gaining access is central for participant observation. In the context of this thesis, the preceding stage of interviewing facilitated access. Informal conversations, in particular before and after interviews, helped me to build relationships of trust with the participants. During the course of field work, I became more and more familiar with different organizations and people, not all of which know or frequently meet each other. Consequently, I acquired also a mediatory role in which I supported the exchange of information and sometimes also the establishment of new contacts between individuals and organizations. The transition from interviewing to participant observation, however, is not clear cut. Observation inevitably is a part of being present on the sites of alternative economic practice. Systematic documentation and thus a more formal form of participant observation set in when I started volunteering at the open workshop *HOBBYHIMMEL* in spring 2017.

HOBBYHIMMEL provides the primary locale for participant observation in the present study. With 23 out of 60 individual occasions of documented participant observation, a significant share of participant observation is set in the physical space of the workshop (see table 8 in annex). Apart from its prominence in the first round of exploratory interviewing, the workshop's accessibility, spatial set-up, informal atmosphere and its role for a wide range of sustainability-related initiatives render it a promising *site* for observation. Site, here, refers to both the workshop as a specific place or locale of human activity, as well as the connectivity between practices and their bodies, things, artefacts and meanings which travel through the workshop (Schatzki, 2003; Everts, 2016; see also chapters 5 and 6). In this vein, the workshop is both a spatial context in which sustainability-related practices transpire (and can be observed), as well as a nexus of practices that extends in time and space, interlinking with close and distant geographies.

Methodologically speaking, the workshop is the main entry point into the study's ethnography on sustainability-related practices and organizations. As locale in which practices materialize, the workshop provides access to a range of other organizations such as a *Relumity*, *Foodsharing*, *Lastenrad*, *Smark*, and *Grünfisch* (see figure 8). And as site through which sustainability-related practices, travel, it links to other close and distant places. Participant observation, then, moves with the practices to other locales (on condition that they are spatially and temporally accessible within a reasonable frame). Although not all sites link directly to the workshop, there are numerous connections that I discuss in part IV. Additional sites of observation, then, are scattered across Stuttgart – including the *Wizemann Space*, the Züblin Parkhaus, Stuttgart main station, and various offices and worksites, – and beyond Stuttgart in Isingen, Mannheim and Berlin. The forms of participation, thereby, vary significantly across these different settings and situations. They range from active collaboration on operational and organizational processes; the acquisition of trade skills and the ability to operate machinery; taking part in correspondence; participation in various events such as trade fairs, (interorganizational) meetings, workshops, and panel discussions; to informal interviewing; visits to projects sites and off-topic conversations.

Digression: Informal interviewing

Informal interviewing is a significant part of participant observation (DeWalt & DeWalt, 2011). In some respects, it is closer to casual conversations than formal interview settings, but differs from non-research conversations for at least two reasons. First, informal interviewing is generally guided by a particular interest of inquiry. Second, it is documented in some form after the conversation. According to (DeWalt & DeWalt, 2011) informal interviewing can be classified along two continua: the degree of control through the researcher and the uniformity of questions to different informants. In the context of the present study, informal interviewing serves two main purposes. First, to generate meaningful insights beyond more formal interview situations. Second, to collect information from participants that were not available for formal interviewing. Both objectives are approached through targeted questions as well as non-controlled conversations. A specific subtype of the latter is the involvement in chat and email exchanges.

Chat and email exchanges allow to converse with practitioners at a distance (Markham & Stavrova, 2016). This includes newsletters, newsfeeds on social media as well as group chats on Telegram and group email exchanges. Whereas the former two are non-reciprocal and are considered above as part of desktop research, the latter involve interactions among several people including the researcher. Most importantly, the HOBBYHIMMEL team chat involves a daily exchange amongst the approximately 50 members. Yet, due to the amount of material

gathered in the course of more than two years, as well as ethical considerations, no systematic analysis was conducted. However, the passive tracking of the exchange provided additional insights into the everyday activities of the organization and filled the gaps between visits.

The documentation of participant observation evolved during the course of the study. Guidelines to facilitate the focus on practices accompanied the first few occasions of participant observation (see example of guidelines for participant observation in annex). At a later stage, when I was already familiar with the setting, free recording in a research diary proved more adequate. The notes of each session were formulated as running text as soon after retracting from the field as possible. In most cases the train ride home allows to work through a better part of the notes, digitalizing the essentials in a 500 to 1500-word document that can be used for further software-based analysis (see example of observation notes in annex).

Participant observation also raises a number of methodological issues that include questions of reliability, interpretative bias and subjectivity, generalizability, and representativeness (Walsh, 2009). While there is well-founded critique of methodologies that uncritically assume any of the above as gold standard of good research (Flyvbjerg, 2006), they provide important food for reflection on participant observation's challenges and shortcomings. More so than methods that are standardized, participant observation leaves much leeway for interpretation and subjective impressions. This freedom, challenges the researcher to be transparent about her assumptions, proceedings, as well as her positionality. Furthermore, an ethically grounded self-reflection is required. In the vein of aforementioned iterative cycles of action and reflection, the critical assessment of one's own position and practices needs to accompany the research process throughout. Amongst others, this includes the involvement with research ethics (Lunn, 2017). Transparency also includes the representation of the study's results as situated and contingent. While a lack of generalizability and representativeness does not make qualitative non-standardized methods less scientific, again, a critical reflexivity and an appropriate caution have to go along with analysis, discussion and conclusion. I return to issues of positionality and research ethics in particular in the section on research as practice below.

Stage 4: Focus groups

The study uses focus groups as a means to question, validate and amend the data collected through interviewing and ethnographic methods. Focus groups allow the researcher to passively observe as well as actively take part in the discussion. The reasons for including focus groups in the research design are fourfold. First, focus groups provide deeper insights into the dynamics of the community. Second, focus groups allow for the validation of preliminary findings, as well as the development of a more nuanced perspective through the discussion. Third, they function as a means of dissemination. While this study does not apply participatory methods in the strict sense (see chapter 10), it

sympathizes with the general sensitivities of participatory action research and attempts to allow for a deeper involvement of participants in the research process. Forth, and closely related to point three, focus groups serve as means to initiate, consider, and prepare further collaboration amongst the participants. They create a space for exchange amongst practitioners that exceeds their normal interaction with each other.

This thesis' research design includes two focus groups with different audiences and different orientations. The first focus group was quite comprehensive and revolved around all four objectives listed above which. Aside from the collection of additional data and the verification of preliminary findings, its main concern was to explore possibilities of action and collaboration. All objectives were communicated to the participants in advance. Due to the limited capacities of focus groups that generally comprise between six and twelve participants (R. Longhurst, 2010), I invited only those organizations that are most pertinent to the research question. All invited organizations match at least two of the following criteria.

a. financial independence and/or a pragmatic financing strategy through business case
b. significant correspondence with degrowth principles
c. connections to the emergent community

Of the seven organizations invited to the focus group discussion, five were represented through nine participants: *HOBBYHIMMEL* (1), *Slowtec* (4), *Relumity* (2), *Smark* (1), and *ownworld* (1). The disproportionate presence of *Slowtec* was primarily due to the focus group taking place in their shared bureau and living space. This imbalance, however, did not affect the discussion. The formal part of the focus group lasted 2h44min and was recorded and transcribed.

The second focus group was more streamlined and revolved around cooperation within the open workshop in particular. In a group of 20 participants we explored in a workshop-like setting the strengths and weaknesses of *HOBBYHIMMEL*'s organizational set-up. The two main outcomes of this discussion were deeper insights into the internal structure of the workshop which is based on self-management (see part IV). And the reciprocal learning about ways to improve it. In lieu of an audio recording, I took notes during the focus group discussion which I later formulated into a report for all members of the workshop and a more comprehensive record for data analysis.

Stage 5: Semi-structured follow-up interviewing

Semi-structured follow-up interviews allow the research to address pertinent issues in greater depth. In this study, it serves four purposes: the explication of tacit knowledge, the validation of preliminary findings, an update on recent developments and the broadening of context. Besides allowing for further elaboration of emergent themes of prior stages of data collection as well as their validation, in-depth interviewing is used to collect updated information to provide a longitudinal perspective. My

involvement with some organizations spans over a period of more than two years. Due to the fact that the majority of organizations are less than 4 years old at the commencement of empirical work, the documentation over a two-year-period captures a significant time in the organizations' development. *Slowtec* and *HOBBYHIMMEL*, which both feature prominently in this study, are founded only 2 to 6 moths prior to the first cycle of data collection.

In the context of this thesis, in-depth interviewing has similar advantages and disadvantages as exploratory interviewing (see above). It differs, however, in that it focusses more specifically on individual pertinent aspects that emerged in the course of data collection. Two types of follow-up interviewing were conducted. First, additional interviews with organizations that were part of exploratory interviewing and/or participant observation. And second, interviews with city employees as well as political representatives to follow-up on issues around regulations, support and cooperation.

Integration of the different methods

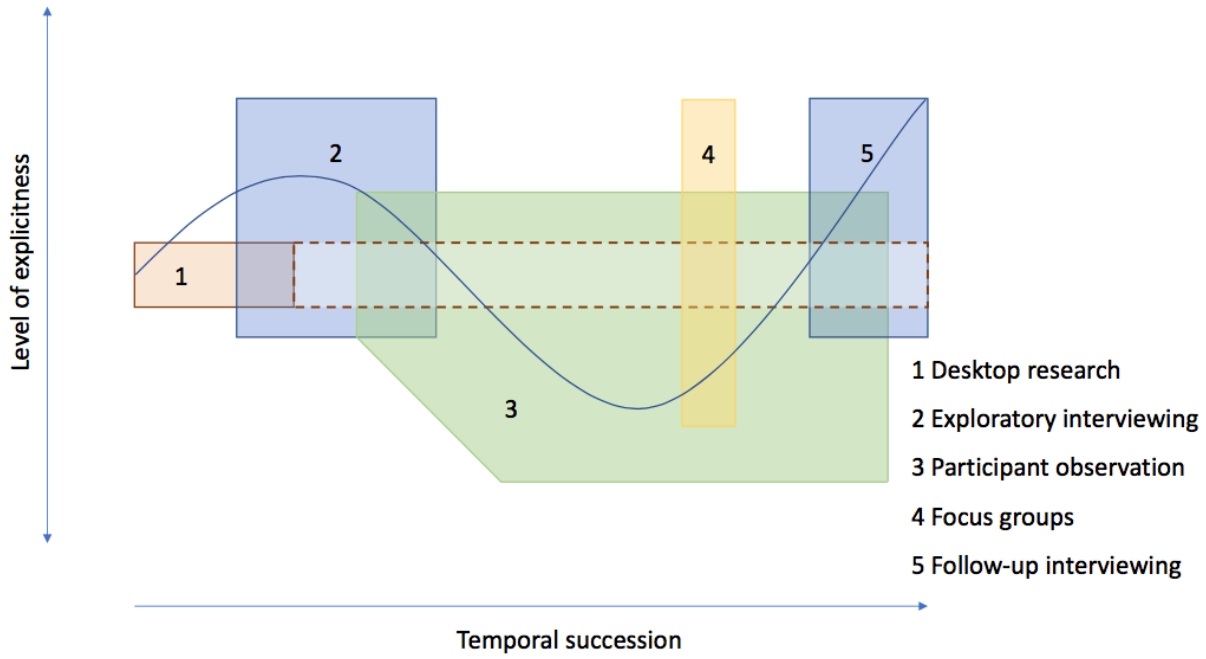

Figure 9: Level of explicitness across different stages of inquiry

Broadly speaking, the methodological set up of this study moves from explicit to implicit and back to explicit inquiry. Figure 9 schematically illustrates the temporal unfolding with respect to the level of explicitness the methods capture. Desktop research moves within a rather narrow range. Although it provides a low-threshold access to information, it hardly entails further cues that go beyond the information explicated on the organizations' web page. Furthermore, the information provided is generally strongly limited and important questions are not explicated. Nevertheless, desktop research provides a useful grounding for semi-structured exploratory interviewing. The latter, then, allows for the explication of further details of interest to this study by interviewees. Rather than being a purely

verbal exchange, interviews – in particular those conducted in *sites* of community activism – also entail a number of non-verbal elements that further the development of tacit knowledge. Participant observation, then, increasingly drills down into the organizations' everyday practices. It stretches over a wide range of explicit and implicit moments of inquiry, from informal interviewing to passive observation and allows the research to build a growing tacit knowledge about the case study. The focus group spaces the long phase of participant observation and allows to explicate some of the observations in a more formal setting. It also covers a broad spectrum of explicit and implicit aspects, for instance by enabling the researcher to gain a deeper insight into the group dynamics. Semi-structured follow-up interviewing, again, takes many observations to a more explicit level and helps the researcher to validate or reinterprets data. In doing so, it sets up data analysis which is not just about systematic evaluation of data but also the explication of tacit knowledge on part of the researcher.

Chapter 10: Research as practice

A practice theoretical methodology does not only entail reflections on the practices in the field but also the practice of research itself, which is imbued with political and ethical decisions. After presenting methodological considerations with an outward focus in chapters 8 and 9, chapter 10 turns inward and reflects on questions of politics, ethics and positionality. It addresses two issues in particular. First, the ethical and political assumptions the study is based on and that inform its methodology. And second, the role of the researcher including his positionality. The first question requires to situate this study with respect to literature on participatory action research, an issue the next section turns to.

Participatory action research

Participatory action research (PAR) challenges hierarchical and extractive modes of research and rethinks data collection, knowledge production and research objectives (Kindon, Pain, & Kesby, 2009; 2007). PAR does not so much refer to a particular method (although there are methods more suited for PAR than others), as to a way of approaching research accompanied by corresponding methodological reflections. Within the diversity of approaches, two characteristics of PAR stick out: collaboration and politics. The participatory part of participatory action research challenges the separation of researcher and researched. PAR is participatory both in the sense that researched participate in the research – shared knowledge production – and that the researcher participates in communities' activities. Insofar, PAR aims at collaboratively producing relevant knowledge for the stakeholder community (Pant, 2014).

Questioning the power-relations of traditional research models, PAR opposes imperial, hierarchical and extractive modes of knowledge production. It criticizes claims to neutrality or objectivity of

orthodox social science, maintaining that "it serves the ideological function of justifying the position and interests of the wealthy and powerful" (Kemmis & McTaggart, 2005, p. 560). Instead, PAR acknowledges the politics inherent in research. Its conceptual proximity to poststructural, feminist and postcolonial theories makes PAR sensitive to power relations, alternative ways of knowing and (institutionalized) oppression while pursuing an explicit agenda of emancipation and empowerment (Kemmis & McTaggart, 2005; Kindon et al., 2007; 2009). Insofar, PAR builds on critical theory that is grounded in a fundamental suspicion of the very categories with which traditional theory operates (Horkheimer, 1937). Critical theory questions the status quo of social relations and maintains that a more just society can be build.

Methods-wise, most PAR approaches are flexible and pragmatic. Non-standardized and qualitative methods are usually chosen over structured and controlled means of data collection (Pant, 2014). Common methods include storytelling, collective action and participatory mapping or diagramming (Kindon et al., 2007). Appropriateness is rather determined by methods' usefulness for the political and emancipatory agenda, than by hegemonic scientific standards. Yet, this does not imply that PAR approaches dispense with systematic research procedures or are synonymous with "sloppy social science" (Bradbury-Huang, 2010, p. 104). Reflexivity, transparency and comprehensibility are all the more crucial throughout data collection and analysis.

Participant observation, although implying participation, does not automatically make participatory action research. Participation in ethnographic terms centers around the researcher's bodily involvement in everyday practices generating an understanding through sensual, emotional, and embodied experience. Participation in PAR, in contrast, is a means of collectively addressing social injustice and working towards emancipation and empowerment. While ethnography does not exclude political engagement, participation for PAR is "explicitly oriented toward social change" (Kindon et al., 2009, p. 90). Insofar, PAR might just serve as a token if the research lacks collaborative emancipatory engagement and power is not equally shared amongst researcher and researched (co-researchers) (Pant, 2014).

This thesis draws selectively on PAR methodologies which requires a close reflection. Although the study involves participants through explicit invitations of feedback on data analysis – for instance through focus groups and follow-up interviewing – it does not engage in actual co-production of knowledge. The community has no direct power over the interpretation of findings, and the researcher retains full responsibility over analysis and output. Furthermore, participants' involvement differs significantly. While in active exchange with some participants, others are only involved passively through more traditional methods such as interviewing.

Reasons for a more selective recourse to PAR lie in the nature of the case study and in my assessment of case-specific methodological adequacies respectively. First, although diverse social groups are involved, the community is composed of mostly well-off and predominantly white males that voluntarily engage in alternative economic practices. Second, social and environmental injustices that the study and the practices that it examines target are spatially and temporally dispersed. While the "goal of PAR is to fundamentally transform social relations – helping those with less power and fewer resources get more of the same" (Pant, 2014, p. 584), the present study's empirical engagement is not with a marginalized community. Rather, than "changing their own situation" (585) the thesis is interested in how the community works to change social and ecological relations more broadly. In addition, a deeper involvement of the community is limited due to the severe time restraints of many protagonists. Some work several jobs or long hours in their respective organization, leaving little capacity to function as co-researcher.

From this follows a particular interpretation or adaption of PAR principles to the research project. While practicing an active and politically motivated involvement in the community, a rather traditional separation between researcher and researched prevails. Therefore, the term 'action research' appears more adequate to characterize the projects' methodology. Nevertheless, a number of elements blur boundaries, such as my collaboration on the organizational set-up of the workshop, different forms of cooperation and support for some organizations, and recurring discussions of findings with the main protagonists of the study. Furthermore, the question how research and activism can cooperate was repeatedly raised and discussed.

Beyond PAR's grounding in critical theory and the concomitant politicization of research, PAR is also important for this study's methodology in terms of its movement between action and reflection. Kemmis and McTaggart (2005, p. 563f.) describe the process of PAR as "spiral of self-reflective cycles" consisting of planning, acting, observing, reflecting and revising the plan, starting the cycle anew. Most research, however, as is the case in this study, overlaps stages and is more open (ibid.). Yet, this spiral captures the iterative movement between action and reflection and constant readjustments. It particularly emphasizes the reflection of research itself as practice and therefore as social performance. With it comes a processual perspective on social relations from which the practices of research are not separate.

The "reflexive-dialectical view of subjective-objective relations and connections" (Kemmis & McTaggart, 2005, p. 573) is a strong point of contact between practice theory and participatory action research methodologies. While practice theory, here, refers to a conceptual perspective that locates the social within the continuous movement of practice, PAR provides the corresponding methodology that acknowledges the mutually transformative moments of research practices, community,

researcher and broader context. From a practice theory point of view, the practices of action research might be understood as "meta practices that help to construct and reconstruct the first-level practices they are investigating" (Kemmis & McTaggart, 2005, p. 574). Critical research that supports the change of everyday practices, then, is a vital part in a transition towards degrowth. Through their focus on reflexivity and processuality, practice theory and participatory action research are allies in their work for social change.

Positionality and self-reflection

Research is always a view from somewhere (Haraway, 1991). Geographers, in particular, need to reflect on the spatial implication that knowledge and its production is always "situated" and "positioned" (Rose, 1997, p. 308). Famously, Donna Haraway refers to the illusion of universal knowledge that is not produced and disseminated from a particular spatial, temporal and social position as "god trick" (Haraway, 1991, p. 189) . Recognizing that the practices of research are always enacted from different (social) locations has profound implications for both its normative orientation and for the role of the researcher. After reflecting on the ethical and political assumptions of the study in the preceding section, this section examines the researcher's positionality and the importance of research ethics.

Positionality is a twofold process that closely interlinks the position of the researcher with respect to relatively stable social categories such as "race, nationality, age, gender, social and economic status" (Rose, 1997, p. 308) and the political and ethical positioning she performs. Although both moments of situatedness interpenetrate, we might speak of an *outwards* and a *towards* movement of positioning. Race, nationality, age, gender, social and economic status, while some of which are more negotiable and navigable than others, are brought *towards* the researcher through discursive and material practices of subjectiviation and identification. Subjects, however, do not remain passive and reach *outward*, renegotiating the situatedness of self and others as well as the positioning in relation to others. In order to guide the reflection, I will first consider how I am *positioned* within the web of practices that constitute the research case (towards) and second, how I am *positioning* myself throughout the research process (outwards).

As white, male researcher with a mid-European nationality and from a non-precarious background, I am speaking from a relatively privileged position. This is important with respect to the broader research interest on exploitation and injustice. Socioeconomic injustices go beyond class differences and include north-south relationships, gender relations and nationalities. Sensitivity to intersectionality (Al-Hindi, 2017) is particularly important if situated in a rather advantageous position. This includes the consideration of who can 'speak' (Spivak, 2011) and who is only heard as 'noise' (Rancière, 1998) when alternatives are conceived and proposed. While necessitating a continuous

awareness of these differences, they are only indirectly relevant for the study's methodology. Working with a community that in itself consists of relatively privileged individuals (see above) my positionality does not produce problematic power-relations with respect to the community itself.

Research, however, is never value free and thus requires disclosure of and reflection on the political and ethical positioning it is grounded in. After detailing the thesis' normative stance in the discussion of degrowth and postcapitalism (see chapters 1 and 2), I reflect on concrete implication for research practices in the following. Driven by the action research sensitivity to "prioritize the pursuit of justice…as the primary aim of research" (Masuda, 2017, p. 1), I started this project with a strong sympathy for community economies. Consequently, there is a certain risk of exaggerating the significance of specific organizations or practices. The scoping study and the initial stage of interviewing, in this vein, were informed by the search for innovative and subversive practices that can be interpreted as harbinger of postcapitalist economies. Remaining sympathetic to a focus on possibilities (see part II), giving more prominence to restraints in the study's conceptual framework helped me to develop a more critical and distanced stance. Nevertheless, the thesis remains in the spirit of what Esper et. al (2017, p. 671) call "critical performativity" which refers to "scholars' subversive interventions that can involve the production of new subjectivities, the constitution of new organizational models and/or the bridging of these models to current social movements".

Critical performativity needs to navigate a twofold tension. First the danger of going native. And second, the continuing influence of lasting relationships beyond systemic data collection. Going native refers to the immersion of the researcher in the community whereas, he loses his "critical external perspective and … unquestioningly adopts the viewpoints shared in the field" (Flick, 2014, p. 315). As a consequence, critical performativity becomes uncritical participation. Ethnographic methodologies in general and action research in particular hinge upon meaningful relationships amongst researcher and community members. In this vein, the researcher has to navigate the tension between emotional and practical proximity on the one hand and critical distance on the other. Due to the travel involved in getting to the site of fieldwork, empirical work usually lasted one to three days and was spaced by one to two weeks in between field visits. This allowed me to move not only in physical space but also in emotional and conceptual space. In addition, the iterative research design between phases of empirical work and critical reflection supported this movement.

Aside from knowledge creation, meaningful relationships and friendships beyond any instrumental research objective are a valuable outcome of my ethnographic field work. While much ethnographic literature discusses immersion and trust in the context of building rapport and strategic relationships, this instrumentality is ethically questionable. Participatory action research methodologies, thereby, support the critical reflection on extractive and instrumental relationships. In this respect, I appreciate

the tension that arises from having built close relationships and take it as a challenge rather than a dilemma that diminishes the value of research. For me, this also entails a certain indebtedness to the protagonists of this study that have taken much valuable time to share information and introduce me to their organizations. In the sense of mutual help, I try to remain at disposal for requests and seek an exchange also beyond the actual empirical field work. Amongst other things, this pertains to information gathered and analyzed in course of the study that might support the organizations.

Of course, the continuous involvement raises the question in what form new information are documented and considered in the data analysis. Taking a rather pragmatic approach to this issue, I documented information that seem to be relevant up to the beginning of the final coding. After that, new developments are not considered in the systematic analysis. Nevertheless, they continue to shape my (tacit) knowledge and might therefore at least indirectly influence further analysis and discussion. Chapter 11, now, turns towards data analysis in more detail.

Chapter 11: Data analysis

Materiality and implicitness challenge data analysis to work with empirical evidence that is only partially explicated. Ethnographic and action research methodologies that are in line with practice theory's conceptual focus, emphasize researcher's direct engagement to develop a tacit understanding of practices, subjects, organizations, and their relations and interactions. A major methodological challenge, therefore, is the explication of tacit knowledge acquired through ethnographic field work. The systematic documentation of participant observation in field notes is an important part of this process. Another part is the analysis itself. Coding, as analytical practice, guides the process of explication and combines the explicit or already explicated data (primarily interview transcripts and field notes) with the researcher's embodied knowledge.

This chapter develops a code framework in conversation with the study's conceptual grounding. After introducing coding as analytical practice that allows for a systematic engagement with empirical data, section one gives an outline of the coding frames. The subsequent section, then, elaborates on three frames that guide further data analysis. It traces their development by establishing links to the empirical data (part IV) and the study's conceptual grounding (part II). The third and last section fuses the different coding frames into a complex framework that guides the main data analysis and transitions to the presentation of findings.

Coding and coding frames: an overview

Coding is an analytical practice in which the researcher systematically works through her material to identify patterns, ideas, events and features of interest to the research inquiry (Benaquisto, 2008; Saldaña, 2009; Till, 2009). In coding, the researcher assigns words or short phrases (codes) to portions

of data which summarize or qualify their relevance and link related segments of data. Coding can be used with a broad range of different materials – such as interview transcripts, field notes, articles, photographs, or paintings – and for a broad range of research designs, from explorative to focused. Importantly, coding itself is already an interpretative act and thus a "transitional process between data collection and more extensive data analysis" (Saldaña, 2009, p. 4). In putting data in conversation with the researcher's (tacit) knowledge, the study's conceptual approach and specific research interest, "coding generates the bones" (Charmaz 2006, cited in Saldaña, 2009, p. 8) for further analysis.

Coding and the development of a coding structure do not follow a strict chronological order. In vein of the abductive research design of this thesis, practices of data collection, analysis and interpretation interweave. In doing so they "affect[t] each other, and, through their mutual impact, they help contribute to more rigorous conclusions." (Cope, 2010, p. 442). As a consequence, Cope (2010, p. 445) continues, "the process of developing the coding structure for your project is one that is inevitably circular, sporadic and, frankly, messy… coding involves reading and rereading, thinking and rethinking, and developing codes that are tentative and temporary along the way, even during an on-going research project."

A coding frame emerges from and provides a connection among the different codes. Depending on whether the approach is rather deductive or inductive, the coding frame is developed from theory or grounded in empirical data itself. This study's abductive reasoning develops a coding frame through the iterative movement between theory and empirical data. The study develops three distinct frames that focus on different aspects of the research question, namely diversity (1), implicitness and materiality (2), and normativity (3). In addition, two coding frames go beyond the more streamlined analysis and capture a range of recurring themes (4) or support further analysis by coding basic cross-cutting issues and links (5). Coding frames one and three, finally, combine and inform the main stage of data analysis. Table 2, below, provides an overview of all coding frames.

Coding Frame	Coding Technique	Focus
CF 1: Diverse logics perspective	Provisional Coding	Structuring the diversity of alternative practices and narratives thereof
CF 2: Implicitness & Materiality	Process Coding	Distinguishing between different levels of explication and material engagement
CF 3: Degrowth Transition	Normative Coding	Modification of CF2 to accommodate for issues of normativity
CF 4: Grey Codes	Open Coding	20-30 codes that refer to issues of interest
CF 5: Sorting Codes		Codes for every organization and basic information about them, supporting the navigation of other codes

Table 2: Coding Frames 1-5

Coding frame 1 (CF1) focusses on the issue of complexity and translates the considerations of chapter 7 on a structured notion of diversity that allows to grasp patterns in practices' relatedness into an

analytical tool. CF1 develops through provisional coding (Saldaña, 2009) which starts with a pre-formulated list of codes, based on the study's conceptual framework and literature review as well as the researcher's knowledge developed during field work. Successive rounds of coding refine CF1 to comprise five patterns of practices' relatedness – economy, governance, communality, subjectivity, and technology – that guide further analysis.

Coding frame 2 (CF2) focusses on the issues of implicitness and materiality and simplifies the continua of explicitness and material involvement for analytical purposes. CF2 develops through process coding which uses gerunds and is therefore particularly attentive to practices and processes (Saldaña, 2009, p. 77). This coding frame, furthermore, operationalizes the study's interest in enabling and constraining moments. Consequently, it consists of two modes of practices – practices of representation and material practices – and four moments in the implementation of alternative practices – alternatives, enablement, constraints, and compromise.

Coding frame 3 (CF3) focusses on the issue of normativity and builds on CF2. It accounts for different understandings of sustainability and alternatives (see part I). CF3 modifies CF2 by focusing on practices that are in line with degrowth principles (see chapter 7) while maintaining the same code structure.

Coding frame 4 (CF4) includes a wide range of topics that speak to the research question and develops through open coding (Till 2009). Open Coding is a "form of brainstorming, whereby the researcher revisits materials in order to think about possible ideas, themes, and issues" (Till, 2009, p. 629). In contrast to CFs 1-3, CF4 has not internal congruence and is simply a collection of topics that are relevant to the study's broader interest. CF4 is not part of a more streamlined analysis, I therefore refer to its codes as 'grey codes'.

Coding frame 5 (CF5), finally, supports the general navigation of data. CF5 includes all the organizations that are part of the study as well as basic information about financing or legal form. Aside from providing basic information, CF5 allows to filter all sections with reference to other organizations or the cooperation between them. Like CF4 codes, CF5 is not part of the main analysis.

From conceptual framework to coding frames

Coding frame 1: the diverse logics perspective

Logics are patterns of practices' relatedness, or, in other words, different ways how practices hang together and interact. Chapter 7 advances a 'diverse logics perspective' (DLP) as a tool to grasp practices' relations beyond their sites of enactment. It supports the empirical tracing of practices' trajectories that travel through the sites of research but reach beyond the moments and places of field work. The DLP, thus, operationalizes Nicolini's (2013) notion of zooming that enables the researcher to expand the scope, tracking broader connections and interactions with practices across time and

space. The DLP is particularly important to account for the thesis' ambition to investigate a degrowth politics of place beyond place (part II) while facing limitations that bound the bulk of empirical to a specific geographical and temporal context.

During provisional coding and refining emergent categories – inspired by different notions of structured diversity (chapter 7) – are merged, split, cut out, and sharpened. The complete process spans over more than two years and includes versions with up to ten different logics that emerge through iterative processes of theoretical considerations and provisional (re)coding. For reasons of scope, I will not elaborate on the development in detail. Table 3 shows the conclusive version, used for the final rounds of coding and analysis, which comprises five logics: economies, governance, communality, subjectivity and technology.

Code	Description
Economy	Economy captures practices' relatedness through moments of creation, exchange, reciprocity, comparison, and sustenance. It is particularly visible in production, consumption, exchange and distribution.
Communality	Communality captures practices' relatedness through moments of togetherness, interdependence, contestation, and collective identity. It is particularly visible in practices of support, participation, non-violent disagreement, competition, negotiation, and group-formation.
Governance	Governance captures practices' relatedness through moments of rule, domination, power, control and norms. It is particularly visible in bureaucratic practices, law (enforcement), policing, politicking and violence.
Subjectivity	Subjectivity captures practices' relatedness through imaginaries, meanings, theories and concepts on the one hand, and habits, affects, feelings and experiences on the other hand. It is particularly visible in practices of explaining, analyzing, sense-making as well as practices of judgement, and (self-) positioning.
Technology	Technology refers to practices' relatedness through infrastructures, documents, machines, tools, substances, and other artefacts. It is particularly visible in practices based on (modern) technological innovations such as instant messaging, nuclear energy, electro mobility, 3D-printing or living in a smart home.

Table 3: Codes of diverse logics perspective (CF1)

Different rounds of coding – which I detail in the last section of this chapter – apply the logic codes to passages that are of interest for this study's inquiry. This does not mean that segments are always coded with all the logics codes that can be associated with the it (which is often most of them). Rather they are coded with the logics code(s) that seem(s) to be relevant with respect to the research question. Therefore, frequently multiple codings are used, for instance economy and technology, to focus on where different logics meet. Especially the code 'compromise', which is part of CF2 to which I turn next, often contains a trade-off between several dimensions of practices' relatedness.

Coding frame 2: narrating alternatives and material engagement

Narrations of sustainability and their materialization in practices are of central interest for this thesis. In order to operationalize the distinction between talking about and imagining alternatives on the one hand and transforming bodies, artefacts and things according to particular notions of sustainability on

the other hand – a distinction that is conceptually challenging (chapter 8) – the aforementioned continua of explication and material involvement need to be translated into a coding frame. This section traces the development of CF2 by means of the categories outlined in table 4.

	Alternatives	**Enablement**	**Constraints**	**Compromise**
High level of explication	Narrating alternatives	Narrating constraints	Narrating enablement	Narrating compromise
High level of material engagement	Practicing alternatives	Encountering constraints	Encountering enablement	Negotiating compromise

Table 4: Combination of two modes of practices with four moments of transformation

The rows of Table 4 distinguish between practices of representation with a high level of explication on the one side and practices with a high level of material engagement on the other side. The first row of codes – 'high level of explication' – pertain to data that record or document 'discursive practices' (see chapter 8) that means practices which narrate perceived, potential, theoretical, or hypothetical alternatives. The second row of codes – 'high level of material engagement' – applies to data that recount or record 'material practices' that means actual, observed, and experienced practices in which materials do not solely have an 'infrastructural relation' but are exposed to the possibility of transformation (chapter 8). This admittedly rather coarse separation provides a heuristic to capture whether data refer to potentials, ideas, ideals, possibilities, wishes, fears, and thoughts related to sustainability on the one hand. For instance, an interviewee describing the idea of an open source business model. And observation notes that document practices that materialize in and transform bodies, things and artefacts on the other hand. Such as the implementation of an open source business model.

The columns of table 5 detail the different moments of transformation – alternatives, enablement, constraints, and compromise. 'Alternatives' refer to practices which differ from those that are considered to be unsustainable or unjust (I detail below the difficulties of the normativity involved). 'Constraints' refer to restrictive moments complicating the implementation of alternatives. That is, contextual factors, conditions and organizational practices that impede the translation of ideals into practice. 'Enablement' refers to enabling moments facilitating the implementation of alternatives. That is, contextual factors, conditions, strategies and organizational practices that support the translation of ideals into material practice. And 'compromise' refers to trade-offs between possibilities and constraints. That is, the forced, pragmatic, or strategic weighting of some alternatives over others.

Analogous to the distinction between a high level of explicitness and a high level of material engagement with respect to alternatives in general, the coding structure distinguishes between the narration and encountering of enablement, the narrating and encountering of constraints as well as deliberation and negotiation of compromise. That means, the coding captures potential (narrated)

enablement, constraints and deliberations on trade-offs on the one hand. And materialized possibilities, constraints and negotiations on the other hand. Again, of course, this is a coarse distinction that abstracts from the complexity and continuity of the actual spectrum. Table 5 summarizes the codes as used in the coding process.

Code	Description
Narrating alternatives	Codes sections that express how the organization and its practice differ from the business-as-usual that is considered to be unsustainable or unjust.
Narrating constraints	Perceived, potential, theoretical or hypothetical contextual factors, conditions, strategies and organizational practices that impede the translation of ideals into practice
Narrating enablement	Perceived, potential, theoretical or hypothetical contextual factors, conditions, strategies and organizational practices that support the translation of ideals into material practice
Narrating compromise	Perceived, potential, theoretical or hypothetical trade-off between possibilities and constraints
Practicing alternatives	Codes sections documenting the enactment of practices that differ from business-as-usual
Encountering constraints	Actual, material, experienced contextual factors, conditions, strategies and organizational practices that impede the enactment of sustainability-related practices
Encountering enablement	Actual, material, experienced contextual factors, conditions, strategies and organizational practices that support the enactment of sustainability-related practices
Compromising	Actual, material, experienced trade-off between possibilities and constraints.

Table 5: Codes of Process Coding (CF2)

Coding frame 3: strong sustainability

Sustainability is a highly contested concept and therefore difficult to use as descriptive category for coding. Coding frame 2, consequently, runs into a number of difficulties revolving around different notions of sustainability. In particular divergences between the orientation of interviewees' or participants' notion of sustainability on the one hand and the study's grounding in postcapitalist and degrowth scholarship on the other. Consequently, CF 2 needs further development and sharpening in accordance with the study's normative orientation (part I). I call this process *normative coding*, since it adds an evaluative dimension to coding (see figure 10).

Normative coding aligns the codes of CF 2 with degrowth principles (chapter 7). 'Practicing degrowth alternatives', consequently, codes sections that document practices that are relevant from a degrowth perspective. 'Encountering constraints' codes segments that document actual, material, experienced contextual factors, conditions, strategies and organizational practices that impede the enactment of degrowth-oriented practices. Analogous, 'encountering enablement' codes segments that document actual, material, experienced contextual factors, conditions, strategies and organizational practices that support the enactment of degrowth-oriented practices. Finally, 'compromising' refers to actual, material, experienced trade-off between possibilities and constraints for degrowth-oriented practices. CF3, therefore, replaces the second-row codes of CF2 (see table 4)

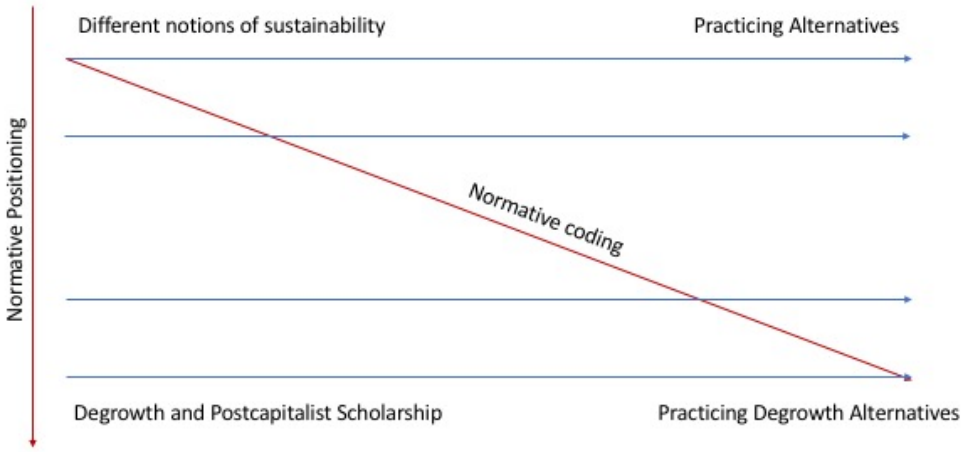

Figure 10: Normative Coding

Normative coding links to the reflections on positionality and normativity in chapter 10. This specification of CF2, then, adds a selective layer over the coded materials that highlights material engagement that is relevant from a degrowth perspective. It specifies research question (a) of *what practices follow from and accompany critiques of unsustainable social relations* (see introduction) to *what practices follow from and accompany a degrowth or postcapitalist critiques of unsustainable social relations*. The same goes for research question (b) *how do facilitating and constraining moments become relevant in sustainability-related practice* (see introduction) to *how do facilitating and constraining moments become relevant in degrowth-oriented practice*.

Code	Description
Practicing degrowth alternatives	Practices that are relevant from a degrowth perspective
Encountering constraints	Actual, material, experienced contextual factors, conditions, strategies and organizational practices that impede the enactment of degrowth-oriented practices.
Encountering enablement	Actual, material, experienced contextual factors, conditions, strategies and organizational practices that support the enactment of degrowth-oriented practices
Compromising	Actual, material, experienced trade-off between possibilities and constraints for degrowth-oriented practices

Table 6: Codes of Normative Coding (CF3)

Triangulation and coding

The coding frames this chapter develops account for different levels of explication and material engagement. Thus far, however, data analysis does not reflect the different kind of data this study uses. As a consequence of applying multiple methods (see chapter 9), analysis faces different kinds of data that require a careful distinction. Interviewing captures primarily practices of representation that allow for inferences about the narration of alternatives. Data from participant observation, instead,

captures both practices of representation (for instance through informal interviewing) and observable practices that are documented and explicated by the researcher. It allows for inferences about material practice. This thesis combines different methods for several reasons (see chapter 9), including the ability to cover both practices of representation and material practices and to collect comprehensive data in face of the study's limitations (such as temporal and financial resources and difficulties to access sites of practices' enactment). Data analysis, however, cannot simply merge interview data with data from participant observation. The remainder of chapter 11, therefore, reflects on two issues. First, how can data analysis triangulate interview and observation data? And second, how does that translate into coding?

Aside from information explicated in interview transcripts and field notes, the acquisition and development of tacit knowledge is an important pillar for data analysis. Tacit knowledge entails, for instance, the ability to assess and contextualize data. The capacity to judge the validity, accuracy, and relevance of information becomes a crucial methodological tool. Inferring practices solely from the observation of their performance severely limits the collection of relevant information. Observation, therefore, transcends mere visual witnessing – 'I only belief what I see with my own eyes' – and becomes a method that combines visual input, experience, intuition, and secondary evidence to build a coherent case. Consequently, there is much potential in bridging the gap between different kinds of data in order to illuminate the activities of interest.

To ensure a systematic procedure and maintain awareness of the limitations of data triangulation, this study structures the coding process in three phases with different foci. The first coding phase, focuses on the narration of alternatives, enablement, constraints and compromise. It codes all interviews including the focus group transcript that all exhibit a high level of explication but do not allow for any conclusions pertaining to material involvement. Coding, at this first stage, combines CF1 (table 3) with the first-row codes (narrating alternatives; narrating enablement; narrating; constraints; and narrating compromise) of CF2 (table 4). Subsequently, a second round codes the field notes from participant observation. In doing so, it adds information on the activities observed and documented during field work. Coding, at this second stage, combines CF1 (table 3) with the whole of CF2 (table 4).

The final (main) coding entails a double shift that includes both triangulation and normative coding. For one thing, it substitutes the second-row codes of CF2 (practicing alternatives, encountering constraints, encountering possibilities, compromising) for the CF3 codes of normative coding (practicing degrowth alternatives, etcetera). For another thing, it applies the codes that infer a high level of material engagement to all data including interview transcripts. The final coding is aware of and attentive to the limitation of interview data, but squares them with insights from participant observation and other methods to ensure that the interviewees' claims and accounts correspond to

actual practice. In my judgment, I rely on tacit knowledge about the participants and their surroundings, general insights into the context, informal interviews, the triangulation of multiple accounts, empathy and trust. Table 7 summarizes the different coding phases.

Phase	Coding Frame	Data
I	CF1 & CF2 (first row)	Interviews & Focus Group
II	CF1 & CF2	Participant Observation
III	CF1 & CF2 (first row) & CF3	All data

Table 7: Different Phases of Coding

Finally, the different coding frames can be combined, setting up a perspective that links diverse forms of practices' relatedness with the different moments in the implementation of alternative practices. The ensuing perspective structures the wealth of data into a number of related categories that support a more detailed understanding of a degrowth transition. Alternatives, for instance, become visible with respect to economies, governance, communality, subjectivities and technology. In the same vein, constraints, enablement, and compromise are specified by different foci on practices' relatedness. As a matter of course, this is a purely analytical move to capture different moments in the complex process of transformation. Part IV builds on this possibility and uses it as orientation to present the thesis' findings.

Part IV: Stuttgart's community economy

Part IV[22] presents the study's findings. It structures into four distinct chapters – alternatives, constraints, enablement, and compromise – that travel from the inquiry on what and how things are done differently to moments that constrain and enable alternative practices and navigate trade-offs. Chapter 12 traces the study's findings on practices that deviate from and challenge prevailing forms of economic, political, cultural, and technological conduct. In doing so, it sketches the landscape of Stuttgart's community economy. Chapter 13, then, presents aspects that either constrain the organizations directly or limit the effect of their practices for a degrowth transition. Aside constraints, the study also uncovers a number of factors that facilitate Stuttgart's community economy. Chapter 14 identifies institutional arrangements and infrastructures that support organizations in their orientation towards a degrowth transition. Chapter 15, finally, turns to compromise. In light of diverse constraining and enabling factors, organizations have to trade-off between different priorities and develop strategies to navigate transformative geographies.

This arc of suspense ensues from the research questions that guide this thesis (see introduction) and which chapter 11 translates into coding frames. The methodological consideration in part III draw attention to the difference between speaking about alternatives and practicing alternatives which CF2 specifies and operationalizes. This distinction is crucial in order to acknowledge different kinds of data and the inferences they allow for. A quick refreshment recalls the conceptual and methodological background before continuing with its analytical consequences: Practice theoretical perspectives investigate the material unfolding of social phenomena including their conceptual and discursive moments (see chapter 5). Ethnographic forms of data collection operationalize this thrust by attending to the entanglement of bodies, artefacts, competences and meanings as observable and perceivable from a researcher's perspective – rather than (solely) inferring the processes of social-material co-constitution from the accounts of interviewees (see chapter 8). Combining different methodical approaches enriches the research process by attending to both explicit and implicit moments of practice and allowing for more comprehensive data collection with limited resources (see chapter 9). Coding frame 2 resumes these different modalities and recasts the distinction between talking about and imagining alternatives on the one hand and transforming bodies, artefacts and things according

[22] Small sections of this part have been published in the research paper (Schmid, B. (2018). Structured Diversity: A Practice Theory Approach to Post-Growth Organizations. *Management Revue*, *29*(3), 281–310. https://doi.org/10.5771/0935-9915-2018-3-281) or are forthcoming in a research paper in Ephemera: Schmid, B. (forthcoming). Repair's diverse transformative geographies – lessons from a maker community in Stuttgart. *Ephemera: Theory and Politics in Organization*.

to particular notions of sustainability on the other hand in the coarse separation of *narrating* versus *practicing* alternatives. The former captures potentials, ideas, ideals, possibilities, wishes, fears, and thoughts, whereas the latter documents practices that materialize in and transform bodies, things and artefacts.

Coding frame 2, therefore, is an important step for data analysis. The primary concern of this section, however, is not the difference itself between representing and practicing alternatives, but the actual implementation of alternatives. Hence, rather than detailing the divergence between (a) what participants say that should be done, (b) what participants say that they do and (c) what the researcher observes in practice, the findings focus on the enactment of alternatives, while emphasizing the importance of being aware of different levels of explication and material involvement in researching transformative geographies. Consequently, each of the following subchapters is set up to trace the study's interest in practicing alternatives, encountering constraints, encountering enablement and compromising respectively. That means I do not further pursue the operationalization of narrating alternatives on the one hand and practicing alternatives on the other. Instead, all forms of data – from interviewing, observation, desktop research and focus groups – are taken together to provide a comprehensive image of alternatives, enablement, constraints and compromise (see chapter 11). In concrete terms this means that each of the following sections contains a number of quotes that illustrate central points. Yet, the quotes are selected carefully and do not stand for themselves. Interview data is squared with insights from participant observation and other methods to ensure that interviewees' claims and accounts correspond to actual practice. In my judgment, I rely on tacit knowledge about the participants and their surroundings, general insights into the context, informal interviews, the triangulation of multiple accounts, empathy and trust.

Where useful and applicable, the diverse logics perspective established in part II and further operationalized in part III structures the main body of the ensuing chapters. On occasion, however, the findings include topics from grey codes that do not fit neatly with the perspective on practices' relatedness through economy, governance, communality, subjectivity, or technology. Rather than a rigid categorization, the diverse logics perspective provides a supportive orientation which remains flexible enough to accommodate other insights.

Chapter 12: Alternatives

Alternatives refer to *doings and sayings that deviate from and challenge explicit and implicit norms and prevailing forms of economic, political, cultural and technological relatedness amongst humans and with the more-than-human world*. As detailed above, this neither implies that alternatives are a second choice (White & Williams, 2016) nor that alternatives' capacity and significance for human co-

existence is per se subordinate to more common forms of relatedness (Schmid & Smith, resubmitted). From a diverse economies perspective, alternative economies are "(1) [p]rocesses of production, exchange, labor/compensation, finance, and consumption that are intentionally different from mainstream (capitalist) economic activity" as well as "(2) an alternative representation of economy as a heterogeneous and proliferative social space" (Healy, 2009, p. 338; see chapter 2). Acknowledging the sites of Stuttgart's community economy as heterogeneous spaces where diverse practices meet and interrelate, the study's interest in alternativeness is not restricted to practices' relatedness through moments of creation, exchange, reciprocity and material provision (what has been referred to as the logic of economy) but also through modes of governance, subjectivities, communality and technology. Subsequent to an overview over different motivations and philosophies in general, the chapter covers the findings on alternative practices across these different dimensions.

Of infidels and agnostics

This introductory section traces respondents' different objectives and economic philosophies. The organizations that are part of this study were selected due to their opposition to linear, profit-oriented economizing as expressed in their public appearance, their self-positioning and as well as their practices (see chapter 9). It is thus of little surprise to encounter a range of alternative practices in the aforementioned sense. A central precept of all organizations is a critique of self-referential notions of economic practice, that means economizing for economy's or growth's sake.

> Es ist ja nicht so, dass man wirtschaftet, dass es Menschen besser geht. Sondern momentan ist es so, dass man wirtschaftet, weil man wirtschaftet. Und weil es ein paar Leute gibt die eine Menge Kohle damit verdienen. Oder weil da einfach Geld herumliegt, das mehr werden will. Das ist natürlich schon mal eine recht obskure Ausgangslage. Und von dem wegzukommen, das ist natürlich unser Ziel, keine Frage. (I_E02a)[23]

A central driver for all organizations is the sense of doing something meaningful and addressing social and environmental issues. While the organizations experiment with different legal forms and modes of financing, there is a tendency to engage in market-oriented practices in order to be financially self-sufficient while focusing on non-monetary objectives. The majority of participants have a long-standing involvement with the voluntary sector but struggle with the precariousness of their engagement. Indeed, while a number of organizations are based on non-monetary engagement and some rely on public funding and/or private donations, much of the innovative organizing explored in this study explicitly emerges from the need to devise (at least partially) financially independent organizations.

[23] It's not that one does business in such a way that people are better off. Rather, at the moment, it's that one does business because ones does business. And because there are a few people who earn a lot of money with it. Or simply because there is money lying around that wants to be capitalized. That is of course a rather obscure starting position. And to get away from that is our goal of course, no question.

> Ich brauche jetzt etwas, was funktioniert, was sich finanziert. Was aber nicht heißt, es muss irgendwie auf Gewinnmaximierung, sondern eher auf Sinnmaximierung hinauslaufen. (I_E01a)[24]

A (partial) financial independence provides the participants with some autonomy to pursue ethical goals while sustaining themselves and their organizations. Its thus for both personal reasons – making a living, receiving a return or appreciation – and politico-economic reasons – autonomy of decision-making, having resources at disposal – that some take an entrepreneurial approach to activism. At this, the need for diverse strategies and trade-offs prevails, which chapter 15 discusses in detail.

> Alles was quasi von externen Geldquellen abhängig ist, ist auf Dauer für mich nicht nachhaltig. Weil du dann immer für jemand anderen arbeitest oder regelmäßig die Hand aufhalten musst – also betteln. Dabei kannst du halt nicht frei agieren. Das heißt du bist immer abhängig. Und das ist eben nicht stabil. (I_A01a)[25]

Describing the case at hand in terms of (eco-)social entrepreneurship, however, oversimplifies the trade-off between an economic orientation on the one hand and ecological and social objectives on the other hand. The monetization of ethical activities is a means rather than an end. In other words, while the discourse on social enterprises exhibits a certain thrust to integrate (eco-)social objectives with the (seemingly) self-sustaining set-up of market-oriented organizing (see chapter 3), the extraction of revenue from social or ecological engagement, here, is perceived solely as (often rather ambiguous) means of building independent organizations within a capitalist economy.

> Ich brauche irgendeine Hülle, einen Raum. Einen Raum, in dem Wirtschaften möglich ist im bestehenden System. Aber *innerhalb* ist der Raum anders gestaltet. (I_E01a)[26]

This is, however, not to obscure that the organizations differ with respect to problem diagnosis, causal attribution, strategies and goals on the one hand and realization on the other. Most protagonists problematize a growth-based capitalist economy and some firmly emphasize the urgency to establish economic arrangements that renounce a focus on growth. Yet, others discuss social and environmental sustainability without reference to economic (de)growth or explicitly subscribe to growth agnosticism, instead problematizing the linearity of current economies and the lack of implementation of technological possibilities.

> Cradle 2 Cradle spricht da gar keine Präferenz aus. Sondern wenn wir weiter wachsen wollen, dann ist geschickt das in Kreisläufen zu tun. Und wenn wir mehr auf die Suffizienzsstrategie setzen, dann sollte man trotzdem das, was man immer noch konsumiert in Kreisläufen organisieren. Das ist auf jeden Fall quasi ein Konzept das beides da umschließt und erstmals keine Aussage trifft. (I_E08)[27]

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[24] I need something that works, that can finance itself. But this doesn't mean it has to be a maximization of profits, rather a maximization of meaning.

[25] Everything that is dependent on external sources of money is not sustainable in the long run. Because then you always work for someone else or regularly hold out a tin cup - begging - and so on. You just can't act freely. That means you are always dependent. And that's just not stable.

[26] I need a shell, a space. A space in which economic activity is possible within the existing system. But *within* that space is designed differently.

[27] Cradle 2 Cradle does not express any preference at all. But if we want to grow further, then it is a good idea to do this with a circular economy. And if we want to focus more on the sufficiency strategy, then we should still

Furthermore, opposition against economic exploitation and growthmanship does not translate into practice in any straightforward way. Numerous external and internal constraints as well as the wealth of possibilities in prefiguring, shaping, and promoting alternatives – let alone the diverse ethics and perspectives that accompany alternative practices – render the sites of alternative economizing colorful, creative and confusing. Chapters 13 and 14 below take a close look at constraints and enablement respectively. Here, in a more general sense, it is important to note the multiple shades of dissonances between consideration and application, beliefs and realization, sayings and doings. Note the qualification towards the middle of the following statement:

> …dass man nicht sagt: konsumiere noch mehr damit wir mehr verdienen, sondern eher zu kommunizieren: brauchst du das jetzt wirklich oder kannst du darauf verzichten? Und … weil es wichtig ist, dass wir alle weniger konsumieren und weniger Ressourcen verbrauchen. Das geht halt nicht indem wir noch mehr nachhaltige Dinge kaufen, sondern man muss auch auf viel verzichten. Und das ist was wir versuchen zu leben. Und das würden wir dann, *sobald wir die Möglichkeit haben da auch wirklich mit in unser Geschäftsmodell einbringen*. Und vielleicht ist das ja wirklich ein Schritt in die Richtung, wenn man wirklich versucht von kleinen Herstellern zu beziehen, die direkt um die Ecke sind, weil dadurch ja doch wieder Ressourcen geschont werden…aber dass man da wirklich sagt, dass man nicht immer alles auf noch mehr Konsum eben richtet. (I_E06a, emphasis added)[28]

During the first half of the quote, the interviewee subscribes to ideas of degrowth and infers therefrom a need to not only sell more sustainable products but also avoid unnecessary sales. Sufficiency, however, in the sense of consuming less turns out to run against his organization's own interests. *Smark*, the organization the interviewee represents, runs fully automated supermarkets that sell local and organic food. To navigate this contradiction, the organization has to translate sufficiency into something that works economically at the end of the day. While *Smark* focusses on purchasing its foodstuff from local farmers, the imperative of reaching a particular level of sales – stimulated through marketing measures – prevails. A coherent integration of sustainability in organizational practices, then, is a constant challenge. The subsequent chapters show different priorities and strategies how organizations such as *Smark* navigate the challenging landscape of community economies and do (or do not) contribute to a degrowth transition.

organize what we still consume in cycles. In any case, this is a concept that embraces both and does not prefer one over the other.

[28] …that you don't say: consume more so that we earn more, but rather communicate: do you really need this or can you do without it? And because it's important that we consume less and consume even less resources. That's not possible by buying more sustainable things, but rather you have to refrain from many things. This is what we try to live. And *as soon as we have the opportunity, we would really bring that into our business model*. And maybe that really is a step in the right direction if you really try to buy from small manufacturers that are right around the corner, because that saves resources again...but that one decides not to focus on even more consumption.

Slow technology – supporting sufficiency and subsistence

One way of meeting the challenges that *Smark* faces is the use of technological means to attain a competitive advantage which, in turn, increases the organization's capacity to focus on sustainability-related issues.

> Und unser Ziel ist es eben mit unserem Geschäftsmodell alles, also sowohl die Produkte als auch die Logistik dahinter, die nachhaltig zu gestalten. Und das auch teilweise dadurch zu erreichen, dass man viele Prozesse automatisiert und einfach auch schlanker gestaltet, um quasi Ressourcen einsparen zu können. (I_E06a)[29]

Technology, in this case, however, is not seen as solution in an off itself but rather as means to facilitate more sustainable modes of distribution and consumption. Against the background of a sufficiency orientation, the application of technology is accompanied by a broader critique of growth-based economizing. In line with critical perspectives on technological fixes, many participants make it clear that a focus on technology alone does not suffice. In contrast to smart cities, homes, grids and other forms of smartness usually associated with the green economy, a reflexive use of technology emerges: 'slow technology'.

A conscious, deliberate, emancipating and subversive approach to technology is at the heart of a number of organizations that were investigated. Most prominently, *Slowtec,* reflects this awareness in its very name. *Slowtec* describes its mission as follows:

> Wir entwickeln nachhaltige Technologie, die den Menschen in seiner Entwicklung und in seinem Leben unterstützt, Lebensqualität langfristig, also auch für künftige Generationen garantiert und dabei einen ganzheitlichen Blick auf seinen Bedarf und seine Lebensgrundlage behält: unsere Erde. (slowtec.org)[30]

Slowtec is a team of engineers that develops, constructs, and programs soft- and hardware products that support sustainability-related practices. Technology, for *Slowtec*, is not just a passive backdrop for its business activities or a means for accumulation but a possibility to further alternative ways of living and economizing if applied wisely. Technology, thereby, is anything but value neutral. Rather, the organization continuously reflects on the upsides and downsides of technology depending on kind, size, origin and application. In developing and marketing technologies, *Slowtec* raises the question:

> Wieviel Technologie braucht es, um sinnvoll für den Menschen und die Gesellschaft zu wirken und wann ist es *too much*? (I_E01a)[31]

Slow technology, however, is not to be mistaken for low technology. All technology-oriented enterprises in this study operate with state-of-the-art software and hardware such as automated

[29] And with our business model, our goal is to make everything sustainable, both the products and the logistics behind them. And to achieve this in part by automating many processes and simply making them leaner in order to save resources.

[30] We develop sustainable technologies, that support humans in their development and living and grant long term quality of life – that means also that of future generations – while maintaining a holistic view of human needs and our basis of existence: our earth

[31] How much technology is needed to be meaningful for people and society and when is it too much?

system control, 3D printing or photovoltaics, to only name a few. But these high-tech potentials are predominantly applied to support sufficiency and subsistence, rather than overly technologized livelihoods. One of *Slowtec*'s projects is the *Krautomat*, a partially automated indoor herbage growing system (see illustration 1). The product is designed to support year-round autonomous growing of foodstuff. As in many cases, however, a number of factors hamper the full realization of development and production (see chapter 13).

Illustration 1: Sketch of the 'Krautomat' (slowtec.org)

A reoccurring theme for sufficiency and subsistence-oriented technologies is the creation of circular flows of water, energy and nutrients. *Grünfisch* is an association that develops and constructs aquaponics systems. Integrating fish farming with plant growing, they generate partly closed nutrition cycles eliminating the need to add fertilizers. In a running system, fish food is the only input and crops the only output.

> Also die Grundidee bei der Sache ist einfach der Kreislauf und das quasi Autarke. Oder auch die Dezentralität. Das sind so ganz viele Stichworte, die im Grunde bei der Aquaponik zusammenkommen. Natürlich auch verbunden mit einem persönlichen Interesse an Natur. Aber so vom ökologischen Kreislauf her finde ich das einfach spannend, also dass man Dinge baut, sogar hier auf so einem Dach, wo ja eine total tote Umgebung ist. Aber man macht Leben. Man bringt Leben hierhin (I_A02)[32]

Geco-Gardens is a small venture that constructs and markets systems based on a similar principle but with lobworms. The worms decompose organic kitchen waste releasing nutrients that fertilize the

[32] So the basic idea of the thing is simply circularity and self-sufficiency. And also decentralization. These are a number of ideas that come together in aquaponics. Of course, also connected to a personal interest in nature. But I find that so exciting in terms of the ecological cycle, that you build things, even here on the roof, which is a totally dead environment. But you make life. You bring life here.

plants in the system. Solar panels provide the energy to circulate the water for the transport of nutrients (illustration 3). *ownworld* goes one step further in integrating energy, water and nutrient cycles into a building – the *ownhome* (illustration 2). The *ownhome* is constructed to minimize resource consumption through a combination of sufficiency and efficiency. Water and energy needs are fully covered by solar energy and rainfall, both harnessed and processed through state-of-the-art technologies to provide electricity and clean water respectively. Used water is circulated and treated again through constructed wetland and UV disinfection to provide for raw water and additionally through reverse osmosis for drinking water. In addition to energy and water a third focus is on food production and the nutrient cycle.

> Nicht zuletzt soll auch der Kreislauf der Nährstoffe erlebbar gemacht werden. Aus diesem Grund gibt es eine moderne Trockentrenntoilette. Die Nährstoffe, die über den Anbau der Lebensmittel der Erde entnommen und durch den menschlichen Organismus in hochwertigen Dünger verwandelt werden, gelangen wieder zurück in den natürlichen Nährstoffkreislauf. (ownworld Flyer)[33]

Illustration 2: ownhome (own photo)

After my first visit to the *ownhome* I noted,

> The project is primarily driven by a desire for a modest but comfortable lifestyle that is socially and ecologically just and allows for more freedom and time wealth. The basic idea is to be independent of provisioning of water and energy and to some extent food. This then leads to an increased financial independence and independence from participating in unsustainable practice. (B_E05a)

The use of technology, here, differs fundamentally from the techno-optimism and managerialism of green-growth approaches. Rather than contributing to capital accumulation, technology supports

[33] Last but not least, the cycle of nutrients should also be brought to life. For this reason, there is a modern urine-diverting dry toilet. The nutrients, which are taken from the earth through the cultivation of food and transformed into high-quality fertilizers by the human organism, are returned to the natural nutrient cycle.

sufficiency and subsistence-oriented practices in a modern world. Technology, then, is a means to withdraw from spaces of capitalist economizing. In that way, organizations like *Slowtec*, *ownworld* and *Geco-Gardens*, in particular, use technology to gain autonomy over everyday needs.

> Eigentlich genau darum geht es ja. Dass man versucht einen Lebensstil zu etablieren der nicht in dieses normale System reinpasst. Dass man hin geht und sagt: Ich versuche möglichst viel selbst zu machen. Und in meinem Fall halt möglichst viel Nahrung selbst zu produzieren in verschiedenen Gärten, daheim, in der Stadt, mit dem Geco-System, mit der Aquaponik und wenn man natürlich so was macht, dann steckt man seine Arbeitszeit direkt in das Produkt und lässt dann einfach das Geld weg. (I_E04)[34]

Illustration 3: Geco-Gardens' vertical farm system with lobworms (own photo)

Other projects are less focused on the development and spread of new (highly technical) tools and instead advocate for a shift to alternative and possible simpler technologies. *Critical Mass*, for instance, is a monthly event where a large group of cyclists obstruct traffic to demonstrate against automobility. Depending on the season, a few hundred up to 2000 cyclists claim Stuttgart's streets to demonstrate that more inclusive and sustainable mobility technologies already exist.

Unlocking a sustainable local economy

Sufficiency and subsistence-oriented technologies are important parts of a localized and sustainable economy. Nevertheless, while sufficiency and subsistence technologies reduce the need (or desire) for consumption, other needs and wants prevail that cannot be fulfilled locally and sustainably. In response, a number of organizations seek to establish non-exploitative relations of production and

[34] Actually, that's what this is all about. That one tries to establish a lifestyle that does not fit into the system. That you say: I try to do as much as possible by myself. And in my case to produce as much food as possible in different gardens, at home, in the city, with the Geco-system, with aquaponics. And, of course, if you do something like that, then you put your working time directly into the product without the use of money.

exchange through fair sourcing of materials, just working conditions, durable products, accessible knowledge and appropriate institutional arrangements. Many participants turn to debates on social entrepreneurship and degrowth for inspiration, but are disappointed by the lack of tangible outcomes these movements have yet to produce.

> Aber was natürlich katastrophal ist und da darf man sich auch gar nichts vormachen, ist gerade bei Konzepten wie der Postwachstumsökonomie, da gibt es kaum jemanden der ein praktisches Produkt liefern könnte. Und das ist unser Anspruch gewesen. Da die Brücke zu schlagen und zu sagen: Wir haben hier irgendwie eine großartige Theorie, das ist ja schön, aber keiner hat ein Produkt dazu. Keiner hat irgendwie einen anfassbaren Vorschlag, wie so etwas in einem Wirtschaftssystem aussehen kann. (I_E02a)[35]

As a consequence, some organizations try to translate degrowth principles into practice by integrating considerations around social justice and ecological sustainability into practices of design, production, and distribution. Longevity, reparability, circularity, modularity and open source, for instance, become an elementary part in product design. And the production process is based on fair sourcing of resources and fair working conditions. For degrowth-oriented organizations, then, this means not only to reflect on the role of technology and social needs (see previous section) but also the question what is produced and for whom. In doing so, some practitioners…

> …haben die Absicht die Art und Weise wie Elektroprodukte gegenwärtig hergestellt werden zu ändern und positiv zu beeinflussen. Und positiv in einem Sinne, dass sozusagen die Gesellschaft und Natur in den Mittelpunkt gerückt werden. (I_E02a)[36]

Relumity, for instance, is an eco-social startup that engages in the development, production, and sale of repairable lamps. *Relumity*'s business model is grounded in the critique of the wastefulness of mainstream product-design that ignores longevity and reparability of products. The realization that light bulbs cannot be repaired and deliberations around the possibility to do so motivated the founders to conceive an alternative. Financed primarily through a crowdfunding campaign, *Relumity* developed, produced and sold a few hundred private-use household lamps. *Relumity #LED1*'s design is based on longevity, modular design, open source, and reparability (illustration 4). Aside from being exchangeable, some of the lamp's parts are easily available (such as the Petri dish used for coverage), or are design for local (re)production (such as the 3D printed outer shell).

[35] But what's catastrophic, of course, and you can't fool yourself with that, is with concepts like the post-growth economy, there's hardly anyone who has a tangible product. And that was our claim. To bridge the gap and say: we somehow have a great theory here, that's nice, but nobody has a product for it. Nobody has any tangible suggestions as to what something like this could look like in an economic system.

[36] We intend to change and positively influence the way electrical products are currently produced. And positive in the sense that society and nature are the focus

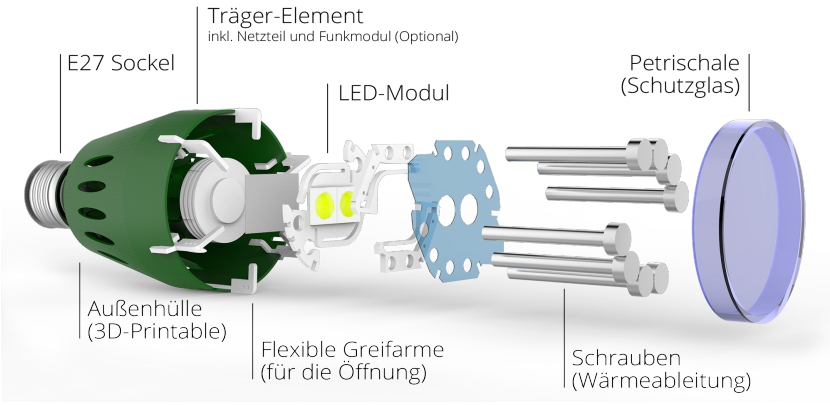

Illustration 4: Relumity #LED1 (relumity.org)

In addition to the development of novel products that internalize degrowth principles, other organizations set up a broader infrastructure that enables individuals to engage in sustainability-related practices. Repair, local production, and sharing constitute central practices around which alternative economies evolve (Lange & Bürkner, 2018; Paech, 2016; Schmid, forthcoming). The open workshop that constitutes the primary site for this study's fieldwork (chapter 9) prominently features these activities. *HOBBYHIMMEL* is a publicly accessible facility with high-tech and low-tech tools and machinery providing low threshold access to productive infrastructures (see illustration 5). Different work areas including woodwork, metalworking and FabLab (fabrication laboratory) enable individuals and organizations to engage in sustainability-related practices such as making, repairing, recycling, hacking, and sharing. Furthermore, the workshop houses a number of degrowth-related events and projects such as repair cafés. Repair cafés are regular meetings that coordinate the spatiotemporal proximity of materials, competences and meanings to enable community-supported, decommodified repair. Stuttgart has several repair cafés, two of which were part of this study. One hosted by the open workshop itself – which for a lack of name and legal form refer to as *Reparaturcafé.* Another related repair café is organized and hosted by the association *Werkstadt e.V.*

Offline repair related organizing has an online counterpart in repositories for repair manuals and digital design files. *iFixit* hosts an online collection of repair manuals and sells corresponding specialty tools and spares. The organization operates its sole European branch office in Stuttgart and occasionally supports repair-related events. In this vein, various forms of repair-related organizing that include non-monetized repair events, accessible permanent work spaces, reparable products and cultural interventions interlock within and without the local context.

Illustration 5: HOBBYHIMMEL entrance area; (hobbyhimmel.de)

Sharing is another pillar of local alternative economies. Sharing supports the reduction of resource consumption through a more efficient utilization of products. *HOBBYHIMMEL*, for instance, does not only provide access to a productive infrastructure, it also reduces the need for individual ownership of tools and machinery.

> Also, ein elementares Thema ist eben Dinge zu teilen. Wenn bei uns zum Beispiel in den letzten zweieinhalb Jahren ich sag mal 300 Leute die gleiche Stichsäge benutzt haben, dann haben wir 299 Stichsägen eingespart. Die nicht produziert werden mussten, die nicht verschickt werden mussten. Also dieser ganze ökologische Fußabdruck von den Rohstoffen über die Herstellung, Verpackung, Versand und Entsorgung. Ja, das ist alles weggefallen, weil es nicht nötig war. Weil sie effizient eingesetzt wurde, die Ressource Stichsäge. (I_A01b)[37]

Sharing, at times, is part of a more comprehensive commoning of resources, that means the collective ownership and administration of goods, ideas, or infrastructures (see chapter 2). Although organizations' legal form, generally, does not formally accommodate commoning, *HOBBYHIMMEL*, *Lastenrad*, and *teilbar* constitute organizations that integrate several principles of a commons. *Lastenrad* is an initiative that coordinates, administers, and maintains a free cargo-bike lending system. *teilbar* coordinates a common pool of goods that can be borrowed without payments. Organizing goods and infrastructures as (partial-) commons decommodifies access and thus makes resources available to individuals and organizations outside of monetized economic relations.

[37] An elementary topic is the sharing of things. If in the workshop, for instance, 300 people have used the same jigsaw during the last two and a half years, we have saved 299 jigsaws. They didn't have to be produced, they didn't have to be shipped. So this whole ecological footprint from the raw materials to the production, packaging, shipping, disposal at the end. Yes, all this was omitted because it was not necessary, because the resource *jigsaw* was used efficiently.

A politics of pragmatism

Alternative forms of economic organization go hand in hand with alternative forms of governance. This reflects both in the organizational set-ups and in the ways protagonists interpret and engage with institutional regulations. Most organizations, thereby, are not confrontational but rather pragmatic in the conduct of their everyday activities. Although, in many cases statutory provisions and regulations severely strain organizational resources and leeway (see chapter 13) they are rarely a primary focus of organizations' activities. That means, most protagonists are less concerned with an overly political approach to 'change to rules of practices' (chapters 6 and 7) than with the development of practical and tangible solution to social and ecological issues. While not all share the same visions, solution-focused pragmatism guides the activities of most organizations.

> Wir schaffen die Realität in unseren Möglichkeiten, ohne dass wir die Energie dazu verbrauchen, um da jetzt Grenzen groß zu verhämmern. Sondern wir fokussieren uns vielmehr auf den Wandel an sich, als auf die Probleme. (F01_1h17min20)[38]

This pragmatism, goes hand in hand with fairly undogmatic ways. Although most members of and contributors to the eco-social enterprises in this study have indeed fairly articulate critiques of socio-ecological injustices, there is much caution towards ideologically-driven practice.

> Was mir ganz wichtig ist: Weder ich noch die Leute aus unserem Team sind Dogmatiker. Also es geht nicht darum, und das ist ein bisschen, was bei der Postwachstumsökonomie, was mich ein bisschen stört, dass wir sagen wie es sein soll. Sondern wir kritisieren die gegenwärtige Situationen oder Ausgangslagen und wollen mit unserem Konzept einfach eine Debatte zu dem Thema anstoßen. (I_E02a)[39]

Interestingly, many participants do not perceive their practices to be political, which can be generally attributed to a narrow understanding of politics as confined to the sphere of formal political institutions. Nevertheless, there is a broad dissatisfaction with the incompatibility of current administrative practices and the organizations' values and goals (see chapter 13). Some organizations, indeed, explicitly challenge political and bureaucratic institutions that lack an adequate consideration of entrepreneurship that is geared towards social and ecological concerns rather than profits. *em-faktor* and the *Economy for the Common Good*, for instance, demand a more sophisticated consideration of non-profit-oriented organizations in legal frameworks. In particular a reformulation of the criteria defining common-interest organizations and of the taxation laws associated therewith.

> Wir haben ein social-profit Manifest veröffentlicht. Hinter diesem Begriff steckt im Grunde auch so die Vision, dass das Gemeinnützigkeitsrecht umgestaltet werden sollte, sowie auch die Vision, dass man

[38] We create the reality within our possibilities, not wasting our energy on establishing boundaries. Rather we focus on change itself and not on the problems.

[39] What is very important to me: neither I nor the people from our team ... are dogmatists. It's not about –, and that's something that bothers me a bit in post-growth economics – that we say what it's supposed to be like. Instead we criticize the current situation and want to use our concept to initiate a debate on the subject.

> insgesamt Unternehmen an ihrer Wirkung misst und nicht an irgendwelchen Gewinnen. Der beste Begriff wäre eigentlich, wenn man beim Englischen bleiben will, 'social-impact Organization'. (I_E03)[40]
>
> Das ist ja eine der Hauptforderungen der Gemeinwohlökonomie, dass Unternehmen, die eine gute Gemeinwohlbilanz vorlegen können auch andere Steuern zahlen. (I_L01)[41]

em-faktor already bases its cooperation with other enterprises on ethical principles rather than vacuous legal categories. *em-faktor – Die social profit Agentur GmbH* is a communication agency offering campaigning, fundraising, corporate social responsibility, and branding services. Customers and partners are primarily organizations with a social or environmental purpose. Although legally registered as for-profit organization, *em-faktor* prioritizes non-monetary objectives. The organization is audited by the *Economy for the Common Good* (ECG) and shows a close association, in terms of content as well as personnel, with the local ECG group. ECG is a transnational organization comprising over 100 local chapters working towards an economic model that values organizations according to their contribution to the common good instead of financial profits (see illustration 6). A central demand of the ECG is to change legal frameworks in accordance with public interests to create favorable conditions for organizations that solve, over those that cause, social injustices and environmental destruction. It sees a key leverage, for instance, in charity law and taxation systems.

VALUE / STAKEHOLDER	HUMAN DIGNITY	SOLIDARITY AND SOCIAL JUSTICE	ENVIRONMENTAL SUSTAINABILITY	TRANSPARENCY AND CO-DETERMINATION
A: SUPPLIERS	**A1** Human dignity in the supply chain	**A2** Solidarity and social justice in the supply chain	**A3** Environmental sustainability in the supply chain	**A4** Transparency and co-determination in the supply chain
B: OWNERS, EQUITY- AND FINANCIAL SERVICE PROVIDERS	**B1** Ethical position in relation to financial resources	**B2** Social position in relation to financial resources	**B3** Use of funds in relation to the environment	**B4** Ownership and co-determination
C: EMPLOYEES	**C1** Human dignity in the workplace and working environment	**C2** Self-determined working arrangements	**C3** Environmentally friendly behaviour of staff	**C4** Co-determination and transparency within the organisation
D: CUSTOMERS AND BUSINESS PARTNERS	**D1** Ethical customer relations	**D2** Cooperation and solidarity with other companies	**D3** Impact on the environment of the use and disposal of products and services	**D4** Customer participation and product transparency
E: SOCIAL ENVIRONMENT	**E1** Purpose of products and services and their effects on society	**E2** Contribution to the community	**E3** Reduction of environmental impact	**E4** Social co-determination and transparency

Illustration 6: Common good matrix 5.0 (ecogood.org)

[40] We have published a social-profit manifesto. Behind this term lies the claim that the non-profit law should be reshaped, as well as the vision that companies in general should be measured by their impact and not by their financial profits. Keeping with English, the best term would actually be 'social-impact organization'.
[41] One of the main demands of the Economy for the Common Good is that companies with a favorable Common Good balance pay different taxes.

In Stuttgart, the ECG has successfully introduced their agenda into communal politics. The municipality of Stuttgart pioneered the Economy for the Common Good by auditing four city-owned enterprises: the *Hafen GmbH* (operator of Stuttgart's harbor), *Stuttgarter Wohnungsbaugesellschaft* (building association), *Stuttgarter Entwässerungsbetrieb* (dewatering operation) and the *Eigenbetrieb Leben und Wohnen* (social services). After an initial audit, the latter two continued with the detailed ECG auditing process.

Trust-based economies

Individual organizations and groups in the sample experiment with non-hierarchical structures and trust-based cooperation. Inspired by alternative organizational forms that are grounded in principles of self-management – as, for instance, advanced by the writings of Frederic Laloux (2014) and the insights of Holacracy (Robertson, 2015) – these organizations evenly distribute (decision-making) competences and responsibilities. In lieu of control mechanisms, particular decision-making procedures are in place that all participants must abide by. Furthermore, a flexible system of roles which the individual participants assume ensures that responsibilities are clearly defined and transparent. By engaging in self-management, these organizations cultivate a form of togetherness that dispenses with control and command.

> Von der Organisation her gibt es keinen Chef. Ich bin zwar nach außen hin offizieller Geschäftsführer. Das muss ich sein aufgrund der GmbH. Aber innerhalb entscheiden die Leute, die mitmachen, nicht ich. Und dass das funktioniert braucht natürlich bestimmte Prinzipien: Transparenz, Vertrauen und so weiter. Aber auch da ist jetzt eben die Frage, wie können wir das Unternehmen aufbauen, wie kann man überhaupt ein Unternehmen aufbauen das unter diesen Bedingungen funktioniert. (I_E01a)[42]

Trust does not only play an important role within specific organizations, but also with respect to the cooperation between diverse participants and organizations. Many activities, such as sharing and volunteering across different organizations, lack formal frameworks and the exchange of value-equivalents. Trust, thereby, is not simply premised on close personal acquaintance, but involves shared meanings, common goals and forms of belonging. By and large, two related tendencies or forms of trust interweave. First, the trust in a common cause. And second, the trust in each other. The 'trust-based economy' that emerges has many facets, some of which are quite elusive for empirical research. In the following, I attempt to trace different ways in which trust characterizes (certain parts of) Stuttgart's community economy.

Organizations and individuals that share common values constitute a network based on solidarity, trust and mutual help. Volunteering is an important cornerstone for most organizations. That means, many

[42] From an organizational point of view, there is no boss. I am the official managing director. That's what I have to be because of the GmbH [for-profit legal form]. But within the company, the people who take part decide, not me. This requires certain principles: transparency, trust and so on. But there is also the question, how we can set up the company so that works under these conditions.

participants contribute to one of more organizations practically or financially. The sense of contributing to a meaningful endeavor is a central driver in Stuttgart's community economy. Moreover, people's engagement is based on the confidence that the community continuous to work for common ideals. Trust, therefore, is closely connected with a shared sense of contribution to a greater cause.

> Im Moment gibt es ein sehr starkes, auf Vertrauen basiertes, kooperatives Miteinander nenne ich es mal. Das heißt, man erkennt und nimmt den Wert der Idee des Anderen wahr und nimmt daraus auch so etwas wie einen immateriellen Wert, an der Realisierung der Idee mitzuwirken. Also das ist ein interessanter intrinsischer Motivator, den ich da feststelle. Aber wie gesagt, es ist eine hochgradig subtile und latente Dynamik, die mir nicht ganz zugänglich ist. Aber sie fühlt sich sehr menschlich an. (I_E02bii)[43]

> Es gibt etwas, was uns verbindet, dieser gemeinsame Sinn oder das gemeinsame Leiden unter den Bedingungen, unter denen wir sind. Und da versuchen wir jeweils in unseren Organisationen neue Wege zu finden. Und wir werden dadurch natürlich erfolgreicher, indem wir sagen: Wir vernetzen uns, wir tauschen uns aus und stützen uns und inspirieren uns in diesen Punkten. (F01)[44]

Aside from volunteering, trust-based relations also shape the practices of more market-oriented organizations. Reciprocity and trust, then, partly substitute for the exchange of value-equivalents and the conclusion of contracts and other forms of formalized agreements. Interestingly, the absence of measurements, compensation and legal binding contracts does not forestall reliability. Many highly implicit rules are in place and enable the community to plan without the recourse to formal agreements.

> Es gibt auch keine Kontrollmechanismen, keine Verträge. Also diese ganzen Instrumente für diese Planungssicherheit fehlen. Sie entsteht quasi natürlich. (I_E02bii)[45]

Trust also allows organizations to engage in decommodified exchange. The transfer of goods and services, then, is not based on exchange of equivalents (in a monetary or non-monetary sense) but rather on trust, solidarity and mutual help. *Relumity*, for example, was enthusiastic about the *ownhome* and provided the light installments free of change (see illustration 7). Through this, synergies emerge that help in particular organizations with limited resources to get different forms of support through shared information, practical help, or equipment, tools, and parts. Barter, furthermore, helps small organizations to circumvent complex regulatory frameworks and expenses on licenses and taxes.

> Dann ist natürlich cool, wenn du da bei dir in deinem Netzwerk jemanden hast, der sowas baut. Und dass man da irgendwie so Synergieeffekte nutzt, die nicht klassisch am Markt quasi gehandelt werden,

[43] At the moment, there is a very strong trust based, cooperative cooperation I call it. That means, you recognize and perceive the value of the other's idea and take from it something like an immaterial value to participate in the realization of the idea. That's an interesting intrinsic motivator that I notice here. But as I said, it's a highly subtle and latent dynamic that's not entirely accessible to me. But it feels very human.

[44] There is something that connects us, this common sense or common suffering under the present conditions. And there we try to find new ways in our organizations. And of course, we become more successful by saying: we network, we exchange and support each other and inspire each other in these points.

[45] There are no control mechanisms, no contracts...so all these instruments for planning security are lacking. Instead, it comes about almost naturally.

> dass du ein Angebot kriegst und du kaufst es ganz normal. Sondern, dass es irgendwie eher verflochten ist quasi und nicht alles so auf monetärer Ebene stattfindet. (I_U06a)[46]

Illustration 7: Relumity's light installments in the ownhome (own photo)

Economic relations based on trust, however, require time in order to build confidence on a personal level – both within and without organizations. When *Slowtec* was commissioned to build a prototype for an irrigation system, for instance, it took a few personal encounters to consolidate the connection although the contact already existed for quite some time.

> Da braucht es einfach ein bisschen Zeit und ein paar Treffen und das Vertrauen auch von seiner Seite. Das hat er auch so gesagt, das ist ihm wichtig. Das hat er mehrmals so betont, es gibt da mehr als nur die Zahlen und so. (I_E01c)[47]

Whereas these examples testify trust within and across a small number of organizations, other communities set up trust-based and solidary relations in larger groups. The *Solidarische Landwirtschaft Stuttgart* (*SoLaWi*), a community-supported agriculture scheme, for instance, is premised on the principle 'everyone to their needs and to their abilities'. *SoLaWi* is a consumer-producer cooperative for organic agriculture. Bidding rounds, in which each participant makes an offer that she considers appropriate, are repeated until a set amount is collected that finances the year's food production. Production is undertaken by a farmer with support from *SoLaWi* members. The yield, then, is distributed according to individual needs preferences. Again, the whole scheme hinges upon a strong trust-base in the other participants in order to function well. So far, key protagonists have not reported any misbalances in the project.

[46] Then of course it's cool if you have someone in your network who builds something like this. And that you somehow use synergy effects that are different from regular market exchange, that you get an offer, then you buy it. It's that it's somehow more intertwined and not everything takes place on a monetary level.
[47] It simply needs a little time and a few meetings and the confidence also from his side. That's what he said, that's important to him. He emphasized several times, there is more than just numbers and the like.

Cultivating subjects for other worlds

Alternative forms of togetherness go hand in hand with different subjectivities. Most organizations in this study implicitly and explicitly aim to cultivate forms of trust, solidarity and mutual help through their practices. This is premised, amongst other things, on the notion that alternative forms of economizing do not only require a different set of rules and agreements but also different subjects that embody social justice and equity. Cooperative, solidary and self-managed organizational structures are based on subjects who responsibly accept and contribute to non-hierarchical forms of togetherness that work without coercion. At the same time, involvement in an alternative organizational set-up nurtures individuals' abilities to respectful and reflective social interaction. The absence of instructions necessitates responsibility and reflection on part of the individual.

> Das Bewusstsein, das die Menschen im Unternehmen mit sich tragen, ist mir sehr wichtig. (I_E01a)[48]

> Also in dem Moment, in dem ich anfange umzudenken und mir sozusagen Werkzeuge aneigne selbst beurteilen zu können was ist denn hier los, dann bin ich auf dem richtigen Weg. (I_E01a)[49]

Aside from their actual material input, which is rather limited (see chapter 13), alternative organizations proof that different kinds of products, economic relations, legal frameworks, and forms of togetherness are possible. *Relumity*'s repairable, durable, non-proprietary and sustainably sourced light bulb *Relumity #LED1*, for instance, demonstrates: "hey Leute, es geht. Man kann solche Produkte bauen. Es ist möglich" (I_U02a)[50]. Pushing the boundaries of what is perceived as feasible and provide first-hand experiences is a key in cultivating alternative subjectivities. This is also a key focus of commons-based projects such as *teilbar*.

> Es ist wichtig, dass es möglichst viele solcher Projekte gibt an denen die Leute in der Nachbarschaft teilnehmen und merken: Aha da gibt es etwas, was tragfähig ist und das ein bisschen anders läuft. Also dass sie es auch einüben quasi und verstehen: Es gibt also irgendwas anderes, eine andere Logik. Und da kann und soll ich mich anders verhalten als in der üblichen Tauschlogik. Und das macht es dann gesellschaftlich leichter, wenn ein größerer Anteil der Gesellschaft so was kennt, dass sich auch die Erwartungshaltung entsprechend verschiebt. (I_A07)[51]

Learning that there is an alternative to the current mode of social organization encourages individuals to cultivate different practices. The *Reparaturcafé*, for instance, challenges the normality of replacement by (re)instituting the normality of repair. Not feeling alone in doing something about social and environmental injustices is crucial for many to not lose or to regain hope.

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[48] The mindset that people in the company have is very important to me.

[49] When I start to think differently and acquire tools, so to speak, to be able to judge for myself what is going on here, then I am on the right path.

[50] hey, guys, it's working. You can build such products. It is possible

[51] It is important that there are many such projects in the neighborhood in which people participate and realize: there is something that is sustainable and which works a bit differently. So that they practice and understand it: there is something else, a different logic. And there I can and should behave differently than in the usual exchange logic. And that makes it easier for society if a larger part of society knows something like that, so that expectations shift accordingly.

> Und ganz oft, wenn es um Umweltzerstörung, Ressourcenausbeutung oder auch Egozentrik in der Gesellschaft, mangelnde Nachhaltigkeit, diese ganz großen Themen geht, dann fühlen sich viele Leute sehr hilflos und haben das Gefühl sie können gar nicht. Ja, sie finden das ganz furchtbar, das macht sie regelrecht depressiv zum Teil auch. Und ich glaube, das entspringt aus diesem Gefühl der Hilflosigkeit heraus. Und dem kann man aber entgegenwirken durch so Initiativen, die eben zeigen was machbar ist. Ich glaube, dass die Reparaturcafés in einem solchen Wandel total wichtig sind, weil sie da ansetzen, wo jeder einzelne bei sich anfangen kann. Das zeigt so ein bisschen was jeder einzelne bei sich machen kann, was machbar ist. (I_A03)[52]

Challenging hopelessness is a key aspect in the development of alternatives. Many individuals who are dissatisfied with the current situation are transfixed with the overwhelming 'power' of capitalism. This is a central aspect that Gibson-Graham seek to dismantle – the disidentification with a unified and all-powerful system. Community economy projects, such as repair initiatives, are an integral part of liberating discourses and subjectivities from paralysis.

Chapter 13: Constraints

While a range of alternative practices can be observed, they are severely constrained and sidelined by numerous constraints that I will elaborate on in this section. Set within monetized growth-based and profit-oriented economies, neoliberal forms of governance and materialist consumer culture, sufficiency- and subsistence-oriented practices jar with social norms and institutions. Although sustainability has long entered public and political discourses, practically it often translates into greenwashing and politicking. Actually sustainable activities, thereby, are notably limited by prevailing forms of economic, political, cultural and technological relatedness.

Consuming to save the planet?

HOBBYHIMMEL houses a large number of activities that neither replace unsustainable practices nor contribute to the generation of possibilities to do so in the future. Instead the workshop's productive infrastructure enables individualized forms of consumption that add on to and even exacerbate existing forms of consumption. 3D printing, laser cutting and to a lesser extent also woodworking and metalworking are resource intensive leisure activities which do not necessarily contribute to a more sustainable future. On one occasion, I noted into my field work diary:

> Es gibt zwar großes Potential für nachhaltige Praktiken und man sieht ja auch immer wieder wie es durch verschiedene Organisationen und Individuen genutzt wird. Heute war es aber wieder sehr bezeichnend, dass eigentlich vor allem Leute am Lasercutter und im Holzbereich gearbeitet haben, an Projekten, die nicht unbedingt direkt mit Nachhaltigkeit verbunden sind. Am Lasercutter hat einer eine Handtasche aus Holz hergestellt nach Vorlagen, die er im Internet gefunden hat. Das dünne Holz wurde nach einem

[52] And quite often...yes, when it comes to environmental destruction, resource exploitation or even egocentrism in society, lack of sustainability...these big issues, many people feel very helpless and have the feeling they can't do anything. Yes, they find that quite terrible, that makes them downright depressed to some extent. And I think that comes from this feeling of helplessness. And this can be counteracted by initiatives that show what can be done. I believe that the repair cafés are totally important in such a change, because they start where each individual can start. This shows a little bit what each individual can do with himself, what is feasible.

> Muster gelastert, sodass es biegsam wird. Im Holzbereich haben zwei Leute an einem Spielbrett gebaut, das ein Geschenk werden soll. (B_A01)[53]

At least two caveats apply, therefore, when considering degrowth practices. First, it is difficult to say which of these practices replace less sustainable ones. If, for instance, the manufacturing of a handbag and a present (as on the day of the journal entry above) replace buying a handbag and buying a present, the workshop actually facilitates the localization of production. In many conversations with visitors of the workshop, however, productive practices were reported as additional activities that do not necessarily replace other forms of consumption. Second, it is ambiguous how the resource input for local production – energy use of machines, material input, the individual purchase of materials, the waste through unsuccessful attempts, and the transport to and from the workshop – relates to that of large-scale global production networks. From a resource perspective, the comparison of local production and global value chains can be quite ambiguous (Petschow, Ferdinand, Dickel, Flämig, & Steinfeldt, 2014).

In a similar vein, products like *Geco-Gardens*' vertical farm systems and *Slowtec*'s *Krautomat* are designed to contribute ecologically and pedagogically to a degrowth transition. At the same time, however, they these products might constitute yet another purchase, not replacing less sustainable practices but adding on to existing consumption patterns. A prospective customer of *ownworld*, for instance, wanted to purchase an *ownhome* as vacation home. This misses the intend behind the project and was declined. The consumption of 'green' technologies in and of itself – including products or infrastructures created with a genuine intend to further sustainability-related issues rather than generating profits – does not contribute to a degrowth transition. Only in conjunction with a shift in subjectivities and broader economic alignments, technologies unfold their potential to catalyze sustainable practice.

Money makes the world go 'round

Despite high levels of trust in the community and numerous examples of demonetized productive relations, money is still a central concern for all organizations. On an organizational level, payments for rent, equipment, and, where applicable, services and employees require a stable revenue through donations, institutional funding, market activities or a combination thereof. On a personal level, the

[53] There is great potential for sustainable practices and you can see again and again how it is used by different organizations and individuals. Today, however, it was again very significant that people were actually working on laser cutters and woodworking projects that are not necessarily linked to sustainability. At the laser cutter someone made a handbag out of wood on the base of a template he found online. The thin wood was cut according to a pattern so that it becomes flexible. In the wooden area, two persons built a board game that is going to be a present.

participants need to earn a living. In particular organizations that are not based on voluntary work – which constitutes a restrain itself (see below) – need to generate a minimum wage for the participants.

> Ja, also es muss sich schon auch auszahlen. Das spür ich schon irgendwie. Von irgendwas muss ich auch leben. (I_E01a)[54]

> Ich wäre ja gerne ständig überall, das habe ich ja davor gemacht. Die Initiativen gegründet und gemacht. Aber das Konto war leer und die Miete musste gezahlt werden. Ja gut, dann kann man sagen geldfrei leben, dann müsste ich raus aus Stuttgart und irgendwo auf dem Acker wohnen. Das funktioniert auch nicht. (F01)[55]

Consequently, organizations' focus partially shifts away from alternative projects and towards paid commissioned work. *Slowtec*'s *Krautomat*, for instance, started out as open source project. But without marketing, the project did not generate enough return to remain viable. As a consequence, *Slowtec* decided to discontinue development and search for individuals or organizations that want to advance a more market-based business case within particular boundaries set by *Slowtec*.

Scant financial resources, in general, characterize large parts of the organizational landscape in this study. Giving and barter, as exemplified above, partially compensate for this lack. However only insofar as the respective needs can be fulfilled within the community. Besides a limited number of goods and services available within the community, the financial pressure reduces organizations' leeway for participation in non-monetary economies. While barter is a possibility to confront the lack of resources, it draws much needed capacities away from commodified exchange on which organizational subsistence is premised. The fact that most organizations face the same issues hampers the community economy since each organization has to carefully household with their resources and capacities. Projects that do not receive long term support – or do not want to rely on external funding – are particularly pressured to withdraw from non-paid work and friendly turns and develop a business case that finances their everyday operations.

> Wir haben schnell tolle Kunden, die sozusagen mit uns d'accord sind, wenn es um die Ideale geht und wir sagen ok. Nur leider ist es oft so, dass diejenigen auch oft in der Situation sind, dass sie sagen: Wir sind gerade nicht so zahlungskräftig. Weil sie vielleicht selbst gerade im Aufbau sind oder selbst die Welt retten wollen und das in der Gesellschaft nicht automatisch gut finanziert wird. (I_E01c)[56]

Organizations, in this way, are forced to adopt an entrepreneurial mind-set, which, for some, goes against the ideas they attempt to convey. Actors that refuse to adapt to the rules of business and commerce face severe financial and practical restraints. Although there is a wide spread excitement

[54] Well, it has to pay off on some level, I can feel it somehow. I have to make a living, too.
[55] I'd like to be everywhere all the time; I did that before. I founded initiatives and so on. But the bank account was empty and the rent had to be paid. Well, then one can consider to live without money, but then I would have to get out of Stuttgart and live somewhere on the field. That doesn't work either
[56] We quickly have great customers who agree with us when it comes to our ideals. But unfortunately it is often the case that they are in the same situation saying: we lack the financial resources. Because perhaps they are themselves in the process of establishing themselves and want to save the world and that is not necessarily well financed in society

for the *ownhome*, for instance, the project does not generate any material output. Turning the idea into a marketable product that creates revenue, would require the development of a detailed business plan and the acquisition of investment money. All of which go against the grain of unconditional and equitable non-commodified economizing.

> Was da aber aus meiner Sicht auch fehlt, ist einer der sagt: Ich gehe das Ganze unternehmerisch an. Das heißt, ich kümmere mich um die Schritte, die es braucht, dass ein Kunde von der Begeisterung bis hin zum fertigen Produkt kommt, dass er dabei begleitet wird in dem Kaufprozess. Was braucht es dafür? Welche formalen Dinge und so weiter. (I_E01c)[57]

Organizations that actually do formulate and implement a business case often face a market that is flooded with cheapened products based on socially and environmentally externalized costs. *Relumity*, for example, faces multiple competitive disadvantages in the production of *Relumity #LED1*. Costs for fair wages, sustainably sourced materials and a local production that tries to avoid long distance shipping, add up to an amount that is far beyond that for conventional lamps.

> Es ist ja eine traurige Tatsache, dass all diese großartigen Produkte und großartigen Initiativen alle nachfragebasiert sind. Das heißt, Kunden stellen sich hin und bezahlen extra um ein fair gehandeltes Produkt zu kaufen oder ein Produkt das verantwortungsvoll hergestellt wird. Weil es da ja darum geht, dass man Kosten für vernünftige Arbeitsbedingungen und Kosten auch gegenüber der Umwelt in ein Produkt einpreist. Und dann darf man nicht vergessen, dass on top einfach – das ist ja noch die Absurdität oben drauf – natürlich ganz viele von den Projekten zertifiziert sind. Die Zertifizierung kostet jetzt aber nochmals, das heißt auch das musst du an den Kunden weiterleiten. Das heißt du stellst quasi ein faires Produkt her und wirst dann noch wirtschaftlich dafür bestraft mit zusätzlichen Kosten. Abgesehen davon, dass es sowieso schon teurer ist, wenn du keine Kosten externalisierst. Das ist total schizophren. Du versuchst etwas Tolles zu machen und wirst dabei finanziell bestraft. Das ist ja die Ausgangslage. (I_E02a)[58]

> Wann man dieses Spiel nicht mitmachen möchte, kommt man da nicht in eine preislich vergleichbare Kategorie. Unmöglich! Nicht, dass wir Konkurrenz suchen, aber sie wird uns sozusagen abverlangt. (I_E02bi)[59]

Yet, investors and administrative institutions demand cost externalization. The disregard of social and environmental justice, therefore, is a de facto requirement for market participation. Organizations that want to follow an entrepreneurial path without compromising their objectives reach an impasse. *Geco-*

[57] What is missing from my point of view, however, is one who says: I approach the whole thing entrepreneurially, which means that he takes care of the steps it takes for a customer to get from enthusiasm to the finished product; that he is accompanied in the purchasing process; what is needed for it; the formalities, and so on.
[58] It is a sad fact that all these great products and great initiatives rely on specific demand. That means customers pay extra to buy a fairly traded product, or a product that is manufactured responsibly. Because the point is to include the costs for reasonable working conditions and environmental costs in the price of the product. And then one should not forget that many of the projects are also certified - which is the absurdity on top. Because the certification causes further costs, which again you have to pass on to the customer. This means that you produce a fair product and then you are punished for it economically with additional costs – apart from the fact that the product is already more expensive if you do externalize costs. That's totally schizophrenic. You are trying to do something good and as a consequence you are punished financially. That's the initial situation.
[59] If you don't want to take part in this game, you are not competitive. It’s impossible! Not that we're looking for competition, but that is what is demanded from us.

Gardens, for instance, refuses to outsource production which causes severe financial restraints that can only be compensated through an additional source of income.

> Der Berater, als ich bei der Stadt Stuttgart bei diesem Beratungsgespräch war meinte, da werde ich nicht darum herumkommen, billig zu produzieren. (I_E04)[60]

Even if costs disadvantages can be incorporated into the business case, fair resources and parts may not be available. *Relumity* who put much effort to investigate the possibilities to set up a fair and short-distance value chain have to source parts of their lamps from outside of Europe. The same is true for a range of other technical components.

For-profit policy

The dissonance between existing legal forms, and organizational set-up is a reoccurring issue. A mixture between economic activities and the orientation towards social and ecological issues that most organizations exhibit is not appropriately considered in the binary of for-profit and non-profit legal forms. The non-profit status, which grants tax benefits to partially compensate for prioritizing socio-ecological issues over profits, can be revoked up to three years in retrospect. This is a high risk in organizations' calculation. For most organizations, legal competences and responsibilities also jar with their internal structure. In particular non-hierarchical and self-managed organizations find no adequate representation in a corresponding legal structure. While cooperative organizational forms would be most suited, there is a high threshold for small eco-social start-ups to register as cooperative. In particular the financial burden for the legally prescribed membership in an auditing association as well as the costs for the annual audit prove to be big financial burdens.

All these factors make it difficult for eco-social enterprises to find an adequate legal form. In an early stage, some divert a considerable fraction of their scarce resources to the exploration of advantages and disadvantages of different legal forms. In the open workshop – a particularly difficult case for its combination of volunteer work, partially donation-based financing structure, internal self-management, engagement in commercial activities to cross-subsidize low-threshold access of private and sustainability-related use, and risk associated with (heavy) machinery – a group of volunteers took up the topic. The following observation notes show some of the difficulties in particular with lack to clear information about liability and financing.

> Die Rechtsformgruppe stockt etwas. Das Finden einer geeigneten Rechtsform gestaltet sich als sehr schwierig. Die Informationen zu Einnahmen und Verdienstmöglichkeiten sind nach wie vor schwammig. Verschiedene Quellen können keine verbindlichen und klaren Angaben zu Haftungsfragen und

[60] The consultant, when I was at this consultation by the city of Stuttgart, said that I will not be able to avoid cheap production.

> Finanzierung machen. Momentan scheint der Verein die wahrscheinlichste Lösung. Auch ein Hybrid aus Verein als alleiniger Gesellschafter einer GmbH ist denkbar. (B_V01b)[61]

Despite these difficulties, most organizations find a workable solution to deal with external relations such as issues of liability and financing. Dissonance between legal form and organizational set-up, however, can also cause internal problems. For-profit organizations are generally structured hierarchically, with the manager as bearer of ownership rights and decisional power. Due to the precarious finances of ecologically and socially driven enterprises (see above) the collaboration, in particular in an early stage, entails risks and sacrifices. Hierarchical legal forms make it very difficult to adequately compensate for and provide security for (early) collaborators. In one case, these difficulties translated into a personal disagreement that ultimately led to the separation of collaborator and organization. The following field notes render the full complexity on this dissonance visible.

> T. hat ein Problem damit, dass L. noch die volle Entscheidungsgewalt hat, während L. diese noch nicht abgeben will bis das Unternehmen „fest auf Kurs ist". Er ist bereit Teile davon abzugeben, solange er noch die Mehrheit behält und genau dieser Punkt ist das Problem für T. – er möchte nicht, dass L. alleine entscheidungsbefugt ist. Das Problem ist sehr facettenreich und scheint sich aus unterschiedlichen Aspekten zusammenzusetzen: (1) Das Unternehmen steht noch immer etwas prekär da was das Finanzielle angeht. Das heißt es ist noch nicht einfach sich weitestgehend auf die Dinge zu konzentrieren, die eigentlich im Mittelpunkt des Unternehmens stehen sollten – viele Kompromisse sind noch erforderlich. (2) Vor allem T. bringt dem Unternehmen bisher keine Gewinne ein. Das ist prinzipiell kein Problem, da er genau zu der Überzeugung des Unternehmens passt. Jedoch, vor dem Hintergrund der noch immer prekären Lage, ist das ein Faktor in der etwas angespannten Situation. (3) L. erwirtschaftet derzeit noch einen großen Teil des Geldes. Der Rest ist noch kein Selbstläufer. (4) Die Organisation als GmbH ist durch L. Privatdarlehen gedeckt. Er ist daher auch persönlich verschuldet und tut sich daher nicht einfach Geschäftsanteile mehrheitlich abzutreten. (5) Die Rechtsform der GmbH passt in diesem Zusammenhang nicht gut auf das Unternehmen. (B_G19)[62]

In cases where legal constructs are available to respond to particular needs, they are difficult to realize for small organizations with limited temporal, administrative and financial resources. Advisory and notarial costs and the need to acquire in-depth knowledge eat into the small budget and draw much needed resources away from the day-to-day operations. The result is a general uncertainty and dissatisfaction with the status quo.

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[61] The legal form group is stagnating a bit. Finding a suitable legal form is proving very difficult. Information on income and earning opportunities is still vague. Various sources are unable to provide clear and committed information on liability and financing. At the moment, forming an association seems to be the most likely solution. Also, a hybrid of an association that is the sole shareholder of a GmbH is conceivable.

[62] T. has a problem with the fact that L. still has full decision-making power, while L. does not want to give it up until the company is "firmly on course". He is willing to give up parts of it as long as he still retains the majority and exactly this point is the point of contention: T. does not want L. to have sole decision-making authority. The problem is very multifaceted and seems to be composed of different aspects: (1) The company is still a bit precarious when it comes to finances. This means that it is not yet easy to concentrate as much on the things that should be the focus of the company - many compromises are still necessary. (2) T. in particular does not contribute to the organizations' revenue yet. In principle, this is not a problem because his activities fit with the company's ideals. However, against the background of the still precarious financial situation, this contributes to the tensions. (3) L. still earns a large part of the money at present. The rest is not yet self-sustaining. (4) The organization as GmbH [for profit legal form] is covered by L. private loans. He, therefore, is in debt and is reluctant to transfer business shares. (5) The legal form of the GmbH, in this context, is unsuitable for the enterprise.

Similar issues exist with regulatory frameworks. The volume of statutory provisions poses a number of difficulties for small eco-social enterprises. Two intertwined problems cause (in some cases existential) difficulties. First, regulations are oversized for small, experimental and eco-socially oriented organizations. Second, it is difficult to obtain clear, case-specific and binding information about the legal situation. Even though counselling programs are available for (some) organizations, they are generally only of limited help. Many organizations face contradictory information. Regulations and administrative responsibilities are not clearly evident and located on different levels – European, national, federal, communal – which further complicates the situation. When I asked if there are any programs or authorities that start-ups can approach to inquire, one responded remarked:

> Gibt es jede Menge und jeder erzählt was anderes. (I_E04)[63]

Another complained in more general terms:

> Ja also Bürokratiezeug ist definitiv ein Thema. Unglaublich ein Thema…. Also dadurch machst du halt viel kaputt von der politischen Seite irgendwie. Es gibt genug Leute, die trauen sich dann nicht oder gehen das Risiko nicht ein, weil die Kosten zu hoch sind. Auf der anderen Seite, wenn du halt wirklich wegen eines Fehlers, irgendwas, was du nicht beachtet hast – was durchaus vorkommt, weil es ist ja ein riesen Verordnungsdschungel ist wenn du gründest – dann hast du halt sofort Nachzahlungen, die dich im schlimmsten Falle in die Insolvenz reinreißen. (I_E08)[64]

Organizations that go about their business without penetrating the jungle of regulations can face lengthy and expensive processes of formal approval. *HOBBYHIMMEL*, for instance, carried out interior work without the respective permits. The retrospective approval cost over 1000 Euros and took far over half a year for completion. *ownworld*'s water provision and disposal systems, which make both fresh water provision and sewage hook-up superfluous, pose an even more complex issue. The conversion of rain water is only permissible under particular circumstances, especially in cases where there is no other source of water. The recycling of grey water is not foreseen at all in the regulatory framework. Similarly, sewage hook-up is necessary for inhabited properties. Administrative competencies for these questions are on different levels and despite sustained efforts and professional measurements of water quality, there are still not results at the time of writing.

The tragedy of (artificial) scarcity

> Das ist ein gesellschaftliches Problem, dass die Leute einfach gar keine Zeit haben sich gegenseitig zu helfen. Die haben so viel um die Ohren, dass die das nicht schaffen. (I_P01)[65]

[63] There is a bunch of them and everyone tells something different.
[64] Bureaucracy is definitely an issue. Incredibly so. Current politics puts a lot of obstacles in the way of start-ups. There are many people who don't dare or don't take the risk because the costs are too high. On the other hand, if you make a mistake, something that you don't pay attention to, which happens because it's a giant regulatory maze for start-ups, then you've got back-payments that in the worst case can cause bankruptcy.
[65] It's a social problem that people simply don't have time to help each other. They have so much on their hands that they don't find the time.

Economic and administrative constraints intersect with and have an effect on interpersonal relations. The need to prioritize (well-) paid commissioned work renders non-monetized community economies a privilege pursuable in times of stable resources. Mutual help, then, is often second to financial consolidation. Participants, in this vein, turn away (from) alternatives in the abovementioned sense to secure their own 'survival' and well-being as well as that of their organization. While mutual help and solidarity, as portrait above, are important pillars of the community, they are of limited relevance in the organizations' daily conduct. Service-oriented organizations that earn their money through the sale of working time diminish their source of income directly through engagement in noncommercial exchange. As a consequence, they carefully weigh the voluntary work invested in non-monetized projects. Associations and projects that are largely demonetized and based on volunteer work are thus put in an asymmetrical relationship since most of them do not command the financial means that are required to engage in formal market exchange. Spaces of non-monetized transfer, then, remain strongly confined and with it the alternative (economic) practices of these organizations. *Slowtec*, for instance, commands a range of programming and development skills that can be extremely valuable for other organizations. For a lack of financial leeway, they have to decline some requests even from projects they are enthusiastic about.

> Das sind so die Dinge, die eigentlich hier auch zusammenkommen sollten. Die aber leider nicht kommen. Zum Beispiel der P. war ursprünglich jemand, bei dem wir gehofft haben, dass er vielleicht Lust hat uns ein Programm zu schreiben für den Arduino, um die Solarthermie, also zusätzliche Wärme, zu steuern. Nachdem wir ihn angesprochen haben, hat er gesagt: Ne, keine Zeit. Also da fehlt uns quasi auch so ein bisschen jemand, der das dann auch macht. Insofern, funktioniert die Vernetzung nicht so hunderprozentig, also nicht so ganz gewünscht halt. (I_A02)[66]

At times, mutual help and non-monetized economic relations lack trust and reciprocity. In lieu of monetary compensation, other forms of appreciation are important to sustain mutuality. In cases in which exchange relationships are perceived as misbalanced and non-reciprocal, non-monetized economies break down. Organizations, then, resort to monetized exchange instead.

> Ich brauche irgendeinen Gewinn. Ja, der Gewinn muss nicht finanziell sein, manchmal reicht schon ein Dankeschön. Ich habe zum Beispiel für die Organisation die ganze Technik gemacht. Und das Dankeschön war: die Email funktioniert nicht, warum geht *das* nicht, warum geht *das* nicht? Und das ist dann einfach unglaublich kräftezehrend. Du gibst Energie rein, zahlst sogar noch aus deiner privaten Tasche drauf und das Dankeschön ist dann noch: das und das funktioniert nicht. Dann habe ich gesagt, das kann nicht sein, das muss irgendwie wirtschaftlicher funktionieren. (I_E01a)[67]

[66] These are the things that should actually come together here. But unfortunately, they don't. For example, P. was originally someone we hoped for to write a code for Arduino to control the solar thermic. When we approached him, he said: no, no time. So, we lack someone who can take care of it. In this respect, the networking doesn't work 100%, not as well as it should.

[67] I need some kind of profit. The profit does not have to be financial, sometimes a thank you is enough. For example, I did all the technology for the organization. And the thank you was: the email doesn't work, why does this not work? Why does that not work? And that's just incredibly exhausting. You put energy into it, even pay for it yourself and the only thanks you get is: this doesn't work. I said to myself, this can't be it, this has to work more economically somehow.

Some organizations manage to base they business on volunteer work but still face a number of difficulties in finding an appropriate mode of cooperation. Unequal input between different individuals, arrangements, commitments, and effective collaboration remain constant challenges. In case of the open workshop, for instance, more than 30 persons collaborate in different working groups. In response to a number of challenges around self-management, I organized a focus group for members of the workshop which was attended by 19 persons (see chapter 9). Collectively we identified strengths and weaknesses of the organizational set-up. Even more so than hierarchical modes of organizations, self-management needs consistent internal structures and clear responsibilities. The following note I jotted down during the workshop captures this sensitivity.

> Mein persönlicher Eindruck ist, dass zwar Motivation, Wille und Bereitschaft gegeben sind, aber vielen nicht ganz klar ist: Wer macht was? Wer kann was? Wer ist für was verantwortlich? Wer kann für was angesprochen werden? Wie sind die Teams vernetzt? Was machen die Teams und wer ist in welchen Teams? (F_02)[68]

Self-management, reciprocity, and trust hinge substantially on the subject that encounter each other, an issue that I turn to next.

Me, myself and I

Non-hierarchical relationships are not only contingent on appropriate structures and principles of equity, but also on cooperative subjectivities. Self-management, however, is unfamiliar to most subjects and thus something that first has to be learned and incorporated. Despite several discussions on team meetings and repeated attempts to shape the workshop's internal structure according to principles of self-management, recurrent issues such as unclear responsibilities and over- or underdeveloped individual initiative prevail. In particular the allocation of 'roles' that attribute clear responsibilities to individuals remains partial and inconsistent, as the following notes that were taken weeks after the workshop, testify.

> Die Bedeutung von Rollen ist nach wie vor etwas unklar. Auch beim Workshop konnte das nicht ganz geklärt werden, trotz mehrfachen Hervorhebens meinerseits. Das scheint ein Schlüsselelement zu sein, das noch fehlt. Vielen fällt es nach wie vor schwer, sich auf diese Form der Organisation einzulassen und verfallen letztendlich wieder in alte Muster, in denen sie auf Anweisungen warten oder sich darauf verlassen, dass sich schon jemand um die Sache kümmern wird. (F_02)[69]

Alternative forms of social relations and interaction require subjects who are capable and willing to cultivate non-hierarchical and equitable collaboration. Social and mental infrastructures (Welzer,

[68] My personal impression is that although motivation, willingness and readiness are given, many people are not quite sure: who does what? Who can do what? Who is responsible for what? Who can be approached? How are the teams networked? What do the teams do and who is in what teams?

[69] The significance of roles remains somewhat unclear. Also, at the workshop this could not be clarified completely despite repeated emphasis on my part. This seems to be a key element that is still missing. Many find it still difficult to engage with this form of organization and frequently fall back into old patterns: waiting for instructions or relying on someone to take care of an issue.

2011), by and large, however, point in another direction. The explicit and implicit norms of non-hierarchical forms of organization differ fundamentally from the competition in capitalist markets. Equity, respect and voluntarism are, in some ways, the antithesis of capitalist competition. In a social environment where people are required to assert themselves against others, many are overwhelmed by a lack of coercion and control. Organizations which face a number of external issues, such as the ones discussed above, can also be vulnerable towards internal misconduct through egoistic and exploitative individual behavior. One participant in the focus group describes the conundrum as follows:

> Egal in welchem Projekt, ob das jetzt Ehrenamtliche sind oder in einem Konzern. Wenn Du ein Arschloch dabei hast, brauchst du mindestens fünf, um den auszugleichen. (F_01)[70]

Aside from organizations' internal structuring, trust and mutuality play also an important role in their daily business. While control mechanisms are undesirable from an ethical and educational point of view, they would also exceed the capacities of most organizations. This means, however, that the organizations' functioning depends on individual sincerity and adherence to basic codes and rules. In the open workshop, for example, machines can be accessed without direct control and usage is accounted for mainly on a trust basis. For volunteers of *HOBBYHIMMEL*, the competences are still more far reaching, including permanent access to the workshop space. Responsibility, then, is not only relevant for the organization's proper functioning but also with respect to safety (and at the end questions of liability). A number of organizations report egoistic behavior and a (false) sense of entitlement by users. This rages from lack of appreciation all the way to – albeit astonishingly few – cases in which individuals exploit the respective project. *HOBBYHIMMEL*, for instance, has had a number of cases in which commercial users try to circumvent the higher industrial rate by passing for a private visitor. The cargo bike initiative, thereby, reports a significant fraction of users that use the complementary service without appreciating either the work behind the project nor its social and environmental objectives.

> Vom Feedback der Leute her habe ich ein bisschen das Gefühl, dass viele, die Mails schreiben oder anrufen nicht verstehen was wir hier machen. Also die sehen, das Lastenrad ist kostenlos, Punkt. Und mehr interessiert die dann nicht. (I_V04)[71]

Many individuals lack understanding for the (economic) difficulties that eco-social organizations face. Internalized costs to ensure fair and (possibly) regionalized production, non-exploitative supply chains and preferably recyclable and innocuous materials are reflected in a higher price for sustainable products – for example *Slowtec*'s *Krautomat*, *Relumity*'s *Relumity #LED1*, or *Geco-Gardens'* vertical

[70] No matter what project, whether run by volunteers or in a corporation. If there is an asshole in the group, you need at least 5 people to compensate for him.

[71] From people's feedback, I get the feeling that many of those who write mails or call don't understand what we're doing here. They see the cargo bike is for free, that's it. Anything else they don't care about.

farms. They do not fit with a bargain mentality and are frequently met with incomprehension. While, of course, others are excluded on an economic basis through the high costs.

Another issue is the lack of knowledge or awareness of the issues and possibilities surrounding sustainability-related practices. Infrastructures such as the open workshop facilitate a number of alternative practices but might as well be used for adverse purposes (see above).

> Die Leute, die das hier nutzen haben eher selten diesen Gedankengang [zu Nachhaltigkeit]. Das sind vielleicht zehn Prozent oder maximal zwanzig Prozent der Nutzer, die sagen: 'Ich schone damit Ressourcen'; 'Ich brauche nicht das Gerät kaufen'; 'Ich kann mir ein Ersatzteil bauen'; oder 'Ich kann das Ding da so umbauen, dass es dann länger hält'. (I_A01a)[72]

Apart from the participants or 'non-participants' that clash with the organizations' values and codes, there is the behavior of individuals who are both familiar with and sympathetic to novel forms of non-hierarchical relatedness, but still regress to individualistic and counteracting practices. This rather elusive issue is best exemplified by self-observation as noted in the reflections on a bad day of fieldwork in the workshop.

> Ich habe versucht mit der Stichsäge das Brett in Wolkenform zu sägen. Das hat nicht geklappt. Ich habe vermutlich ein zu dickes Sägeblatt benutzt, welches dann zu heiß wurde als ich versucht habe den Kurvenverlauf zu schneiden. Weil mir das sehr unangenehm war, habe ich das angesengte Sägeblatt wieder zurück in den Koffer gelegt und das Brett zum Abfallholz gelegt. Das sind genau die Nutzer, die die Werkstatt nicht braucht. Obendrein habe ich die Zeit nicht abgerechnet. Das war nicht beabsichtigt, aber es ist ein schlechtes Zeichen, dass sich Leute so verhalten wie ich es gemacht habe, obwohl sie das Projekt sehr gut finden und eigentlich unterstützen. Also irgendwie dem Projekt schaden oder es ausnützen ohne es eigentlich zu wollen, beziehungsweise ohne Böses zu wollen, sondern im Gegenteil. (B_V01p)[73]

Deeply engrained patters of egocentric behavior also reside in individuals who positively respond to alternative forms of relatedness. Frequently, subjects who feel very strongly about alternative approaches loose critical distance. This, then, occasionally results in a strong identification with particular labels or projects and a rejection of possible allies. In the present study, this was largely the case with some smaller initiatives rather than with enterprises, the latter of which generally had a more 'undogmatic' approach (see above). Different forms of identification with particular projects or labels range from consequential rejection of specific practices to individual vanity and self-importance.

[72] The people who use this here, rarely have this train of thought [about sustainability]. Only between 10 and 20 percent of the users say things 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'.

[73] I have tried to bring the board in cloud shape with the jigsaw. That didn't work, I probably used a saw blade that was too thick, which then got too hot when I tried to cut the curve. Because this was very unpleasant for me, I put the singed saw blade back into the suitcase and put the board in the pile of the waste wood. These are exactly the users the workshop doesn't need. On top of that, I didn't charge myself for the usage. That wasn't intentional, but it's a bad sign that people are behaving the way I did, even though they think the project is very good and actually support it….so somehow harming the project or exploiting it without actually wanting it or wanting anything bad, on the contrary.

Chapter 14: Enablement

Despite numerous constraints, alternatives forms of economic, political, cultural and technological relatedness are practiced. This section identifies institutional arrangements, strategies and scopes of action that support the organizations' objectives and enable their engagement in degrowth-oriented activities under current socio-economic conditions.

Supportive infrastructures

HOBBYHIMMEL's productive infrastructure catalyzes a number of alternative practices and supports individual and organizational endeavors in local production, repair, maintenance, coordination and other sustainability-related activities. The open workshop cross-subsidizes private users and eco-social enterprises through profitable business activities, such as hosting team-building events and the usage free from commercial users. With *HOBBYHIMMEL* being financially self-sufficient, eco-social organizations, then, can use its workshop spaces free of change, at a discounted rate and/or outside of normal opening hours. Almost all organizations in this study exhibit ties to the workshop (see figure 8 in chapter 9), including *Relumity*, *Smark*, *Lastenrad*, and *Grünfisch* who use the *HOBBYHIMMEL*'s infrastructure for their projects, some more frequently (and fundamental to their functioning) than others.

> Und die anderen, die wir unterstützen, das sind eben die, die auch sagen: Uns gefällt der Status quo nicht ganz. Das sind Leute aus verschiedenen Projekten. Und die machen alle in ihren Bereich eine Aktion oder ein Geschäft womit sie Dinge verändern. Und die Werkstatt kann sie dabei unterstützen. (I_A01b)[74]

Some eco-social enterprises use to workshop to produce parts of their products or of their infrastructure locally, without the need to acquire and own the means of production themselves. *Smark*, for example, used the workshop for parts of their automated store.

> Von der ganzen Infrastruktur konnten wir sehr profitieren. Und genau, so haben wir sie auch für das jetzige Projekt wieder genutzt. Wir greifen immer wieder darauf zurück, dass es da schon Maschinen gibt, die wir einfach nutzen können ohne sie selbst anschaffen zu müssen. (I_E06a)[75]

Relumity, furthermore, realized the production of the casings for their *Relumity LED#1*, a lamp for household use, in the open workshop. This is not only to avoid long-distance shipping but also to test and ensure the local capacity for maintenance and repair:

[74] We support others that 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

[75] 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.

> Da kann ich wirklich sagen, dass die Ersatzteile lokal verfügbar sind. Nicht unbedingt als solche existieren, aber sie können jederzeit lokal wieder hergestellt werden. Durch die Werkstatt sind die Materialien und die Produktionsmittel jederzeit verfügbar. (I_E2bii)[76]

Organizations that are mainly engaged in non-commercial activities, too, use the workshop for construction, repair, prototyping or simply as meeting space. *Grünfisch*, for instance, built some of their aquaponics systems in the workshop. And *Lastenrad* regularly services their bikes in the workshop. In turn, the broad community of activists and eco-social entrepreneurs supports the workshop through volunteering, commodity contributions, and dissemination of its concept.

Illustration 8: HOBBYHIMMEL - counter and entrance area (own photo)

Beyond the material space of the workshop, supportive infrastructures are in place in a more metaphorical sense. Since a number of organizations that are part of this study are interconnected, they form a pool of common resources including skills, knowledge, contacts, and workforce that occasionally can be tapped into in case of need. Similar supportive networks exist also beyond place. For instance, the communities that develop and provide open source software and hardware products which sustainability-oriented organizations (and others) can use. Almost all initiatives both work with open source software (and sometimes hardware) and in turn contribute to the pool of open source products. *Lastenrad*, for instance, uses an open source software that significantly facilitates setting up a digital booking system.

[76] …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

> Dieses Buchungssystem spielt auch eine ganz wichtige Rolle für die Funktion des Ganzen. Das haben die Kölner auch entwickelt. Commons booking, das ist ein open source Plugin und damit arbeiten eigentlich alle diese freien Lastenradinitiativen, die es gibt in Deutschland. (I_A04)[77]

Open Source Ecology (OSE), is a global movement that develops and advocates open source hardware products. Although there is no instituted local group in Stuttgart, some individuals have close ties with the German-wide OSE association. One of the products developed locally – using the workshop space of *HOBBYHIMMEL* – is a mobile hydroponic system (illustration 9). This and other open source products significantly lower the threshold for individuals and organizations to access and build on existing knowledge.

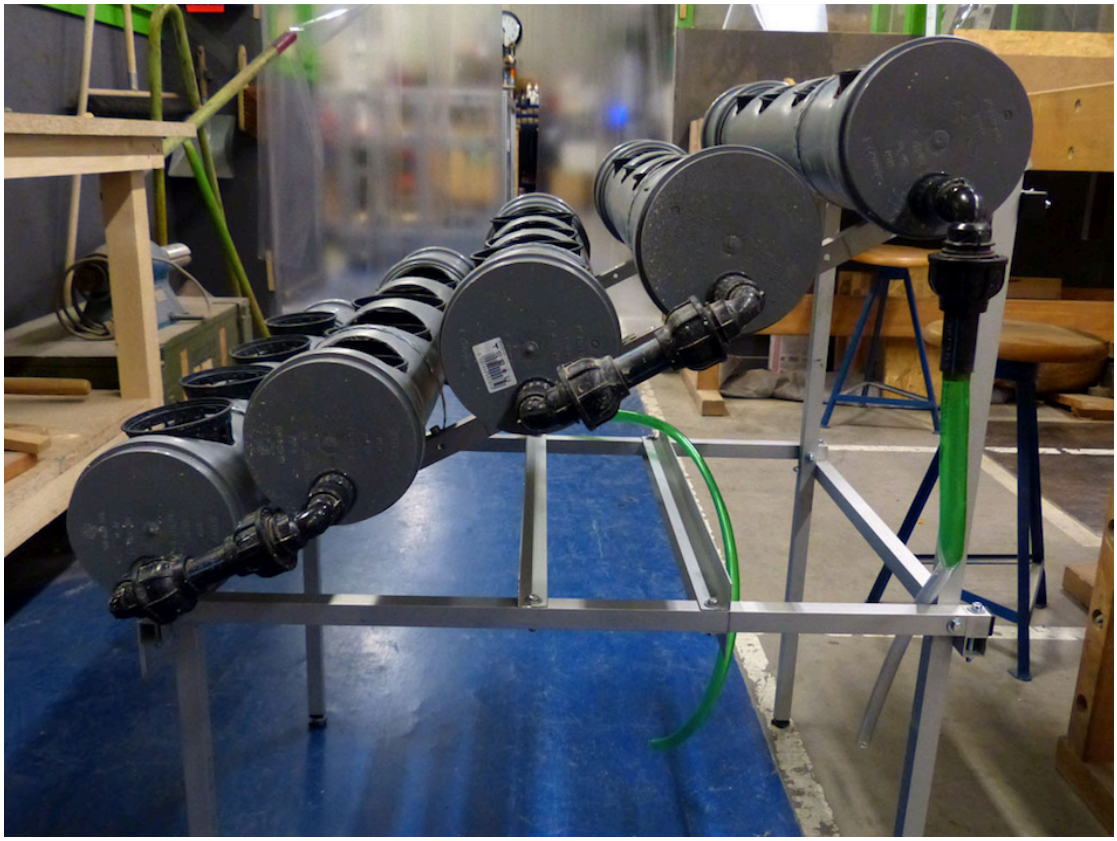

Illustration 9: Open source mobile hydroponic system (wiki.opensourceecology.de/Boxfarm)

Sustainability-related business models

Internalization of costs through fair sourcing and equitable working conditions, the focus on non-profitable issues and areas, and the engagement in non-monetized transfer tilt the economic playing field to the detriment of eco-social enterprises. Nevertheless, there are business models which partly compensate for this disadvantage. Durable products, for example, lend themselves to contracting models. That means, the costumer no longer purchases the product but a service. The hardware required to deliver that service – for example light – remains in the contractor's ownership who is

[77] This booking system also plays a key role. It was developed by people in Cologne. Commons booking is an open source plugin that all cargo bike initiatives in Germany use.

responsible for its continuous performance. Longevity, then, is in the interest of the service provider to minimize expenditure. *Relumity*, for instance, engages in light contracting in a business to business context, thus internalizing an interest in durability into the business case.

> Generell ist das für uns natürlich eine wahnsinnig attraktive Art und Weise unsere Produkte in den Markt zu bringen, weil wir natürlich wissen bei unseren extrem langlebigen Produkten, dass wir die nicht besonders häufig reparieren müssen und damit auch Wartungskosten sparen. (I_E02a)[78]

Furthermore, there are opportunities to generate revenue through projects that are in line with the enterprises' values. Increasing awareness of climate change leads to public and private investments in energy transition and other adaptation and mitigation measurements. While these commissions in and off themselves do not challenge current social and economic alignments, they also don't jar with the organizations' objectives. These commissions provide opportunities for sustainability-related business.

> Da geht es um die Energiewende, die Aufklärung davon. Und das ist wo ich sag, da stehen wir zu hundert Prozent dahinter, ist super, ist toll. Und da gab es einen Auftrag. Wir haben die Software gemacht. (I_E01b)[79]

In addition, commissions from other eco-social enterprises and associations provide an opportunity to conciliate financial revenue with non-financial objectives. Naturally, most eco-social enterprises are low on funds themselves. But sourcing goods and services from other eco-social enterprises whenever possible creates internal relations that strengthen these organizations.

> Aus dem Projekt ‚Karte von Morgen' ist sozusagen jetzt ein offizieller Auftrag an uns entstanden. Das ist zwar ein verhältnismäßig kleiner Auftrag, aber so, dass ich jetzt mit einer befreundeten Firma zusammen arbeiten kann. Das ist eigentlich ganz schön, weil im Grunde genommen ist es das, was wir voranbringen wollen. Ist thematisch genau richtig und so ist es zumindest nicht mehr in Konkurrenz zur Arbeitszeit. Bisher war es immer so, dass ich sowas am Wochenende machen musste. Und so bündelt es sich langsam. (I_E01b)[80]

Beyond compatible commissions, other-than-entrepreneurial income sources are a major enabling factor for organizations' activities. Factoring out labor costs significantly eases financial pressure on organizations. This, however, is in itself problematic and in some cases boarders on (self-) exploitation. There is, of course, a distinction to make, between, first, associations which are based on volunteer work in principle. Second, organizations that hover between volunteer work and the ambition to commercialize their activities to be self-sustaining. And third, those who manage to cover operations including labor costs. Individual contributors to organizations that fall into the former two categories

[78] Generally, this is an incredibly attractive way for us to market our products. Because we know that our extremely durable products don't need to be repaired very often and we therefore save maintenance costs.
[79] This project is about the energy transition, an information campaign. And that's something we support 100 percent. And we got a commission to develope the software.
[80] The "Karte von Morgen [map of tomorrow]" project has now, so to speak, become an official commission for us. It's a relatively small job, but this way I can now work with a befriended company. That's actually quite nice, because basically it's what we want to push. The project fits thematically and is not in competition to our working time. So far it has mostly been the case that I had to do work on projects like this on the weekend. But slowly work and activism combine.

generally have alternative income sources. Some are employed by universities and, to some extent, can combine their entrepreneurial activities with other responsibilities. Others have paid day jobs, often, however, with reduced working hours to allow for both a modest income and enough time to invest in (for them) more meaningful activities.

Organize online – act offline

Technology opens up new possibilities and risks – not only for sustainability-related practices directly (see above) but also for alternative forms of organizing that catalyze transformative processes. Participants frequently refer to the role of networking tools and "digital multipliers" (I_L04). Commercial social media, however, aim for the maximization of user time spend in digital environments. Tools particularly designed for social change, instead, facilitate sustainability-related organizing.

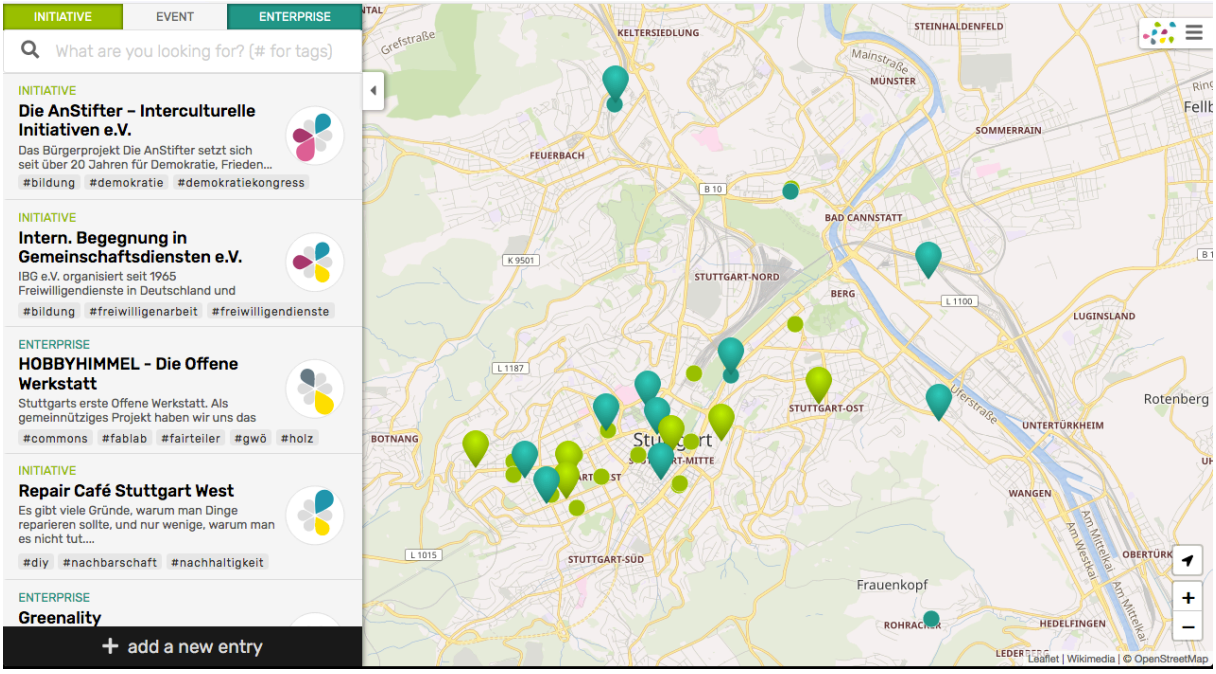

Illustration 10: Karte von Morgen – Stuttgart (kartevonmorgen.org)

The *Karte von Morgen* [map of tomorrow] and *Human Connection* are two projects with a thrust towards networking for eco-social transformation. The *Karte von Morgen* (see illustration 10) is a participatory mapping tool that collects and rates sustainability-related initiatives and enterprises. It provides a quick orientation for individuals and organizations that seek possibilities for more sustainable consumption, networking or inspiration. Human connection, is a common good oriented social network that connects information and action. It is deliberately set up to facilitate online coordination for offline activism.

Institutional support

Different forms of institutional – mostly monetary – backing are important for a large number of organizations from the sample. Innovation vouchers, founder's stipends, living labs, research projects and various forms of earmarked subsidies considerably broaden individuals' and organizations' room for maneuver. Innovation vouchers are a relatively simple and low-threshold way to receive a partial reimbursement of research and development costs. This, however, requires that the company is solvent enough to advance the full expenditures.

> Pro Jahr kann man jeden Innovationsgutschein einmal beantragen. Und wenn man sich jetzt nicht super doof anstellt. Also das ist wirklich, was die Bürokratie angeht, im Vergleich zu anderen Fördermaßnahmen eine sehr freundliche Geschichte. Weil wir können es uns auch nicht leisten, irgendwie eigentlich nur an 50 Seiten langen Anträgen dranzusitzen. Aber die Innovationsgutscheine, die helfen uns da gerade schon. (I_E01c)[81]

Other forms of state-institutional sponsorship schemes can create similar leverages. Stuttgart is the first major city in Germany to have a commissioner for urban gardening. Urban Gardening schemes receive assistance both in finding appropriate spaces as well as through a subsidy of gardening related expenses. Amongst the groups that are supported, some actively engage for food commons. Another example is the support of private organizations to get certified by the economy for the common good (ECG). Again, it is unique amongst major German cities that private enterprises receive a 50% subsidy to go through the ECG certification process. Although dwarfed in comparison with other subsidies, the institutional support contributes to a growing niche of alternative enterprises. This last example, however, was too recent at the conclusion of data collection to have substantial observable effects. *HOBBYHIMMEL* and *em-faktor*, the two organizations from the study's sample audited by the ECG, went through the certification process prior to the launch of the subsidy scheme.

One city council member resurfaces in different contexts as key force for a progressive political agenda. Her role in aforementioned audits of city owned companies as well as the support for private enterprises' common good audit is quite prominent. The engagement of an individual politician, here, set the ball rolling for a number of official commitments and institutional measures that address several of the foregoing issues around non-profit regulations and systematic disadvantages for eco-social enterprises in markets. For sure, these are small steps but in a promising direction. While generally disenfranchised with communal- and politics on other administrative levels, a number of interviewees have singled out this council member as powerhouse for (small) institutional change.

> Wir haben ja das große Glück, dass wir diesen gewaltigen Rückenwind im Stadtrat haben. Das ist vor allem eine Stadträtin, die voll engagiert ihre Möglichkeit im Stadtrat nutzt und es geschafft hat, dass einige städtische Betriebe jetzt die Gemeinwohlbilanz gemacht haben. Und das Projekt geht weiter. Da

[81] One can apply for each innovation voucher once a year. And if you're not stupid…compared to other funding measures this is really easy in term of bureaucracy. Because we can't afford to spend time on applications that are 50 pages long. But right now, the innovation vouchers are already helping us.

> gibt es weitere Fördermittel für die Unternehmen, um das weiter entwickeln zu können. Und dass Privatunternehmen für ihre erste Bilanz von der Wirtschaftsförderung eine Förderung bekommen. (I_L01)[82]

Her personal ambitions are largely compatible with fundamental shift away from growth-dependent economies, as the following interview quote shows.

> Wir haben einfach auch grundsätzlich das Thema, dass wir in einem Wachstumsdogma leben und dass jeder immer denkt er muss überall wachsen und die Systeme so ausgelegt sind, dass man dann tatsächlich, selbst wenn man auch Stakeholder wird, auch wachsen muss, um zu bestehen. Auch wenn man es vielleicht gar nicht will. Und das ist sicherlich die größte soziale Innovation die wir jetzt in den nächsten Jahren brauchen. Das sind eben Ökonomien, Wirtschaftssysteme, Veränderungen evolutionär um eben da zu Postwachstum oder zumindest einer Entkopplung von den beiden Sachen zu kommen. (I_S03)[83]

Due to the multiple constraints mentioned above, the coalition between institutional and entrepreneurial actors is still small. Nevertheless, first small steps in a progressive direction are taken.

In community we trust

Trust is the lubricant that facilitates mutual support within and across eco-social organizations. Trust in other collaborators, in their collective capacity, and in the worthiness of their cause is a key factor that motivates and enables many activities. Despite a number of financial and legal constraints (see above) community economies work through the dedicated engagement of a number of individuals that belief both in the possibility of transformation, and in others that share their commitment – including the trust that they really do share the same agenda.

> Das ist fast wie der Humus auf dem das Ganze wächst. Der soziale Kontext ist von seiner Natur oder von seiner Gestalt oder seinem Gehalt vielleicht hochgradig vertrauensdurchsetzt. Also da ist eine hohe Konzentration oder eine hohe Dosis an Vertrauen in diesem Kontakt. (I_E02biii)[84]

Mutual trust facilitates collaboration without the need for immediate payback. For example, *Relumity* supplied both the light instalments for the *ownhome* prototype and for *Slowtec*'s *Krautomat*. The transfer of materials and labor would not have been possible on a commission base. Instead, the conviction that neither project exploits the support enabled the cooperation. Furthermore, trustful relationships can be multipliers in the pursuit of common objectives. The experience of past

[82] We are very lucky to have this huge support in the city council. Above all, the support is from a city councilor who has been fully committed to using her possibilities in the city council and who has managed to get some municipal companies to do the common good balance now. And the project goes on, there are more subsidies, for the companies to develop further... and private companies get a subsidy for their first balance from the office of economic development.

[83] A basic issue that we have is that we live in a growth paradigm and that everyone always thinks he has to grow everywhere and the systems are designed in such a way that you actually have to grow, if you are a stakeholder, in order to survive. Even if you may not want it at all.... And this is certainly the biggest social innovation we need in the next few years: economies, economic systems, evolutionary changes to come to post-growth or at least a decoupling of the two.

[84] It's almost like the humus on which the whole thing can grow. The social context is, perhaps through its nature or setup of form, thoroughly permeated by trust. So, there is a high concentration or a high dose of trust in this contact.

collaborations and mutual sympathy allows participants to put trust in each other's judgement. Relying on other's experiences and appreciation facilitates the challenging search for collaborators who share the same values.

Organizations that take a leap of faith by basing their activities on confidence, often experience a return in times of need. Participants of the community-supported agriculture project, for example, help their farmers when the harvest is due but conditions are unfavorable and there is time pressure. Another example is the workshops counter service. Frequently, there are gaps in the shift schedule, nevertheless the workshop has not remained closed for a single day during more than two years of data collection. Although the workshop's supervision is organized on a voluntary basis, there is an extremely high reliability and thus the corresponding trust in the collective. More generally, therefore, trust is also an enabler in the sense that individuals are convinced that others will continue to make sacrifices and challenge obstacles to further common goals around sustainability which in turn increases their own willingness.

Relations based on trust, however, do not imply the absence of disagreement and of a need to compromise. Collectively agreed on transparent rules and procedures, thereby, help to avoid misunderstandings and ensure fair negotiations. *Slowtec*, for example, does not have positions with defined tasks for which one is employed but a number of more and less enticing roles that have to be assumed to ensure its continuous working. Here, substantial coordination is required to both balance the allocation of different functions and duties and to cover all necessary activities. Setting up and cultivating appropriate procedures is a continuous learning process. Collected experiences and input from other groups advance the establishment of appropriate structures. Not unlike trust, the cultivation of these relations cannot be forced but need to grow organically. Once they are established, however, they are an important enabler of alternatives modes of (economic) organization.

> Ich merke, dass es unglaublich wichtig ist, dass wir Struktur haben, und vielleicht sogar mehr Struktur als eine normale [hierarchisch strukturierte Organisation], *damit* wir auf Augenhöhe kommunizieren können. (I_E01b)[85]

Trusted subjectivities and devotion

The trust invested in individuals can fundamentally change the parameters of togetherness. At the same time, when communities invest trust in individuals it does something to their subjectivities. On many occasions, I observed interesting dynamics and processes of reinforcement in groups – both towards more or less trust – depending if trust was invested or withdrawn. These shifts are highly

[85] I notice that it is incredibly important that we have a structure, and perhaps even more structure than a normal [hierarchically structured organization], so that we *can* communicate at eye level.

implicit and only partially available to conscious reflection. But the fact that trust repeatedly came up in formal and informal discussions attests its importance for community economies.

> Was macht das mit den Subjekten? Wenn plötzlich Vertrauen gegeben wird, Verantwortung. Was ist deren Antwort? Welche Möglichkeiten haben sie? Sie können fast nicht mit Misstrauen antworten, sie haben erstmal einen Vertrauensvorschuss. Sie haben jetzt einmal die Verantwortung bekommen. Da macht es was mit denen. Und das ist glaube ich ein Knackpunkt, den ich auch sehr gut finde und dass da eine Transformation stattfinden kann innerhalb von bestehenden Organisationen mit gewissen Voraussetzungen. (F_01)[86]

Trust in each other and the mutual cause is a fundamental moment in transformative practice. Especially so for individuals that are highly dedicated to their project or organization. While the protagonists of eco-social organizations would not be able to pursue their objectives without the help of engaging contributors, it is important to reflect on the dedication, readiness and capacities the former bring in. Most organizations in this study exhibit key personalities who have an essential role in the set-up and shaping of their organization. Often this goes hand in hand with great personal risk and devotion. In the end, this requires someone who is so deeply invested in the project that work becomes vocation.

The founder of the open workshop, for instance, quit his job to devote more than three years full time to the project. The first year he used to plan the project and find an appropriate location. In the following two years, he devoted up to 80 hours a week to the implementation and consolidation of the workshop. In other organizations, similar engagement has proved crucial in establishing a relatively solid standing within current modes of economic organization. Some of the economic and governmental disadvantages organizations face (see above) are thus compensated by strong engagement. This, of course, brings with it the danger of personal sacrifice and responsibilization (W. Brown, 2015), neoliberal tendencies that closely intersect with transformative practice through notions of entrepreneurship (Hardt & Negri, 2017).

Commitment alone does not suffice but has to be accompanied by new ways of thinking. Although eco-social organizations do not necessarily break explicit norms and rules, they frequently transgress the boundaries of 'business-as-usual'.

> Man überschreitet das Übliche mehrmals in einem solchen Prozess, oder fast regelmäßig muss man sagen. Weil diese Neuheit dieser Eigenschaften [Reparierbarkeit] nur herbeigeführt werden konnte durch neues Denken, neues Verständnis von der Notwendigkeit dieser Eigenschaften. Und dann aber auch daraus abgeleitet, eine neue Fähigkeit in der Bereitstellung oder Ermöglichung dieser Eigenschaften. (I_E02biii)[87]

[86] What does that do to the subjects? If they are trusted all of a sudden and given responsibility. What is their answer? What possibilities do they have? They can hardly answer with distrust; they were given an advancement of trust. It does something with them. And I think this is a crucial point which I think is very good and that, in this way, a transformation can take place within existing organizations.

[87] One transgresses the usual several times in such a process, or almost regularly one should say. Because the novelty of these qualities [reparability] could only be brought about by new ways of thinking, a new

Breaking with "mental infrastructures" (Welzer, 2011) entails a high degree of reflexivity about routines and norms and the ability of their questioning. Subjects challenge conditioned behaviors and finally unlearn them while cultivating other – alternative – routines. On occasion, the departure from 'normal' ways of doing things clashes with the mainstream and seems odd or out of place. This makes set-backs and the relapse into old patterns a regular part of (personal) transformation.

Chapter 15: Compromise

Degrowth practices and politics exist, at best, as ambiguous, contradictory, and often unclear patterns of activity that navigate the complex field of possibilities and constraints through trade-offs, impulse decisions, and long-term strategies. Alternative practices are often sidelined by the 'reality' of financing, markets, growth-centered governance structures, habits, competitive forms of social intercourse, and egocentric subjectivities. Yet, organizations and individuals continue to encounter possibilities through trust, innovation, chance, good-will, inventiveness and institutional support. Together these factors – and there are many more that this study did not uncover or which I had to neglect for reasons of space – constitute a complex playing field on which transformative geographies unfold. This last section sketches findings pertaining to the compromises organizations make. That means the ways they anticipate, fight, embrace, and respond to the ecologies of practices they find themselves exposed to and embedded in.

Trade-off

Organizations that financially depend on sales and paid commissions have to enter commercial relationships with others. Potential business partners, however, might not share the same value set, or engage in activities that counteract the principles of eco-social enterprises. For a lack of 'allies', eco-social enterprises compromise by doing business with individuals and organizations of different shades of compatibility. *Slowtec* is a particularly conspicuous example when it comes to the assessment of commissions that do not fit the organization's ideals. They have rejected a number of inquiries in areas that are socially or environmentally problematic or, from their point of view, unnecessary. On the other side, *Slowtec* also accepts commissions that are controversial from their point of view such as the cooperation with an automobile enterprise which included a transcontinental flight of one of the members. *Slowtec* makes these compromises very consciously, weighting (environmental or social) costs against the possible (future) impact of their organizational activities.

> Und das Zweite ist, die zahlen normale Industriepreise und das ermöglicht uns wieder für ein paar Monate hier im Team zu wirken. Also ich meine, ich weiß es [die negativen Folgen], ich gehe den Kompromiss bewusst ein. Aber wenn ich jetzt sozusagen den hundertprozentigen Idealisten in mir

understanding of the necessity of these qualities. And then, derived from it, also new abilities in the provision of these qualities.

> heraushole, dann habe ich vielleicht meinen Idealismus, aber kein Team mehr und keine Firma und kann auch nicht wirken. Und ich befürchte es wird noch ein bisschen so dauern. (I_E01b)[88]

Similar to commissions, there is no black and white when it comes to the sourcing of materials, the purchase of products, or their design, construction and sale. While most organizations strive to be as 'fair' and 'sustainable' as possible, budget constraints, time constraints and a lack of availability repeatedly causes them to opt for choices that are less expensive, less time-consuming or simply available at all. *Relumity*, for instance, put much effort in setting up a fair and local supply chain. For a lack of regional, national, and even continental alternatives, *Relumity* decided to obtain electroluminescent diodes (LEDs) from Japan for reasons that the working conditions are likely to be better than in other Asian countries – which remains speculation on part of *Relumity,* having no capacity to assess the conditions on site. Others have to trade-off due to financial restraints. *HOBBYHIMMEL*'s audition report for the economy for the common good, for instance, reads:

> Als Startup mit hohen Investitionen und auch laufenden Kosten, sowie stark begrenztem Gründungsbudget konnte nicht immer auf die vielleicht für das Gemeinwohl beste Wahl zurückgegriffen werden. Es wird jedoch bei jeder Kaufentscheidung abgewogen, ob es bessere, sinnvollere Alternativen gibt und ob sich diese im finanzielle Spielraum befinden. (D_A01b)[89]

Compromise between availability, costs and ideals is a recurrent issue beyond the few examples mentioned. *Relumity*, *Slowtec*, *Smark*, *HOBBYHIMMEL*, and *Geco-Gardens* constantly have to compromise in their sourcing of materials. This is particularly conspicuous with respect to electronics where continental let alone regional alternatives hardly exist. Without trade-offs, however, none of these organizations would be able to operate.

Charity projects, social tariffs, and trust

Volunteer work and mutual support are important pillars of Stuttgart's community economy. On the one hand, many organizations are financially weak and depend on, or significantly profit from, non-monetized support. Furthermore, non-commodified relations prefigure more social and egalitarian forms of economy that many participants and organizations envision. On the other hand, organizations face payments for rent, equipment, and, where applicable, for services and employees, and thus require a stable revenue through donations, institutional funding, market activities or a combination thereof. Beyond that, organizations that are not a side or leisure activity of their protagonists need to generate at least a minimum wage for some or all participants. This often leaves little leeway for

[88] And the second is, they pay normal industry prices and that allows us to work here in the team again for a few months. I know about them [the negative effects of my practices] and deliberately make a compromise. If I were to follow my idealism 100% then I may have my idealism but no team and no enterprise, and consequently no effect. And I'm afraid it will continue for a little longer.

[89] As a startup with high investments and running costs as well as a very limited start-up budget, it was not always possible to go for the best option with respect to the common good. However, we consider for each purchase decision whether there are better, more meaningful alternatives and whether these lie within the financial possibilities.

engagement in non-monetized economies that do not 'pay off'. Trapped within these tensions, some organizations implement 'social tariffs' and/or focus their volunteer work to maintain an oversight.

> Bei uns heißt das *Sieben Tage Projekt*, dass wir sozusagen sieben Arbeitstage spenden pro Jahr an eine Organisation und da arbeiten wir völlig kostenfrei. (I_E03)[90]

Em-faktor compounds its voluntary engagement into a 'seven-days-project' in which the whole organization devotes seven working days to a charitable project. The selection of a project often emerges from personal ties or from within the local context. The local group of the *Economy for the Common Good* – of which the *em-faktor*'s manager is a member – for instance, was the addressee of a seven-days-project in which *em-fakor* designed and printed a brochure for the association (see illustration 11). Apart from controllability, a condensed voluntary engagement also creates better visibility. *em-faktor* draws on their seven days project for marketing purposes.

Illustration 11: Cutout from the brochure designed by em-faktor, the full version can be downloaded from http://www.em-faktor.de/fileadmin/gemeinwohlbilanz/gwoe_unternehmen_1_1.pdf

Slowtec has social tariffs at about half the normal rate for charitable projects. The decisive factor, here, is not the organization's legal form but their purpose and financial situation. The fact that many of *Slowtec's* potential partners would qualify for reduced rates, further strains its finances. Commissions from the *Karte von Morgen* project, for instance, are calculated with the social tariff. In addition to the significantly lower rates, there are issues with the project's liquidity and its ability to render account of their project-based money. In sum, that means that *Slowtec* works for a reduced rate that, in addition, is only paid partially. This exchange is based on the trust that the project can pay the bill at a later stage. Lower rates and more focused voluntary engagement are the compromise between financial requirements and a social purpose. In particular in the case of *Slowtec*, a significant shift occurred from earlier attempts to cross-finance decommodified work with some commissions and in doing so creating interstitial spaces of alternative economies to a severe limitation of their non-

[90] We call it seven-days-project. That means, so to speak, we donate seven working days per year to an organization and we work completely free of charge.

monetary engagement. A more structured take on volunteering and support helps to trade-off between financial requirements and a social focus. On one occasion, I noted:

> Seems like Slowtec has matured and become more 'realistic'. This does not necessarily mean that they are compromised on any level but that there is simply not enough room to manoeuvre on the long run for decommodified support. Maybe there is also a kind of dissatisfaction with the lack of entrepreneurialism of other organisations. (B_E01f)

Diversified business

Smark started out with the slogan "Unser Ziel ist es nachhaltigen Konsum zum einfachsten zu machen, für uns bedeutet dies, alle bisherigen Grundprinzipien über Board zu werfen"[91]. This slogan appeared on the main page of their internet presentation, followed by a range of impressions from local farmers – fields, happy animals, scenic views. Today, the front page greets the visitor with a picture of a shipping container that has been redesigned as fully automated supermarket, headlined "Der Supermarkt 4.0 – 500 Produkte. 24 Stunden. 15m2"[92]. According to *Smark*'s new internet presentation the organization's goal has shifted: "Jederzeit einkaufen. Spontan. Einfach. Offline & Online"[93]. Scrolling down, I am presented with various advantages of fully automated supermarkets – any references to local food and sustainability I search in vein. What happened?

Rewind to early 2018. *Smark* just opened a second store in the west of Stuttgart. Like their first store, the veneer is made of recycled wood, this time from an old garden shed in Stuttgart-Botnang. The food for sale is organic and local, supporting a range of small brands and farmers. The organization has one member who scouts suppliers that fit *Smark*'s vision of sustainable food consumption. Since mid-2018 the store also carries fruits and vegetables that are sold on a trust-base. *Smark* aims to expand further both to spread the concept and to reach a size that can sustain the organization economically – at present the founders still depend on support through a subsidy programme. With respect to potential investors they state:

> Nee, man muss das schon auch sehr plausibel erklären, dass das auch wirtschaftlich ist und dass man da vielleicht wieder was rausholen kann. Und das ist für uns auch ein bisschen das Thema so. Da muss man tatsächlich auch so ein bisschen Kompromisse eingehen was den Idealismus angeht. Das heißt, wir würden nichts bekommen, wenn wir nur sagen würden: Uns geht es nur darum nachhaltigen Konsum zum einfachsten zu machen. Also das muss natürlich auch wirtschaftlich noch zusätzlich sein. Und da müssen wir jetzt einfach so ein bisschen Kompromisse eingehen und dann auch gucken, dass wir da Geld verdienen mit. Weil sonst kriegen wir keine Investoren, sonst ist das nicht attraktiv für die. Weil so viel Geld hat dann doch niemand als Spielgeld. Oder wahrscheinlich sehr wenige. (I_E06b)[94]

[91] Our goal is to make sustainable consumption the easiest. For us this means throwing all principles overboard.
[92] The supermarket 4.0 – 500 Products. 24 hours. 15m2
[93] Shopping at any time. Spontaneously. Simple. Offline & Online
[94] You have to explain it very plausibly that it is also economical and that possibly investors can get a return. And for us, the issue is that we have to make some compromises when it comes to our idealism. That means we wouldn't get anything if we just said: we're only interested in making sustainable consumption the easiest. So of course, in addition, it has to be economical. And here we simply have to make a bit of a compromise and try to

Illustration 12: Kesselkiste at Stuttgart main station (own photo)

Rewind to late 2017. *Smark*'s *Kesselkiste* – their first project located at Stuttgart main station is running for a few months. The technology is still prone to failures which requires on-site support by the founders. At this point, the founders invested over three years fulltime into the development of the technology. Funding came through a stipend EXIST that aims to support innovative technology-oriented or knowledge-based start-ups. Technology, from the outset, was a means to create more efficient processes, which then grants the organization a competitive advantage. This way, the more expensive regional and organic products gain in attractiveness. This very advantage – at least on the surface – is now turned into a means to generate profits. On the other side, *Smark*'s elaborate technology requires high investments. The discursive shift from sustainability to technology could as well be read as adjustment to investor's requirements – whose primary interest lies in revenue rather than fair sourcing and ecological food production. In spring 2019, the internet presence changed again, this time asking the visitor to choose whether she is interested in *Smark*'s products or *Smark*'s technology. Selecting the former transfers the visitor to scenic images and the promise: "regional und nachhaltig einkaufen. Rund um die Uhr. Jeden Tag"[95]. The latter links to Smark's new business approach: the supermarket 4.0.

make it profitable. Because otherwise we won't get any investors, it won't be attractive for them. Because nobody has that kind of money to fool around. Or probably very few.

[95] Regional and sustainable purchasing. Around the clock. Every day.

Self-restriction

In contrast to *Smark*, *Slowtec* deliberately does not allow any classic investments. Instead it focusses on 'organic growth'. This is a compromise in so far, as it makes investments in materials and development work as well as the recruitment of additional contributors, much more difficult and the organization vulnerable to delayed payments, back taxes, unforeseen costs, and delays in the work process. In the past, *Slowtec* was under severe financial strain several times. This does not only compromise their charitable orientation (see above), but also complicate planning. Nevertheless, the enterprise is autonomous in their management and registers annually increasing turnovers. If continuing along this trajectory, it continues to generate increasing leeway for activities in line with their social and environmental values and objectives.

Furthermore, many protagonists compromise when it comes to their own income and merit. The founder of *HOBBYHIMMEL*, for instance, invested three years and much his savings into the project without getting any returns. Similarly, many volunteers and entrepreneurs live on the breadline, paycheck to paycheck, and on mini-jobs they hold in addition to their other activities. Of course, there are significant differences between individuals. Some are supported by their partners, parents or through savings from previous occupations. Others deliberately challenge themselves to live minimalist lifestyles. Nevertheless, their financial precariousness brings with it a general insecurity. One protagonist seriously worried about payments for several months' worth of health insurance – due to an administrative misunderstanding about the legal form of his company and thus his personal status – which would pose a severe financial challenge to him.

Grey zones

Regulatory frameworks and statutory provisions – construction regulations, requirement of permits, questions of liability, taxation and charges, accountancy, data privacy, health regulations, and employment laws – often complicate sustainability-related practices. Most organizations lack the appropriate resources to learn about regulatory frameworks in detail and comply. Although they are generally non-confrontational in their dealings, many organizations intentionally and unintentionally transgress statutory provisions.

A common 'compromise' lies in an intentional lack of knowledge. Due to organizations limited resources as well as often ambiguous information from public institutions, it is not quite clear how full compliance translates into practice. These smaller and larger grey zones provide opportunities for a rather lenient interpretation. Examples that I will not elaborate further for obvious reasons include the deliberate omission to apply for permits and thus evade all the administrative expenditure that come with it. Similar strategies include the avoidance of costs and bureaucracy by passing sales off as donations. It is important to stress that these strategies are not born out of malevolence or negligence.

In most cases the full compliance would strain organizations' capacities to a level that can cause severe pressure, financial and otherwise, and might even imperil their subsistence. Said strategies, therefore, are alternately forms of self-protection, protest or mitigation – and sometimes all at the same time.

Self-management

Direct democracy and consensus-based decision making are lengthy processes that can be quite paralyzing for organizations. While some set priority on inclusiveness and participation and accept the difficulties that come with it, others prefer and depend on more lean and efficient processes of decision-making. The forms of self-management practiced by *Slowtec*, *HOBBYHIMMEL* – and less structured by some other organizations in the sample – are forms of compromise between trust and control, participation and flexibility, individual responsibility and organizational capacity. The strategies of Holocracy and Laloux' Reinventing Organizations are empirically based and refined tools that provide practicable approaches to self-management. Instead of consensus they are based on consent.

Although *Slowtec* and *HOBBYHIMMEL* are 'self-managed', they still have a manager or chairperson. This apparent contradiction, again, is a compromise. First, between their legal form – for-profit enterprise [GmbH] in the case of *Slowtec* and registered association [e.V.] in *HOBBYHIMMEL*'s case – and the ideals of non-hierarchical organizing. Second, although the manager has equal rights and duties in everyday operations, she functions as a 'last resort' in case of conflict or emergency.

Non-confrontative confrontation

Alternative projects can be unappealing to those who are unfamiliar with, and at times skeptical of, the organizations' values, purposes and objectives. To invite "reluctant subjects" (Gibson-Graham, 2006, 23), some participants think of their organizations as Trojan horse for spreading alternative practices. The workshop, for instance, is compatible with a wide range of different lifestyles and attitudes. Yet, its material set-up subtly confronts attendees with issues around resource use, waste, planned obsolescence, car-centered mobility, economic growth and others through placards, flyers, books and conversations. The latter being quite important: as meeting place for diverse individuals that would not meet otherwise, the workshop often houses informative but also controversial exchanges. In sum visitor and in particular regular users of the workshop are exposed to degrowth narratives.

Illustration 13: HOBBYHIMMEL's concept (provided by HOBBYHIMMEL)

In communicating its purpose, *HOBBYHIMMEL* draws on generally appealing messages such as easily accessible workspace, flexible payment options, opportunity to realize creative projects and support through the team and other users with references to sustainability-related issues such as resource consumption and other environmental problems. The workshop, then, is advertised as meaningful solution to these issues (see illustration 13). Degrowth narratives, furthermore, are accompanied by corresponding practices. The workshop prominently houses projects related to plastic reuse, upcycling, post-fossil mobility, and urban gardening. These practices and projects appear prominently as showcases at public appearances and to users of the workshop. With its unimposing appearance and communication, the workshop manages to subtly expose subjectivities to issues and solutions around sustainability and degrowth.

Interlude II: Of transition

Transition is tricky business. For "as soon as we begin to deal with what comes next, we enter the terrain of speculation, conditionality and advocacy, as well as hope and imagination" (Chatterton, 2016, p. 405). It is therefore important to reflect on some fundamental issues before discussing the possibilities and insights these findings might yield.

First, the evidence collected is, of course, limited by the study's temporal, spatial and contentual scope. Although I was in the field for over two years, remaining in contact even beyond, the context of a dissertation project and the rhythms of academia require a temporal demarcation and caesura in empirical engagement. The data therefore allow only a glimpse into Stuttgart's community economy between 2016 and 2018. On the other side, this has been a quite turbulent and exciting period with a promising dynamic. Data interpretation, therefore, is driven by a certain hopefulness that this momentum continues. Also in spatial terms my perspective is limited – apart for some notable exceptions – to the urban area of Stuttgart. Multiple ties point to dispersed organizations, localities and sites. Although these links occasionally took me far beyond Stuttgart, other sites do not feature prominently in this study's findings since they remain too sporadic and underexplored. Most, importantly, however, is my focal restriction to several eco-social enterprises and organizations. Only a few of which I could explore to a degree to deeply understand their intricate workings, rationales and practices. While others are covered rather superficially, I also had to leave out a large number of possible allies for a degrowth transition – individuals, groups, organizations, enterprises – that I did not have sufficient time for or access to.

Second, an orientation towards what comes next involves numerous normative decisions. In contrast to descriptions of the present, the turn to possible futures leaves little leeway to escape into apparently neutral descriptions. Transitioning towards the discussion of this study's findings, it is important, therefore, to reiterate the study's orientation towards the values and principles associated with a degrowth transition which, in particular, chapters 2, 7, and 10 reflect on. Writing about the future, furthermore, draws on – and speaks to – different imaginaries and practices and is thus a part of transformative politics itself. Of course, there is more to transformation than its discourses. This study gives a prominent place to the materialities that both enable and constrain transformation. Nevertheless, it presents itself to the reader as *text* and is thus, for now, part of the discourse on transformation to which it hopes to contribute.

Third, uncertainty often becomes prescription. Individual examples how transition *could* unfold quickly become instructions how it *should* unfold, forgetting about the specific contextualities of sites and practices. It is therefore important to note that this thesis does not devise a specific and uniform

strategy for transition. It does, however, aim to contribute to transformative knowledge and capacity, in the sense of Hardt and Negri's (2017, p. 18ff.) call for a strategy to the movements: "To equate movements with strategy means that the movements already have (or can develop) adequate knowledge of the social reality and can plot their own long-term political direction".

Despite the need for critical reflection, the diverse findings on alternatives, possibilities, constraints, and compromises bring about both evidence and inspiration how a degrowth transition (might) unfold in practice. Evidence in the sense that it shows communities' capacity to engage in different forms of economy, governance and togetherness. The findings show how organizations answer to difficulties and seek compromise to advance their values and objectives despite numerous obstacles – which are often similar across different sites. Although the organizations' tactics do not provide hard and fast rules how to realize transformative projects, they inspire possible actions and solutions.

Before discussing my own interpretation of the data and making inferences what might follow for transformative geographies, some protagonists of this study shall get a chance to speak for themselves. In this vein, this section closes with an excerpt from a focus group discussion, tracing imaginaries of change. The general thrust of this discussion did not only inspire some of the interpretations that follow, but also gives a deeper insight into the community's dynamics and some of the aspects that drive it.

On an evening in mid-October ten of us sit around the meeting table in Slow Villa – as the building that houses *Slowtec*'s shared bureau and living spaces is nicknamed – discussing the preliminary findings of this thesis. In the second half of our nearly three-hour conversation, the topic shifts to transformation. I asked the participants to reflect on the role of community and mutual help for their activities. The following discussion ensued:

> T.: Ja gut, also was ja schon angesprochen worden ist, es gibt ja irgendwas, was uns verbindet. Dieser gemeinsame Sinn oder gemeinsame Leiden unter den Bedingungen unter denen wir sind. Und da versuchen wir jeweils in unseren Organisationen neue Wege zu finden. Und wir werden dadurch natürlich erfolgreicher, indem wir sagen: Wir vernetzen uns, wir tauschen uns aus und stützen uns und inspirieren uns in diesen Punkten. Weil ja jeder seine eigenen Stärken da mit reinbringen kann bezüglich des etwas neueren Ansatzes. Und dieses … neulich hatten wir es von Flecken des Wandels. Es gibt dann innerhalb von diesen Organisationen Flecken und die werden dann vielleicht von innen immer größer und dann übergreifen … dann kommen irgendwie Kooperationen zustande und dann kommt es da … aber auch bei den Kunden ist es so, dass da eigentlich diese Vertrauensebene wächst. Und dadurch verbreitet es sich, ohne dass wir knallhart irgendwie auf die Straße gehen müssen und demonstrieren: Wir brauchen anderes Gesetz hier und dort. Sondern wir schaffen die Realität in unseren Möglichkeiten, ohne dass wir die Energie dazu verbrauchen, um da jetzt Grenzen groß zu verhämmern. Sondern wir fokussieren uns vielmehr auf den Wandel an sich als auf die Probleme oder so.
>
> S.: Das würde ich auch sagen, dass es da ganz gut rauskommt, dieses ‚nicht gegen etwas zu sein', sondern eine Alternative schaffen, eine bessere, die das Alte ablöst. Da gibt es von einem schlauen Menschen irgendwo ein Zitat, der das mal gesagt hat. Buckminster Fuller ist das glaube ich. Und das sehe ich da eben auch. Du kannst natürlich fünf Jahre versuchen eine neue Gesellschaftsform in der Politik durchzubringen und alle Leute davon zu überzeugen und, und, und. Oder du sagst ich pass mich eben so lange an, bis genug Leute sag ich mal unter dem Mantel einer GmbH eigentlich etwas anderes

machen. Und dann irgendwann andere Leute auf den Trichter kommen und sagen: Hey, dann bräuchten wir eigentlich eine andere Gesellschaftsform, die muss erstmal gegründet werden. Und dann sagen alle: endlich, jetzt können wir wechseln. Das ist ja bei uns ganz ähnlich, wir sagen auch: Zu uns passt nicht wirklich was und wir hatten erst ein Einzelunternehmen und dann einen Verein jetzt. Aber die richtige Form wäre es trotzdem noch nicht. Aber sich damit lange aufhalten ist eben nicht das Ziel der Übung. Sondern einfach machen. Und was ich noch zum Vertrauen sagen wollte: Ich denke schon, dass es ganz gut ist, dass wir uns, die meisten hier, gut kennen oder auch zusammenarbeiten und auch austauschen. Und dass dadurch auch einfach das Vertrauen wächst. Und wenn ich eben dem H. sag: Ich kenn ja jemand, der macht das so und so, oder was weiß ich, mit dem habe ich schon öfters Kontakt gehabt, dann weitet sich das Netzwerk viel schneller aus als wenn der jetzt einfach zum L. hingehen würde und sagen würde: Hey, ich habe gehört du machst irgendwas mit Lampen. Dann denkt er so: hmm will der auch was mit Lampen machen? Also weißt du: Wo kommt die Person her? Was ist da für ein Hintergrund? Aber wenn er jetzt wüsste, wir arbeiten zusammen, oder ich kenn den seit 2 Jahren, dann weiß er einfach, also das passt von der Ausrichtung her. Dadurch glaube ich vergrößert sich auch das Netzwerk an Akteuren und das ist denke ich auch wichtig.

R.: Oder irgendwann hast du eine Grenze erreicht und bist in ’ner Blase. Das ist die Gefahr die ich dabei sehe.

H.: Das habe ich im Interview auch thematisiert, weil ich glaube eben, dass wir diese Vertrauenskultur nicht beliebig hochskalieren können. Also es gibt da eine Grenze an, ich sag mal, menschlicher Kapazität. Also eine soziale Kapazität vielleicht. Das heißt nicht, dass es nicht flächendeckend funktionieren kann. Aber es muss sich irgendwann fragmentieren. Es kann nicht ein Monolith sein glaube ich.

S.: Nein, aber das wird es ja automatisch wieder.

H.: Das wird’s automatisch wieder, durch die räumliche Komponente.

S.: Aber auch durch die andere Ausrichtung. Jeder hat ja einen anderen Fokus von uns, ja. Weißt du deswegen und…aber was meinst du mit Blase? Das wir uns in unserer Welt bewegen oder was?

R.: Ja wir jetzt sind alle einer Meinung.

S.: Das würde ich nicht so unterschreiben, (lacht), lass uns in Detail gehen.

R.: Lass uns ins Detail gehen, genau. Aber oberflächlich betrachtet sind wir für mich in einer ähnlichen Richtung. Wir wollen was verändern. Wir wollen selbstorganisiert sein. Wir wollen nicht Gewinnmaximierung, sondern wollen vielleicht ein bisschen nachhaltiger wirtschaften. Das ist ein gemeinsames Ziel und das Problem ist, dass wenn ich jetzt in die nächste Bar gehe und das denen erzähl, was ich machen will, dann ist das eine komplett andere Welt. Und das ist eine andere Blase. Das ist die Barblase.

(Durcheinander)

R.: Und jetzt ist die Frage, wie kommt unsere Blase so weit, dass wir sogar in die Barblase mit reinkommen. Oder wollen wir das überhaupt gar nicht?

S.: Also ich denke, dass es gar nicht schlecht ist, weil du dich dann gar nicht so alleine fühlst auf dieser Welt, sondern denkst: da gibt es noch ein paar andere, die genauso bekloppt sind und die auch für irgendwas viel machen ohne viel Brot dafür zu sehen. Ja, also ich finde das eher positiv.

R.: Das ist auf jeden Fall positiv.

S.: Ja und ich denke auch nicht … es hat auch jeder die Möglichkeit auch in diese Blase reinzukommen. Und wir haben so viel Schnittstellen. Es ist ja nicht so, dass wir nur interne Geschäfte machen. Und sagen: Ok ich bezieh nur noch Essen aus dem Krautomaten und ihr baut den nur noch bei uns und dann wäre es irgendwann eine Blase. Aber wir haben so viele externe Beziehungen zu der Kneipenwelt.

U.: Und eher wieder wie diese wandelnden Flecke dann auch.

S.: Genau, wir werden eben zu größeren Flecken, mit Verbindungen. Und wenn dann einer von der Kneipendings sagt: Mich interessiert da irgendwas mit Anbau und blabala, dann sage ich: Geh doch mal

zu Slowtec. Und dann wird eure Blase größer und ihr schickt…oder euer Fleck. Also von dem her, das sehe ich eigentlich nur positiv. Das kann sein, dass wir irgendwann in eine negative Blase…

R.: Nee, ich sehe es positiv. Ich sehe alles positiv (lacht). Ich sehe nur dabei…

S.: Blase hat sich für mich so negativ…

R.: Nee, die Blase als Risiko, nicht als Status Quo oder so. Also eher als Risiko tatsächlich.

S.: Der Abgrenzung jetzt?

T.: Es gibt ja ganz viele von diesen Blasen. Zur gleichen Uhrzeit sitzt wahrscheinlich jetzt in Leipzig auch so eine Blase und in Berlin (lacht). Aber das ist doch wunderbar. Und ich finde, dass dieses Bild mit dem Vernetzen, das macht es irgendwie. Wenn da diese Blasen, wenn die größer werden und dann verschmelzen, dann haben wir vielleicht die große Blase vor der du sagst: Das ist jetzt schlimm. Aber dann haben wir vielleicht schon eine Transformation gemacht. Aber da müssen wir eh weitergucken.

Part V: A degrowth transition in practice

Stuttgart's community economy – to speak with Gibson-Graham et al. (2013, p. 13) – comprises diverse practices that constitute capitalist, alternative-capitalist, and non-capitalist forms of labor, enterprise, transactions, property, and finance. Guided by a combination of different moments in the enactment of alternatives – practicing alternatives, encountering constraints, encountering enablement, and making compromise – and the diverse logics perspective on practices' relatedness through economy, communality, governance, subjectivity, and technology, the previous part structures this diversity and traces the different ways in which alternatives materialize empirically. The challenge at hand, now, is to map these diverse practices onto the complex unfolding of social dynamics to interrogate their relatedness beyond place for the possibilities of a degrowth transition, a task this part turns to.

The foregoing interlude closes with an extensive quote from a focus group discussion on transformation. The participants imagine organizations as spots or bubbles that might grow and connect to eventually transform societal relations more broadly. This is a powerful imaginary frequently evoked throughout literature on transformation, for instance as peninsulas against the current [Halbinseln gegen den Strom] (Habermann, 2009), as seeds of change [Keimformen] (Meretz, 2014), as autonomous geographies and as interstitial spaces (Pickerill & Chatterton, 2006). But do the empirical insights of this study support such an imaginary? In order to formulate a tentative response to the research question how community activism and civil engagement can shift transformative geographies towards a degrowth trajectory (see introduction), this part integrates empirical material with the rich thematic and conceptual groundwork expounded in parts I-III. Before I outline the structure of this part in more detail, I ought to reiterate the study's take on transition.

Social dynamics, from a practice theory perspective, unfold in a nonlinear and complex process revolving around the emergence, stabilization, and decline of practices or practice formations. Practices hang together and form larger nexuses, complexes, and constellations such as degrowth-oriented organizations, city councils or markets. Power, thereby, is not a property of individuals, organizations, and institutions but resides in practices' alignments. That means power emerges from the different ways the (innumerable) practices that constitute social phenomena relate to each other. This perspective both decenters the power of capitalism and the notion of capitalism as homogenous entity, while remaining attentive to the alignment of practices pursuant to the purposes of capital (chapter 6).

Parts I and II show that although capitalist forms of production, transfer and governance are not the only way in which economic practices hang together – as the diverse economy perspective maintains – they enroll and align a significant fraction of economic practices. Take for instance the production of

a smartphone which connects practices of "salvage accumulation" (Tsing, 2015, p. 63) of materials like lithium and tantalum with practices of assembling the phone under inhumane working conditions (Marchant, 2018), and practices of a highly disproportionate surplus appropriation (Kenneth, Linden, & Dedrick, 2011). The communities affected by these exploitative practices, the enterprises that attempt to internalize costs, as well as the individual consumer faced with the decision what phone to buy have little leverage over such a constellation. Its practices seem to come from elsewhere (chapter 6). Yet, practices of fair sourcing, repairing, open source designs, fair working conditions, equitable allocation of surplus, and ethical consumption transpiring through the infrastructure of open workshops like *HOBBYHIMMEL*, the skill-sharing and help in repair cafés, the modular design of products like *Relumity #LED1*, the repair manuals of *iFixit*, and diverse non-profit business forms, open perspectives onto the possibility of different alignments. This raises a number of questions for the possibility and form of a degrowth transition.

The first question revolves around a politics of place beyond place. Empirically, this study captures the complexity of relations around alternative economies in place. Thematically, however, it aims to explore transformative geographies beyond place. The study's focus on place, then, limits its ability to trace social and material relations beyond the geographical and temporal context of Stuttgart – more precisely beyond the sites it covers empirically. Consequently, the thesis needs conceptually and methodologically sound tools to grasp practices' relations beyond their sites of enactment. This requires two things: a notion of the broader context and a concept of practices' relatedness beyond place. Throughout this work, I develop both. Part I takes a general look at growth-based economic, political, and cultural institutions in the Global North, considering diverse economic practices, capitalist cheapening, sustainable consumption, and non-capitalist forms of production, transfer and surplus allocation. Part II, then, develops a conceptual argument how different sites interlink and traces the relations of practices beyond place. It concludes by operationalizing practices' relatedness through the 'diverse logics perspective' that systematizes the practice-theoretical notion of 'zooming' (Nicolini, 2013). Parts III and IV elaborate on this analytical framework methodologically and empirically in a dialectical manner: while the diverse logics perspective guides analysis, empirical insights develop and refine it (see chapter 11). Against this background, the ensuing discussion on transformation is grounded in rich empirical data from a specific site squared with the many sided (or 'sited') and conceptually-grounded insights beyond place. Chapter 16, in this vein, (re)turns to the question of politics of place beyond place and combines the study's conceptual and contextual insights with its empirical findings to sketch tendencies around a degrowth transition.

The second question revolves around the constitution of degrowth practices and degrowth organizations. The empirics of this study sketch a broad variety of practitioners and organizations that

engage in sustainability-related activities. Tracing different forms of practices' relatedness in and beyond place does not suffice to capture the possibilities for a degrowth transition. Consequently, the study needs to develop a conceptually-grounded understanding of practices and organizations that orientate towards a degrowth transition. Rather than singling out particular practices or organizational forms, chapters 17 and 18 propose more nuanced perspectives on practices and organizations that reflectively relate to practices' broader alignments in ways that found the assumption that their activities have an – however minor – effect in line with degrowth's principles.

The third question revolves around possible leverages that further a degrowth transition. The profound changes, required to veer current societal trajectories away from deepening crises, premise a widespread dissemination of degrowth practices and organizations. Yet incumbent alignments require extensive compromises and water down much activity oriented towards radical change. Chapter 19, in this vein, discusses the difficulties to identify, let alone single out, transformative processes of a degrowth transition. Rather than losing itself in the hybridity, contingency, diversity, and processuality of transition, it traces the development of possible strategies for a degrowth transition around 'hybrid infrastructures'.

Chapter 16: Sketching a degrowth transition

Degrowth convenes a number of theoretical and practical approaches that seek to abandon economic growth and related narratives of development, innovation, and progress as guiding principles of human co-existence and instead proposes a reflective recalibration of economic, political, and social institutions to support a temporally and spatially equitable, sustainable, and dignified survival of human and nonhuman species (see chapter 2). What is at stake from a degrowth perspective, then, is not only a downscaling of economic parameters (in a narrow sense), but the ideology of progress across all social domains: technological innovation, self-enhancement, community development, political expansion, all of which are regularly modelled on a notion of (ecological) evolution. A degrowth transition, therefore, exceeds economic degrowth and includes all dimensions of social life including politics, culture, identity, and technology (Schneidewind 2018, see chapter 7).

Stuttgart's community economies, as the findings in part IV show, confront and erode incumbent alignments of practices on multiple fronts simultaneously. The lens of the diverse logics perspective sheds light on different practices that gnaw away on the apparent verities of growth, innovation, enhancement, development, expansion and evolution. Degrowth-oriented organizations, however, do not blindly oppose, say, technological progress, but subject technological innovation to critical reflection and politics (Kerschner et al., 2018). Similarly, although a number of organizations

deliberately forgo profits and expansion due to the ways they align practices of sourcing, management, production, work, and sale, they do not withdraw from profitable market exchange altogether.

Two issues, therefore, need further exploration and discussion at this point. First, degrowth transition implies a large-scale shift in economic and political practices. But how do the findings of a place-based study map onto the fundamental, dispersed and far-reaching changes a degrowth transition implies? Second, if degrowth extends beyond economic degrowth towards technological, political, and social dimensions, this study needs to account for the contradictions, tensions and reinforcements that emerge between the different dimensions of a degrowth transition (see chapter 7). For instance, how can we square the *innovation* of sufficiency-oriented technologies or the *expansion* of degrowth-oriented organizations with a degrowth transition at large? And how does a shift in subjectivities – a primary focus of community economy scholarship (Gibson-Graham, 2006; see chapter 4) – relate to changes in other dimensions? In the following, I return to the diverse logics perspective in combination with Wright's (2010) notion of symbiotic, interstitial, and ruptural transformation to propose a basis for further discussion.

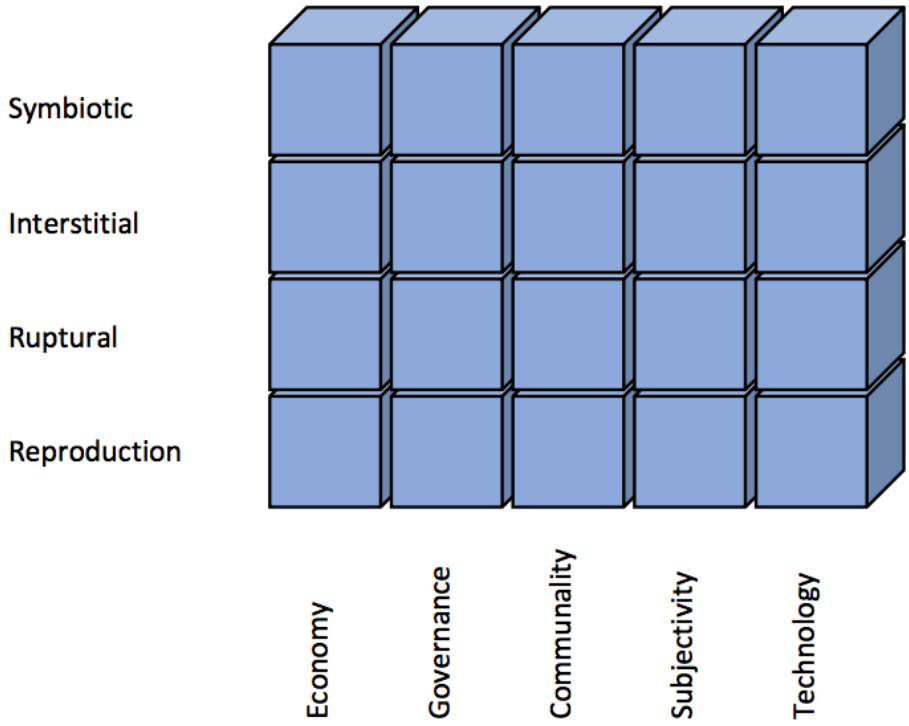

Figure 11: Social and strategic dimensions of transformation

The five perspectives on practices' relatedness – economy, governance, communality, subjectivity, and technology, that informed the coding process (chapter 11) and supported the presentation of findings (chapters 12-15), shed light on different dimensions in which a degrowth transition can unfold. Symbiotic, interstitial, and ruptural transformation as well as reproduction, furthermore, provide four

modes how practices relate to broader alignments (see interlude I: Geographies of change). Structured by the diverse logics perspective and different modes of transformation, the remainder of this chapter aims to sketch a degrowth transition, guided by the question: what could a degrowth transition look like in the light of this study's empirical findings? The first section, thereby, sets the ground by referring back to the context of this thesis to situate the findings in place. The subsequent sections each explore transformative dynamics along one perspective on practices' relatedness – economy, governance, communality, subjectivity, and technology. For each perspective, I shortly set the scene by reflecting on issues outlined in parts I and II. I then square the logic with the findings in part IV before discussing moments of symbiotic, interstitial, and ruptural transformation. While this chapter builds on the study's findings, it discusses them rather superficially to set up a perspective on the width and breadth of a degrowth transition. The ensuing chapters (17-19), then, dig deeper into the practices, organizations and strategies involved.

Stuttgart's politics of place beyond place

Part III situates the case study in the relatively prosperous and industry-oriented context of Stuttgart. In form of several hypotheses it reflects on the context's particularities and possible consequences for research on degrowth economies. Aside from conducive factors for technologically-oriented alternative organizations – such as specialized knowledge and skills, material support, and selective cooperation with industrial companies – Stuttgart is also relevant as site of globalized production and consumption. With a number of globally acting companies from automobile and high-tech industries, such as Bosch, Daimler, Porsche, IBM, Siemens, and Mahle, most of whom have their head-quarters or important subsidiaries in the metropolitan area, Stuttgart links and commands considerable flows of resources, materials and money.

Stuttgart, therefore, is not just a site affected by practices' elsewhere, but is also origin and commander of global relations. Massey (2008, p. 15 emphasis in original), in this vein, raises the crucial question "if the reproduction of life in a place, form its most spectacular manifestations to its daily mundanities, is dependent upon poverty, say, or the denial of political rights, elsewhere, then should (or *how* should) a 'local' politics confront this?" In Stuttgart, similarly to Massey's London, the prosperity of place depends on innumerous relations to other places. Flows of capital, workers, resources, products, directives, documents, and knowledge are entangled with salvage accumulation, dispossession, displacement, oppression, exploitation of workers, cheapening of natures, and other forms of eco-social injustices and ecological destruction (see chapter 1).

A politics of place beyond place, accordingly, starts *in place.* Changing patterns in practices of provisioning, sourcing, exporting, commanding, and countless others, are crucial elements of a degrowth-oriented politics (chapters 6 and 7). Although the organizations in this study are not the

global players that leverage global value chains, some of their practices interfere with incumbent alignments and provide plausible links and orientation for a degrowth transition. Zooming in and out and putting concrete practices in relation to the institutions that characterize growth-based societies, thereby, shows how practices collide with, shift, substitute, rupture, and reproduce broader alignments. Needless to say, Stuttgart's organizations and activists certainly do not make a transition by themselves. But while changes in one place are insufficient for a degrowth transition, putting local transformation into relation with practices' broader alignments opens a perspective on the possibilities of a politics of place beyond place *in many places.* The change-makers that feature in this thesis, therefore, are important pioneers that provide the ground for critical scholars, activists, politicians, planners, entrepreneurs in various places to ally and affect change in practices' alignments across economy, governance, communality, subjectivity, and technology.

Economy

The logic of economy captures practices' relatedness through moments of creation, exchange, reciprocity, comparison, and sustenance. It is particularly visible in practices of production, consumption, distribution, and appropriation. Incumbent institutions align said practices in ways that support the accumulation of capital, for instance, through a focus on exchange value, rates of productivity, wage dumping and the externalization of costs. Or in the words of Patel and Moore (2018), a cheapening of work, nature, and lives (see chapter 1).

Degrowth criticizes that economic practices aligned through exchange value and productivity counteract social and environmental justice and imperil community, democracy, well-being, and the earth's ecosystems. Just and sustainable economies require an end of exploitation and the embedding of economic practice into democratic and solidary value systems. Production and exchange ought to align through usefulness, equity, and sustainability instead. Degrowth scholarship proposes the localization and regionalization of productive activities, the organization of resources as commons, the sharing of work, resources, space, knowledge, and skills, and the decommodification of land, labor, and value as coordinates of a degrowth economy (Kallis, 2018; see chapters 2 and 7). Productivity, measured in monetary terms, then, gives way to expenditures that enrich pleasure and well-being. Such an economy draws on diverse of ways to organize economic relations which supplant the truth of the market and elude quantification.

The study's findings, however, show, that organizations run into difficulties if they do not align their practices through exchange value, rates of productivity, wage dumping and the externalization of costs. Short value chains which include regionalized production and assembly are uncompetitive beyond a small group of idealists and lifestyle consumers. *Relumity* and *Geco-Gardens*, for instance, face severe restrictions by refusing to base production on offshoring and cheap sourcing. To

compensate (at least partially) for financial restraints, most organizations in this study accept low returns (and thus precarious wages or no compensation at all), despite much engagement that is often considerably beyond a regular working week. Compromising, in the face of stark limitations, practitioners and organizations also reproduce incumbent economic alignments. Most obviously by engaging in marketing- and sale-related activities. *Smark*, for instance, promotes organic and local food stuff on social media and other platforms. In lieu of aggressive marketing and focus on exchange value, organizations like *Smark*, *Relumity*, and *Geco-Gardens*, of course, offer products and services that target social and environmental needs more directly and abstain from artificial need creation. Notwithstanding, these organizations attempt to win customers to sell their products and services to and in doing so align with a competitive logic that clashes with degrowth principles (chapter 7).

In combination with symbiotic and interstitial transformative practices, however, their orientation also contains shifts and substitutions that are conducive to a degrowth transition. A selective cooperation with organizations that share similar values partially substitutes for competition and introduces elements of reciprocity into economic practice. Furthermore, their products and services expand the availability of ethical alternatives, to some extend compelling competitors to realign their practices. *Smark*'s (original) slogan 'to make the purchase of sustainable food the easiest one', expresses this tendency well. In doing so, these organizations introduce different elements and practices to the local economy. The findings show that a number of organizations indeed engage in local production and sourcing, draw on alternative materials and organizational forms, and put an emphasis on use values. These practitioners and organizations are guided by the question whether a product or service is socially and environmentally useful rather than the question whether it can be sold on a market.

Some organizations' practices, thereby, relate *symbiotically* to economic alignments, *shifting* them towards more sustainable trajectories. *Smark*, for instance, sources regional and organic products from local farmers and sells them through a fully-automated supermarket supporting the shift towards a more sustainable food consumption. Or *Relumity* sets up a more regionalized and transparent value chain for lightbulbs, which they sell in a business-to-business context. Furthermore, some organizations' practices relate *interstitially* to economic alignments, *substituting* for unsustainable practices. For instance, *HOBBYHIMMEL* and the *Reparaturcafé* together provide a space in which people engage in repair practices, (partially) replacing the purchase of new products. *Lastenrad*, as another example, provides cargo bikes that can be used free of change, setting up a commons that substitutes for car-based mobility patterns. Since most organizations this study researched focus on setting up alternative spaces, there are few examples of practices that relate *rupturally* to incumbent institutions, *opposing* economic alignments. A marginal case are organizations like *Slowtec* or *em-faktor* who refuse to cooperate with enterprises that engage in destructive business practices. By

detailing that refusal, *Slowtec* and *em-faktor* oppose and confront capitalist enterprises with their exploitative business activities. Oppositional tendencies, however, are very moderate and remain the exception.

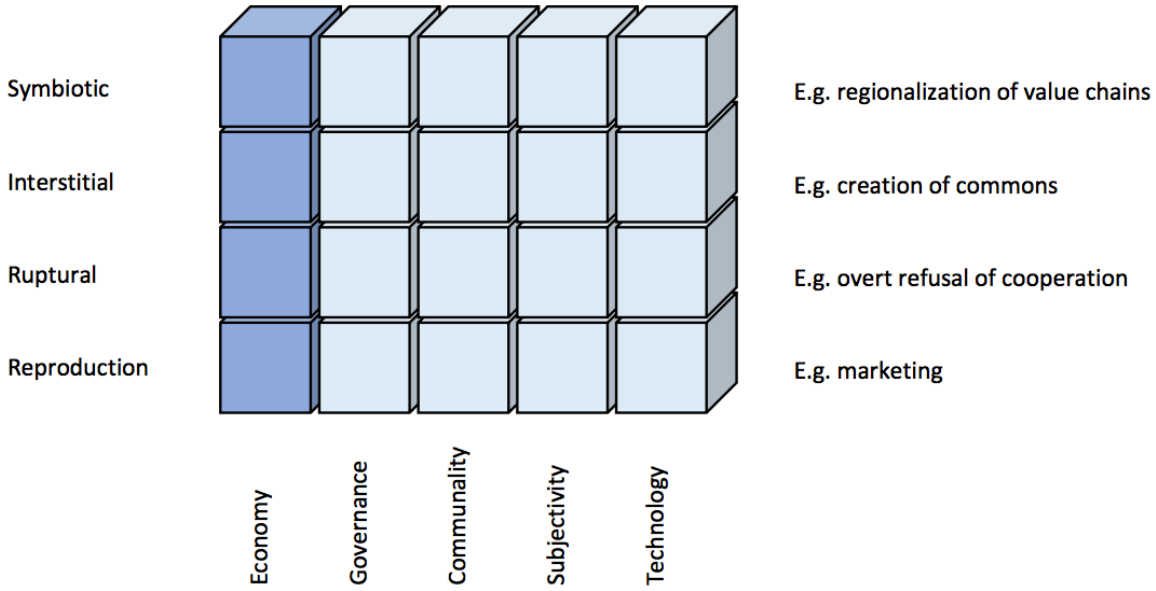

Figure 12: Transformation of practices' economic relatedness

Governance

The logic of governance captures practices' relatedness through moments of rule, domination, power, control and norms. It is particularly visible in bureaucratic practices, law (enforcement), policing, politicking and violence. In a growth society, a significant fraction of governance practices align with capital accumulation, supporting private property and enclosure of social and natural commons – for instance through patents or mining rights – policing – for instance through police repression, intimidation, and use of excessive force at protests such as those against Stuttgart 21 or more recently the anti G20 protests in Hamburg (Haunss et al., 2017) – and politicking – the inadequate and insufficient legislation to respond to social and environmental issues and the denial of more fundamental examination of their root causes (chapter 1). Bureaucratic practices, furthermore, fail to sufficiently support and encourage civil and economic engagement for social and environmental justice and protect forms of initiatives that do not align with market demands. Current German nonprofit law, for instance, excludes political engagement for freedom, social justice and autonomy.[96]

Degrowth seeks to reorient the logic of governance towards democratic forms of decision-making and participatory polycentric forms of control. Practices, then, should be aligned in ways that foster equality, care for disadvantaged individuals and groups, prevent socially and environmentally harmful

[96] https://www.gesetze-im-internet.de/ao_1977/__52.html (accessed March 17, 2019)

practices, encourage dialogue and non-violent communication, and protect the commons for instance through redistribution of wealth, fair wages, transparency, more possibilities for participation, and the strengthening of local politics. Foremost that means to sever social norms and rules from alignment with and orientation on capital accumulation. Bureaucracy, law, norms, and police work, from a degrowth perspective, should align through equality, participation, non-violence, non-coercion and care.

The findings, however, show that most organizations face a number of bureaucratic challenges ranging from inadequate legal forms to disproportionate administrative expenditures. *Slowtec*, *em-faktor*, *Relumity*, amongst others, bear the same tax burden as extractive enterprises although their focus is primarily socially and environmentally motivated. Furthermore, some of the organizations that are possibly entitled to tax exemptions do not attempt to acquire non-profit status, for fear of revocation and retrospective tax payments. In addition, high bureaucratic expenditures and unreliable support can be existence-threatening to small organizations like *reCIRCLE*. Nevertheless, a perspective through the lens of governance, sheds light on a number of activities that shift, substitute, and oppose the ways practices relate through rule, control, and administration.

em-faktor's thrust to judge organizations and enterprises by their social and not by their monetary profit – for example through the social profit manifesto[97] – chimes in with claims by the *Economy for the Common Good* to reform charity laws and taxation. The work of the Green Party in Stuttgart's city council, to audit city-owned enterprises, engenders first small *shifts* in legislation towards a different evaluation of economic activity. Although these changes relate largely *symbiotically* to present institutional alignments the claims of the *Economy for the Common Good* in itself are *oppositional* to capitalist institutions. The ECG seeks to tame markets through common-good-oriented taxation, maximum income, limits to personal assets, restrictions on heritages etcetera, essentially abrogating capitalism's unlimited drive for accumulation.

As with practices' economic relatedness, however, few activities relate rupturally to incumbent alignments of governance practices. This is mainly due to the fact that there is little focus on protest movements in this study. There are, however, exceptions in the sample. *Critical Mass*, for instance, actively disrupts traffic and thereby challenges the political protection and privileging of the automobile industry. A number of individuals from organizations like *HOBBYHIMMEL* and *Lastenrad* participate in these events, and the organizations themselves support them. In addition, organizations like *Slowtec* relate *interstitially* to bureaucracy and law by setting up an outer shell that corresponds to legislative practices while prefiguring other forms of governance internally. Practices of self-

[97] spo-manifest.de, accessed on 15/03/2019

management, non-contractual cooperation, and mutual support remain outside of the sphere of influence of legislation but merge into a grey zone with respect to taxation and control. In this vein, some organization also seek ways around administrative boundaries by ignoring regulations, deliberately remaining uninformed, or navigating grey zones.

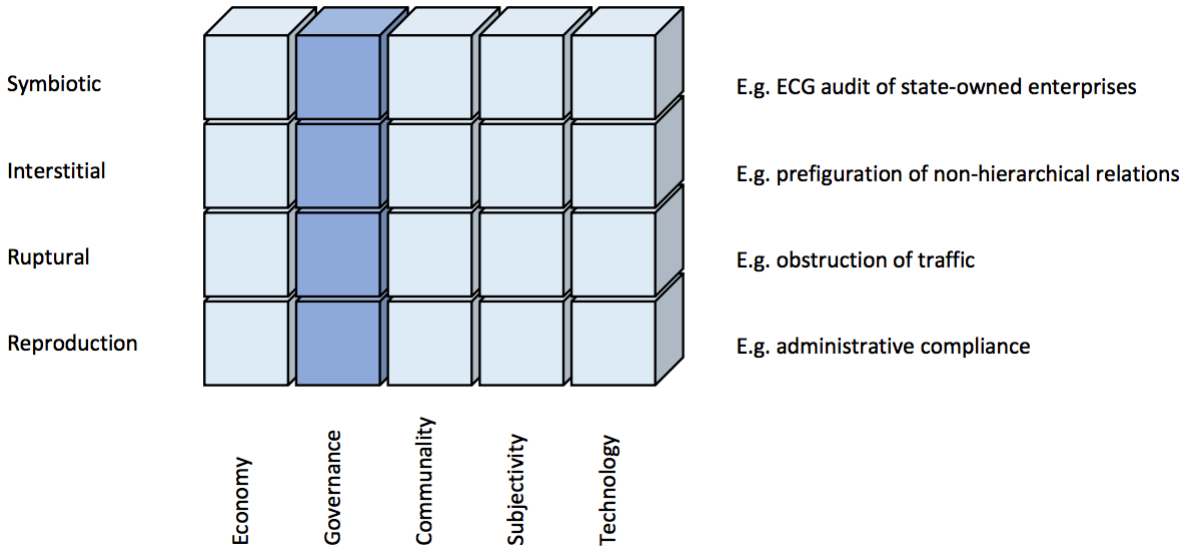

Figure 13: Transformation of practices' governing relatedness

By and large, however, the practitioners and organizations in this study cooperate with bureaucratic and state institutions. In face of the consequences of non-compliance, for instance with taxation laws, organizations have little leeway for opposition. For the most part, non-compliance is out of question and thus not part of organization's reflection or strategy. Despite various disagreements with legislative and policing practices, the confrontation of state institutions remains largely symbiotic with few tendencies outside of formal political practices. Partial withdrawal from state practices poses a greater challenge to organizations and individuals than the (partial) disengagement from markets. Building non-commodified value chains, for instance as community-supported agriculture, hinges primarily on sufficient input of non-market resources and work. In contrast, taxation, policing, and regulatory frameworks affect organizations irrespective of their organizational set-up. It remains a major challenge to reform governance to encourage rather than discourage non-market, common-good oriented forms of organization.

Communality

The logic of communality captures practices' relatedness through moments of togetherness, interdependence, contestation, and collective identity. It is particularly visible in practices of support, participation, non-violent disagreement, competition, negotiation, and group-formation. In contrast to the foregoing logics of economy and governance, it is (even) more difficult to speak of a prevalent

alignment. Generally, however, incumbent economic, political and social institutions foster instrumental and calculative relations rather than appreciation, reciprocity, and solidarity. Neoliberalism models central areas of social life – like education, care, and politics – on the market which organizes togetherness around competition (W. Brown, 2015; Ratner, 2019). In connection with the dismantling of solidarity-based welfare systems, individuals' interests are pitched against each other, creating a 'dog-eat-dog society'. Interpersonal ties in many areas of social life – such as work, public life, academia, social media and sometimes even acquaintances – consequently, are shaped by self-centeredness, superficiality and opportunism. Neoliberal discourse, furthermore, veils interdependence through individualist ontologies, the ideology of responsibilization and naturalization of homo oeconomicus (W. Brown, 2015). Instead of reflecting on togetherness as being-in-common – the notion that being is always being *with* another – political and public discourses frequently instrumentalize a common-being, such as for instance in the agitation against migration.

Scholarship on alternative economies maintains that human existence is fundamentally interdependent (Gibson-Graham, Cameron, et al., 2013; White & Williams, 2012; see chapter 4). The ways in which humans organize and depend on each other, furthermore, is the object and outcome of disagreement, representation, and negotiation (Dikeç, 2015; Rancière, 1998). Degrowth seeks to cultivate practices that align through co-dependence while leaving room for politics. Cooperation replaces competition as central principle of organizing societal relations (Bollier & Helfrich, 2012; Meretz, 2015). Degrowth-oriented togetherness, in this vein, foster practices' alignment alongside trust, reciprocity, solidarity, and non-violent communication rather than competition, extraction and managerialism.

The findings, however, show that organizations which attempt to build relations of trust, mutual help, and solidarity within and without their groupings face a number of challenges. *Slowtec*'s practices of self-management, for instance, are at odds with legal and economic frameworks they face. More generally, the non-instrumental and voluntary support between different participants and organizations is limited by financial and legal restraints. For a lack of time and resources, many participants partake in the competition for sales or funding instead of devoting time to their moral priorities around social and environmental justice. Solidarity beyond place is even more difficult, since many resources and goods are not available or not affordable. Many organizations are therefore involved in possibly exploitative commodity chains.

Nevertheless, the study abounds with examples of practices that affirm trust and support rather than extraction and calculation. A focus of many organizations revolves around products or activities that cultivate and maintain equitable relations to other humans and nonhumans, rather than extracting value from them. The consumption of fairly traded and non-extractive products, for example, is a key

focus of most organizations. In face of the limitations of linear value chains, however, a number of organizations go one step further and attempt to close the loops of resources, energy, nutrients, or water. In doing so, *Cradle to Cradle*, *reCIRCLE*, *ownworld*, *Grünfisch*, and *Geco-Gardens shift* practices of living, food production and consumption from linearity and extraction towards circularity and co-dependence. *Cradle to Cradle*'s practices, thereby are largely *symbiotic* with incumbent institutions, even considering the possibilities of an acceleration of consumptive cycles. *ownhome*'s energy, water, and nutrient cycles, in contrast, substantially *substitute* for consumptive practices, affirming in particular the dependence of human sustenance on natural flows. *ownworld*, furthermore, is part of a larger community with *Relumity*, *Slowtec* and others that cultivate practices of mutual help and trust. Although decommodified exchange is severely limited by financial and legal restraints, a number of practitioners and organizations foster *interstitial* spaces of trust-based economizing. Concomittant with the affirmation of interdependence the organizations' practices also politicize production, distribution, and consumption. *HOBBYHIMMEL* and the *Reparaturcafé*, for instance, draw attention to the politics of planned obsolescence and short production cycles, broadening the opposition against these pillars of growth-based economies.

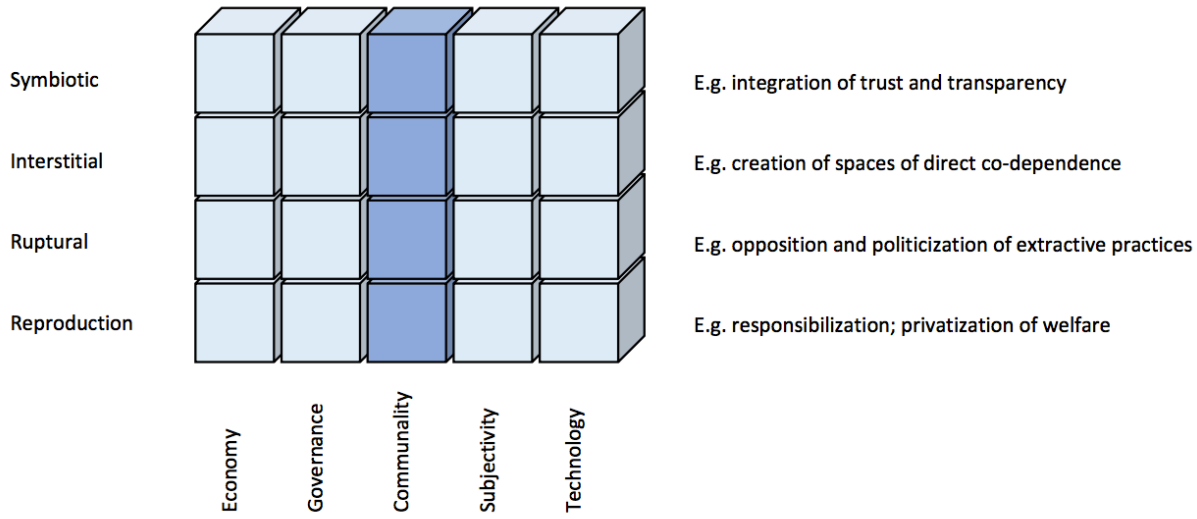

Figure 14: Transformation of practices' communal relatedness

In contrast to alternative alignments of economic and governing moments in practice, the enactment of trust is quite consistent. Despite stark limitations of decommodified relations, there is a strong sense of togetherness between many of the practitioners and organizations, especially, since some individuals are members and supporters of several organizations. Community-based care, however, raises a number of questions around responsibilization and the privatization of welfare. Substituting dismantled welfare systems through social enterprises not only exempts state institutions from responsibility but also transfers welfare from democratically legitimized institutions to private entrepreneurs. Degrowth scholars and activist, therefore, need to pay close attention that autonomy,

entrepreneurship and decentralization do not revert to competitive (communality) and extractive (economy) tendencies.

Subjectivity

The logic of subjectivity captures practices' relatedness through imaginaries, meanings, theories and concepts on the one hand, and habits, affects, feelings and experiences on the other hand. It is particularly visible in practices of explaining, analyzing, sense-making as well as practices of judgement, and (self-) positioning. Incumbent institutions across politics, media, and education align their practices with narratives of progress, in particular economic growth and technological innovation and largely ignore limits to growth, the unlikeliness of absolute decoupling, and imperialist basis of prosperity in the Global North (Brand & Wissen, 2017; Jackson, 2017; chapter 1). Individuals, thereby, are compelled to succeed and keep up with social advancement rather than engage critically with social and environmental issues. It is individuals' responsibility to act as 'homines oeconomici' and entrepreneurialize themselves as human capital (W. Brown, 2015). Organizing society around calculative individualists fosters uncompromising, self-centered, and ignorant subjectivities, valued in terms of success, and focused on self-enhancement. Like with other forms of practices' relatedness, alternative alignments exist but are discouraged rather than fostered by incumbent economic, political and social institutions.

Alternative economies emphasize the need to develop empathy, altruism, and joyful doing to establish a socially and ecologically sustainable economy. Community economy scholarship, in particular, focusses on subjectivities that disidenfity with capitalism and become more caring individuals (Gibson-Graham, Cameron, et al., 2013; chapter 4). Alongside other alternative approaches (Habermann, 2012; Raworth, 2017; Schneidewind & Zahrnt, 2014), degrowth theories and practices challenge the naturalization of self-centered rationalism and the ideology that markets divert egoism towards common good (Kallis et al., 2018; Muraca, 2013) while acknowledging that social institutions based on individualism reproduce such behavior.

Calculative, ignorant, and self-centered subjectivities jar with alternative forms of economizing and decision-making on numerous occasions, as the findings in part IV show. This is for reasons of attitude as well as difficulties to adapt to cooperative and non-hierarchical models or lack of sustainability-related skills. Although most individuals that participate as supporter or customer in one or several projects are cooperative and overly asocial behavior is rare, incidences of (voluntary or involuntary) damaging occur at times. Most difficulties, however, are due to deep seated attitudes and habits that clash with organizations based on voluntary participation, autonomy, sufficiency, and principles like 'everyone to their needs and to their abilities'. *Slowtec* and *HOBBYHIMMEL* that both experiment with self-management experience reluctance and insecurity of subjects to adapt to non-hierarchical forms

of work and decision-making. Many protagonists, furthermore, align strongly with a focus on efficiency and optimization of their own practices and that of their organizations. All these aspects, of course, apply to people who actually participate in the projects and organizations featured in this study. On a more speculative note, these and other reasons such as lack of awareness about social and environmental issues and unknowingness, inability, or unwillingness to engage in alternative practices also prevent others from participating.

Subjectivity, however, is not only a key premise for transformative practice but also a site of transformation itself. Hardt and Negri (2017, p. 224) note that "subjectivities are radically transformed by their participation in political organizing and political action". In this vein, the thesis identifies a number of practices shifting, substituting, and rupturing incumbent alignments of subjectivity. Most prominently, trust features in this study both as catalyzer of community economies and as challenge to subjectivities accommodated to distrust, control and hierarchy. *Interstitial* spaces of trust-based economizing (see logic of communality above), therefore, not only substitute for extractive and competitive relations but also change the identities, attitudes, and affects of those involved. In particular, the experience that things can be done differently is a strong leverage and encouragement for further alternative practice. It produces "resonance", in the words of Hartmut Rosa (2016, p. 736, author's translation) which "keeps alive the notion and desire for a different form of world relationship". Simply put, it gives hope which plays a crucial role for transformative geographies (Gibson-Graham & Community Economies Collective, 2017; Kallis & March, 2015; see also chapter 4).

Participation, furthermore, for instance as volunteer or visitor of the open workshop, exposes individuals to doings and sayings related to social and environmental issues, which they might not encounter otherwise. This confrontation can lead to *shifts* and in extreme cases also *ruptures* in judgments, sense-making of and (self-)positioning vis-à-vis social, economic, and environmental relations. Besides emotional and cognitive competences, the involvement with alternative organizations also enhances practical skills for a degrowth economy. Repair, for instance, which I will discuss in detail below, is a crucial element of sufficiency and subsistence which organizations like *HOBBYHIMMEL* and events like the *Reparaturcafé* cultivate.

In some ways, however, practitioners and organizations reproduce incumbent forms of subjectivation. Although, in line with the findings on commonality, subjectivities largely deviate from exploitative and self-centered forms of relatedness, some tendencies like (self-) optimization and responsibilization prevail. As a consequence, individuals take on large workloads, sacrificing themselves for the cause. While this is admirable, it is problematic insofar as it puts disproportionate pressure and responsibility on single individuals. Aside from reproducing individualistic tendencies, the formation of groupings

around exposed individuals are more vulnerable to changes, for instance, if that person leaves or pushes the organization into a different direction.

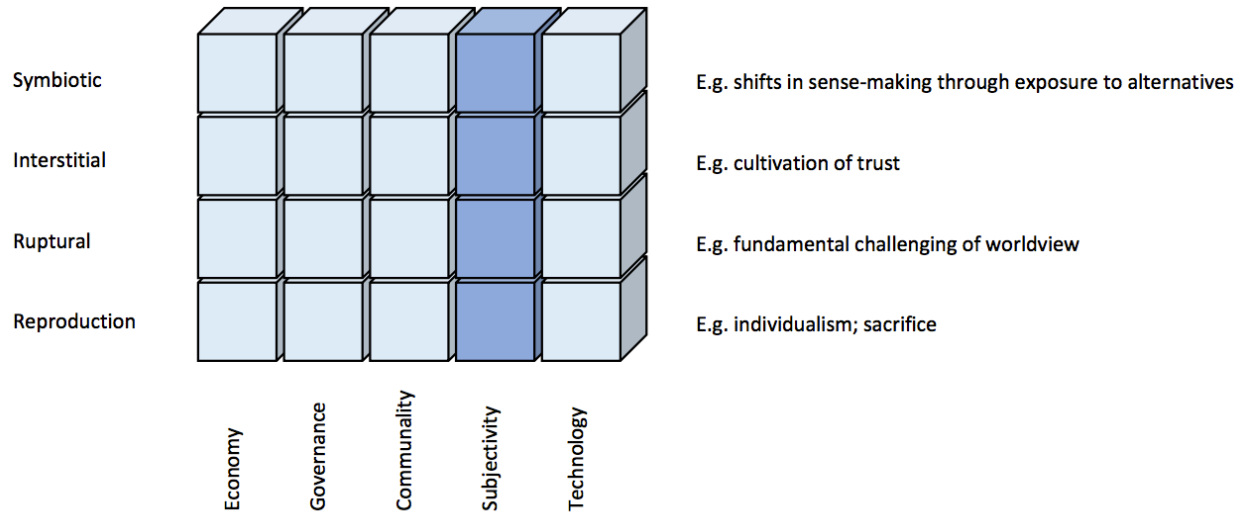

Figure 15: Transformation of practices' subjectivist relatedness)

Technology

The logic of technology refers to practices' relatedness through infrastructures, documents, machines, tools, substances, and other artefacts. It is particularly visible in practices based on (modern) technological innovations such as instant messaging, nuclear energy, electro mobility, 3D-printing or living in a smart home. Incumbent institutions align technology through increased productivity, creation of new markets, mass production of technological devices, and convenience. Growth-based economies require technological progress as a means to increase capital accumulation. Negative effects such as ecological destruction, social alienation, increase of vulnerability and dependence are frequently ignored, downplayed, or willingly accepted.

Alternative economies diverge in their positioning towards technology. The spectrum ranges from visions of a fully automated luxury communism (Bastani, 2018; see chapter 2) to anarcho-primitivism that seeks to return to a pre-agricultural society (Huber, 2015). Degrowth scholarship, in general, proposes a localization and regionalization of markets, the significant strengthening of subsistence economies and reduction through sufficiency and voluntary simplicity (Demaria et al., 2013; Kerschner et al., 2018; Paech, 2012). Degrowth scholars, thereby, oppose the naïve technologism of green economy discourse that holds tight to business-as-usual forms of economic practice for the highly unlikely prospect of an absolute decoupling of resource consumption and economic growth (Jackson, 2017). However, this does not mean that degrowth opposes technological development altogether. Technology, rather, is "subject to intense debate between enthusiasts and sceptics of technology" (Kerschner et al., 2018, p. 1619). Convivial tools and technologies (Illich, 1973; Vetter, 2018) require such processes of reflection and negotiation about the appropriateness and usefulness of technology.

Technology, therefore, materializes in diverse ways: not just as anti-thesis to degrowth –for example in the form of cars (Culver, 2018) – but also as a ways that facilitate degrowth's aspirations of subsistence and sufficiency –for example through off-the-grid tiny houses – or regionalized value chains – for example through 3D printing. By and large, degrowth seeks to align technology-related practices alongside usefulness, freedom, emancipation, and preservation.

The findings show, that organizations, especially those which are technologically oriented, face a number of contradictions. Technologies that include electronic components in particular, rely on resources and upstream products, the extraction and production of which is not clearly traceable and is likely to include social exploitation and ecological destruction. *HOBBYHIMMEL*'s productive infrastructure, *Relumity*'s lamps, *Slowtec*'s *Krautomat*, *Smark*'s fully automated supermarket, *Geco-Gardens'* vertical farm systems, and *ownworld*'s *ownhome*, to name the most prominent technologies in this study, all depend on input that is partially beyond control of the provider and producer. Nevertheless, all these products catalyze and support sustainability-related practice such as localized production, sustainable consumption, repair, and self-sufficiency. It is therefore a difficult calculation – ethically and materially – to trade-off sustainability-related products and the conditions of their sourcing and production.

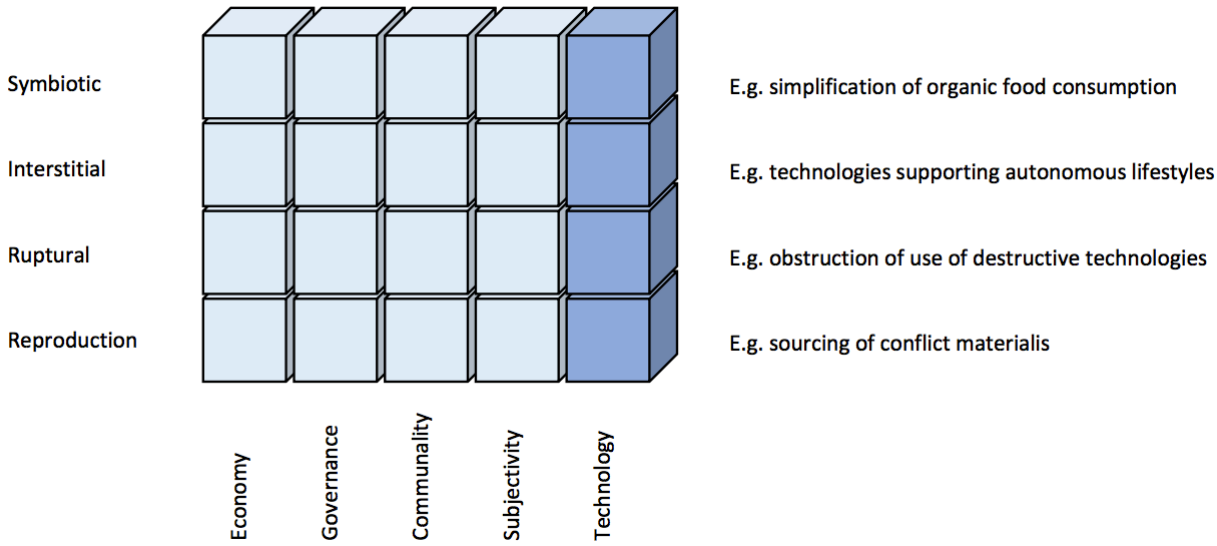

Figure 16: Transformation of practices' technological relatedness

Nevertheless, technology-related practices are an important dimension of a degrowth transition. *Smark*'s automated supermarket, for instance, makes regional and organic food available 24/7 in central places such as Stuttgart's main station, contributing to a *shift* in practices of food consumption. *HOBBYHIMMEL*'s productive infrastructure, furthermore, enables a range of practices around local production, upcycling, maintenance and repair that partially *substitute* for consumption. Equally so the *ownhome*, which, by closing electricity, water, and nutrient cycles, provides amenities few people

in the Global North would voluntarily do without, while significantly reducing the footprint of its occupants. The community's practices also relate *rupturally* to incumbent alignments of technology. *Critical Mass*, say, deliberately obstructs car mobility and advances (well-tried) non-fossil and resource-sparing mobility technologies.

Still, novel technologies and technologically mediated relations also reproduce incumbent alignments around consumption and convenience. The organizations have limited leverage over the use and application of their products and infrastructures and the practices linked thereto. Practices of using *HOBBYHIMMEL*'s infrastructure to 3D-print resource-intensive gadgets, or buying the products of *Slowtec* and *Relumity* as "positional goods" (Hirsch, 1995) and repurposing them – for instance using the *Krautomat* for ornamental plants – counter the degrowth effects of these technologies. It is clear from this data that technology can support an orientation towards degrowth but only in connection with political, economic, and cultural moments. The same is true for all dimensions of practices' relatedness discussed in this chapter. Economy, governance, communality, subjectivity, and technology closely hang together, an issue the last section of this chapter turns to.

A multifaceted transition

Processes of social change towards degrowth trajectories consist of a complex interplay of different logics and modes of transformation. The preceding sections square diverse forms of practices' relatedness with different strategies of intervention. Both perspectives, thereby, shed light on the possibilities and constraints of a degrowth transition. On the one hand, the diverse logics perspective brings various areas of change into view. Tracing transformative dynamics across economy, governance, communality, subjectivity and technology shows that transition unfolds in multiple arenas of social co-existence that can both reinforce and jar with each other. The development of technologies, for instance, can support sustainability-related practices while reinforcing extractive value chains and competition for market shares. Shifting economic practices towards fair sourcing can counteract salvage accumulation while underlining individual responsibility and leaving wrongheaded regulatory frameworks in place. Transition, consequently, manifests through various moments in practices' relatedness simultaneously, all of which degrowth scholarship must attend to. On the other hand, a perspective on different modes of transformation and reproduction sheds light on the strategies and possible leverages of alternative practices. Combining, for instance, symbiotic with interstitial forms of intervention, enables enterprises and practitioners to subsist while partially substituting for unsustainable practices.

It is clear from the foregoing analysis that a degrowth transition must entail change across all dimensions of social co-existence and employ different modes of transformation. There is no singular leverage point for transition. Some approaches tend to overemphasize a single dimension that should

be the focus of transformative practice. The post-work strand of postcapitalist thought, for instance, imagines technological process as a way out of capitalism (Chatterton & Pusey, 2019; see also chapter 2). Community economy scholarship, in contrast, places much emphasis on subjectivities and communality while neglecting issues of power and governance (chapter 4). And Marxist thought traditionally, revolves around governance and a narrow conception of economy, without adequate consideration of subjectivity and communality. Furthermore, Marxism counts on ruptural transformation while neglecting the merits of symbiotic and interstitial strategies and in doing so overemphasizes antagonism without leaving leeway for imagination and diversity (chapter 2). This chapter's analysis suggests that, if to occur, a degrowth transition is likely to entail simultaneous shifts, substitutions, and oppositions (the latter in particular through social movements that appear as important allies but are outside of the focus of data collection) across diverse forms of practices' relatedness which gradually realign towards postcapitalist ends.

The general insight that transition is multifaceted, however, is of limited use without closer examination of what this entails for research and activism on transformative geographies. Thus far, this chapter has discussed various ways in which changes in practices' relatedness lead to changes in socio-spatial relations more broadly. To unravel these connections, the subsequent chapters zoom in on the practices, and organizations that are relevant for a degrowth transition. In doing so, chapters 17 and 18 further develop the notions of degrowth practices and degrowth organizations respectively (see chapter 7). Chapter 19, then, zooms out again, trailing a concrete degrowth strategy around hybrid infrastructures.

Chapter 17: Degrowth practices

Discussing degrowth practices in the context of a degrowth transition in practice, as sketched above, raises a crucial question: are degrowth practices those practices that are in line with degrowth's principles or those practices that work towards a degrowth transition? Depending on the definitional thrust, degrowth practices comprise quite different activities. Marketing, for instance, including the building of a memorable brand, the printing and distribution of promotional material, and the allowance of discounts, jars with degrowth's principles of sufficiency and self-determination. Yet it can create an important leverage for sustainability-oriented organizations within a marketized environment. A host of other practices such as local production, ethical purchasing, cooperation in community-based initiatives, and volunteer engagement, on the other hand, are in line with degrowth principles but not necessarily bound up with a degrowth agenda. Although these activities stand for a shift in practice, they do not automatically address or challenge a growth-based economy. Lacking a more radical orientation, however, activities that were initially oriented towards social and environmental justice are frequently integrated and indeed seized and appropriated by incumbent

institutions (Kenis & Lievens, 2015; see chapter 1). Aside from creating new sources of revenue, it is "really capital's only feasible path ... to embrace the autonomous and cooperative potential of workers, recognizing that this is the key to valorization and increased productivity, and at the same time, try to contain it" (Hardt & Negri, 2017, p. 143).

Degrowth, consequently, needs to be wary of the pseudo-solutions of green capitalism. Green(ed) practices and progressive politics appear to address social and environmental issues while leaving the foundational institutions of capital in place. This poses a great challenge for critical scholarship to assess and evaluate the capacity and role of sustainability-related practices for transition. Žižek (2018, p. 394), in this vein, flips Marx' 11th thesis on Feuerbach (again; see chapter 4), claiming that the point is to reinterpret the world self-critically instead of engaging in hasty action. Žižek does not advocate for a withdrawal from action, but for the critical attention to "false activity" (ibid.). Taking this warning serious from a practice theory perspective, means to pay attention to practices' meanings. Or more precisely, as I will argue below, its politics. *HOBBYHIMMEL*, for instance, was indeed set up with the intention to provide an infrastructure for a degrowth transition. The practices of local production, repair, volunteering, and upcycling, etcetera, that constitute the workshop on an everyday basis, however, link to degrowth's broader agenda only to a limited extent.

Circling back to the question of activities' congruence with degrowth principles versus their orientation towards a transition, then, unveils a crucial moral and strategic decision. The difference between coherence and tactics translates into a focus on ends – a degrowth society – on the one hand and on means of a transition thereto on the other hand. The (tendentially anarchist) notion of prefiguration demands congruence between the two, while (often Marxist) visions of a revolution suggests that the end justifies the means. The discrepancy between means and ends has been subject to much debate and, simply speaking, constitutes a major divide between anarchism and Marxism (Harvey, 2015; Springer, 2017; see also chapter 2). For the present purposes, the juxtaposition of means and ends sheds light on the spectrum of strategies available to degrowth which, in turn, inform the notion of degrowth practices. Chapter 16, above, advances a perspective beyond this chasm and proposes a more pragmatic stance combining different strategies of transformation (Wright, 2010). A non-dogmatic pragmatism premises both: goal-orientation (ends) and reflection about the possibilities to get there (means). Instead of putting them into a specific relation a priori, the adequacy of means and ends itself needs to be part of a degrowth politics.

Degrowth politics comprise moments of reflexivity and relatedness (see chapter 7). Reflexivity, thereby, refers to practices' reflective relation to the plenum of practices. Degrowth practices, consequently, involve motivations, intentions, and knowledge that align with degrowth principles. Relatedness, furthermore, refers to the interaction of practices with other practices. That means,

degrowth practices, in some form, bear on the way practices interrelate and align. Defining degrowth practices through a notion of politics rather than on the base of everyday verb forms like repairing, sharing, helping helps to avoid aforementioned limitations. A degrowth politics, then, captures those activities that work towards a degrowth transition. Both with respect to their orientation (is there an underlying critique of a growth-based economy and a motivation to change it?) and with respect to their effect (do practices support a degrowth transition, even if they are not directly aligned with degrowth principles?).

Degrowth practices, in this sense, are *conventionalized patterns of activity that reflectively relate to practices' broader alignments in ways that found the assumption that these activities have an – however minor – effect in line with degrowth's principles.* To determine practices' reflexivity and relatedness, I have developed the notion of logics which is based on the idea that practices are bound together through different moments such as economics, governance, communality, subjectivity, and technology. The previous chapter outlines on the basis of empirical data how a degrowth transition along these lines might unfold. Following up, this chapter zooms in on individual practices and traces their role for a degrowth transition. It discusses two practices that feature prominently in the degrowth debate – repair and sharing – reflecting on their consideration as degrowth practices.

Repair

Repair is a well-established practice that aligns with economic institutions *and* a key practice for a degrowth transition (Bertling & Leggewie, 2016; Schmid, forthcoming). Service, maintenance and repair are traditionally an important part of economic alignments, for instance in the car industry. Repair itself is as old as human use of tools – when something breaks people either repair it, build it anew, or do without it. In a growth-based economy, however, repair might obstruct capital accumulation (Packard, 2011). If products last too long, consumption decreases. Planned obsolescence, labor division and the complexification of production are tendencies that shorten product cycles and reduce repairability (Bertling & Leggewie, 2016; Packard, 2011). Furthermore, in market terms, the decision whether to repair something is generally guided by economic viability.

Of course, there are other reasons to engage in repair such as the sentimental value of a broken object, curiosity about its (inner) workings, and resource conservation. Some organizations in Stuttgart's community economy, including *HOBBYHIMMEL* and the *Reparaturcafés,* push the importance of repair in a world in which replacement has become the norm. In lieu of economic viability, they emphasize the relevance of repair for empowerment, pleasure, and sustainability. From a practice theory perspective, these alternative meanings are crucial to trace repair as degrowth practice. The open workshop in general and the *Reparaturcafé* in particular, then, are sites that integrate repair's elements – materials, meanings, and capable bodies – to facilitate the enactment of repair. Besides

pushing meanings and motivations that emphasize repair's role for social change, the organizations provide access to materials such as tools and spare parts, including special tools for proprietary fasteners and machinery such as 3D printers to manufacture spares. Furthermore, repair requires capable bodies that can perform repair practices. Since many subjects do not possess the respective competences, the *Reparaturcafé* coordinates the physical co-presence of skillful subjects.

Still, this does not make all repair activities of these organizations degrowth practices. Activities driven by sentimental reasons, cost saving, and pleasure, for instance, do not align with degrowth principles. This, of course, does not render these activities altogether unimportant for degrowth transition. Focusing solely on meanings, would mean to neglect repair's materiality irrespective of the intentions behind it. Key, here, is that a number of repair activities indeed do reflect on the role of repair for degrowth economies (or comparable ideas). But how is it possible to separate between political and non-political repair practices? Does it make sense to do so? And do any of the repair practices have an effect beyond place? Naturally, there is no black and white. This is where the diverse logics perspective can help to trace tendencies which in turn shed light on the role of repair for degrowth transition.

Economically, repair can reduce consumption, primarily if accompanied by the motivation to save resources. Repair, in this vein, prefigures subsistence and sufficiency-oriented degrowth economies. In cases where repair does not replace new purchases, this effect, of course, is absent. Technologically, repair challenges the construction of difficult-to-repair products. Along with a turn to repair, repair-friendly products like *Relumity #LED1* engender a shift in practices of production, design, construction, and sale that align technologically through reparability and longevity. In terms of community, the *Reparaturcafés* foster spaces of encounter, which also has political consequences. In communication with others, repair becomes object of reflection, subjects exchange repair-related knowledge, and on occasion previously nonpolitical repair activities are politicized. Governance, furthermore, sheds light on the power relations and policy effects of these emergent forms of repair-organizing. Lack of consideration of repair in product design is increasingly challenged institutionally through activism linked to the phenomena of repair cafés and open workshops. Intellectually and physically, repair changes subjectivities including awareness and valuation of objects and the acquisition of repair-related competences.

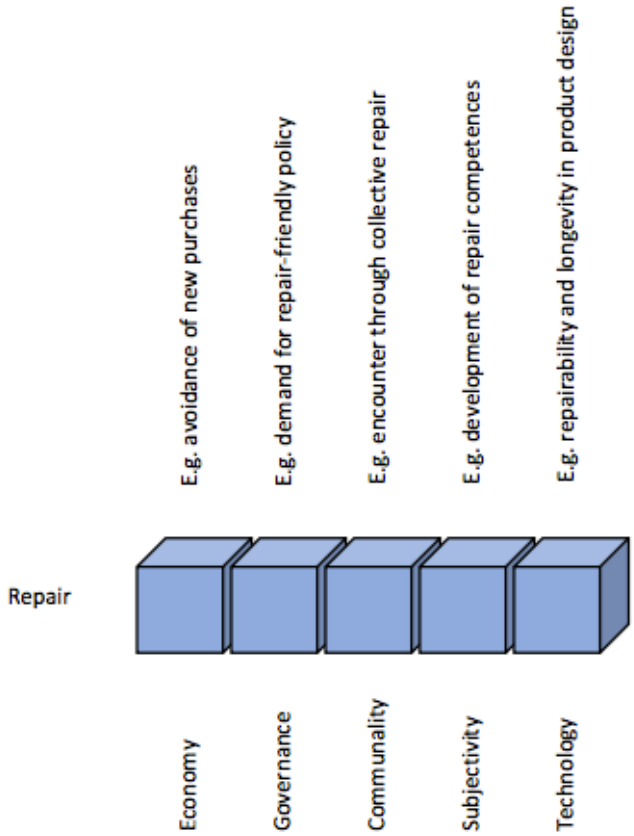

Figure 17: Social dimensions of degrowth-related repair

Repair activities, consequently, move between different degrees of reflexivity and relatedness, whereas both aspects do not necessarily need to correlate. Depending on the meanings that accompany repair activities and the ways in which these activities related to other practices, repair indeed constitutes a degrowth practice. This, however, is cannot be an either/or distinction but rather an orientation to examine the role of repair activities for a degrowth transition. At the end, as with all practices, each individual enactment of repair is idiosyncratic. But through *HOBBYHIMMEL*, the *Reparaturcafés*, and many other sites of repair, patterns of activity are conventionalized that challenge the culture of replacement and prefigure other forms of economic practice. They do not always carry the radical meaning of degrowth, but, in particular when they do, they are important stepping stones towards a degrowth society.

Sharing

Practices of sharing feature prominently in different strands of the debate on alternative economies. The sharing economy, in particular, is a buzzword that appears far beyond the confines of an alternative discourses. As a consequence, a wide spectrum of activities are lumped together under said label, ranging from decentralized and deregulated forms of neoliberal value production to non-monetary schemes of local production and consumption (Cohen & Muñoz, 2016; Martin, 2016b;

Richardson, 2015). The breadth of practices considered as sharing necessitates a critical discussion of definitional issues (Frenken & Schor, 2017). This, however, is not the place to drill down into the debate on sharing economies as such. What I am interested in, rather, is the relevance of sharing practices for a degrowth transition.

Sharing, here, refers to individuals and organizations collectively using resources according to particular rules that apply to all participants. Sharing, in this sense, is close to the notion of commoning (Kallis, 2018, p. 119), but might involve formally private ownership and monetary exchange, as long as the surplus value is returned to the community or for community-related expenditures. A for-profit car-sharing schemes, against the background of this definition, in turn, constitutes a form of renting rather than sharing.

Sharing activities are a pillar of a number of organizations in the empirical sample of this study. *HOBBYHIMMEL*, for instance, constitutes a form of sharing of tools and machinery. Although the use of the workshop is monetized, all revenues flow back to cover for the workshop's maintenance and operating costs, which are, in addition, cross-subsidized through the yield from commercial users and donations. *Lastenrad* and *Foodsharing* constitute non-monetary sharing schemes and might be described as food and mobility commons respectively. Moreover, knowledge and skills rather than artefacts or things, can be shared, for example in *iFixit*'s online repository of repair manuals or in the workshop during repair-related events such as the *Reparaturcafé* (see above).

Like repair, sharing in itself does not constitute a degrowth practice as defined above. Many acts of sharing in the aforementioned organizations do not necessarily align with degrowth principles. Jointly using a highly energy intensive infrastructure such as a 3D printer by and of itself, for instance, does not automatically mean that all activities related thereto are degrowth-oriented. And of those that are – say, the printing of spare parts for repair – only some activities reflexively relate to practices' broader alignments. Nevertheless, sharing, like repair, has material effects regardless of intention. In conjunction with a more reflective and critical orientation in organizations that politicize sharing, these activities, then, partially link to degrowth politics. *HOBBYHIMMEL*, for instance, explicitly relates the provisioning of a shared productive infrastructure to degrowth principles. To some extent, even individual enactments of sharing that do not include political motivations and intentions, support the degrowth-related agenda of the organizations they participate in. Nevertheless, the organizations themselves are generally ambiguous in their relation towards degrowth principles – an aspect that I discuss below in the context of degrowth organizations. To assess the various forms of sharing's relatedness, I will turn to the diverse logic perspective next.

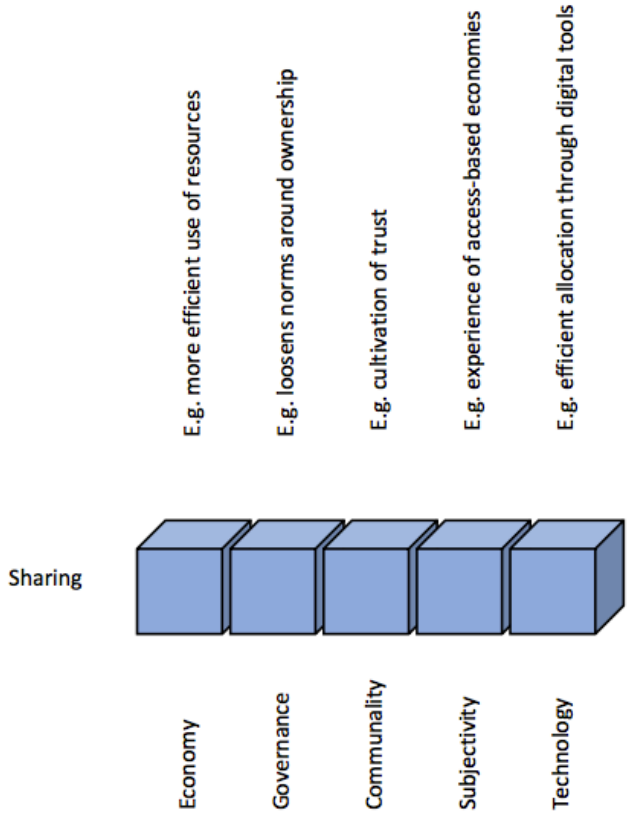

Figure 18: Social dimensions of degrowth-related sharing

Sharing relates in various ways to other practices. Economically, sharing intensifies the use of individual commodities and/or creates opportunities for non-commodifed access. Sharing, in this vein, prefigures economies based on access and common ownership rather than private ownership. Technologically, sharing shows the potential of internet-based tools to optimize the utilization of goods and services. Digital commons such as commons booking, a plugin that *Lastenrad* uses, or the collection of repair manuals of *iFixit* constitute important resources for other sustainability-related practices such as repair (see above) and fossil-free transportation. In addition, the sharing practices observed in this study, generally involve a great amount of trust and dedication contributing to the cultivation of convivial forms of togetherness. Sharing of tools in the workshop, for instance, does not involve deposit or specific checks but is largely based on trust. And like *Foodsharing* and *Lastenrad*, *HOBBYHIMMEL* includes much volunteer work of individuals that build and maintain these organizational forms to create solidary communities. Being involved in sharing food, tools, skills, knowledge and other things, furthermore, affects the subjects themselves. An important leverage for degrowth transition, therefore, is individual's experience with access- instead of ownership-based economies. Policy, thereby, is often in the way of sharing, such as health regulations that hamper food sharing. Yet, increasing participation in sharing economies also put pressure on policy to respond. In addition, sharing loosens norms around private property, which for many is sacrosanct.

Zooming in on degrowth practices shows that it is anything but straightforward to define activities that are effective in terms of a degrowth transition. A practice theory perspective argues that the doings and sayings of local activists and alternative organizations indeed do matter. Across-the-board statements, however, that single out, say, practices of repair, sharing, or cycling fall short. The notion of degrowth practices is bound to be a contextual one. Degrowth practices, in this sense, are political in that they consider activities' broader context while having an (at least minor) effect in line with degrowth's principles. Most practices this study considers occur in the context of organizations, which can support the contextualization of degrowth practices. Chapter 18, in this vein, seeks to develop a notion of degrowth organizations.

Chapter 18: Degrowth organizations

Chapter 5 conceptualizes organizations as "constantly in the process of becoming – dynamic, multiple, performative and open-ended" (Pallett & Chilvers, 2015, p. 151). From a practice theory perspective, then, organizations are instituted forms of practice or, in other words, practice formations. Analogous to the question of degrowth practices, degrowth organizations are not a matter of black-and-white painting. Although similar difficulties apply for the definition of degrowth organizations as for that of degrowth practices, there is a crucial advantage of the former notion over the latter. Looking at practice formations, the focus is not so much on specific patterns of activity – such as sharing or repair – but on a complex of practices. That means, in contrast to the notion of degrowth practices, (degrowth) organizations already contextualize possibly degrowth-oriented activities.

For instance, *Slowtec*'s decision to accept a commission from the automobile sector inclusive of a transcontinental flight in order to cross- subsidize other activities appears far removed from degrowth's principles. Considering the fact, however, that *Slowtec*'s choice is to compromise or perish, puts another complexion on things. Decisions like this enable *Slowtec* to operate as enterprise that furthers sufficiency and subsistence-oriented technologies. Compromising constitutes a key leverage to enable transformative practices, arguably more so than a consistent adherence to degrowth principles (see above). Compromising itself, then, might be considered a degrowth practice. *Slowtec* relates reflectively to practices' broader alignments in deliberately weighting advantages against negative consequences. Development and construction practices of, say, the *Krautomat*, are inextricably linked to compromise.

A few points, however, need further exploration. In the case of *Slowtec*, motivation and intend are clear and directly communicated. All members of *Slowtec* identify with a degrowth agenda and align organizational practices accordingly. In a small organization with little assets, like *Slowtec*, the link between revenues and potential output is straightforward. Despite limited resources, *Slowtec* engages

in projects like *ownhome* or *Karte von Morgen* that are fully congruent with degrowth principles. But how can a perspective on degrowth organizations account for more divergent motivations and meanings? How can it trace more dispersed and ambiguous effects? And how can it distinguish compromise from cooptation? The remainder of this chapter approaches the question by developing a typology of organizational 'ideal types'.

Organizational ideal types

Chapter 16 draws on Wright's (2010) notion of different modes of transformation – symbiotic, ruptural, and interstitial. The organizations in this study differently draw on and combine these strategies. Wright's typology, thus, provides a first orientation to develop organizational ideal types that I refer to as symbiotic, idealistic, and subversive-pragmatic in the following.

Symbiotic organizations' practices align for the most part with dominant state and market institutions and they have a high readiness to collaborate with policy makers and for-profit businesses. Organizations of this type that are legally-speaking for-profit enterprises, generally have a clearly defined business model that is particularly geared towards a specific social or environmental issue and/or particular goods and services. Associations that can be characterized as symbiotic, typically have a specific focus on a well-defined and rather particular social and environmental problem. Financially, some symbiotic organizations face common challenges of start-ups, small enterprises or associations, while others find quite lucrative market niches in the green or social economy (chapter 3). Due to their alignment with incumbent institutions and their often particularistic focus, symbiotic organizations, in general, are susceptible to integration and cooptation.

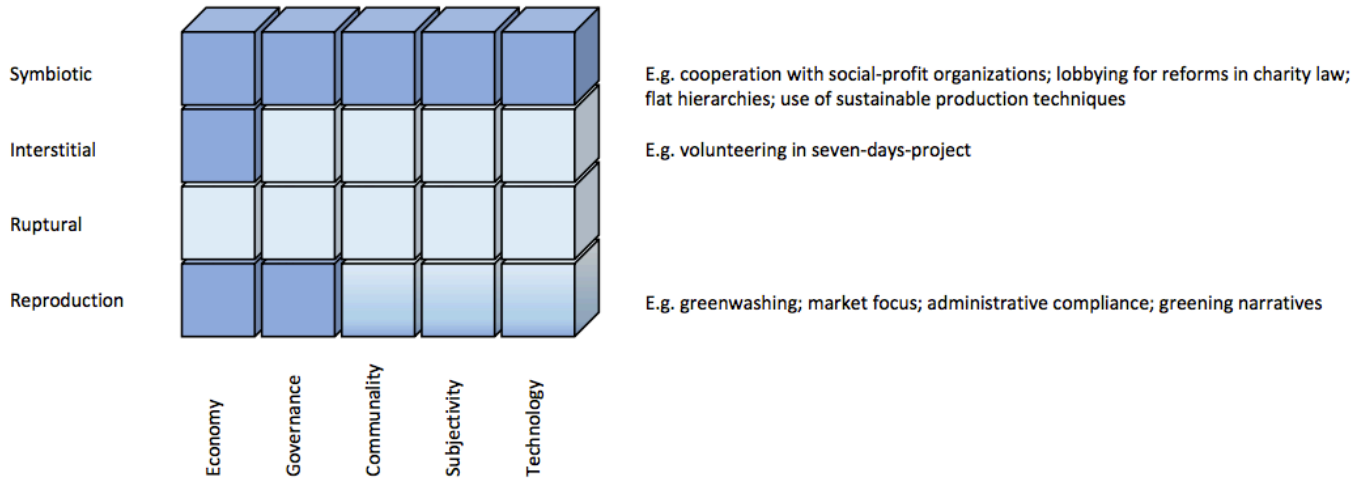

Figure 19: Social and strategic dimensions of em-faktor's practices

From the study's empirical sample, *em-faktor* exemplifies a symbiotic organization. Its services in branding, fundraising, campaigning, and corporate-social-responsibility largely align with market-driven dynamics. *em-faktor*'s activities are primarily geared towards the marketing of sustainability-related activities or the appearance thereof. While *em-faktor* works for a broad range of foundations and charitable organizations, its portfolio also includes businesses (or foundations related to businesses) for whom social and environmental justice do not constitute a major focus. Pertaining to the former, improved marketing can be an important factor in gaining a higher visibility and spread. Pertaining to the latter, and to the many shades in between, *em-faktor* contributes to greenwashing. Furthermore, a strong focus on market-based leverages for change neglects the limitations of branding, fundraising, campaigning, and corporate-social-responsibility to affect more fundamental change.

Symbiotic strategies, nevertheless, are important for a degrowth transition for two reasons. First, symbiotic organizations bridge the gap between mainstream and alternative economic practices and can mediate between the two. That means, they provide, low threshold points of entry or contact to businesses and policy makers outside of alternative spaces. Second, by being connectors, symbiotic organizations are more likely to receive funding (as associations) or generate revenue (as enterprises) thus acquiring resources to further sustainability-related activities.

Interstitial organizations, in contrast, largely withdraw from state and market practices and follow an prefigurative strategy. They attempt to build alternatives outside of dominant alignments of practice. In doing so, these organizations seek to prefigure solidary, non-exploitative, non-hierarchical institutions. Interstitial organizations, therefore, are wary of compromise and cooperation with incumbent institutions and instead practice alternatives as coherently as possible. Organizations of this type are mostly constituted as non-profit or are (voluntarily or involuntarily) loose groupings without legal form. Most have to work with strongly limited resources, due to the refusal to participate in monetized and marketized practices.

ownworld, for instance, follows a largely interstitial strategy. The *ownhome* is a tool to (partially) withdraw from market practices and lead a more sustainable lifestyle. A combination of efficiency and autonomy enables the inhabitant to significantly reduce his resource consumption. However, there is little focus on dissemination and growth which jars with the project's rejection of an expansive logic. Prefiguring an economy of unconditional giving and mutual solidarity rather than equivalence-based exchange, the project does not develop a business model and thus also lacks the financial resources that would allow for greater flexibility – for instance pertaining to the legal issues *ownworld* faces (see findings). The consequential adherence to (degrowth) principles, here, has a quite ambiguous effect on transformative geographies. On the one hand, it attracts many visitors and thus spreads the idea

and knowledge about self-sufficient housing. On the other hand, for lack of a business case – next to numerous legal issues – it is very challenging for those interested to actually acquire their own *ownhome*.

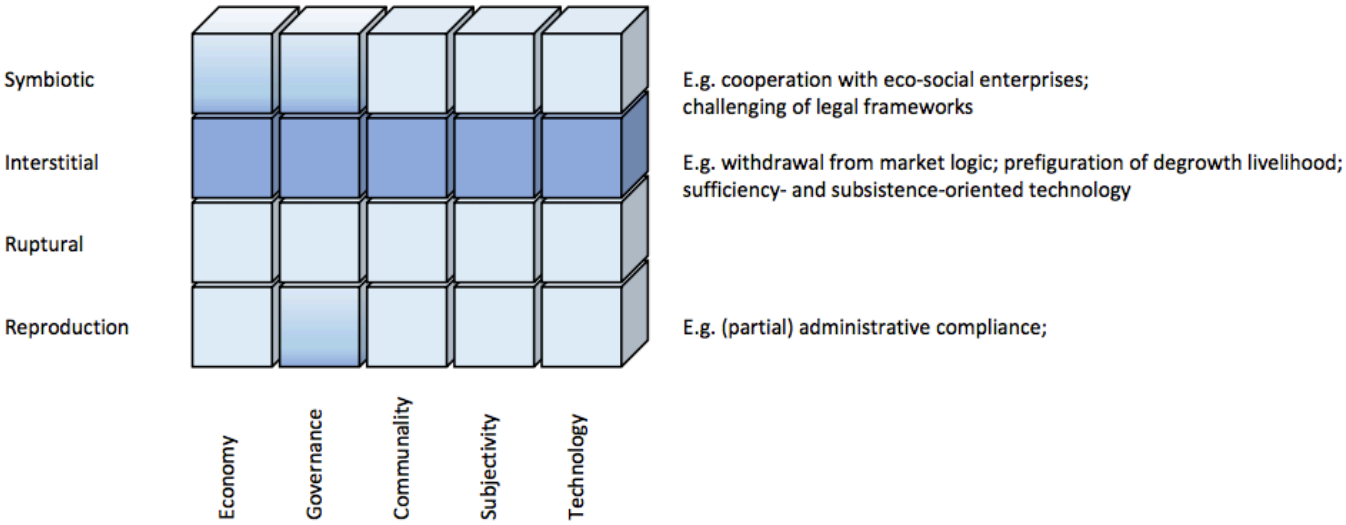

Figure 20: Social and strategic dimensions of ownworld's practices

Interstitial organizations are a flagship for degrowth economies because they adhere consistently to degrowth principles, for instance, by rejecting the participation in competitive markets and the expansive logic of 'upscaling' and 'impact'. For the very same reasons, interstitial organizations generally lack resources and aspiration to spread and disseminate their technologies and social innovations. This has quite ambiguous effects on the role of interstitial organizations in transformative processes across different logics. The consequential enactment of degrowth principles can be quite compelling for subjects to experience different forms of (economic) being-in-common. In line with Gibson-Graham's focus on resubjectivation (chapter 4), interstitial organizations make a strong case that things can be done differently. On the other hand, however, a lack of concern and capacity to push change across other dimensions more proactively – for instance making resource-low housing available to a broad audience[98] – weakens the transformative potential of interstitial organizations.

Like symbiotic organizations, interstitial organizations avoid confrontation with capitalist institutions. While the former focus on cooperation, the latter largely function outside of incumbent practice alignments. Ruptural strategies, Wright's third mode of transformation, thereby, lacks an organizational pendant in this study. Since most organizations are goal-oriented and less overly

[98] As of the end of 2018, collaborators and sympathizers of the *ownhome* founded an association that supports and links individuals who seek to practice a just lifestyle. The *SoBaWi* (solidarische Bauwirtschaft), is designed to enable participants to acquire their own *ownhome* while avoiding cooptation and integration into capitalist circuits of value.

political, few of their strategies and practices are directly oppositional (see chapter 16). This work only briefly touched on collaboration with social movements which is beyond its scope but constitutes promising terrain for further research (see conclusion). Rather than ruptural strategies, then, a third type of organization follows the pragmatic combination of symbiotic and interstitial strategies.

Pragmatic organizations participate in market practices and cooperate with state institutions but do so very selectively. In contrast to symbiotic organizations, this cooperation is quite cautious of integration and cooptation. And in contrast to interstitial organizations, pragmatic organizations are less consequential in prefiguring degrowth economies – although this remains an important characteristic. The focus shifts from prefiguration – where the means align with ends – towards compromising – where arguable means are reflectively employed to pursue a transformative strategy.

Slowtec exemplifies a pragmatic organization that develops a business model and positions itself in the market while remaining cautions not to imperil the organization's ends. *Slowtec* cooperates with a range of businesses, some of which correspond better to their values than others. In doing so, its members reflect on the up- and downsides, making a deliberate compromise. As a consequence, *Slowtec* is independent of external funding and although it draws on subsidies it does not hinge on their support. Free of investors and public institutions, *Slowtec* operates as independent organization.

> Also ich meine ich weiß es, ich gehe den Kompromiss bewusst ein, aber wenn ich jetzt sozusagen den hundertprozentigen Idealisten in mir heraushole, dann habe ich vielleicht meinen Idealismus aber kein Team mehr und keine Firma und kann auch nicht wirken[99]

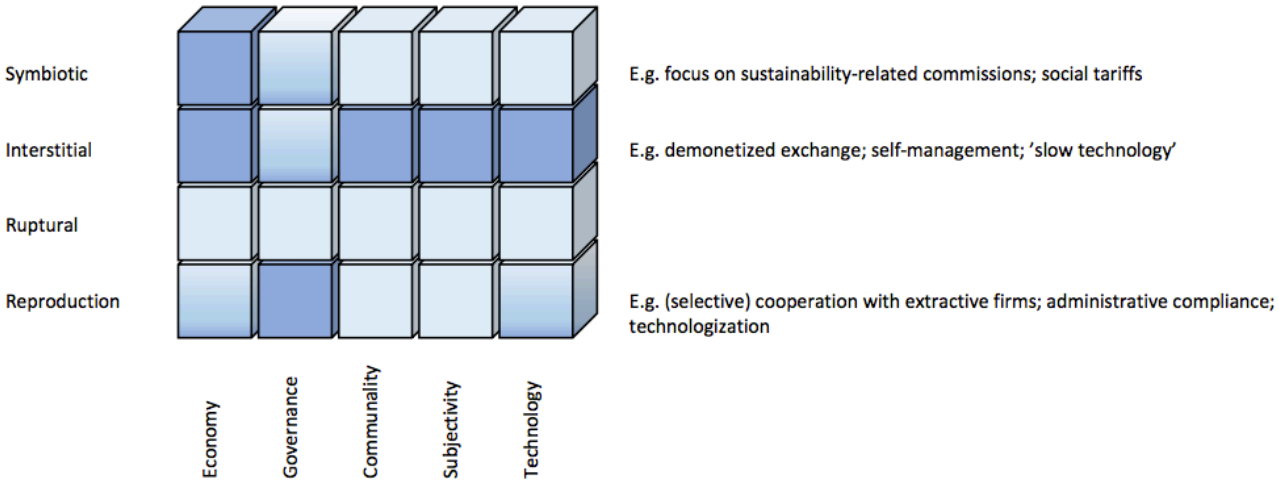

Figure 21: Social and strategic dimensions of Slowtec's practices

Pragmatic organizations, however, navigate a thin line between symbiotic and prefigurative strategies. Like symbiotic organizations, they are prone to integration and cooptation, for instance, when making

[99] I know it and deliberately make a compromise. If I were to follow my idealism 100% then I may have my idealism but no team and no enterprise, and consequently no effect.

too many compromises. Like prefigurative organizations, they face resource limitations if not making the right compromises that leverage more radical activities. Nevertheless, following a fairly undogmatic, flexible and yet critical strategy sets up pragmatic organizations to prepare the ground for more fundamental changes.

In combining different strategic logics of transformation, pragmatic organizations are likely to play a pivotal role for a degrowth transition. Wright (2010, p. 268) himself sees the interplay of different strategies, in particular interstitial and symbiotic, as the best prospect for a transformation. Elsewhere he elaborates that

> Though interstitial strategies, activists and communities can build and strengthen real utopian economic institutions embodying democratic-egalitarian principles where this is possible. Symbiotic strategies through the state can help open up greater space and support for these interstitial innovations. The interplay between interstitial and symbiotic strategies could then create a trajectory of deepening social elements within the hybrid capitalist economic ecosystem. (Hahnel & Wright, 2016, p. 103)

Pragmatic organizations, in this vein, are hybrid configurations that integrate symbiotic and interstitial strategies. That puts them into a central position in a degrowth transition. The last chapter, now, zooms back out and links the discussion of degrowth practices and organizations to a broader strategy around a politics of hybridity.

Chapter 19: Degrowth strategies

Like the growth-based capitalist economy that degrowth practices and organizations oppose, substitute and cooperate with, degrowth itself does not constitute a homogenous entity but consists of a broad variety of activities. Community economy scholarship, in particular, eschews depoliticizing tendencies of a ready-made alternative blueprint (chapters 3 and 4). Instead it emphasizes the diversity of economic practices that differently align and stabilize forming institutional nexuses around solidarity, sustainability, and justice, as well as growth, expansion and capital. Practices, as conventionalized patterns of activity, overlap, interfere, oppose, modify, and reproduce each other, constituting a complex mesh of hybrids between capitalist, degrowth, and yet other forms of economizing.

Above, I discuss the difficulties of singling out specific practices or organizations from this composite playing field as degrowth practices and degrowth organizations, while affirming the effort of analytically sharpening both notions. On a similar note, transition necessitates a close reading of opposing and compliant tendencies to avoid simplified analyses and the jumping to conclusions. Transition processes embody this complexity at least in three ways relevant for the discussion of a degrowth transition (see part II). First, transition unfolds with and from the everyday practices of social reproduction. Transitional dynamics, therefore, are set within the material and power-laden spatialities of social co-existence. This means, second, that transition emerges from moments of

constraint and enablement, destabilizing and restabilizing movements and counter-movements that characterize social dynamics. Third, as a consequence, transition does not unfold in straightforward, defined, or predictable ways but is always subject to the politics between different individuals and communities.

Hybridity, contingency, diversity, and processuality, however, should not veil possibilities, risks, and, responsibilities and preclude the development of forceful strategies for a degrowth transition. This thesis demonstrates at length the insufficiency of simply acknowledging diversity (R. Lee, 2016; Jonas, 2016; see chapter 2). Detailed analyses from the outside and the inside of organizations, institutions, and actors need to run with the complexities of transformative geographies, rather than surrender to them. Hardt and Negri (2017, p. 20), in this vein, call for "strategic movements" that have or develop knowledge of the social reality, long term visions of co-existence, and capacities to engage in material politics. In this sense, chapter 19 brings the discussion of the possibilities of a degrowth transition (chapter 16) and the zooming in on degrowth practices (chapter 17) and organizations (chapter 18) full circle, by zooming back out in order to develop a degrowth strategy. It proposes the creation of 'hybrid infrastructures' as key component of such a strategy. The subsequent thoughts on politics of hybridity, however, are neither prescriptive, nor do they exclude other practicable avenues. Instead they bring together the various conceptual and empirical insights of this thesis into a coherent proposal how a degrowth transition in practice might unfold.

Hybrid Infrastructures

If the inertia and stability of incumbent practice alignments pose a major challenge to social change, the development and conventionalization of alternative institutions seems to be an obvious answer. A number of authors emphasize the importance of hubs around which transformative practice can build and from which it can eventually erupt to affect broader change. Longhurst (2015, p. 192f.) describes alternative milieus as spaces providing "ontological security" that means practical resources, norms, moral support and spaces for experimentation that encourages individuals to escape dominant routines and cognitive frames. Smith (2007), explores the transferability of innovative niches emphasizing that practices need to navigate the tension between shallow sustainability and radical orientation. And 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.

Interstitial strategies which attempt to build infrastructures that support alternative practices, however, generally fail to mobilize enough resources to 'scale up' and stabilize their endeavors. Symbiotic strategies, on the other hand, remain too closely associated with business-as-usual to dissociate from the institutions of capital (see part I). A degrowth strategy, therefore, needs to acknowledge multiple difficulties while it aims to build supportive structures for leveraging

transformative practice. Since such 'infrastructures' are set within the material and power-laden spatialities of social co-existence (chapters 5 and 6), they necessarily reflect opposing as well as compliant tendencies. Compromise and pragmatic decisions – a degrowth politics – thereby, always works towards the horizon of a degrowth society. The 'hybridity' of degrowth practices and organizations, consequently is deliberate and strategic. Building hybrid infrastructures, *material and social practice formations that constitute resources for degrowth practices and organizations which, however, still depend on and thus substantiate social relations that jar with degrowth's principles*, are a key component for a degrowth strategy.

Larkin (2013, p. 329) defines infrastructures as "matter that enable the movement of other matter". Reading this definition with three different emphases advances of a notion of infrastructure that prepares the ground for the further development of a strategy around it. First, infrastructures are *matter* that enable the movement of other matter: Taking matter in the broadest sense possible, the first emphasis highlights infrastructures as materializations of social dynamics. Social performances stabilize over time and space through inscription into bodies, artefacts and things, institutionalizing patterns and relations. Second, infrastructures are matter that *enable* the movement of other matter. The second emphasis focusses on the conditioning side of infrastructures. Practices stabilize in material configurations that catalyze certain activities. Infrastructures, then, are the material grounding of possibility, enabling or conditioning practices. Third, infrastructures are matter that enable *the movement of other matter*. Activities than ensue from infrastructures enablement *do* something. That means they have effects in the world. Infrastructures might catalyze activities that shift, rupture and realign incumbent institutions or such that reproduce and stabilize the status quo. The constituent 'Infra', thereby, indicates that infrastructures themselves form the (material) background of (transformative) practices. For Shove (2017, p. 158) things have an infrastructural relation to a practice if they are necessary but not interacted with directly. Examples include power grids, harbors, pylons, kitchens, homes and oxygen supply (ibid.). Infrastructures, however, are not limited to artefacts. Also, the capable and knowledgeable bodies form supportive structures by providing the skills, abilities, and expertise for activities. Infrastructures, thus, are material and social nexuses that constitute the enabling backdrop of (degrowth) practices.

The empirical material of this thesis identifies a number of formations that catalyze further degrowth-oriented practices. In particular, it exposes the open workshop *HOBBYHIMMEL* as site that supports practices and organizations which challenge incumbent alignments. Examples include repair and maintenance of cargo bikes, construction of *Relumity #LED1,* diverse sharing practices, and the exchange of sustainability-related information and skills. In this vein, the workshop constitutes an infrastructure for degrowth practices. This infrastructure, however, also enables a multitude of less

desirable practices around individualized consumption and resource intensive leisure activities. Only part of the practices in the workshop actually further a degrowth agenda. Moreover, the workshop has limited control over the value chains that enter its material set up of tools, machinery, resources, parts, and construction materials. In combination with the financial restraints that condition the workshop's procurement, the material infrastructure itself is deeply rooted in possibly exploitative and extractive practices. From a degrowth perspective, the infrastructure of the workshop is a hybrid between degrowth practices and practices that align with capitalist institutions.

Hybridity, however, is nothing out of the ordinary. A diverse economies perspective on small and medium sized enterprises (SME) shows that most organizations are driven by a wide range of motivations and engage in a number of more-than-capitalist practices (North, 2016). Moreover, the very notion of social entrepreneurship builds on the idea of hybridity (chapter 3). Social enterprises combine different institutional logics by blending an economic orientation with social values. Hybridity, then, results from trading-off and balancing resource acquisition and social mission, resulting in strategies 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 et al., 2014, p. 427).

In discussing the breath and possible pitfalls of social entrepreneurship, chapter 3 criticizes the restriction of transformative agency to market-mediated activities. Social entrepreneurship, generally, takes economic institutions, in particular markets, as given. Hybridity, consequently, is a coping strategy that enables social enterprises to link their social mission to incumbent institutions, rather than a strategy of transformation beyond a growth-based economy. Degrowth organizations, also employ different strategies in response to the contradictions between their values and the instituted alignments they face. In contrast to social enterprises (in a narrow sense), however, degrowth organizations also engage in degrowth politics and envision alternative economies. Hybridity, in this vein, is not solely a coping strategy but a means to engage in degrowth practices prefiguring alternative practices and institutions. Of course, there are different nuances between these positions and different imaginaries what constitutes alternatives and the kind of institutions required (see chapters 2 and 3).

Hybridity, thereby, differs significantly across individual organizations. First, with respect to the specific blend of different logics and the priorities organizations set. And second with respect to organizations' goals and visions. Against the background of a degrowth perspective, chapter 18 proposes three organizational ideal types. Symbiotic organizations focus on collaboration, interstitial organizations focus on substitution, and pragmatic organization attempt to compromise between collaboration and prefiguration.

Pragmatic organizations, in particular, reflect on the tension between alternative practices on the one hand and stability, reach and scope of these practices on the other hand. Deliberate compromising allows pragmatic organizations to further degrowth practices by partly aligning with dominant economic and bureaucratic institutions. Hybridity, then, is not simply imposed *on* pragmatic organizations but set up, controlled and reflected *by* these organizations. That means pragmatic organizations like *Slowtec* and *HOBBYHIMMEL* compromise with respect to commissions, procurement, employment, financing, governance etcetera in order to build leverage for transformative practice. In doing so, they set up *hybrid infrastructures*. Hybrid infrastructures, in this vein, refer to *material and social practice formations that constitute resources for degrowth practices and organizations which, however, still depend on and thus substantiate social relations that jar with degrowth's principles*.

In doing so, pragmatic organizations produce hybrid spaces that move between the edges of state and markets and beyond. Hybrid infrastructures actualize possibilities for different forms of economizing while grounded in the materialities of dominant practice alignments. Akin to what Longhurst (2015) calls "alternative milieu" and Habermann (2009) refers to as "peninsulas against the current [Halbinseln gegen den Strom]", they are anchors around which degrowth practices can thrive. On the other side, however, hybrid infrastructures are rooted in practices that partake in the "repetition" (Schäfer, 2016a) of exploitative and unjust social institutions. They simultaneously challenge and reproduce dominant socioeconomic alignments. The transformative geographies of hybrid infrastructures, then, are ambiguous, emerging with and through schizophrenic materialities.

Politics of hybridity, in this vein, constitute an important strategy for a degrowth transition. Hybrid infrastructures are forms of compromise that stabilize in current alignments while providing a stepping stone to mode radical change. They build and store the potential for a degrowth transition that might erupt as radical realignment of practices' relatedness. Hybrid infrastructures materialize postcapitalist possibility and in doing so integrate pragmatic and hopeful approaches. A strategy around a politics of hybridity, then, 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.

Interlude III: Transformative geographies

Transformation is a profoundly spatial process. Power-laden struggles of human co-existence unfold in various socio-spatial dimensions in and through which transformation transpires. Interlude I foregrounds the role of spatial concepts for a perspective on transformative geographies. Change unfolds in places, connects close and distant sites, shifts horizontal and vertical relations, and negotiates boundaries. Place, territory, network, and scale, therefore, capture different moments of transformation's spatiality. While this work employs a spatial perspective throughout, it revolves much around a non-hierarchical notion of scale conceptualized through practices' relatedness. This section demonstrates the merit of mapping transformative geographies explicitly across different forms of socio-spatial relations including place, territory, and network. For reasons of scope, however, I shall focus solely on some insightful examples around the links between communality, governance, and economy with place, territory and network. In doing so, this interlude shows that the consideration of different forms of socio-spatial relations support the understanding of transformative processes and the development of strategies around it.

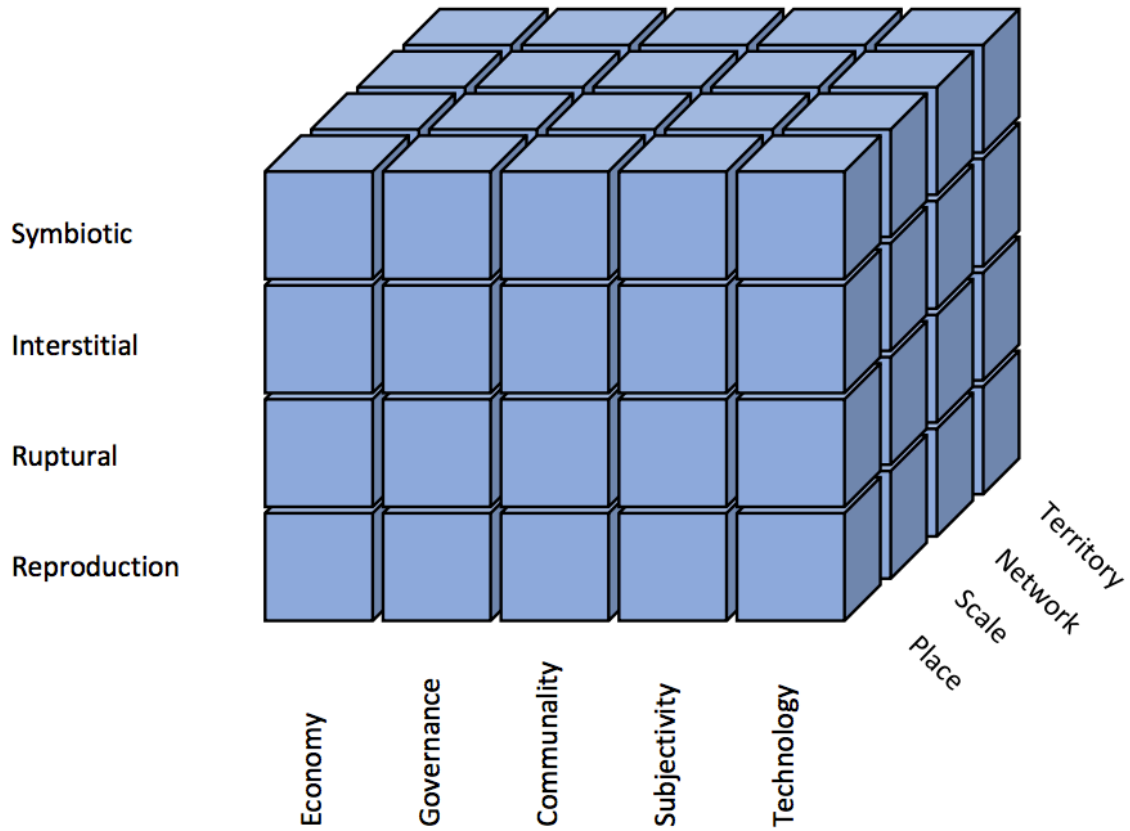

Figure 22: Social, spatial, and strategic dimensions of Transformation

Place operates through proximity, socio-spatial embedding, and areal differentiation (Jessop et al., 2008). Stuttgart as this study's designation of the *place* of transformation, in turn, includes multiple

sites through which transformative and reproductive practices transpire. *Slowtec*, *Geco-Gardens*, and *Relumity* unlikely affect the global value chains and their command by Daimler, Bosch, and others. Stuttgart's administration does not change their orientation because of *em-faktor*, the *Economy for the Common Good*, and *iFixit*. And *Lastenrad*, *Foodsharing*, *Smark*, and *HOBBYHIMMEL* are in no position (yet) to substitute for the city's infrastructures. But exceptions prove the rule. Located in *Siemens* Street and literally around the corner and between buildings of Bosch, Mahle and Daimler *HOBBYHIMMEL* indeed attracts individuals including managers from these organizations and spreads into their floors and offices. Learning about alternative enterprises, some individuals reduce or cancel their employment with larger corporations to seek more meaningful work with organizations like *Slowtec*. And on occasion, there are indeed exchanges between eco-social enterprises and renowned entrepreneurs. All these are highly erratic and contingent events testify possibilities for interaction across praxeologically distant but geographically close sites.

Stuttgart describes also a territorial entity relevant primarily in administrative practice. The economy for the common good made small advances to shift formal governance on a local level towards a realignment with degrowth-compatible values. Yet, a host of other issues organizations' practices jar with such as regulatory frameworks, legal forms, charity laws, and taxation are beyond the competences of Stuttgart's city council and a matter for state-, federal-, or European legislature. A perspective on the logic of governance, in particular, requires knowledge about legal geographies (Bennett & Layard, 2015). The discussion of the complex territorialities of law is beyond the scope of this study but provides important points for further examination. A perspective on the nested territories that condition administrative and legislative practice as well as their execution (for instance through policing) is crucial to understand the inertia of practices' governmental alignment and the difficulties this poses for a degrowth transition. It also challenges the narrow focus of community economy scholarship on alternative economic practices and lack of critical engagement with the state which "can play an important role in framing the tactics and strategies of alternative social and political movements" (Jonas, 2016, p. 18).

In contrast to the territoriality of bureaucratic and legal practice, practices' economic relatedness is best characterized by a networked spatiality. Stuttgart's diverse economies are entangled with innumerable close and distant sites that elude transparency and control and instead differently incorporate "salvage accumulation" (Tsing, 2015, p. 63). Communities set up localized and regionalized value chains that maintain transparency and solidarity throughout production, transfer, and consumption (for instance *SoLaWi* with respect to certain foodstuff). Products like mobile phones or light bulbs, however, require a significantly more complex input. In particular natural resources such as tantalum, tin, or gold rely on trans-local value chains. Small eco-social organizations generally lack

the means to mobilize, coordinate, and control the complex connections needed to ensure the dissociation from exploitative and ecologically destructive activities. *Relumity*'s efforts shed light on the possibilities and difficulties of such an endeavor. A degrowth transition, therefore, requires solid connections and trans-local networks to institute non-exploitative relationships across space.

Changes in practices' governing, economic, and communal alignments require fundamentally different spatial strategies. Proximity is crucial for the cultivation of trust, reciprocity, and communication – all qualities of commonality that appear desirable from a degrowth perspective (chapter 16). Practices' communal alignment, of course, is not reducible to a local context. Still, attention to local differentiation and interaction opens up possibilities to foster interaction across praxeologically distant but geographically close sites. This is most likely to occur through a combination of symbiotic and interstitial strategies the kinds of which pragmatic organizations employ (chapter 18). The founder of *HOBBYHIMMEL*, for instance, deliberately reflects on the workshop as Trojan Horse to disseminate sustainability- and degrowth-oriented practice (chapter 15). Symbiotic elements are important to provide points of contact while interstitial elements introduce difference and the possibility of other modes of social organization.

The territoriality of governance, in contrast, formally excludes interstitial spaces in which alternative alignments of bureaucracy, administration, and policing can evolve. Grey zones around regulation and taxation provide important leeway for eco-social organizations, but are necessarily limited in scope and are non-generalizable. The possibility of developing alternative administrative practices that exist side-by-side with incumbent institutions and eventually replace them is highly implausible. Changes in practices' governmental relatedness are more likely to be an outcome of symbiotic and ruptural strategies that align through common principles.

The networked spatialities of economic relations, in turn, invite yet different spatial strategies. Practices of production, transfer, and distribution transpire through the connections of dispersed sites that are differently positioned with respect to resources, command, and leverage. Decentralization, entrepreneurialization, and responsibilization, thereby, are functions of neoliberal economies that cheapen nature and lives for salvage accumulation. Symbiotic strategies are quite limiting since they themselves build on non-transparent value chains that possibly involve exploitative relations. Ruptural strategies, on the other side, lack a clear center to target. Corporations themselves are positioned in economic relations that constrain a radical shift towards degrowth practices. In turn, targeting the complex of transnational corporations, international law that backs exploitative practices, and lawyers that protect particularistic interests (although this of course should not be left out entirely) is a diffuse endeavor. Interstitial strategies that enroll "potentially autonomous circuits of cooperation" (Hardt & Negri, 2017, p. 145) into non-exploitative value chains, instead, appear to be a more promising avenue.

Networks of cooperation can incrementally substitute globalized consumption until „whole swathes of economic life [actually do] move to a different rhythm“ (Mason, 2016, p. xv).

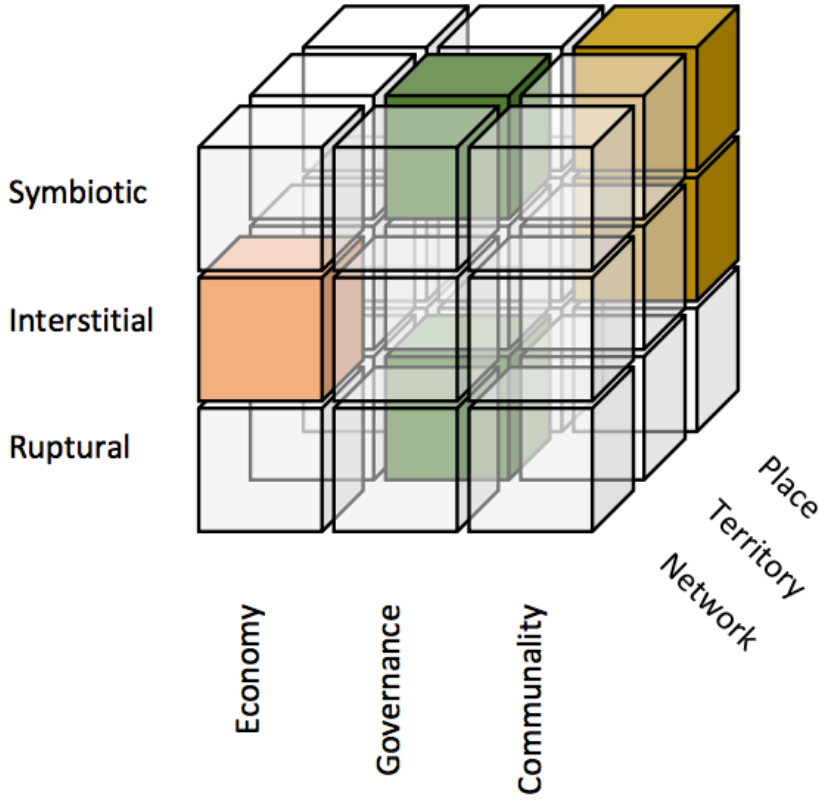

Figure 23: Viable foci for socio-spatial degrowth strategies

A perspective on transformative geographies reveals the intricate interplay of different strategies, logics, and socio-spatial relations. It affirms that a degrowth transition premises synergies between symbiotic, interstitial, and ruptural strategies in transforming practices' relatedness across economy, governance, communality, subjectivities, and technology through place-based, networked, territorial and scalar social relations. Although this work examines the nexus of diverse forms of practices' relatedness, modes of transformation, and socio-spatial relations by means of a specific case-study, it makes a plausible case how awareness of these different social, spatial, and strategic dimensions contribute to theory and practice of a degrowth transition. The subsequent section concludes with a reflection on the study's contributions and limitations as well as the major leverages it identifies.

Conclusion

Activists, scholars, entrepreneurs, and politicians around the world increasingly take note of the ills of current modes of social organizations and the possibilities of a different future. At the time of writing, *Fridays for Future* (FfF) have surged from a one-person protest to a global movement within a few months. Worldwide, thousands of school students skip classes (mostly on Fridays) and gather to demand decisive political action against climate breakdown. Aside from students, other groups such as *Scientists for Future*, *Parents for Future*, and *Artists for Future* have formed in support of the school strike for climate. This development is not simply a spontaneous agitation, but the eruption of long-standing grassroots organizing and the dissatisfaction with formal politics. Writing-off social resistance as spontaneous "eclipse[s] and discredit[s] the work, knowledge, and organizational structures that stand behind events of protest and revolt" (Hardt & Negri, 2017, p. 21).

Like the Occupy Movement in 2011, FfF is a flare-up of the emancipatory politics for an alternative co-existence that smolders largely unnoticed in the interstices of incumbent practice alignments. Episodic outbreaks of oppositional work go hand-in-hand with the repair and sharing practices in open workshops, social enterprises' regionalization of production, and the closing of energy, nutrient and water cycles through alternative technologies – to name only a few of the examples which this study examines. Seen on their own, these movements are easily discounted as revolutionary fad that will pass by. In the context of postcapitalist resistance, they become visible as eruption of the desire for a just future that draws on and adds to the capacity for collective struggle and materializes in manifold alternative practices and organizations. Alongside many other initiatives, organizations, and events, thus, *Fridays for Future* are a part of a multifarious "constituent potential" (Hardt & Negri, 2017, p. 36) of alternative/postcapitalist/degrowth organizing.

Real change, however, faces many forces that militate against its work towards social and environmental justice and which become more and more apparent in the continuing attachment to economic growth by mainstream politics and media despite significant evidence that growth cannot be reconciled with social and environmental sustainability (Jackson, 2017; Kallis, 2018; see chapter 1). Hope as important driver for emancipatory action, therefore, does not suffice to navigate the unruly terrain of resistance. Transformation, rather, requires strategies that develop long-term visions of togetherness, build on the knowledge of possibilities and constraints, and enlarge the ground for postcapitalist practice (see chapters 3 and 19). Tracing and dissecting the complexities of transformative geographies, this work speaks to the development of visions, alternatives, and strategies around the notion of a degrowth transition. It drills down into the social, spatial, and strategic dimensions of transformation and advances a conceptually and empirically grounded

assessment of the possibilities and limitations of community activism and civil engagement in shifting transformative geographies towards a degrowth trajectory.

Contributions

In doing so, the study contributes to pertinent discussions on global change and social resistance in three major ways. First, it integrates different perspectives and emphases of research on transformation that productively speak to each other, calling forth a comprehensive research agenda. Second, it takes a distinctly spatial approach to transformation and sharpens perspectives on its processes. Third, it operationalizes research on a degrowth transition, developing a number of concepts that provide practical leverage for transformative theory and practice.

(1) Combining different perspectives and emphases allows the thesis to advance a balanced and critical discussion that evades the extremes of hopeful naiveté, false 'realism', escapist theory, empirical particularism, and one-sided foci on specific areas of social life. The thesis integrates (a) antagonism and imagination as different modalities of resistance (Zanoni et. al., 2017; chapters 2, 5 and 6); (b) empirical material and conceptual-methodological tools to trace transformative practice (chapters 7 and 11); (c) economy, governance, communality, subjectivity, and technology as different areas of transformation (see chapters 7 and 16); and (d) symbiotic, interstitial, and ruptural strategies of change (see chapters 3 and 16). It does so (e) by looking at a broad sample of 24 sustainability-related organizations that exemplify different ideals, strategies and orientations and, above all, form a comprehensive network that exceed the focus on individual examples in isolation (see chapter 9). This is not to say that other studies do not call on diverse approaches across one of more of these dimensions. However, lack of their balancing frequently reduces the usefulness and allure of literature on societal transformation.

(a) The tension between antagonism and imagination ensues from oppositional and often (partially) essentializing perspectives on 'undesirable' practices, actors, institutions, or economic forms on the one hand, and the (over-) emphasis of plurality, possibility, and openness on the other hand. Against the background of a critical engagement with the respective literatures, the study develops a research agenda around the materialization of postcapitalist possibility. In combining the ontological politics of community economy scholarship (chapter 4) with practice theory's grounding of social life in conventionalized patterns of activity (chapter 5), it proposes a relational perspective that acknowledges plurality and becoming while remaining rooted in power relations that transpire through practices' alignments (chapter 6). It thus integrates antagonism's opposition to economic practices that reproduce and consolidate unsustainable trajectories with imagination's embracement of the possibilities of diversity.

(b) To trace processes of change, including enabling and constraining moments of transformative practice, this study analyses and contextualizes empirical data with abductively developed conceptual, methodological, and analytical tools. These tools allow the thesis to advance an empirically grounded perspective of a *(degrowth) politics of place beyond place* by connecting degrowth-oriented practices with their broader alignments (see chapter 7). That means, although the study faces limits in researching practices' relatedness across time and space, by focusing on a particular local context, it integrates extensive literature-based knowledge into its argument. Systematically and carefully combining empirical data with a broader contextual view enables the thesis to trace transformative dynamics beyond place and thus link the study's empirical site to transformative geographies beyond.

(c) Empirically and conceptually, the thesis integrates perspectives on different forms of practices' relatedness (chapters 7, 11 and 16). By separating economy, governance, communality, subjectivity, and technology for analytical purposes to dissect transformative dynamics, the thesis illumes how change transpires through different areas of social coexistence simultaneously. Tracing transformative process across different areas and illustrating their close interaction, then, challenges perspectives that attempt to single out specific starting points without acknowledging the integrate interplay of diverse social dimensions. Transformative geographies, consequently, premise an iterative understanding of change that enrols all dimensions of social co-existence

(d) Radical change, furthermore, cannot be expected to come about through any single mode of transformation. The study develops a case for the creative combination of symbiotic, interstitial, and ruptural interventions into incumbent practices alignments (Wright, 2010; see chapters 3 and 16). For itself, each mode faces strong limitations. Combining these different strategies, however, counteracts some of these limitations, specifically around co-optation and resource constraints. Integrating different social, strategic, and spatial dimensions of change, then – the latter to which I turn to in (2) – the study advances plausible scenarios how practices' broader alignments might shift (see interlude III).

(e) The thesis integrates a broad sample of 24 sustainability-related organizations (chapter 9). In doing so, it traces a broad variety of thematic foci, models of financing, legal forms, motivations, and strategies. Aside from opening a perspective on the diversity of organizational forms that a degrowth transition enrols, it emphasises the importance of inter-organizational links and coalitions. By looking at Stuttgart's community economy more broadly, the study provides valuable insights into the connections between different actors which coalize (not always without drawbacks) for (radical) change (chapters 12-19).

(2) Spatializing transformation sharpens the perspective on its processes. In particular, a distinctly spatial approach lessens the conceptual tension between stability, institutional inertia, and

materialization on the one hand and contingency, performativity, and difference on the other hand (chapters 5 and 6). Furthermore, it supports the integration of empirical data with transformation's larger context. In this vein, the study draws on spatial thinking in three major ways, portraying the advantages of a geographical approach: (a) politics of place beyond place; (b) the materialization of (postcapitalist) possibility; and (c) different forms of socio-spatial relatedness.

(a) Linking close and distant sites through a conceptual framework around practices' relatedness, the thesis traces a (degrowth) politics of place beyond place. Adopting an explicitly geographical perspective, thereby, allows the study to demonstrate the role of activism in place for transformative processes at large. In doing so, the thesis overcomes the dichotomization of local and global and develops a non-hierarchical notion of scale (chapter 6). It shows that practices are always conditioned from a spatial or temporal 'elsewhere'. That 'elsewhere', however, is rooted in sites through which practices transpire and thus always has a place (Massey, 2005, 2008; see chapters 6, 7 and 16). A spatial perspective on transformation, then, allows the study to account for power relations without reverting to a layered reality.

(b) Acknowledging a degrowth politics of place beyond place, furthermore materializes postcapitalist possibility. In line with the integration of antagonism and imagination (see 1a above), a distinctly spatial approach allows for the conceptualization of a non-hierarchical ontology while accounting for the materiality of social relations. Power and possibility, then, are not opposites but emerge from practices' alignments. Practices' alignments, in turn, become visible as contingent yet material formations which can be shifted, ruptured, or substituted, but always against the constraints of institutional inertia. Transformative strategies, then, need to develop around both possibilities and constraints.

(c) Apart from place and scale, the integration of other concepts of socio-spatial relations such as network and territory shed light on transformative processes. Squaring networked, place-based, and territorial spatialities with social and strategic dimensions of transformation helps to navigate possibilities and constraints. The study demonstrates the potential of perspective on place-based, scalar, territorial, and networked spatialities for the formulation of transformative strategies in general and degrowth strategies in particular (see interlude III).

(3) Operationalizing transformation, finally, provides practical leverage and allows for a positioning within the broad field sustainability transition research (see chapter 3). The thesis develops (a) categories and empirically grounded abstractions that guide research; which (b) support the assessment and development of degrowth activities; and (c) articulate a clear normative standpoint.

(a) By developing a number of empirically grounded categories such as the notions of degrowth practices, degrowth organizations, degrowth politics, and the diverse logics perspective, the study

advances a helpful abstraction from the complexities of transformative geographies. It is clear from the empirical and theoretical work of this study that there is no black and white between sustainable/unsustainable and degrowth/business-as-usual trajectories. Organizing knowledge around critical concepts developed in close conversation with empirical data supports our understanding of transformative geographies.

(b) Aside from improving the understanding of transformative processes, said categories also help to assess and devise action in line with degrowth's principles. While acknowledging the hybridity of actually existing transformative practices and practice-formations, the categories allows the thesis to carve out possible leverages that successfully navigate the tension between reproduction and integration on the one hand and isolation, sacrifice and lack of resources on the other hand. Here, the thesis takes an explicitly practical orientation and seeks to provide useful knowledge for a degrowth transition.

(c) Lastly, the study's operationalization of transformation in line with degrowth principles allows it to articulate a clear normative standpoint and develop its argument accordingly. While the study shows numerous links to existing institutions and symbiotic as well as interstitial forms of transformative practice, it takes a decisive stance against business-as-usual approaches around ecological modernization, sustainable development, and green economy all of which ignore the fundamental contradiction of sustainability and social justice with capital accumulation.

Limitations

Although this thesis advances an important and novel perspective on transformative geographies, it has a number of limitations that require reflection. The thesis (1) faces a number of challenges in pursuing a practice-theory methodology; (2) could be deepened and fleshed out with further studies on practices' relatedness; (3) could be further enriched by a deeper empirical understanding of the institutional frameworks in which the alternative organizations operate; and (4) leaves out potential allies in the form of social movements. All of the above constitute potential shortcomings and open promising areas for future research.

(1) Practice theory perspectives focus on activities that 'actually take place' – meaning that they are observable from a researcher's perspective – and the patterns that emerge from that observation. Due to a number of constraints around accessibility, temporal and spatial dispersion of alternative practices, this study partially relies on interviewing to complement its ethnography (see chapter 9). As a consequence, the study relies on different kinds of data that it integrates to form a coherent picture of the empirical case (chapter 11). Yet, in doing so, it cannot avert the partial conflation of representative (discursive) and material practices. Lines blur between concrete practices observed and described on the one hand, and more speculative accounts of occurrences and the possibilities of what

could be on the other hand. The study is transparent about the collection, handling, analysis, and presentation of data. Nevertheless, it does not implement practice theory's conceptual and methodological principles throughout. While it is practice theory's strength to capture the implicit and material part of social phenomena (Reckwitz, 2016; chapter 8), the presentation of findings in part IV, do not always provide a clear picture of the extent and depth of alternative practices. Expanding the study's expressiveness would require more ethnographic empirical evidence.

Within the scope of a doctoral thesis that would have meant to curtail the sample to fewer organizations. Although I reflected on this possibility early on in the research process, I decided to take a broader focus for several reasons. First, to get a feeling for organizations' positioning, strategies, motivations, and orientation with respect to a degrowth transition requires at least a basic level of trust and therefore personal contact. Limiting the sample to a small selection from the outset, would have excluded some compelling examples, the relevance of which became only apparent during empirical research. Second, the study's perspective on links between organizations are one of its central contribution to research on transformative geographies. Item (1e) above emphasizes the study's insights into the connections between different actors which coalize for (radical) change. Third, item (1e) also highlights the merit of taking into account different thematic foci, models of financing, legal forms, motivations, and strategies. A smaller sample would have limited the study's insights into different approaches and orientations.

(2) Related with the foregoing critique, the thesis could be deepened with respect to the description of practices' relatedness beyond place. In the introduction, I reflect on two different strategies to approach research on transformation's complexity with the limited resources at hand, opting for a perspective on the complex interplay of practices and relations in a specific geographical context while developing conceptual and methodological tools to take into account practices' relatedness beyond place. In this vein, the framework that this study advances links empirical data to its broader context. Adding to its broad focus, then, the thesis could profit from an in-depth empirical examination of particular practices' relatedness – for instance 3D printing in the workshop – with broader alignments – including the sourcing of energy and filaments (material used for printing) as well as its capacity to replace other forms of consumption.

(3) Aside from three interviews with key individuals from Stuttgart's city council and administration and the participation in a number of political events around issues of sustainability with profiled attendees from local and state politics, the study it was beyond the scope of this thesis to include a systematic examination of the institutional context. It covers economic, political, and social institutions primarily through the lens of eco-social enterprises instead of developing an independent analysis.

Such a perspective would be a useful extension of the study's activist-centered approach enriching the knowledge about constraints and possible leverages for transformative practice.

(4) Emphasizing the need to employ different transformative strategies, the thesis could be further explored with more evidence that woud provide a stronger empirical appreciation of social movements that engage in oppositional practice. In addition to its extensive discussion of how symbiotic and interstitial strategies complement each other, a more detailed and empirically grounded integration of ruptural strategies would significantly expand on the study's merit for transformative theory and practice.

Impulses for future research

Reflections on the study's contributions and limitations open a number of compelling avenues for future research. While this thesis advances a comprehensive perspective that integrates transformation's various social, spatial, and strategic dimensions, it cannot cover the full scope of such an endeavor. As a consequence, it lays bare much untapped potential for future research. Two prospects, thereby, appear to be particularly enticing. First, the study invites further conceptual and empirical research on possibilities of integrating ruptural strategies with the largely symbiotic and interstitial orientation of degrowth organizations. The findings show that ruptural strategies remain a gap in most practice formations. By and large, this is due to the study's perspective on alternative economies rather than social movements and different forms of protest. Nevertheless, while symbiotic and interstitial strategies are more 'productive' and thus naturally the key focus of alternative economic organizing, a coherent integration of oppositional activities might provide a key leverage for transitional dynamics – such as for example with respect to governance (see interlude III). In connection therewith, and second, further development and refinement of specific socio-spatial strategies for a degrowth transition appear promising. Interlude III has traced a number of examples (see figure 23) how particular social, spatial and strategic dimensions fit together. Here, a more detailed account of viable foci is an auspicious avenue for research on transition.

Furthermore, this work sets some impulses for different school of thought connected to transformative geographies, in particular for transition-, practice theory-, community economy- and degrowth scholarship. Transition literature includes a broad range of examples and models how social trajectories might shift towards more sustainable alignments (Loorbach et al., 2017, see chapter 3). However, it frequently lacks spatial sensitivity and a reflection on transition's politics. Integrating critical perspectives on social togetherness – in particular community economy scholarship (see chapter 4) – and on space – such as a non-hierarchical notion of space and different forms of socio-spatial relations (see chapter 6 and interlude I) – can provide more critical leverage for future research on transition.

Community economy thinking, in turn, tends to overemphasize possibility, diversity and hope. This thesis makes a convincing case for balancing imagination with antagonistic forms of resistance. Taking serious power relations and constraints can support community economy scholarship to avoid being "vulnerable to caricature and dismissal as a naïve, voluntarist reformism that sits comfortably with capitalist modes of diversity and lifestyle choice" (Miller, 2015: 366) and instead accentuate the immense potential that lies in rethinking *and* practicing economic being-in-common. In the same vein, degrowth scholarship can develop more practical leverage by integrating perspectives on antagonism and imagination, different social dimensions, different areas of transformation, and different socio-spatial relations to discuss degrowth strategies.

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In the shadows of the protests of FfF, the movement Extinction Rebellion (XR) spreads globally in the spring of 2019 demanding radical social and political change that counteracts the current trajectory of ecocide. Its tactics are to disturb and interrupt business-as-usual through blockages and other non-violent acts of civil disobedience. While FfF and XR unsettle the routines of everyday practices – by skipping school, blocking traffic, and raising awareness of global injustices and radical unsustainability of the Global North – diverse community projects, social enterprises, and degrowth organizations continue to enact and build alternative forms of togetherness. The interplay of different strategies – symbiotic, interstitial, and ruptural – across different areas of social life – economy, governance, communality, subjectivity, and technology – transpiring through different spatialities – place, scale, network, and territory – constitutes a promising avenue for radical change.

Transformation, while still involving much speculation and hope, is most likely to come about through strategic compromising to build alternative networks. Strategy entails a far-reaching oversight – both temporally in terms of a vision, as well as spatially in terms of surveying the social field. Knowing the possibilities and constraints for transformative action, strategic movements can align their activities accordingly. Tracing and dissecting the diverse strategic, social, and spatial moments of transformation supports the development of strategic knowledge to further a degrowth transition. Degrowth strategies stay true to degrowth's principles in their vision but acknowledge the necessity of compromising to further transformative action. Building awareness of possibilities and constraints enables organizations to navigate incumbent alignments of practice expanding constituent potential for radical change. This potential for alternative economic, governing, communal, subjectivist, and technological alignments remains latent in the networks of alternative organizing which prefigure an equitable future.

The cultivation of webs of alternative practices give reason for careful hope. A kind of hope that drives decisive action but does not content with less than radical change. A hope that mobilizes more and

more people to build constituent potential that eventually shifts practices' alignments towards a radically different trajectory that orients on social and ecological needs and balances.

Appendix

Detailed list of data collection (interviews, participant observation, focus groups)

Code	Scope	Date
Interviews (I) [total: 28]		
	Enterprises (E) [legal form GmbH, gGmbH, GbR]	
I_E01a	1h14min + notes	05/07/2016
I_E01b	1h54min + notes	06/03/2017
I_E01c	1h20min + notes	07/02/2018
I_E02a	1h02min + notes	29/06/2017
I_E02b (i-iii)	1h40min + notes	05/09/2017
I_E03	52min + notes	18/08/2016
I_E04	1h31min + notes	04/09/2017
I_E06a	48min + notes	21/08/2017
I_E06b	20min + notes	25/05/2018
I_E07	34min + notes	29/06/2017
I_E08	47min + notes	25/05/2018
I_E09	written interview	27/06/2018
	Associations (A) [legal form e.V.]	
I_A01a	36min + notes	18/08/2016
I_A01b	1h01min + notes	07/02/2018
I_A02	54min + notes	21/08/2017
I_A03	31min + notes	18/08/2016
I_A04	38min + notes	28/07/2016
I_A07	45min + notes	10/06/2018
I_A08	33min + notes	10/06/2018
	Local Groups (L) [of transregional associations or networks]	
I_L01	1h00min + notes	25/05/2018
I_L02	48min + notes	20/08/2016
I_L03	46min + notes	05/07/2016
I_L04	31min + notes	04/07/2016

Projects (P) [without legal form]		
I_P01	32min + notes	28/07/2016
I_P02	31min + notes	04/07/2016
City Representatives of Stuttgart (S)		
I_S01	38min + notes	29/07/2016
I_S02	1h10min + notes	25/05/2018
I_S03	55min + notes	11/06/2018
Participant Observation (B) [60]		
Enterprises (E) [legal form GmbH, gGmbH, GbR]		
B_E01x	Observation Guide	05/04/2017
B_E01a	383 W	05/07/2017
B_E01b	747 W	02/08/2017
B_E01c	300 W	07/09/2017
B_E01d	796 W	20/11/2017
B_E01f	1035 W	07/02/2018
B_E05a	2954 W	11/08/2017
B_E05b	536 W	01/10/2017
B_E06a	153 W	26/06/2017
B_E06b	276 W	03/07/2017
B_E06c	212 W	04/07/2017
Associations (A) [legal form e.V.]		
B_A01x	Observation Guide	17/08/2016
B_A01x	Observation Guide	06/03/2017
B_A01x	Observation Guide	17/03/2017
B_A01x	Observation Guide	20/03/2017
B_A01x	Observation Guide	03/04/2017
B_A01a	670 W	09/05/2017
B_V01b	1828 W	29/05/2017
B_V01c	799 W	17/06/2017
B_V01d	1344 W	20/06/2017
B_V01e	1136 W	26/06/2017
B_V01f	866 W	01/07/2017
B_V01g	1284 W	03/07/2017
B_V01h	3005 W	04/07/2017
B_V01i	1062 W	24/07/2017
B_V01j	2981 W	01/08/2017
B_V01k	1134 W	21/08/2017
B_V01l	718 W	04/09/2017
B_V01m	703 W	05/09/2017
B_V01n	1000 W	18/09/2017
B_V01o	1005 W	10/10/2017
B_V01p	1459 W	16/10/2017

B_V01q	2136 W	06/02/2018
B_V01l	473 W	19/10/2018
B_V02a	Observation Guide	02/07/2016
B_V02b	554 W	21/08/2017
	Local Groups (L) [of transregional associations or networks]	
B_L05a	Observation Guide	02/04/2016
B_L05b	Observation Guide	02/07/2016
	Projects (P) [without legal form]	
B_P01a	Observation Guide	31/07/2016
B_P01b	1245 W	25/02/2018
	Events and Gatherings (G)	
B_G01	437 W	01/03/2017
B_G02	Observation Guide	20/04/2017
B_G03	5600 W	22/07/2017
B_G04	545 W	24/07/2017
B_G05	1161 W	25/07/2017
B_G06	857 W	23/09/2017
B_G07	1294 W	26/09/2017
B_G08	1143 W	27/09/2017
B_G09	335 W	12/10/2017
B_G10	2380 W	19/10/2017
B_G11	633 W	25/10/2017
B_G12	653 W	06/11/2017
B_G13	618 W	29/11/2017
B_G14	1423 W	24/02/2018
B_G15	910 W	19/03/2018
B_G16	571 W	13/04/2018
B_G17	1024 W	14/04/2018
B_G18	287 W	14/04/2018
B_G19	1040 W	11/06/2018
B_G20	460 W	20/07/2018
	Focus Groups (F) [2]	
F_01	2h44min	12/10/2017
F_02 (written documentation)	2140 W	25/02/2018

Table 8: Detailed list of data collection

Detailed list of organizations with description

Organization	Description	Data Collection	Comments
	Enterprises [legal form GmbH, gGmbH, GbR]		
Slowtec GmbH	Development of sustainable technology in software and hardware sectors	1-5	
ownworld GbR	Development of off-grid, self-sufficient house (own home)		
Geco-Gardens GbR	Development, construction and sale of vertical garden systems	1-3;5	
reCIRCLE GbR	Implementation of reusable take away scheme	1-2	
Smark GbR	Fully automated sale of regional and organic food	1-5	
Relumity - Technologie Transfer Initiative GmbH	Development, production and sale of sustainable and reparable LED lights	1-4	
Wizemann Space GmbH	Co-Working and event space	1-3	
iFixit GmbH	Platform sharing manuals how to fix broken devices + enterprise selling respective tools	1	
em-faktor - Die Social Profit Agentur GmbH	Agency offering fundraising, CSR, campaigning and branding services to social profit enterprises	1-2	
Human Connections gGmbH	Development of social network that connects information and action	1-2	
	Associations [legal form e.V.]		
Werkstadt e.V.	Association organising free exchange of repair services and skills on a regular basis	1-2	
Lastenrad Stuttgart e.V.	Project promoting car-free urban mobility; provision of a free cargo bike lending system	1-3	
HOBBYHIMMEL (Verein zur Verbreitung Offener Werkstätten e.V.)	Open workshop, providing low-threshold access to high-tech and low-tech tools and machinery	1-5	
Grünfisch e.V.	Associating building and operating aquaponics	1-3;5	
Solidarische Landwirtschaft (Verein zur Förderung der Solidarischen Landwirtschaft Stuttgart e.V.)	Consumer-producer cooperative for organic agriculture	1-2	
Teilbar e.V.	Library of things	1-2	
	Local Groups [of transregional associations or networks]		
Gemeinwohlökonomie (Economy for the Common Good)	Local group advocating economy for the common good	1-3;5	
Open Source Ecology	Association working towards an open-source economy	1-3	no constituted group but several links to OSE Germany e.V.
Zeitgeist Movement (local group)	Movement advocating a resource-based economy	1-3	

Cradle to Cradle (local group)	Association promoting a circular economy	1-2
Foodsharing (local group)	Association organizing against food waste	1-3

Projects [without legal form]		
Reparaturcafé	Project organizing free exchange of repair services and skills on a regular basis	1-3
Critical Mass	Regular campaign for more bicycle use and better infrastructure	1
Karte von Morgen	Development of map tool to support sustainability and joint action	1

City Representatives	
City administration Stuttgart	5
City planning Stuttgart	5
City council Stuttgart	5

Table 9: List of organizations and representatives

Example of interview guide

HOBBYHIMMEL

[redacted]
Siemensstraße 140
70469 Stuttgart, Deutschland

Kontakt
[redacted]
info@hobbyhimmel.de
www.hobbyhimmel.de

Allgemeines

Wir sind ein SocialProfitStartup mit langfristiger gemeinnütziger Ausrichtung.

Der HOBBYHIMMEL ist Stuttgarts erste Offene Werkstatt. Als **gemeinnütziges Projekt** haben wir uns das Ziel gesetzt, die handwerklichen Möglichkeiten möglichst vieler Menschen drastisch zu erweitern. Wir bieten eine große Werkstattfläche mit folgenden Werkbereichen: Holz, Metall, Elektro, Fablab, Textil, Farben, Drucken, Fahrrad

Gegen eine geringe Gebühr hat jeder bei uns die Möglichkeit an geeigneten Arbeitsplätzen seine Ideen zu verwirklichen. Du findest bei uns ein großes Sortiment an Hand- und Elektrowerkzeugen aber auch größere Maschinen. Neben dem Offenen Werkstattbereich bieten wir verschiedene Kurse, regelmäßige Repaircafes sowie hauseigene Projekte an.

Die Idee

Eine Offene Werkstatt ist **aus unserer Sicht** ein Platz, an dem alle Menschen ihrem „handwerklichen" Interesse nachgehen können. Handwerk, Kunst, Reparatur, Recycling, Upcycling und vieles mehr gehören dazu. Es werden Maschinen, Geräte, Werkzeuge und vor allem der nötige Platz zur Verfügung gestellt, aber auch Know-how vermittelt und Hilfestellung gegeben. Menschen können sich gegenseitig austauschen, kennenlernen und unterstützen.

Zielsetzung

Nachhaltiger leben & Zum Nachdenken über das eigene Handeln anregen. Wir wollen die verschiedenen alternativen Möglichkeiten der eigenen Lebensgestaltung aufzeigen:

- **Dinge selber herstellen** und dabei einen persönlichen Bezug herstellen, diese mehr schätzen sie nicht so schnell wegwerfen
- **Dinge reparieren** und dabei die Nutzungsdauer verlängern, dadurch Müll sowie die ökologischen Herstellungskosten vermeiden
- **Dinge gemeinsam machen** und dabei lernen, dass man für die Gemeinschaft einen wichtigen Beitrag leisten kann oder diese für einen selbst
- **Dinge gemeinsam nutzen** und merken, dass nicht jeder alles selbst benötigt (Werkzeuge/Maschinen/…). Hochwertig leihen statt billig kaufen
- **Dinge ausprobieren** und eigene Fähigkeiten entdecken und weiterentwickeln. Das stärkt das Ego und erweitert den Horizont
-

Projektziele

- Eine sich selbsttragende Offene Werkstatt, die mit minimalem Aufwand betrieben werden kann.

- Überschüsse generieren, die in einen gemeinnützigen Verein fließen.
- Der Verein kümmert sich um nachhaltige Themen im HOBBYHIMMEL (Vorträge, Seminare, Kurse, Projekte, …).
- Der Verein hat darüber hinaus die Aufgabe, einen einfacheren und schnelleren Aufbau weiterer gemeinnütziger Offener Werkstätten zu unterstützen. Social Franchising

Hintergründe

Post-Wachstumsgesellschaft: Mit diesem Projekt wollen wir verschiedene zukunftsfähige wirtschaftliche und soziale Ausrichtungen aus unterschiedlichen Bereichen vereinen. Schlagworte sind hierbei: Social Entrepreneurship, Sharing Economy, Co-Working, Post-Wachstumsgesellschaft oder Open Source Ecology und Social Franchising. **Die Grundbausteine, auf welchen das Projekt aufgebaut wird soll mit den folgenden 3 Prinzipien verdeutlicht werden:**

- **Nachhaltig: Für die einen "abgedroschen" für die anderen "essenziell". Für andere dient das Wort vielleicht nur zum "greenwashing"?** Für uns ist der Begriff der Nachhaltigkeit ein ständiger Begleiter in allen Entscheidungsphasen. Egal ob die Wahl des Stromversorgers, der Geschäftsbank oder beim Materialeinkauf; wir versuchen möglichst nachhaltig zu denken und zu handeln. Selbermachen, Reparieren, Wertschätzen, Teilen sowie Re- und Upcyclen sind dabei elementare Punkte.
    - Ein ausgeglichenes Spannungsdreieck zwischen Ökologie, Ökonomie und sozialen Aspekten ist das Ziel.
- Unternehmerisch: **Gewinne sind Mittel zum Zweck.** Wir möchten ein ansprechendes und vielfältiges Angebot zu attraktiven Konditionen anbieten. Preise, Prozesse, Qualität und Service werden wie in jedem normalen Unternehmen ständig hinterfragt und kontinuierlich verbessert. Unser Ziel ist es, möglichst unabhängig und frei in der Gestaltung sowie im Handeln zu sein. Gerade in der Aufbauphase sind Fördermittel, Subventionen oder auch Kredite notwendig. Um jedoch dauerhaft flexibel in der Gestaltung bleiben zu können ist finanzielle Unabhängigkeit ein wichtiger Aspekt, der durch eine gewinnorientierte Ausrichtung erreicht werden soll.
- Gemeinnützig: **Für uns schließt die gewinnorientierte Ausrichtung ein gleichzeitig gemeinnütziges Handeln nicht aus. Im Gegenteil:** es stellt neben freiwilligen und ehrenamtlichen Tätigkeiten den wichtigsten Baustein dar. Je mehr Mittel wir erfolgreich erwirtschaften können, desto umfangreicher kann das Angebot an gemeinnützigen Aktionen und Leistungen dargestellt werden. Überschüsse werden nach dem Erreichen der Kostendeckung "abgeschöpft" und an einen gemeinnützigen Verein abgeführt, der diese im Bereich der Offenen Werkstatt sinnvoll verwaltet und investiert.

Finanzierung

Abhängigkeit minimieren**:** Für den Betrieb einer Offenen Werkstatt fallen trotz freiwilliger Arbeitsleistung von Mitgliedern jede Menge Kosten an. Dazu gehören neben dem großen Posten der Raummiete vor allem auch Nebenkosten wie Strom und Heizung aber auch Gebühren, Versicherung und natürlich Werkzeugausstattung und Ersatzteile und vieles mehr. Ziel muss es sein den fixen Kostenblock von mehreren 1000€ auf möglichst viele Einnahmequellen zu verteilen um die Abhängigkeit zu minimieren.

- Beiträge: Ähnlich einem Fitnessstudio werden viele Mitglieder benötigt um eine dauerhaft stabile Finanzierung zu gewährleisten: Mitgliedsbeitrag; Zeitkarten; Förderengel
- Verleih: Über die Vermietung von Werkzeugen und Maschinen werden weitere Einnahmen generiert: Handwerkzeuge; Elektrowerkzeuge; größere Maschinen; Räumlichkeiten
- Verkauf: Der Verkauf von Artikeln und Kursen bringt weitere Einnahmen: Bastelsets; Kleinteile; Verbrauchsmaterialien; Werkzeugsets; Speisen und Getränke auf Spendenbasis
- Spenden: Spenden bringen nicht unbedingt Einnahmen, sie helfen auch Ausgaben zu reduzieren: Geldspenden; Sachspenden; Fördermittel; Vorträge auf Spendenbasis

Ziele des Gespräches

Vertiefung der bisherigen Erkenntnisse durch Gespräche und Beobachtungen, sowie Festhalten dieser. Unter anderem zur:

- Besitzstruktur und Planung dieser
- Regelung des Zugangs und Planung dessen

- Finanzierung und Weg zu einer sich selbst tragenden offenen Werkstatt
- Einschätzung der Praktiken – Beitrag zur Nachhaltigkeit
- Verbindung zu anderen Projekten / Unternehmungen

Leitfaden

1) Praktiken: Ich habe versucht zu beobachten, was im HOBBYHIMMEL konkret gemacht wird. Natürlich nur sehr selektive Eindrücke. Du bekommst ja einiges mit, kannst du deinen Eindruck schildern, wie und für was die meisten Besucher die Werkstatt nutzen?

2) Könntest du mir nochmals kurz einen Überblick geben, in welche Initiativen und Projekte du involviert warst und bist? Und welche Bedeutung dies jetzt für den HOBBYHIMMEL hat?

3) In Anknüpfung an 2: was sind (wichtige) Kooperationen des HOBBYHIMMELs und welche Bedeutung diese haben für den Betrieb?

4) Finanzierung
    a. Was ist die finanzielle Situation des HOBBYHIMMELs?
        i. Trägt sich der HOBBYHIMMEL bereits selbst?
        ii. Welche Einnahmequellen die du aufgelistet hast haben welche Bedeutung?

5) Entscheidungen & Widersprüche
    a. Nach welchen Kriterien werden die Eintrittspreise festgesetzt, was waren die Überlegungen dahinter?
    b. Der HH soll langfristig als sich selbst tragende gemeinnützige Organisation funktionieren. Was sind Überlegungen dahinter? Wie wird das umgesetzt?
    c. Der HH versucht Wirtschaftlichkeit mit Nachhaltigkeit zu verbinden. Kannst du mir etwas über die Möglichkeiten und Grenzen davon berichten?

6) Bedeutung / Möglichkeiten des HOBBYHIMMELs zu nachhaltigerem Wirtschaften beizutragen

7) Nachhaltige Unternehmen in Stuttgart

Kommentare zum Interview

Umfeld, Kontext, Stimmung, Bedingungen, Interviewee, Probleme, Positives, Änderungs-vorschläge	
Zugewinn, Gedanken, Weitere Ideen,	
Sonstiges, Notizen	

Reflexion

i. Welche Praktiken lassen sich ausmachen?
ii. Welche Elemente lassen sich ausmachen?
iii. Welche Logiken lassen sich ausmachen?
iv. Welche Verbindungen lassen sich ausmachen?
v. Welche Rolle spielen Zugang und Besitz?

Example of observation guide (only used for observation sessions as indicated in table 8)

HOBBYHIMMEL

1) *Allgemeines*
   a. Wer ist anwesend?
   b. Wie gehen die Anwesenden miteinander um?
   c. Über was wird gesprochen?

2) *Praktiken*
   a. Welche Praktiken konstituieren die Teamsitzung?
   b. Auf welche Praktiken lässt sich durch das in der Sitzung gesprochene, beobachtete schließen?
   c. Was wird gemacht, das den HOBBYHIMMEL tagtäglich immer wieder hervorbringt?
   d. Worin bestehen die Wiederholungen von Praxis?
   e. Welche Praktiken sind mit anderen Unternehmungen (insb. Urban Gardening, Foodsharing, Open Source Ecology u.a. Unternehmungen die im Bereich open Open Source, Postwachstum etc. angesiedelt werden können) verknüpft?
   f. Welche Materials, Meanings, Competences sind relevant?

3) *Verbindungen*
   a. Auf welche Verbindungen zu anderen Projekten/Unternehmungen lässt sich schließen?
   b. Welche Shared Practices lassen sich ausmachen?

4) Welche Logiken lassen sich finden?
   a. Markt/Gewinn/Verkauf/Erfolg (Markt)
   b. Gemeinschaft/Solidarität (Community)
   c. Austausch/Bildung/Wissen/Kompetenzen (Profession)
   d. Erfüllung/Verwirklichung/Selbst
   e. Erzählungen/Metaphysik/äußerer übergeordneter Zweck (Religion)
   f. Partizipation/Inklusion (Demokratie)
   g. Verwaltung/Organisation/Zahlen/Quantifizierung (Bürokratischer Staat) / inkl. Abstraktionslogiken, Statistiken?
   h. Verantwortung/Schutz/Protektion/Kümmern (Care) / inkl. Umwelt?
   i. ...

   j. Was ist mit den Gegenteilen? Keine Bildung, Ausgrenzung ...?

Vierte Vorstudie Stuttgart: 17.08.2016 – 20.08.2016

Datum: Uhrzeit: Ort:

Praktik (grob)	Praktik (fein)	Praktik (Beschreibung)	Kommentar Hierarchie/Verknüpfung	Logiken	Verknüpfung zu anderen „Komplexen“

Kommentare:

Figure 24: Guide used to support note taking during participant observation

Vierte Vorstudie Stuttgart: 17.08.2016 – 20.08.2016

Rahmenbedingungen

Space: the physical place or places	
Actor: the people involved	
Activity: a set of related acts people do (practice	
Object: the physical things that are present	
Time: the sequencing that takes place over time	
Goal: the things people are trying to accomplish	
Feeling: the emotions felt and expressed	

Kommentare:

Figure 25: Guide used to support documentation during participant observation

Example of observation notes (HOBBYHIMMEL, July 2017)

Um etwas früher da zu sein und noch etwas in Ruhe arbeiten zu können, bin ich mit dem Zug um 14h35 nach Stuttgart gefahren. Am Stuttgarter Hauptbahnhof habe ich [redacted] von Smark getroffen. Er hat mir [redacted] vorgestellt, der auch am Projekt mitwirkt. Die Kesselkiste wurde letzten Sonntag oder Montag (26/27.6.) in Betrieb genommen und funktioniert soweit mit ein paar Zwischenfällen. Bisher ist immer noch jemand anwesend um das Ganze zu überwachen. Mit [redacted] sollte noch demnächst noch Kontakt aufnehmen. Das Projekt scheint sehr interessant zu sein und hat auf jeden Fall auch enge Verbindungen zum HOBBYHIMMEL. Er hat mich auch gefragt ob ich schauen kann ob ein Parkplatz für [redacted] Anhänger frei sei, den er nur hinter dem HH abstellen konnte, er wollte dann auf dem HH Handy anrufen. Allerdings habe ich nicht mitbekommen, dass er es versucht hätte.

Am HH angekommen musste ich feststellen, dass ich nicht aufsperren konnte, da Nuki mir den Zugriff verweigerte. Ich war überzeugt bis auf die Nachtstunden für den Zugang freigeschaltet zu sein. Es lag nicht an der Fernschaltung – ich hatte eine Verbindung über Bluetooth – sondern nur an den Zeiten. [redacted] hat Zugriff, das sollte ich morgen beim Treffen klären, dass die Zeiten nochmals angepasst werden. Nach ein paar Minuten (ich hatte in die HH Gruppe geschrieben und noch nach der Nummer vom HH Handy gesucht, dann habe ich geklopft) kam [redacted] zum Rauchen raus. Er hatte das Klopfen nicht gehört aber nun hatte ich Zutritt gegen 15h50.

Ich wollte noch etwas an der Tischfräse probieren und den Nachttisch bauen. [redacted] fragte nach und hatte einige Ideen, wie man es stabiler bauen könnte. Die Ideen waren gut, aber etwas aufwendiger. Nach dem ersten Durchgang hatte ich das Problem, dass die Fräse etwas zu stark erhitzt war, obwohl das Holz recht weich war. Ich hatte der Fräse wohl etwas zu viel Holz zugemutet und bin dabei aber zu langsam vorgegangen wie sich herausgestellt hat. Als ich dann eine sehr kleine Tiefe eingestellt habe (rd. 2mm) und das Werkstück deutlich schneller über den Fräskopf bewegt habe, ging der Schnitt problemlos. Beim Weichholzbrett (Kiefer?) habe ich es in 4 Lagen, beim Hartholz (Buchenleimholz) habe ich ein etwas tiefere Nut in 5 Schritten gefräst. Im Anschluss habe ich mit der Kappsäge Holzstücke im 45 Grad Winkel zurechtgesägt um sie als Stützen zu verwenden. Leider ist die erste beim Anschrauben gesplittert – hatte vergessen vorzubohren. Ich habe dann einfach ein Kantholz genommen, welches sicherlich weniger stabil sein wird, da nicht so weit nach unten reichend, jedoch gut genug.

Dazwischen gab es immer wieder Pausen in denen ich mich mit [redacted] und [redacted] unterhalten habe. Es hat sich herausgestellt, dass sich [redacted] und [redacted] schon vor ein paar Jahren mal begegnet sind, wir haben uns dann aber nicht genauer über die Umstände unterhalten. [redacted] meinte nur, dass [redacted] schon länger nach einem derartigen Projekt geschaut hat. Es ging in der Unterhaltung vor allem um die Möglichkeit der Ausweitung auf andere Standorte bzw. des Austausches mit anderen Standorten. V.a. auf die Frage hin, ob ich in [redacted] involviert wäre (das hatte [redacted] zu [redacted] gemeint).

Zwischen 18h und 19h wurde es dann voll. Es kamen 3 wegen einer Einführung in den Laser sowie einige (rd. 7) die sich zum Mikrocontrollerstammtisch verabredet hatten. Einige der Leute waren das erste Mal im HH, sodass wir mehrmals die AGBs unterschreiben lassen, den Thekendeckel ausfüllen sowie die Einführung geben mussten. Es wäre zwar etwas effektiver gegangen aber im Endeffekt haben wir zumindest ein kleines bisschen gebündelt, sodass jeder von uns ([redacted] und ich) rd. 2-3 Einführungen geben mussten.

Zwischen halb 6 und 6 hat [redacted] angerufen um zu fragen ob einer was zu Essen wolle. Wir haben in gebeten noch eine Pizza mitzubringen.

[redacted] ist dann gegen 18h00 gekommen um die Einführung in den Laser zu geben. Eigentlich wollte er auch am Stammtisch teilnehmen, aber daraus ist glaube ich nichts mehr geworden. Ich habe zwischendurch noch die Haftungsausschlüsse auf Vordermann gebracht (Namen nachtragen und korrekt zu sortieren), bin dann später aber noch zur Einführung hinzugestoßen. Ich hatte den Eindruck, dass [redacted] zwar sehr viel vom Laser versteht, die Einführung jedoch etwas flapsig (und an vielen Stellen einfach zu schnell) macht. Während die die zwei Jungs vielleicht noch teilweise folgen konnten, hatte ich den Eindruck, dass [redacted] direkt ausgestiegen war. [redacted] schien auch nur so halb dabei zu sein.

[redacted] hat verschiedene Formen gelasert und sollte dann auch eine mitgebrachte Datei (dxf) lasern. Das Bild war jedoch problematisch und konnte nicht entsprechend erfasst werden. Auch meinte [redacted] dass dxf problematisch sei, habe allerdings nicht verstanden warum. Interessant war, dass auch andere Materialien gut gelasert werden können. Plexiglas mit rd. 1cm Dicke, MDF Platten gehen wohl bis ca. 8mm. Aber auch andere Materialien können verwendet werden wie Glas oder (beschichtetes) Metall. Das Problem das ich das letzte Mal hatte, dass der Laser in die falsche Richtung losgefahren ist, lässt sich lösen in dem ich einen anderen Startpunkt wähle. Dies geht über das Menu (ich glaube Config), da lassen sich Kästchen auswählen von je rechts/links; oben/unten; mitte.

Es wurde viel nebenher geredet. Interessanterweise stellt sich immer wieder heraus, dass

a) Leute sehr gut finden, dass es so einen Ort gibt. Teils auch schon länger nach etwas derartigem gesucht haben.
b) Viele sehr motiviert von Nachhaltigkeitsthemen sind. Und auch viel Bewusstsein mitbringen, aber es dennoch an konkreten Handlungsmöglichkeiten fehlt.

[redacted] kam gegen später noch vorbei um ein paar Dinge für das morgige Treffen vorzubereiten. Die Besucherzahlen haben sich bei durchschnittlich knapp 9 pro Tag eingependelt. Dies ist sehr erfreulich. Zwar ist nicht genau zu sagen, ob sich diese Entwicklung (von zuvor 5-7) durch veränderte Dokumentation ergibt (es sollen jetzt alle aufgeschrieben werden, auch Abonutzer), aber sie spiegelt wieder, dass die Werkstatt durchaus rege genutzt wird.

Gegen 21h kam noch ein Gast, der ein paar Löcher bohren wollte. Ich war etwas unschlüssig aber wollte ihn ungern mit seinen Holzbrettern wieder wegschicken. Eigentlich ist am Montag ab 18 Uhr nur ruhiges Arbeiten erlaubt. Der Kunde meinte, es seien nur 10 Löcher und die meiste Zeit ginge es um die Ausrichtung. Jedoch meinten [redacted] und [redacted], dass es immer problematisch ist, wenn man das beim Einen durchgehen lässt, dass dann auch andere kommen würden. Ich sehe das nicht ganz so eng und denke das Ganze ist auch etwas Aushandlungssache (es gibt absichtlich keinen genauen dB Wert), kann jedoch auch deren Punkte gut verstehen. Auf jeden Fall habe ich ihn aufgeschrieben und reingelassen, dann war es schon zu spät.

Insgesamt waren um 21 Uhr noch rd. 14 Leute im HOBBYHIMMEL zugegen von insgesamt 17-18 ([redacted]) die über den Abend verteilt da waren.

[redacted] ist noch immer damit beschäftigt die große Tafel für seine [redacted] Gruppe zu fertigen. Wie sich herausstellte sind das 8 Leute die aus ganz Deutschland kommen und sich zumindest alle 2 Woche per Skype austauschen. Mehr habe ich jedoch nicht erfragt.

[redacted] hat seine ersten 10 Kisten fertig und sie [redacted] gegeben um sie abzufotografieren.

Mit [redacted] habe ich mich heute leider nicht viel ausgetauscht, sollte das nächste Mal wieder fragen was bei OSE so ansteht.

Man hat das Gefühl, dass es irgendwie deutlich ruhiger ist, da [redacted] nicht da ist. Vor allem Leute die vorbeikommen um zu quatschen und einfach in der Küche rumzuhängen scheinen auszubleiben. Ich denke das wird zwar ein deutlicher Dämpfer für die Werkstatt, wenn man jedoch der Sache noch einige Monate gibt und die Selbstorganisation vergleichbar mit den letzten Tagen abläuft, sehe ich [redacted] (teilweisen) Ausstieg optimistisch entgegen.

Research output related to this study

Published or accepted for publication

Schmid, B. (2018a). Structured Diversity: A Practice Theory Approach to Post-Growth Organisations. *Management Revue*, *29*(3), 281–310. https://doi.org/10.5771/0935-9915-2018-3-281. [full paper]

Schmid, B. (2018b). A political economy of attention, mindfulness and consumerism: reclaiming the mindful commons. *Local Environment*, *23*(5), 600–602. https://doi.org/10.1080/13549839.2018.1451831 [book review]

Schmid, B. (2017). Making other worlds possible. *Local Environment*, *22*(7), 908–910. https://doi.org/10.1080/13549839.2017.1283305 [book review]

Schmid, B. (forthcoming). Repair's diverse transformative geographies – lessons from a maker community in Stuttgart. *Ephemera: Theory and Politics in Organization*. [full paper]

Schmid, B., Reda, J., Kraehnke, L., & Schwegmann, R. (forthcoming). The Site of the Spatial. Eine praktikentheoretische Erschließung geographischer Raumkonzepte. In J. Everts & S. Schäfer (Eds.), *Praktiken und Raum*. Bielefeld: transcript. [book chapter]

Under review

Schmid, B. & Smith, T.: Postcapitalist Possibility: The emerging synthesis of practice theory and diverse economies in human geography. *Progress in Human Geography*. (resubmitted)

Schmid, B.: Degrowth and alternative economies: transformative geographies beyond capitalism*.* *Geography Compass.* (in revision)

Schmid, B. & Taylor Aiken, G.: Transformative mindfulness: The role of mind-body practices in community-based activism. *Cultural Geographies*. (under review)

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