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Governing the "Enough" in a Warming World
The Discourse of "Sufficiency" from a Climate Governmentality Perspective

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Abstract

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This thesis deals with the discourse of "sufficiency" as a response to the question of how government should be achieved in times of climate change. Sufficiency implies the critique of the imperative of economic growth and a return to a "sufficient" degree of consumption and partial subsistence in order to reach qualitative well-being. "Government" is understood in the Foucauldian sense as any attempt to shape the behavior of individuals, groups and the self, which can be examined through the lenses of "governmentality", the rationalities and technologies involved. Drawing from Michel Foucault's endeavor to write a "history of problematics" and Mitchell Dean's framework of an "analytics of government", I develop a discourse analytical method to scrutinize how government is reconceived through the practice of thought. Three books by leading advocates of the idea of sufficiency, which all hold potential programs of climate government, serve as case studies. By focussing on the fields of visibility, knowledge, technical means and identities of government, I reconstruct the problematization of forms of government, the reconfiguration of governmentalities and the planned subjectification of individuals. My results indicate that human conduct in various domains is to be steered towards the total reduction of energy, resource use and emissions in order to achieve a stable climate in 2050. Through techniques of disciplinary and sovereign power individuals should develop two new "technologies of the self": the re-balancing of needs (through the reflection on personal aspirations) and the self-furnishing of demands (through practices like gardening, repairing and shared consumption). In that way, the governmentality of sufficiency remediates elements of liberalism and modern progress to guarantee a "good life" for all in a warming world.

Key words: governmentality, climate change, climate governmentality, sufficiency, degrowth, discourse analysis, problematization, political genealogy

Acknowledgments

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1. Introduction

"Globally, economic and population growth continue to be the most important drivers of increases in CO_2 emissions from fossil fuel combustion. The contribution of population growth between 2000 and 2010 remained roughly identical to the previous three decades, while the contribution of economic growth has risen sharply (high confidence)." IPCC (2014: 8)

"Is it not time to recognise that climate change is yet another symptom of our unsustainable lifestyles, which must now become the focus of our efforts? [...] How many people are tired and weary of modern living? The endless cycle of earning and consumption can be exhausting and does not necessarily bring happiness and fulfillment. Can we do things differently, and better?" Eamon O'Hara, EU policy advisor (2007*)*

These are two quotes that hold two different meanings, articulated by two different authors. However, they both mobilize a common issue: climate change. It represents how the latter has stopped to be only a physical phenomenon and has started to circulate in social, political, economic and cultural discourses, carrying as many interpretations as concepts like democracy, terrorism or nationalism do (Hulme 2013: 322). And yet, one can distinguish between the two citations through the functional logic they follow. The IPCC (International Panel on Climate Change), the almost undisputed bearer of knowledge about the dynamics and consequences of a hotter globe, highlights two historical drivers of climate change, most notably the rising output of goods and services. In contrast, Eamon O'Hara, who is just one of the numerous commentators on European climate politics, questions the very orientation that leads to the consumption of these material outcomes. What is a *visualization* of climate change in the first instance is a *problematization* of the same in the other. Both, the IPCC and O'Hara aim to define how society should understand and cope with climate change, which ultimately leads to the question of *how government should be organized in a warming world*.

   This dilemma is, in a nutshell, the bigger puzzle of this thesis. Yearlong studies in political science and now in environmental history have evoked in me the concern over how climate change is undermining the modern life of millions of people and how politics is trying to formulate – very contemporary – "solutions" to it. Inherent in this struggle is the threat climate change poses to the identities we hold and the discourses we draw them from. Can one still be an enthusiast of 1950s Ford Mustangs, a professor on Moroccan fortifications, a mother in a steadily heated 150 m^2 home – if the materialization of these identities leads to atmospheric alterations? The uneasiness that accompanies debates about climate change indicate that there is something fundamental at stake: the way we conceive and realize ourselves, and it is government that intervenes in these processes, preserving them or forging

new ones. These discursive reactions call for the nuanced examination by history, a discipline that has elementary problems with climate change since it has assumed modernity as a time when men and women pursue their freedom, surrounded by a natural world that does not respond to them (Chakrabarty 2009). This thesis wants to take a different angle – by studying a web of articulations to which the quote by O'Hara ties into. It is a discourse that concludes from climate change that the consumptive lifestyle in Western culture can not be sustained by politics anymore and must be transformed towards a more frugal but also happier way of living. I call this line of thought *the discourse of sufficiency*.

But what is meant by this rather cryptic term? The Oxford English Dictionary holds a range of definitions of sufficiency, including "sufficient means or wealth", the "sufficient capacity to perform or undertake something" but also an "accomplishment" (OED 2015). In environmental discussions, sufficiency can apply to individuals as much as the whole society, which generally means a limitation of consumption and production to "where it is enough" to fulfill human needs and overall life-satisfaction. As such, sufficiency involves the critique of increasing Gross Domestic Product (GDP) as an overarching social and political goal, the reorganization and redistribution of work and a decrease in high-carbon activities like flying or eating meat (Hayden 2014: 22ff.). Moreover, sufficiency implies the fostering of capacities that enhance individual autonomy in everyday lives, like gardening, repairing and the crafting of goods (Paech 2012). Wolfgang Sachs and Tilman Santarius argue that sufficiency represents the often neglected third pillar of a holistic ecological strategy, next to efficiency (reducing the energy and resources needed) and consistency (making energy and resources consistent with natural cycles) (Sachs & Santarius 2007: 158f.). Finally, sufficiency represents a "third way" in the broad environmental debate that seems to flicker between technocratic solutions and individual sacrifices because it emphasizes the benefits of lifestyle changes that are low in carbon and lead to the so-called "good life" (Naturvårdsverket 2012: 9f.).

To recapitulate, I am interested in how government can deal with a climate that is increasingly changing and to what degree the discourse of sufficiency provides new understandings and means to that challenge. At this point I can specify what I mean with the term "government": while in common language the term refers to a powerful authority in the national, international, regional or local realm, I understand it as the way human behavior is directed towards certain ends. This analytical perspective has first been formulated by Michel Foucault in two lecture series in the 1970s. Very broadly, he conceived government as "the conduct of conduct", an "activity aiming to shape, guide or affect the conduct of some person or persons" (Gordon 1991: 2). "Governed" in that sense could virtually be everyone: children, souls, consciences, the household, the state and even the self (Foucault 1997: 82). More precisely, Foucault was concerned with "how particular mentalities – ways of thinking and acting – are invested in the process of governing" (Stripple and Bulkeley 2013: 10). As a result, Foucault coined the neologism *gouvernementalité*, which has been translated to the English *governmentality*.

Although Foucault could not engross his thoughts about the "conduct of conduct" due to his untimely death, the concept was swiftly picked up by researches from a wide range of disciplines. Peter Miller and Nikolas Rose, two of the leading scholars in the field of governmentality studies, developed Foucault's initial concept further and argue that the "mentality" of governing can be distinguished between the *rationalities* and *technologies* of government, a way of representing and knowing a phenomenon and a way of acting upon it in order to transform it. It is important to note that both aspects are intrinsically linked: "For problems did not merely represent themselves in thought – they had to be rendered thinkable in such a way as to be practicable or operable" (Miller & Rose 2008: 16). As Foucault illus-

trates in the later course of his lectures, a problem only starts to arise when previous forms of government become obsolete, when they lose their familiarity and coherence due to historical events or processes – a national fail in PISA tests, a rise in fatalities among refugees over the Mediterranean or the accumulation of hot weather years. Then, the conduct of a certain group or individuals needs to be hold responsible for that problem – based on things like new pedagogic theory, the rate of applications for asylum or CO_2 calculations by nation states. And finally, the conduct of these groups or individuals must be remediated in form of a solution – based on things like education benchmarks, new contingents for the distribution of refugees or annual carbon reduction targets. In order to scrutinize these processes of problematization and rectification, an analysis of governmentality looks into the so-called "programs" of government: the explicit and planned attempts to reform the organized behavior of individuals or groups (Dean 1999: 28) – things like ministry action plans, EU directives or the Kyoto protocol.

Over the last years, scholars have increasingly delved into the programs of "climate government", which are occupied with the governing and self-governing of humans in relation to climate change. They have examined how states are disciplined by emission reduction targets and trust in the invisible hand of emission markets (Oels 2006), how individuals calculate their personal carbon foot print and consequently manage it through techniques like carbon off-setting, dieting or rationing (Paterson & Stripple 2010) or how families react to the installation of energy meters in households in order to surveil their contribution to climate change themselves (Hargreaves 2013). Climate government is far from being realized through a single program but by multiple attempts, at different sites, by different actors and in different domains of society. It is a fast moving and transforming field as well (Bulkeley and Stripple 2013: 257), making it impossible to give a comprehensive account of how a warming globe mobilizes politicians, activists and parents to question and rectify their own behavior or the one of others. However, since all these case studies work with the specificity of a Foucauldian concept, one can view them as contributing to a collective project of tracing the multifaceted *genealogy* of climate government, that is "to give highly detailed histories revealing when, where, under what circumstances particular things came into being, how they come to seem coherent and rational, and how they change" (Walters 2012: 118). In my thesis, I would like to add another piece to that puzzle by conducting three case studies on the discourse of sufficiency in the context of climate change.

The objects of my analysis will be three books that have been published in recent years: Uwe Schneidewind and Angelika Zahrnt's *The Politics of Sufficiency. Making It Easier to Live the Good Life* (2014), *Niko Paech's Liberation from Excess. The Road to a Post-Growth Economy* (2012) and Harald Welzer, Dana Giesecke and Luise Tremel's *FUTURZWEI Zukunftsalmanach 2015/16. Geschichten vom Guten Umgang mit der Welt* (2014, *Future Almanac. Stories of the Good Dealing with the World*, translation MD). I encountered the ideas of these authors on the Fourth International Conference on Degrowth for Ecological Sustainability and Social Equity in 2014. As indicated by the definitions of sufficiency that I have provided above, the concept is strongly linked to the one of *post-growth* or *degrowth* that is based on a critique of the dominant development model of continuous economic growth in capitalist societies (Schmelzer 2014: 16, see also D'Alisa et al. 2015). Since degrowth is constituted by various streams of discourse that have their origins in discussions about environmentalism, ecological economics, post-development, feminism, anti-capitalism and others (id.), I situate sufficiency in this vast discursive field but not vice versa.

The reasons for choosing these particular manifestations were rather practical: the authors of the three books can be considered as the most prominent speakers for sufficiency in the German speaking debate. More importantly, they offer surprisingly clear material about how

climate change is problematized and sufficiency conceived. In that way, they all formulate programs of government, albeit with different emphases. In their "sufficiency politics", Schneidewind and Zahrnt formulate a reconception of the Social Market Economy that should enable individuals to find "the right measures for time and space, property and the market" in a fluid way (2014: 49). The "post-growth policy" by Paech consists of instruments that confine the room for conventional consumption much stronger but teaches individuals how to cope with "practices of creative subsistence" and an appreciation of the existing. It is through "Stories of the Good Dealing with the World", that Welzer, Giesecke and Tremel narrate about individuals who experiment with new ways of living and producing, and bear elements for a "cultural model of reduction". By narrowing down my analysis on these three cases, I am aware that my research can only be partial and will not represent the discourse as a whole. Given the scope of a Master's thesis and the exploratory character of governmentality studies, this seems to be unavoidable. Very similar articulations of degrowth and climate change in the Anglophone domain (although without literally referring to the term) can be found in McKibben 2007, Jackson 2009, and Klein 2015, while Hayden (2014) gives a good account of how sufficiency has been mobilized in political struggles about climate change in recent time.

The research question that I will seek to answer in this thesis is:

How can problematizations of climate change and economic growth be understood from a governmentality perspective? Is there an emerging sufficiency governmentality?

In Chapter Two I will introduce the reader to Michel Foucault's original idea of governmentality as "the conduct of conduct" of people. In Chapter Three I will design the analytical tool following Foucault's endeavor of writing a "history of problematics" and Mitchell Dean's framework surrounding the fields of visibility, knowledge, technical means and identities of government. In Chapter Four I will provide a short history of the attempts to govern the climate through shaping the behavior of nation states, businesses and individuals over the last 25 years. In Chapter Five I will conduct the analysis of the three books by Schneidewind & Zahrnt (2014), Paech (2012) and Welzer et al. (2014) by focussing on the problematization of previous forms of government, the remediation of human conduct and the inner logic of the governmentality involved. In Chapter Six I will conclude my thesis by connecting my results with the puzzle of how to organize government in a warming world. In Chapter Seven I will summarize the content of all the chapters above. In Chapter Eight I will list the references in use.

2. Theory: Governmentality

2.1 Governmentality by Michel Foucault

The main source of Foucault's work on governmentality can be found in two lecture series he held between the years 1977 and 1979 at the Collège de France in Paris. They have both been translated to English and published only recently in two monographs: *Security, Territory, Population* (2007) and *The Birth of Biopolitics* (2008). In this thesis, I will draw on interpretations, and developments of Foucault's original conception of governmentality that can be found in the monographs by Mitchel Dean (1999) and William Walters (2012) and also an essay by Ulrich Bröckling, Susanne Krasmann and Thomas Lemke (2011). This will allow me to expand on both Foucault's thinking and these authors, building a framework for sketching a history of climate government and conducting an analysis of sufficiency discourse.

To begin with: Foucault's critique of political theory and his "microphysics of power"

The best way to approach Michel Foucault's notion of governmentality is perhaps by starting with his reformulation of *power*. During his lifetime and until today in most circles, political theory has conceived power as sovereign rule (Oels 2006: 187). In this "juridical" view, power was considered as something situated in a center or connected to a body while exercised in the form of repression, prohibition and denial (Walters 2012: 13). Against this dominant representation of power, Foucault argued provocatively: "We need to cut off the king's head: in political theory that has still to be done" (Foucault 1984: 63).

As an alternative, Foucault developed the idea of a *microphysics of power* in which he understood the term as multiple, relational, heterogeneous and ubiquitous. This calls for a situated analysis that assumes irreducible locales, fields and relationships (i.e. factories, prisons or families) in which one can find forces, struggles and asymmetries but also evasions, reversals and refusals (Walters 2012: 14). It is important to note that in these settings power can not be acquired or hold by individuals or groups, but is working *through* them by enabling or constraining them in their opportunities to act. The ability to still make a decision in such a constrained situation is what Foucault understands as freedom. It takes another central position in Foucault's microphysics, as in order to exercise power a minimum degree of freedom must be given ((Foucault 1982a: 212f.), cited in Oels 2006: 186f.). This enabling and constraining character of power leads to what is known as the "double process of subjectification": individuals are capable to act themselves but are subjugated by power at the same time (Bröckling et al. 2011: 1). Finally, this microphysics of power always relies on certain knowledge (i.e. industrial psychology, pedagogy or medicine) to produce truth as an effect (Walters 2012: 14). This entails that power is always sustained by knowledge and vice versa – constituting what is known as the Foucauldian *power/knowledge nexus* (Robbins 2012: 70).

Writing a history of government as the "conduct of conduct"

Foucault's analytical framework for analyzing power relations proved to be elucidating in very local settings, like the individual body and how it was disciplined in institutions of psychiatry, schools and prisons. However, it fell short in two ways: first, in illustrating the double process of subjectification in a more comprehensive way and second, in explaining the function of the state in the historical organization of these power relations. It was in order to address these analytical challenges that Foucault developed his analytical concept of governmentality (Bröckling et al 2011: 1f.). In his lectures at the Collège de France, Foucault introduced the larger purpose of the concept as to trace "the history of what could be called the art of government" (Foucault 2008: 1). Importantly, he pursued this endeavor not in the conventional historical way of reconstructing the continual coming and going of political structures but by writing a genealogy – which should overall illuminate the co-evolution of modern statehood and modern subjectivity (Bröckling et al. 2011: 2). By doing so, Foucault focussed on particular "events", situations in which experts, authorities and critics questioned the existing ways of governing and reflected upon them, a process that can be described as *problematization* (id.: 20f.).

Pastoral power: the shepherd and his flock

The earliest point to which Foucault can follow back the art of government as a way of guiding, shaping and steering humans is the Ancient world (Walters 2012: 21). Sovereigns and monarchs have long ruled over people and the territories they inhabit by drawing on techniques[1] like violence, law and taxation – constituting the form of *sovereign power* mentioned above (Walters 2012: 24). In Ancient Greece and Rome this kind of power took the shape of what Foucault calls the "city-citizen game": a form of rule which articulated elements that were characteristic for the polis: universality, the public, equal rights for the ones holding citizenship etc. (Bröckling et al. 2011: 3). Although these ideas dominate Western understandings of "politics" again today, Foucault distinguished another form of shaping people's conduct that was more important for the emergence of contemporary governmentality: *pastoral power* (Walters 2012: 22).

   The image that describes the workings of this kind of power best is the one of "the shepherd and the flock": just like a herder care for his drove, a pastor (God or his representative) is looking after and guiding his pastorate (the Christian community). In contrast to sovereign power, which is aimed at a superior whole like the city, territory or state, the object of pastoral power is every individual in a group of equals (id.). As the shepherd is responsible for the actions of all of these, he holds a profound knowledge of the needs and deeds of all his followers who must obey entirely to his will. It is the practice of the "care of the self" which had been cultivated by the Ancient Romans and Greeks and transformed here. The examination of the self and the guidance of conscience is decoupled from the self-government of citizens and bound to the total obedience of the pastor (Dean 1999: 74f.)[2]. By doing so, the spiritual leader only works as an intermediate by guiding his followers "along the lines of

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[1] The term "technique" can be understood as a practice that has been thoroughly and critically examined and cultivated. Techniques can be found in all domains of life, from traffic regulations to the steering of children's behavior. One might ask "What is the best tactic to get your picky child to eat a more healthy breakfast?" (Walters 2012: 12)

[2] Interestingly and according to Foucault, it was exactly these practices of self-assessment and confession which created the individual experiences of "inner truth" and "the self" that appear so "normal" to us modern beings today (Walters 2012: 22). Another sign that pastoral power is still at work – albeit altered – is the existence of counselling services, social work and therapeutic practices. All of them aim at gaining knowledge of the inner existence of individuals and consequently, at the renunciation of "bad" or "harmful" habits (Dean 1999: 75f.).

government of souls" to one end: their well-being and salvation in another world (Heaven) (Bröckling et al. 2011: 3).

According to Foucault, this type of power is first intensified through the institutionalization of the early Church and later spread and secularized through the upheavals of reformation and counter-reformation in the 16th and 17th centuries. This led to the expansion of pastoral techniques to other social locales which laid the foundation for the forms of subjectivity that would give rise to the modern state and society (id.). Accompanied by the crumbling of feudal structures, the transformation of pastoral power exerted a new kind of political pressure on sovereigns: from now on they were not only expected to "rule over" but to "govern" men and women (Walters 2012: 23). Foucault locates a countless number of treatises during this early modern time which indicate that political reflection surpasses the problem of sovereignty and extends to all activities and realms one can imagine (Bröckling et al. 2011: 3f.). It is the art of government which is born, always trying to get a hand on "a sort of complex of men and things", as Foucault said, and continued:

> *"The things government must be concerned about [...] are men in their relationships, bonds, and complex involvements with things like wealth, resources, means of subsistence, and, of course, the territory with its borders, qualities, climate, dryness, fertility, and so on. 'Things' are men in their relationships with things like customs, habits, ways of acting and thinking. Finally, they are men in their relationships with things like accidents, misfortunes, famine, epidemics, and death."* (Foucault 2007: 96)

But Foucault does not rest with the diagnosis of an expansion of government; he becomes more interested in the ways different rationalities organize all these domains towards certain ends (Bröckling et al. 2011: 4). The first of these rationalities which he distinguishes is the reason of state *(reason d'etat)*.

Reason of state: starting to see like a state

When examining the political writings of authors like Bacon, Chemnitz, Naudé and Palazzo, Foucault recognizes a common theme: it is the *state* that becomes articulated as the object and medium of governing human affairs. Through this new "principle of intelligibility" already existing elements of government like taxation, armies and legal systems are integrated and understood as instruments and mechanisms of an ensemble which is now conceived as the state. In the very moment the state comes into existence, the goal is to "hold it out" in a material world that is now constituted by social, economic and military relations and processes (Walters 2012: 25f.; Dean 1991: 87). Foucault speaks of two new "technologies of power" which aim at strengthening the exterior and interior of the state under this rationality. On the one hand, a "military-diplomatic technology" invests in the state's army forces in order to forge alliances and stay competitive in this new realm of European states. On the other hand, a "technology of police" targets the inner assets of the state, its commerce, finances, agriculture, mines, woods and others, to make it grow from within and create a productive and harmonious social order (Walters 2012: 27). Moreover, both technologies are accompanied by a new kind of knowledge that visualizes and measures the various resources of the state: statistics (Dean 1991: 86).

It is important to note here that the object of pastoral power – the well-being and happiness of people – has not been replaced but rather contextualized by the interest of the state. Thus, any motive to improve the living conditions of individuals must be understood as a means to ensure the state's survival (Dean 1999: 86). At this point, Foucault alludes to the various disciplinary practices that have been developed in the locales of schools, workshops and psychiatries in order to regulate the bodies, forces, habits and dispositions of individuals (Walters 2012: 27f.). Always presupposing a prescriptive norm, these techniques draw a line between the allowed and the forbidden, the useful and the useless, a separation which is backed up by law (Bröckling et al. 2011: 4). Because of this strong subjectifying character of "police", one can speak of *disciplinary power* as the kind of power which emerges through the workings of the reason of state[3] (Walters 2012: 27f.; 34).

Bio-politics: indicating the governmentalization of the state

The 18th century indicates a transition period between two governmentalities: the reason of state, which has just been outlined, and liberalism. It is important to illuminate this period of time a bit further, as there is yet a key element missing that would enable the rational conduct of people's freedom: the concept of "population" and the rationality that is circumscribing it, *bio-politics*. There exist different interpretations of the term and its role in Foucault's history of governmentality: while Bröckling et al. diagnose a certain interchangeable meaning of bio-politics by Foucault with liberal governmentality (2011: 7), William Walters and Mitchell Dean emphasize its central function in the emergence and expansion of the latter (Walters 2012: 16; Dean 1999: 101, 113). Here, I would like to follow the suggestions of the last two authors.

As already indicated by the term, "bio"-politics deals with the administration of life, particularly on the level of population. It is through new forms of knowledge like demography, statistics and medicine that new human phenomena are visualized: health, sanitation, birth and death rate, race and others. These matters now become rationalized as "problems" together with the processes that improve or inhibit the optimization of the life of population but also the social, cultural, economic and environmental conditions of life. Consequently, bio-politics is concerned with issues like working conditions, diseases, migration, economic growth and what can be called "lifestyles" today (Dean 1999: 99f.).

This is the moment when population is not understood as the sum of inhabitants of a certain territory anymore – but a *sui generis* with its own tendencies and forces. At the same time, one can face another change in the very attitude of governing: it is not about the right disposition of humans and their relation to *things* (i.e. land, climate, wealth) anymore but a government through biological, social and economic *processes* (i.e. birth, living, production) (Dean 1999: 96). It is this transition that Foucault called the "governmentalization of the state": the non-linear transition from the sovereign rule to the reason of state and *liberal governmentality* (Walters 2012: 37f.).

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[3] William Walters points out that police – or disciplinary power – has not disappeared with the ascent of liberalism. Rather one can find various examples of regulatory practices and tactics on a local scale which now serve important ordering functions: starting from sound levels during night to selective border controls (Walters 2012: 28). It could then be said that the term "police" has lost its broad meaning of regulating and strengthening the inner forces of a state, and now signifies the day-to-day forms of disciplinary power – which is most visible in the shape of uniformed officials (Dean 1999: 89).

Liberal governmentality: securing the free processes of markets and population

Foucault finds the first traces of liberal governmentality in the writings of the French physiocrats and the British political economists which occupy modern government from the end of the 18th century until today (albeit in a transformed form) (Walters 2012: 30). It is important to note that Foucault has used quite a different understanding of "liberalism": not as an economic theory or ideology but as an art of government which aims at the population as a new object while deploying political economy as a technique of interference. Moreover, it is two entities that become "naturalized" through liberalism and will serve as the basis and the limits of governmental action: society and the market (Bröckling et al. 2011: 5). Both are conceived as outside the political sphere, possessing their own laws and processes which government must respect and refrain from (Dean 1999: 50). In this setting, the market gains an authority-like character against which every policy must be tested of its frugality and wisdom. While the "technology of police" used to work with the presumption to govern every imaginable domain, liberal governmentality now strives to govern as little as possible (Walters 2012: 28ff.)

Moreover, the social becomes continuously constituted by a certain kind of individual: *homo oeconomicus* (Walters 2012: 34). Forged through political and economic sciences, the rational and calculating human comes with certain rights, desires, needs and most of all interests. This particular subjectivity is key to operate the processes of the autonomous realms which can now be considered as the new end of government (Dean 1999: 50). In this context, liberal governmentality does not act on subjects or objects "themselves" but it works through the ways a certain thing or being starts to pique the interest of individuals or society as a whole" (Foucault 2008: 45). Thus, interests relate to liberal governmentality in the way conscience relates to pastoral power: they are its respective "point of contact" (Walters 2012: 35).

Of similar importance for liberal governmentality is what Foucault coins "technology of security". These involve a new mode of articulating, weighing up and responding to objects in order to secure the "natural" processes of economy and population, which in turn safeguard the well-being of the state (Dean 1999: 117). On the one hand, security draws on statistics and the distinctive knowledge of bio-politics; on the other, it transforms and resituates techniques of sovereign and disciplinary power (Walters 2012: 31f.). In one regard, techniques of security differ considerably from the ones of disciplinary power: they entail a tolerating rather than a totalizing of human behavior. Based on an "empirical reality" they conceive an imperfect human who is embedded in contradictory social and economic processes. This leads to an attitude of balancing, adjusting and compensating towards an optimal medium within the variation of possible behavior but also against the risks for the economy and the population (Walters 2012: 35; Bröckling et al 2011: 4f.).

William Walters sets a good example for a new conglomerate of security technologies: the trajectory of unemployment policy until the middle of the 20th century. For centuries, people without an occupation and home could be branded or expelled (sovereign power). The 19th century then gave rise to training programs and labor houses which should discipline and remoralize workers (disciplinary power coupled with sovereign power). They were aligned with philanthropies, which offered aid and counselling while still distinguishing between the worthy and unemployable (pastoral power coupled with disciplinary power). But it is not until the 20th century one can notice the concept of "unemployment": social observers and statisticians create empirical accounts of the number of people without employment, first in certain sectors and then national economies. These visualizations were followed by a whole new set of regulatory practices: labor exchanges, state insurance programs and public work

schemes to reduce imbalances of newly discovered "labor markets" and maintain levels of wages and savings. Around the middle of the 20th century there exists a whole apparatus[4] of security around unemployment, involving new Keynesian knowledge and developments in monetary policy, taxation policy, public investment plans and bearing a new object of government: the "macroeconomy". By that time, unemployment has become a natural, irreducible entity which can be "managed" as a rate in the context of processes like inflation, taxation, payments and others. Moreover, this apparatus of security holds elements of sovereign and disciplinary techniques: unwanted migrant workers could still be "sent back" to their countries of origins while moral discourses articulate and forge the norm of the desirable employee (Walters 2012: 32f.).

   With this example at hand it should be clear why William Walters defines the liberal way of governing in the following and comprehensive way:

> *"[Liberal government] operates not in terms of the image of a world that it must order in its entirety and detail, but a world of natural, self-adjusting process that, once framed by apparatuses of security (social insurances, monetary policy, vaccination campaigns) can be steered to the benefit of its subjects and the state. Liberal government will be economic government because it can govern with the grain of self-organizing processes and domains."* (Walters 2012: 34)

As intended by the term, "liberal" government shares a particular relationship with freedom. But in contrast to the widespread conception that politics in modern societies is concerned with the guaranteeing of freedoms (of the market, ownership, opinion etc.), Foucault argued that it is the *conditions* under which individuals can make use of these freedoms which are the significant effect of liberal governmentality (Bröckling et al. 2011: 5). "The new art of government [...] appears as the management of freedom" (Foucault 2008: 63). At the same time the collective exercise of these freedoms can limit or even destroy them, which is the reason why techniques of security are of another central importance (Walters 2012: 31). On the one hand, individuals must be regulated in order to utilize their freedoms in a responsible way; on the other, liberal government draws on more disciplinary methods whenever irresponsible behavior undermines the security of the state and its autonomous domains (Dean 1999: 117). This is what Bröckling et al. call the "production costs" of freedom. Thus, liberalism is always occupied with the question "to what degree does the pursuit of one's own interests pose a structural danger to the general interest?" (Bröckling et al. 2011: 6). Last but not least, the production of freedom always goes hand in hand with a particular "culture of danger" (Foucault 2008: 66f.). According to Foucault, populations always face a certain threat of insecurity (unemployment, poverty, disease), as this is key to the "morals" of liberal governmentality: individuals are expected to cope with these dangers themselves by drawing on their entrepreneurial behavior and personal responsibility, which consequently decides their position in society. From such a perspective, social inequalities become an essential element for the organized functioning of a society (Bröckling et al. 2011: 6).

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[4] According to Walters, an apparatus or "dispositif" in the Foucauldian sense can be understood as "a relatively durable network of heterogeneous elements (discourses, laws, architectures, institutions, administrative practices and so on). As such, an apparatus does not map neatly onto divisions between public and private, state and society. These are instead principles and distributions that it produces and operationalizes as its effects." (Walters 2012: 36).

The "neoliberal branch" of the new art of government

The most recent governmentality which took shape according to Foucault in the late 1970s is the one of neoliberalism. By examining the writings of the German ordoliberals and the Chicago school (in connection with the theory of human capital), Foucault notices two common features. On the one hand, they critiqued the growth of the bureaucratic apparatus of government and the threats they pose on individual freedoms (Bröckling et al. 2011: 6). On the other, markets lose their quasi-natural character and become solely artificial constructs (Walter 2012: 37). The *Ordoliberalen* vigorously accused earlier types of government (National Socialist, Soviet, Keynesian) to have failed in understanding the market dynamics which guarantee stable price formation. In contrast, the market should be organized, fostered and secured through a legal framework and a regime of public policy (currency policy, unemployment assistance, anti-monopoly policy etc.), constituting the "social market economy" (Dean 1999: 56). As another variety of neoliberalism, the Chicago school advocated an extension of economic principles and enterprise behavior to the realm of the state (i.e. marketization of public services) and society (in the form of human capital theory) (Walters 2012: 37). The strategic end of this endeavor would be to transform the economic as one social domain to a process of governing all human behavior (Bröckling et al. 2011: 6).

Liberalism as a way of posing problems and renewing itself

With the detailed workings of liberalism explained, there are two more specifications which might illuminate its character even more. Following Mitchell Dean, liberalism can most of all be understood as a particular way of posing problems:

> *"For Foucault [...], it is a polymorphous and permanent instrument of critique which can be turned against the previous forms of government it tries to distinguish itself from, the actual forms it seeks to reform, rationalize and exhaustively review, and the potential forms it opposes and whose abuses it wishes to limit. This means that the key targets of liberalism can change according to the circumstances in which it is located."* (Dean 1999: 49)

These questioned forms of government can be past, present and potential, and thus the reason of state, early forms of liberalism but also conceived ones (id.). Moreover, as it is driven by an ethos of critique, liberalism always leaves space for its own self-renewal. It is open for a certain dialogical critique with various forms of knowledge and renders them necessary for securing the processes of economy and population: policy science, management theories, welfare and environmental economics, feminism etc. Always connected to this new, "re-animating" knowledge, it is new figures and agencies which can claim expertise while other domains become (re)defined in relation to that expertise (id.: 51f.).

2.2 Governmentality as an Analytical Concept

Introduction: describing the "designing process" of my analytical tool

After this summary of Foucault's attempt to sketch a "history of the art of government", I would like to turn to the question how governmentality has been made fruitful for analysis. As it has been suggested by a number of scholars, governmentality can be regarded as an "analytical toolbox" (Rose et al. 2006: 100) which helps to understand government not only in terms of institutions or ideologies but also as "an eminently practical activity that can be studied, historicized and specified at the level of the programs, rationalities, techniques and subjectivities that underpin it and give it form and effect" (Walters 2012: 2). The ways this has been done by scholars differs quite strongly however, which makes the field of "governmentality studies" anything but a unified body of scholarship. In the following, I would like to illustrate some important presumptions that can be drawn from Foucault's lectures including some conflicting points about his own notion and analytical use of governmentality. Most importantly, this should help to elucidate the "designing process" of the analytical tool I will present in Chapter Three.

First of all, it must be noted that Foucault's history of governmentality is provisional and incomplete. The reasons for this can be found in its character as a work of genealogy but also the fact that Foucault did not have enough time to deepen and substantiate his work on the government of the self and others before he died (Walters 2012: 39, Bröckling et al. 2011: 7f.). Thus, Foucault's writings are better considered as a set of hypotheses which can be scrutinized, confirmed but also rejected. What becomes important then is to ask what should be taken from Foucault and what other concepts and questions one's research interest but also political present call for (Walters 2012: 40). Whatever such an analytical approach will look like, it can be said that it would be anti-foundationalist: it would not assume the social world to be constituted of certain parts or determined by a certain logic latent in the ways of government (Dean 1999: 22). In contrast, it would illuminate the existence of changing discursive productions of the world and their effects in shaping it (Walters 2012: 2f.).

The crafting process will be quite close to an interpretation of Foucault's lectures by Stephen Collier which I find very fruitful. He argues that Foucault's style of analyzing power shifted considerably during these years, leading to different operationalizations of governmentality and what Collier calls an "overevaluation of governmentality" today. In the following, I would like to summarize his argument, explain how governmentality has been utilized by scholars and finally describe how I will come to my own operationalization of governmentality.

Foucault's shift in power analysis and its consequences for studying governmentality

After a careful reading of Foucault's writings in the 1970s, including *Society Must be Defended*, *Discipline and Punish* and the already introduced lecture series in *Security, Territory and Population* and *The Birth of Biopolitics*, Stephen Collier detects a change in Foucault's methodological and diagnostic style of power and governmentality. While he was developing his notion of biopolitics one can find surprisingly totalizing and epochal claims about the workings of power in modernity. One could get the impression that the power relations during a certain age would always stem from and follow a single logic (sovereign, disciplinary power and so forth). However, in the lectures of 1978 and 1979 it seems that Foucault focus-

ses on something quite different: the ways existing techniques of power are re-arranged and remediated in diverse assemblies. Moreover, it is the ways particular *thinkers* (the physiocrats, the British liberals, the *Ordoliberalen* and so forth) reflect on current ways of governing in relation to historically situated problems and reconstruct new forms of understanding and acting in response. Collier calls this transition in Foucault's analysis a shift from examining the "conditions of possibility" of government to the "topologies of power" (Collier 2009: 79ff.). I would like to look at both of them a bit closer in the following.

As Collier reminds us, Foucault's analysis of power has always been invested in his analysis of thought – with the double term of "power/knowledge" as its most famous expression. It is in his work, like the punishment of the condemned and the imprisoned, that Foucault gives fascinating exemplars of different discursive regimes – or different forms of "power/knowledge" – and how strongly they contrast through history. In other words, they exemplify the *difference* between "conditions of possibility for certain modes of understanding and acting" and their coherent and systematic character (Collier 2009: 94f.). According to Collier, a vast number of scholars have been occupied with studying governmentality as *a political rationality which shapes these conditions of possibility*. In that sense, the concept is useful for drawing distinctions between diagrams or technologies of power and for understanding what is general to diverse forms of government in disparate sites – for describing "ideal types" of governmental power (id.: 96ff.; 105). At the same time, this focus on the conditions of possibility makes governmentality prone to reification, as if a coherent regime of thoughts and practices is dominating a whole epoch. This has created a tendency among scholars of governmentality to make totalizing and globalizing claims about neoliberalism and to identify a whole regime already through its parts like techniques of calculative choice or "responsibilization" (Collier 2009: 97f.) – something which has also been labelled the "programer's view" (Dean 1999: 83).

According to Collier, the understanding of governmentality in relation to conditions of possibility resonates with Foucault's early discussion of power/knowledge. In the lectures at the Collège de France, the analytical importance of this conception however declines and gives room to a more dynamic examination of governmental power. In the words of Collier: "[...] Foucault's work of the late 1970s provides a rich vocabulary for examining the 'patterns of correlation' in which heterogeneous elements – techniques, material forms, institutional structures and technologies of power – are reconfigured, as well as the 'redeployments' and 'recombinations' through which these patterns are transformed" (Collier 2009: 80). Such a "topology of power" would not be constituted due to any inner necessity or function. More importantly, this transition in analytical style can be related to a changing conception of *thinking* in Foucault's writing. Whereas, as Paul Rabinow noted, Foucault understood thinking in his earlier work as "an anonymous, discursive thing" (Rabinow 2003: without page; cited in Collier 2009: 80), he later reimagines it as a situated practice of critical reflection which establishes a certain distance from existing ways of acting and understanding and which also tries to remediate and recombine these ways (id.).

This becomes clearer when exemplified with the subjects of his lectures in 1978 and 1979. Foucault is mainly interested in the writings of figures like the physiocrats, the British liberals, the German ordoliberals and the American neoliberals. Their thoughts do *not* find their "conditions of possibility" in a stable regime of knowledge and power. Quite contrarily, "they are situated […] in sites of problematization in which existing forms have lost their coherence and their purchase in addressing present problems, and in which new forms of understanding and acting have to be invented" (Collier 2009: 95). They are actively involved in recombining elements of sovereign and disciplinary power and adapting them to population growth, social equity, state bureaucracy and other historically situated problems (id.).

As Paul Rabinow notes, this space of problematization is established by and through economic conditions, scientific knowledge, political actors and other related elements (Rabinow 2003: 19; cited in Collier 2009: 104). Thinking, then, becomes a key driver for recombining processes in that topological space (Collier 2009: 96). More importantly, it is exactly the activity of thought which needs to be examined in order to understand the process of reproblematization through which contemporary government is being reconfigured (Collier 2009: 100).

Studying the structure of crystals of powers vs. their melting and recrystallization?

I would like to offer an image that could explain the two analytical stances towards governmentality, "conditions of possibility" and "topology of power" even more. To summarize: the first one is well-equipped for identifying the general features of governmental thoughts and practices but also the differences between them. The second becomes useful to grasp how elements of government are remediated and recombined because they lost their coherence and legitimacy in relation to historically situated problems. I would argue that this could be described as two ways of analyzing "crystals of power": the first one focusses on the actual structure of crystals, carves out its similarities and differences and generalizes these features to formulate "ideal types". The second, in contrast, examines the very moment when crystals start to melt due to changing factors in their environment, and how they consequently crystallize again by reshaping and recombining old features and finally take a new form. While the first one describes governmental power through a collection of "photographs" of different sites of governmental power, the other one rather "films" governmental power when it is transforming.

Foucault and his interest in writing a "History of Problematics"

In my thesis I will follow the second strand of analyzing governmentality as outlined above. I would like to complement the argument of Collier with statements by Foucault from a late interview on *Polemics, Politics and Problematizations* which was held with Paul Rabinow just before Foucault's death (Foucault 1984b). In the end of the interview Foucault explains his interest in writing a "history of problematics" or "history of thought". The final summary of his way of approaching this describes perfectly how I will precede in my thesis:

> *"[I]t is a question of movement of critical analysis in which one tries to see how the different solutions to a problem have been constructed; but also how these different solutions result from a specific form of problematization. And it then appears that any new solution that might be added to the others would arise from current problematization, modifying only several of these postulates or principles on which one bases the responses that one gives. The work of philosophical and historical reflection is put back into the field of the work of thought only on condition that one clearly grasps problematization not as an arrangement of representations but as a work of thought."*
> (Foucault 1984b: 389f.)

At an earlier point in the interview Foucault defines problematization as "the development of a domain of acts, practices, and thoughts that seem […] to pose problems for politics" (Foucault 1984b: 384). It is problematizations which are at the very root of what Foucault understands as "thought": it is "freedom in relation to what one does, the motion by which one detaches oneself from it, establishes it as an object, and reflects on it as a problem" (id.: 388). Moreover, the study of thought, does not deal "with a formal system that has reference only to itself" but with moments of destabilization: "for a domain of action, a behavior, to enter the field of thought, it is necessary for a certain number of factors to have made it uncertain, to have made it lose its familiarity or to have provoked a certain number of difficulties around it. These elements result from social, economic or political processes" (id.). And further: "This development of a given into question, this transformation of a group of obstacles and difficulties into problems to which the diverse solutions will attempt to produce a response, this is what constitutes the point of problematization and the specific work of thought" (id.: 389).

What I will do in my thesis is to conduct an analysis of the problematizations that can be found in the material at hand, more precisely: how "sufficiency" is conceived as a result of problematization. In order to achieve this, I will proceed in two steps: first, I will examine how the authors question certain ways of government, how they lost their coherence due to particular historical processes – the melting process of governmentality. Second, I will trace how the authors formulate a solution to that problem: how a different way of human conduct shall be achieved by rearranging and recombining existing governmentalities – the recrystallization process of governmentality. By doing so, I would like to keep the terminology of Foucault's lectures concerning liberal governmentality, disciplinary, pastoral and sovereign power. Although sometimes couched in quite global claims, they describe well how government was to be accomplished in previous times (albeit in rather "ideal" and not totalizing ways). They should help to illuminate how these interventions of thought are historically situated. In a sense, I would like to add another small part to what Foucault understood as a "history of problematics".

3. Methodology

In his book *Governmentality: Power and Rule in Modern Society* Mitchell Dean offers a rare account of how an "analytics of government" can be conducted in very concrete ways (Dean 1999: 30ff.). Although Dean conceived this framework for the analysis of empirical cases (where government is finally realized and the conduct of humans conducted), I argue that it can be used in a similar way for the analysis of the three books on sufficiency. The reasons for this can be found in a methodological agreement among governmentality scholars: any analysis of governing should start with the moment of problematization – the calling into question of human conduct (Dean 1999: 27; Walters 2012: 57; Miller and Rose 2008: 14).

As Miller and Rose point out, to speak of "problematization" means to understand problems not as something pre-given but as the result of a *process*: problems need to be constructed and made visible, in different ways, in different locales and by different agents (Miller and Rose 2008: 14). Once formalized by a certain body of knowledge, the conduct of individuals or groups can be held responsible for that problem – and rendered as unproductive, insufficient, dangerous etc. Moreover, this is followed by the necessity to remedy the conduct in question – through a more or less rationalized set of techniques and instruments that aims at the transformation of that conduct (id.: 15.). Thus, Miller and Rose distinguish between two distinct aspects of the art of governing: the "rationalities" and "technologies" of government, a way of representing and knowing a phenomenon and a way of acting upon it in order to transform it (id.: 16.).

According to Dean, the next step of an analytics of government is to move to the "regime of practices of government", the organized ways of doing things that are exercised by authorities, individuals or groups (Dean 1999: 28). The three books I will analyze are not directly used by such actors to transform a regime of practices of others. However, and as I will show in Chapter Five, the purpose of these three books is first to problematize and secondly, to reconfigure the conduct of human conduct through different means. In that way, they resemble what Dean calls "programs" of government: "[the] explicit, planned attempts to reform or transform regimes of practices by reorienting them to specific ends or investing them with particular purposes. Programmes often take the form of a link between theoretical knowledge and practical concerns and objects." (id.: 211). Since the three objects of my analysis are not realized by a state or any other kind of authority, I may refer to them as *potential programs*. They hold in the terms of Miller and Rose certain "rationalities" and "technologies" of government which can be examined with the "specificity" of governmentality studies (Walters 2012: 58)

The angle of such an enquiry is quite unusual compared to political sciences or history: because governmentality studies reject any priori understanding of the distribution of power or the location of rule, they do not raise questions about "Who rules?" or "What is the legitimacy of that rule?" but of "*How*": "how different locales are constituted as authoritative and powerful, how different agents are assembled with specific powers, and how different domains are constituted as governable and administrable" (Dean 1999: 29). According to Dean, any regime of practices of government can be analyzed along four autonomous dimensions which condition themselves (id.: 30):

1. the field of visibility which is created
2. the forms of knowledge which arise from and inform the way of governing
3. the kinds of technologies which are applied
4. the types of identity which are pre-supposed and formed by these activities

Fields of visibility

What kind of light illuminates certain objects while it obscures others? Fields of visibility help to "picture" what problems are to be solved and to what ends, what and who needs to be governed and how relations between different actors and locales are to be constituted. Examples for such visualizations include architectural drawings, maps, graphs and tables. Moreover, studies of governmentality are strongly concerned with illuminating "diagrams of power" that describe the ways in which seeing and doing are bound into one complex, representing the whole social field (id: 30).[5]

Forms of knowledge

What kinds of knowledge, expertise or rationality surround the practices of governing? Forms of knowledge render certain domains and problems as governable, they try to transform practices of government and give rise to certain kinds of truth (id.: 31f.). Here one can find the ideas of market efficiency, feminist economics or climate science.

Kinds of technology

By what procedures, instruments and techniques is rule accomplished? These technical aspects of government are necessary to achieve the ends and values of government, while they limit the possible activities of government at the same time (Dean 1999: 31). Examples here can include unemployment rates, carbon market mechanisms or remote sensing via satellites.

Types of identities

What types of self and identity are pre-supposed by practices of government and how do the latter try to transform them? Types of identities involve attributes, orientations and capacities of the governing as much as of the governed (id.: 32f.). Examples include teachers, politicians, state ministries, workers or consumers.

Following Angela Oels, I argue that Dean's framework can be well operationalized for a Foucauldian discourse analysis (Oels 2006: 189f.). First, I will study the act of problematization which is present in the respective books: what forms of government they question, and due to what historical events and processes they lost their coherence and legitimacy. Second, I will scrutinize how the authors conceive a new conduct of human conduct to respond to that problem, weaving existing governmentalities together in a new way[6]. Third, I will exam-

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[5] As Foucault has shown, there has been a vast number of these like "leprosy" (expel the impure!) but also "plague" (surveil everything and everyone!) (Walters 2012: 60f.)

[6] Just as liberal governmentality did not replace the preceding governmentalities but rather recoded and rearranged them (see the example of unemployment policy above) – I argue that a "sufficiency governmentality" questions the current arrangement of governmentalities and dismisses but also reuses some of their elements in order to conceive another modern state and subject. In this sense, the critique and solutions found in these books would not radically break with previous

ine how this newly transformed governmentality aims to work on the subjects to achieve its goal. *By focussing on the four dimensions provided by Dean (fields of visibility, knowledge, technical means, and identities) I should be able to describe this process of problematization, redeployment and functioning of government.*

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ways of governing. Quite the contrary, it can not escape the ways of "conduct of conduct" that have emerged over time, and needs to deal with them in a constructive manner.

4. A Short History of Climate Government

The goal of this chapter is to offer the reader a short history of climate government, that is the governing and self-governing of humans in relation to climate change. Such an attempt can only be preliminary and partial due to the nature of government in the Foucauldian sense: it emerges with specific problematizations in different locales and articulates different kinds of knowledge, actors and practices (Paterson & Stripple 2014: 191). Similar to the idea of the "rhizome" of Deleuze and Guattari (1987), governmentalities do not replace each other but rather grow in a horizontal way, develop numerous shoots in different directions and can be found in different times and places that nonetheless can hold similarities. If a history of climate government is understood as a sum of all these shoots, then a "full" history can not be written in a chapter like this but must instead summarize, generalize and simplify the multiple nettings of climate governmentalities. Nevertheless, by constructing this chapter I attempt to exemplify how governmentalities have been invested in governing the climate over the last 25 years. By doing so, I will use the four ideal types of governmentality as outlined by Foucault to illustrate the workings of governmental power.

In order to problematize climate change in relation with human conduct, it first had to be visualized and represented as an entity to be governed. Meteorology and later climate science described and interpreted the climate as the outcome of an interconnected planetary system which is altered (unintentionally) by diverse "anthropogenic" activities over centuries (Hulme 2013: 289). By collecting data, modelling physical processes and testing theories, scientific institutions, most notably the World Meteorological Organization and the IPCC, forged the knowledge of the global carbon circle that is a widely shared today. The invention of this "Earth" – or "climate system" can be traced back to the International Geophysical Year of 1957 during which the "Anthropocene" was also born as a crucial but ambivalent concept for historicizing the human-nature relationship (Stripple and Bulkeley 2013: 11).

Conceiving the planet as a "global" ecosystem was central for rendering the problem of climate change as one that needed global solutions (while disguising local or regional approaches) (Oels 2006: 198). It was the IPCC that, through projecting the consequences of accelerating climate change into the future, provided the scientific justification for the "2°C goal" for collective climate action: the increase in global climate temperature should be halted by that point in order to prevent irreversible effects on the Earth system (IPCC 2014). Angela Oels compares this rendering of the planet with a "spaceship" that can be steered by humankind who is on the mission to secure all "life forms" of the globe based on natural science (Oels 2006: 197f.). By providing regular reports on climate change mitigation which involves the evaluation of effectivity, costs, risks and uncertainty of different options for policymakers (IPCC 2014), the panel also defines and limits the field of available techniques for conducting human practices. This determining attitude of climate science implies a certain rationality: as soon as there exists a scientific consensus about the causes and consequences of anthropogenic climate change, it would automatically lead to the necessary policy solutions (Hulme 2014: 301). I argue that the IPCC tries to articulate a form of **pastoral power** in this way: by collecting a vast knowledge (the deeds and needs) about the inner workings of all life forms on the planet (flock), the panel (pastor) aims to guide policy-

makers (members of the flock who can hear his authoritative voice) to the end of a stable climate regime (well-being and salvation in another world).

The implementation of the Montreal Protocol in 1987 could be regarded as the first time when states have followed that scientific call for action. In order to stop the dissolving of the Ozone layer over Antarctica, the international treaty enforced the phasing out of (hydro)chlorofluorocarbons (HCFCs) that was produced by primarily two multi-national chemical companies back then. This form of climate government proved to be quite successful: projections indicate that the stratosphere could reach the depletion levels of 1980 by the 2050s (Hulme 2013: 291). The use of targets and timetables that are legally binding for all member states represents the exercise of **disciplinary power**: by drawing on the technique of law and prohibition, the conduct of states (and consequently businesses) is totalized towards the goal of zero production of these hazardous substances.

Although the sources and the consequences of emitting greenhouse gases are much more wide-spread and complex than the ones of (hydro)chlorofluorocarbons, the Montreal Protocol became the blueprint for the most well-known attempt of climate government in 2005: the Kyoto Protocol. Since then, member states are prescribed to meet individual reduction targets in a fixed timetable that now ends in 2015. Regular reports that compare the performance of states in their reduction efforts or require self-assessments of individual progress represent both techniques of **disciplinary and self-disciplinary power**. The major difference between the Kyoto Protocol and the Montreal Protocol of 1987 is that the former allows free choice in how these reductions should be achieved. This open space is a typical rationality of **liberal governmentality**: be it through expanding renewable or nuclear power, implementing efficiency standards, taxing carbon, experimenting with carbon capture and storage or the shaping of individual consumption patterns. However, it was another technology, that became the dominant instrument for governing the climate in the international arena: the trading of emission certificates (in most cases of CO_2).

Carbon trading follows the logic of markets: first, an authority limits the total amount of CO_2 that can be emitted in a domain (e.g. the European Union) and distributes a certain number of permits to companies. In a next step, businesses can trade these property rights depending on if they require additional permits or can sell their unused carbon credits. This should reduce the costs for companies to reduce their individual emissions (again through means of their choice) and has been proven to be successful at least in the case of sulphur dioxides in the United States which were contributing to acid rain in the 1980s (Giddens 2009: 197). Through the Kyoto Protocol there were also two other instruments initiated that feed in regional carbon markets: the Clean Development Mechanism (CDM) which channels financial payments or carbon credits to tropical countries for maintaining their forests' function as carbon sinks. The other mechanism is called the Reducing Emissions from Deforestation and Forest Degradation (REDD) and enables the voluntary off-setting of emissions by individuals, organizations and small businesses through the purchase of carbon credits (Hulme 2013: 301). In all these cases, the state functions as a gate-keeper who creates the conditions and rules under which companies conduct themselves by exchanging carbon credits freely. As one could read above, the refraining from the efficiency power of the market is a clear sign of **liberal governmentality**.

Moreover, the extension of the market rationale beyond the "conventional" realm of the economy and the strong emphasis on individualized action, self-monitoring and cost/benefit calculation indicate a recent "off-shoot" of **neo-liberal governmentality** that has grown into the climate domain (for a more detailed discussion see Oels 2006). What can be observed in the way states or companies steer themselves, also takes place in the case of individuals.

Practices like carbon footprinting, offsetting, rationing, dieting and fitness[7] have arisen, a form of self-government that Matthew Paterson and Johannes Stripple call "My Space" or "the conduct of carbon conduct" (2010: 347). The calculative techniques, on which all these practices depend, totalize and individualize behavior at the same time: on the one hand, everyday activities are represented as contributions to global carbon emissions; on the other hand, individuals begin to manage their "carbon budget" in a reflexive manner. As a consequence, material practices are shaped (a person might cut down her meat consumption during a month or pay for a compensation project in Vietnam) as much as the inner conduct of individuals (the person might develop a new "climate conscience" that guides her decisions in a supermarket), forging a whole new subjectivity (Paterson and Stripple 2010: 359). Interestingly, the active carbon manager uses her freedom responsibly in relation to the collective goal of reducing carbon emissions, but in the absence of the state or any similar authority that promotes or surveils her actions.

A last (but not least) form of climate government is characterized by the use of **sovereign power**. Carbon taxes implemented by nation states can punish virtually every practice to which CO_2 emissions are traced back. They have been initially introduced by the Nordic countries in the 1990s and are today focused on the production and consumption of entities like electricity, energy and fossil fuels, by households, factories, airplanes or cars (Giddens 2009: 151). By creating incentives to reduce absolute emissions below a certain threshold that is not taxed anymore, this instrument also holds a clear element of **disciplinary power**. There have been attempts to prosecute businesses or governments for their behavior that is found to be contributing to climate change, drawing on the rectifying authority of courts. Finally, one can think of geo-engineering as another instance where **sovereign power** is mobilized: the exercise of physical force should remediate the "wrong" or undesirable state of the climate. Examples include removing greenhouse gases from the atmosphere through new technical devices, reflecting solar radiation with giant mirrors in space, or rejecting aerosol in the stratosphere. Indeed, the climate would not be "governed" but rather "ruled" by engineers and state (or corporate) agencies through such attempts.

As mentioned above, this short outline of climate government can only be partial and generalized. Moreover, and in the words of Bulkely and Stripple, "the sites at which a carbon-constrained and/or rapidly warming world are represented, categorized and ordered are just about everywhere, from the obvious and theatrical (intergovernmental negotiations) to the mundane and routine (eating and travelling)" (2013: 256). As many ways exist for climate change to be problematized and governed, as multifaceted are the studies of climate governmentality. While a good number of researchers dedicate their work to clusters of (neo)liberal climate governmentality, the least explored field remains the one of alternative rationalities: radically different renderings of climate change that mobilize novel forms of identity, subjectivity and government of the self (Death 2013: 87). In the following analysis, I will scrutinize a discourse that might hold this potential: the one of sufficiency. I argue that some of these forms of climate government have lost their coherence in the discourse of sufficiency, while others reoccur, yet following a different logic. This means that the mentality, the rationalities and technologies, of these ways of governing the climate will be trans-

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[7] A Swedish example: on the website www.koldioxidbanta.se, TelgeEnergi and WWF ask to "challenge oneself" with a CO_2-diet for 30 days. The participant can choose between a range of options (e.g. by not buying any new clothes, using public transport or avoiding water bottles) that imply different reductions in CO_2 if practiced for a month. Another alternative involves to switch to "clean oil" at TelgeEnergy, while every participant has the chance to win an electric car in the end (TelgeEnergi & WWF 2015). This serves as a good example of how carbon self-government is coupled with marketing strategies.

formed towards a new political goal. How this objective is to be achieved will be ultimate question of the next chapter.

5. Analysis

Every analysis in this chapter will be structured along three sections: First, I will introduce the reader to the book at hand with a short background of the authors, the intended purpose and outline of their publication. Second, I will guide the analysis along the processes of problematization and remediation. Although the construction of the problem and posing a solution to it are inherently linked, I will divide them into two analytical steps. This will enable me to continue to a third and last step: to trace how a new governmentality is supposed to work on individuals to turn them into governable subjects.

Analytical step 1: what is the problem?

How are previous forms of government questioned? What social, political and economic processes made it uncertain, unfamiliar or difficult? After all, what made the sufficiency governmentality necessary?

Analytical step 2: what is the solution?

How is human conduct to be shaped? How are previous governmentalities recombined to achieve a certain goal? After all, what does the sufficiency governmentality look like?

Analytical step 3: what is the objective?

Towards what goal is human conduct to be shaped? What is the point of contact for the process of subjectification[8]? After all, how is the sufficiency governmentality supposed to work?

To answer these questions, I will scrutinize the four dimensions provided by Dean (fields of visibility, knowledge, technical means and identities), since it is them which populate the "space of problematization" as pointed out by Paul Rabinow – it is these elements that enable the authors to question and remediate government in the first place. Moreover, I will dedicate a special emphasis on the way climate change is articulated in the three books, how it is involved in the problematization as much as in the rectification of human conduct. Both, the four dimensions of government as well as climate change, shall be highlighted when used in discursive statements.

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[8] The point of contact will be analyzed since it enables governmentality to work on individuals by applying the techniques of government and thus, creating a certain subjectivity of the governed. As mentioned above, Walters argues that while the point of contact of pastoral power is conscience, the one of liberal governmentality is that one of interests. He misses to formulate the cases of sovereign and disciplinary power – but one can think of obedience and conformity as their respective points of contact.

5.1 Schneidewind & Zahrnt: The Politics of Sufficiency

"It is important [...] to recognise how many of the hard-won achievements of modernity – from political freedom and participation to social solidarity – are jeopardised by the reduction of politics to a blinkered and exclusive focus on the support of economic growth." (Schneidewind & Zahrnt 2014: 7)

Outline of the book

The first case I would like to analyze is Uwe Schneidewind's and Angelika Zahrnt's *The Politics of Sufficiency. Making It Easier to Live the Good Life*. While Schneidewind is head of the Wuppertal Institute for Climate, Environment and Energy, Zahrnt has chaired Friends of the Earth Germany among other organizations. Both authors hold doctor's degrees in economics (164f.).

In their introduction, Schneidewind and Zahrnt explain the purpose of their book as to outline "a new field of politics, on which today's politicians still steer well clear of: the politics of 'the Good Life'" (7). On another note, the authors write that "[i]n fact, the whole book is about enabling sufficient lifestyles" (112). For that purpose they first "must demonstrate that such policies are necessary" and second "must set out how such a policy program is to be implemented. In other words, it has to show that the politics of sufficiency is feasible." (8f.)

How to render this attempt thinkable and practicable should be explained in four other chapters of the book, what the authors call "four pathways to a politics of sufficiency". First, sufficiency can be understood as advancement of the social market economy and as *Ordnungspolitik*. Second, sufficiency provides an *orientation* through the decelerating, disentangling, decluttering and decommercializing of everyday lives. Third, sufficiency functions as an *organization principle* for policies on all ministry levels, which is exemplified by the authors in three domains: mobility, housing, and food. Fourth, sufficiency involves *facilitation* for fostering certain resources that are key for the good life – including education, knowledge and time.

Constructing the Problem

The starting point of Schneidewind and Zahrnt's problematization **constitute two macroeconomic concepts** that have been realized in the last decades but were followed by unintended consequences: the *social market economy* and the liberalization of markets[9]. According to the authors, the ***social market economy*** has combined personal initiative and the dynamism of the markets with social equity and security. However, this has been based on continuous economic growth – and once the oil crisis and inflation and public debt shook national economies in the following decades, economic growth was declining, together with the space for social redistribution[10] (31).

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[9] Interestingly, these macroeconomic ideas belong to two forms of advanced liberal government that Michel Foucault distinguished in the end of his lectures on governmentality: Ordoliberalism and the neoliberalism of the Chicago school.

[10] On another note, Schneidewind and Zahrnt follow an argument by Wolfgang Streeck (2013) which can be summarized as the "deferred crisis of democratic capitalism": the liberalization of markets created a shift in the interests that are addressed by the state: from "the interests of democracy" (distributing a society's prosperity in a fair way to its citizens) to the "interests of capital" (ensuring private investments) (32).

As a response to this problem, **markets were liberalized** towards other countries and extended into ever more realms of society. This economic policy and **technological innovations** brought unprecedented material affluence to individuals, a range of products and services that has never been seen before (12). On the long run, though, this increase in surplus backfired: on the individuals in Western countries themselves, on people in the Global South and on the ecosphere.

First, societies have developed a "self-fulfilling expectation of escalation" (49) which is followed **by increasing processes of acceleration, globalization, cluttering and commercialization of individuals** lives (12). Its downside: people suffer from time scarcity, the alienation and unintended accumulation of things, but also an extending economic rationale in parts of their lives (53ff.). Moreover, this consumerist culture implies that individuals compete against each other for a social status that is defined by income and wealth (125). Connected to this, the authors question an **understanding of liberalism that only encompasses "the freedom to consume"**: such freedom could only be accessed by the ones with the adequate financial means and is impinging on the freedom rights of other people (22f.).

Second and third, the consumptive activities in the North have created **costs that were externalized to other places but also to the environment**. Schneidewind and Zahrnt point to the outsourcing of labor to the Global South where working conditions remain worse (55). Moreover, the uneven pressure on the planetary environment and resources is particularly mirrored by the **climate issue**:

> *"[T]he prosperity enjoyed by the industrialized world over the last decades was made possible only by massive use of fossil fuels – coal, oil and gas. So the huge increase in CO_2 emissions into the atmosphere can be put down to how the economy works in those countries. Every US American emits around 20 tonnes of CO_2 every year; every German around 10; an Indian or African, by contrast, just a tonne."* (17)

Next to the macroeconomic concepts and consumer culture it is **economic knowledge that is problematized** for being short-sighted: Schneidewind and Zahrnt criticize modern economics for **conceiving humans as individuals who pursue the satisfaction of their unlimited wants**, a game that can not be won (*homo oeconomicus*). Moreover, economics is solely occupied with how to increase the supply to meet these desires by raising productivity to exploit limited resources in the most efficient way (15).

The same logic lies at core of the **idea of the *Green Economy***: the negative environmental consequences shall be decoupled from economic activity by increasing eco-efficiency through technological innovation (18). Against this hypothesis, the authors refer to two phenomena that undermine its main assumptions. First, Schneidewind and Zahrnt refer to studies that give proof of the so-called ***rebound effect***: relative gains in efficiency are overcompensated by an increase in production, which in the end leads to even more environmental damage. Second, **increasing climate change** over the last two decades shows the limited progress that has been made in technological innovation (19f.).

Another main point of critique is the dominant use of **Gross Domestic Product (GDP)** as a technical instrument to indicate a population's well-being. GDP lost its functionality due to two reasons: first, because it is **blind to social and environmental degradation** despite rising economic turnover and second, because of the so-called ***Easterlin Paradox***: above a

certain income threshold, happiness and life quality are stronger influenced by other factors than a growing GDP (33ff.). Moreover, Schneidewind and Zahrnt criticize that productivity gains have become the major goal in policies concerned with work, health and education, **by replacing other ends** (112ff.).

Remediating the "Politics of Sufficiency"

Schneidewind and Zahrnt remediate the human conduct in question by what they call **a re-establishment and re-alignment of the social market economy**: "it is about having an institutional framework for economic activity which is constructed not just with the national social settlement in mind but with global social justice as well" (28). This thought is grounded in an understanding of an **"enlightened liberalism"** that is different to the one of a consumer society: the goal of a "politics of sufficiency" is to achieve a maximum number of "minimally invasive" life concepts that do not restrict the realization of others, neither in other places nor in the future (13; 23ff.). Applied to government, this means that a reduction of energy and resource use between 80 and 90% has to be reached by 2050 (49, 132)[11].

What Schneidewind and Zahrnt call a "program of escalation" must subsequently be replaced by "the right measures for time and space, for property and the market". "Right" in this context can often mean "less" but also "differently", "better" or "finer" (50). This idea is borrowed from Wolfgang Sachs who suggested four guidelines for a new pathway to the good life: Entschleunigung, Entflechtung, Entrümpelung and Entkommerzialisierung[12], what he coined the four "E"s (Sachs 1993). Schneidewind and Zahrnt translate these into four "Lessens" for the right measures:

- in time: "less speed", i.e. more slowly and more reliable
- in space: "less distance", i.e. closer and clearer
- in the material world: "less clutter", i.e. simpler and fewer
- in the economy: "less market", i.e. providing and making for oneself (50)

It is these four dimensions that should orientate a politics of sufficiency and indeed, they create a kind of **a diagram** through which the **technical means** about how to govern individuals towards a reduction in energy and resource use can be organized. Schneidewind and Zahrnt exemplify measures along these four lines which are overlapping at some points.

In terms of "less speed", speed limits should be lowered on motorways and residential areas, and a new traffic management should favor cyclists, pedestrians and public transport. The lifetime of products should be extended through prolonging warranty periods, stricter product liability regulations, compulsory reparability for products but also through tax-breaks for Second Hand markets. Strengthening employee rights towards options for part-time working and sabbaticals should enable employees to become more time-autonomous (53ff.)

In terms of "less distance", they suggest **a global framework for emissions trading and ecological pricing which would raise the prices for fossil fuels**. Labor standards in

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[11] This goal can be traced back to the study "Sustainable Germany in a Globalized World" that has been conducted by the Wuppertal Institute for Climate, Environment and Energy. The authors highlight that a reduction of fossil-based materials and fuels by 80 to 90% needs to be achieved to be able to decrease CO_2 emissions by 60% until 2050 (Bread for all et al. 2009: 17).
[12] This can be translated to deceleration, disentangling, decluttering and decommercialization.

the Global South should be enhanced, as well as their monitoring. Moreover, the establishment of local currencies can be promoted by reducing banking bureaucracy for their introduction (58f.).

In terms of "less clutter", labels on the durability and reparability of products should be designed and consumer advice reformed so it promotes the non- and Second Hand-purchase but also the co-ownership of products. Moreover, the authors pose penalties on planned obsolescence and restricting advertisements in public spaces and television. An ecological tax reform would increase the prices on environmental resources and decrease the costs for labor, making repairing of products much more attractive (61ff.)

In terms of "less market", Schneidewind and Zahrnt suggest investments to preserve and maintain common spaces and facilities like parks, libraries and playgrounds. Local governments could create room and reduce bureaucracy for community craft workshops, tool exchanges and urban gardens. In addition, education and further education should be orientated towards skills and knowledge about practical, craft and artistic pursuits to be able to create, repair and organize oneself (67f.; 128).

Schneidewind and Zahrnt elaborate in more places on instruments and techniques to conduct the conduct of people towards reduction: the **taxation** of ground rents, carbon, meat, flying and progressive consumption (48, 71ff.), the decoupling of social security systems from paid employment, an unconditioned basic income, a school subject on "happiness" and precautionary health care (121, 48, 117f.). Moreover, the authors argue for the replacement of GDP with **alternative indicators for measuring the well-being of population**: the Genuine Progress Index (GPI), the National Welfare Index (NWI) or the Bhutan Gross National Happiness Index (GNH). These instruments should measure economic turnover but also social and environmental developments (education, crimes, income distribution, **climate change**) (36ff.).

The Objective

The lion's share of governmental practices targets individuals in their everyday lives. In contrast to the *homo oeconomicus* drawn by economics, Schneidewind and Zahrnt point to findings by empirical economics, psychology, neurology and happiness research which present humans as altruistic and ecologically connected beings (65f.). Following Skidelski, the authors encompass **individuals with an array of social and cultural needs**: health, security, respect, personality, harmony with nature, friendship, leisure (113f.). To satisfy these needs, sufficiency politics aims at fostering certain personal resources: time, health, education, knowledge, the freedom and capacity to choose one's own path (112).

Moreover, Schneidewind and Zahrnt emphasize so-called "virtues" of sufficiency which should be cultivated through their program:

> *"A fulfilled and fulfilling human life consists precisely in not pursuing every want, in not being cogs in the machinery of every expanding desires. It consists in being able to consciously chose to forego things, to enjoy what is already there and to cultivate our relationship with the world as it is – rather than always demanding something new."* (15f.)

These virtues involve learning how to handle rhythms, to alternate modes of moderation and expansion, and to resonate with one's immediate environment (16). The authors speak of an asceticism of the simple life: it entails to stay flexible, to be free from contingencies and able to devote oneself to the essential things – which creates a congruence between one's personal life and one's social duty, which in the end increases happiness. The central questions of the good life then become "How should I/we live in future?" [sic] and "What do I/we really need?" (127). Education is crucial for this search for **the right measure that must always be found anew** (126).

This right measure is what I distinguish as the **point of contact** of a sufficiency governmentality. Individuals are given the freedom but also the capability to pursue practices that create a certain satisfaction for them. At the same time, they have **to balance their needs and wants themselves** in scope of the individualized limits of total consumption and emissions. No state or any other authority is disciplining them to comply with this goal directly, rather they try to foster **these virtues of sufficiency inside the individuals** so they are able to regulate their necessities in a flexible way: by developing low-carbon skills at teaching about personal happiness in school, through offering consumer and health advice and allowing a basic income.

Moreover, the state and local governments aim at organizing the conditions for the individuals in a way they can play out these virtues. They build or maintain **material infrastructure** like parks, gardens, Second Hand shops or bicycle paths, but they also draw on **sovereign and disciplinary power** in a vast number of domains, on car drivers, tourists and manufacturers alike: first, through higher prices for fossil energy and materials, the prohibition of advertisements or the strong taxation of flights, meat and other consumption. And second, through new norms on product durability and reparability, higher labor standards and speed limits on streets.

Climate change takes the role of the central indicator in monitoring the success of such a program: through **more "holistic" indices that calculate total energy use and emissions of carbon**. It is also governed through a globalized emission market, however, one that requires to actively increase the costs for fossil energy and materials and thus would leave little space for companies to compensate their over-emission with carbon credits. Interestingly, the state does not restrict the individual consumption of products or the emissions of carbon itself, nor are individuals managing their personal energy or carbon budgets. In contrast, individuals are allowed to organize their practices in a dynamic way. One might decide to fly to New York to fulfill a life-long dream but forego any other flights in the next years, cut down on dairy products and drive an electric car in co-ownership. **This creates a momentum of alteration in individual lives, a dynamic that the subjects have to cope with finding the "right measure" always "anew".**

5.2 Niko Paech: Liberation from Excess

> *"The only remaining responsible principle for structuring societies and lifestyles in the 21st century is reduction – in the sense of liberating ourselves from an excess that not only clutters up our lives, but also makes our existence so vulnerable."*
> (Paech 2012: 11)

Outline of the book

The second book which offers discursive material for my analysis is Niko Paech's *Liberation from Excess. The Road to a Post-Growth Economy*. Niko Paech works as a professor of economics and environment at the University of Oldenburg and has served as chairman of the Association of Ecological Economics and scientific advisor for Attac (Paech 2012: 144).

   In the introduction, Paech explains the intention of his book as "to ease the departure from an affluence model that has become irretrievably weakened due to its chronic dependence on growth" (7). The first three chapters support this claim: the author argues that it is not achievements in efficiency and technological progress that are the foundations of modern wealth but processes of delimitation: humans were only able to acquire so many things through escalating physical capabilities beyond their own bodies, financial possibilities beyond the present time, and ecological resources beyond their regions. The fourth chapter highlights that any attempt to break this dynamic by decoupling economic growth from environmental damage is impossible, while the fifth chapter is dedicated to structural pressures and cultural drivers of economic growth. As a solution to both, Paech poses his concept of a "post-growth economy" in the sixth chapter, which involves the radical reduction of industrial production but also practices of modern subsistence and individuals with sufficiently regulated demands. The overall goal of any economic activity should be, according to Paech, "enlightened happiness" that is "inseparable from the consciousness of practicing a lifestyle that leads to happiness [sic] within a responsible, i.e. not unrestricted operational framework" (135f.).

Constructing the Problem

Niko Paech begins his problematization with the claim that the Western affluence model has become overly weak due to its dependence on economic growth. **Global supply chains and marketization** have enabled modern societies to exploit the benefits of industrial division in unforeseen ways – but have accelerated the degradation of ecological conditions and the risks of financial crises at the same time. The most recent effect of this fatal linkage can be found in the economic crisis of 2007 (7ff.).

   The author elaborates on this dynamic by drawing on the example of the European Union and its economic logic of "harmonization": **the state is removing all obstacles in terms of space, time and institutions to increase the levels of freedom and the number of available options**, for investors and individuals alike. In that way, ever more industrial and agricultural production, construction and mobility infrastructure can be achieved, paralleled by a free movement of people who can seek their self-realization beyond their territory by taking the next flight to work, learn or party (14ff.). Moreover, through creating ever more state debts, societies are not confined by their means of the presence but can hamper the possibili-

ties of future generations. Since indebting can only be justified with an expectation of future growth in capital, modern societies become bound to the growth imperative (17ff.).

This process is driven by what Paech terms **"consumer democracies"**: as social status is determined by competition through consumption, social coherence is to be achieved by **extending the material possibilities of individuals, which lessens the pressure to redistribute wealth** (101ff.; 129). This promise of ever growing freedom and prosperity is realized by two technical means: first, by allowing tax breaks on essential consumption and production patterns that do not represent their "true" ecological costs. Second, by allowing individuals to dedicate the majority of their income on consumption because other economic activities are subsidized: most prominently agriculture but also education, health, security, the transport system, cultural and other public services (20ff.).

However, since the *homo consumens* relies on an external supply system, **her lifestyle becomes enormously vulnerable**. Thus, the material prosperity she can enjoy is surrounded by a constant fear of losing it and makes her protect – just like a drug addict his dealer – the money and growth based affluence model (58ff.). Moreover, Paech agrees with the hypothesis of the "exhausted self" by Alain Ehrenberg: modern individuals suffer from depression because they are not able to obtain free self-expression among too many options and chances. Since time is limited, they constantly fail to make the most out of them. What follows is a "tragedy of insufficiency" (118). Simultaneously and due to the emergence of a global middle class, the peak of fossil fuels and other resources ("peak everything") threatens the material basis of consumer societies and makes this angst ever more relevant (61ff.).

Modern societies use a certain trick to ease their bad conscience towards future generations and "the planet": by **believing in technological innovations and economic growth in almost religious ways**. These two powers of human creation should reduce ecological degradation and debt (18). However, as Paech argues, this idea is an illusion and doomed to fail in reality – by bringing two theses forward.

First, the author tries to reveal a couple **of "myths of progress"** according to which it is industrial labor division, technological innovations and hard human labor that enable a higher production of goods which is ever increasing. Against this, Paech claims that the incomparable wealth of modern societies could only be achieved by breaking three kinds of barriers: people have appropriated things that are in no relation to their own productive capacities (through electronic and digital machines), present possibilities (through debts) and the resources that are available in their local and regional surrounding (through global value added chains) (51ff.).

Second, every attempt to decouple economic growth from its ecological consequences must fail and can even worsen the situation (10). Paech draws the **"story of green growth"**: economic growth can be guaranteed by combining environmental protection and material self-realization. The processes behind this solution are an increase in production efficiency (i.e. the reduction of input needed for the production of a good) and ecological consistency (i.e. goods and energies that are renewable). The author tries to reveal the hunches of this story by pointing to various *rebound-effects*: material ones (technological innovations add new goods and facilities instead of reducing them), financial ones (technological innovations make goods and services cheaper which sets money free that is spent on other things) and psychological ones (technological innovations ease the need to question the unsustainability of the whole system) (69ff.).

This addition of "green" products to or as compensation for conventional products relates to what Paech calls an orientation towards objects that is symptomatic for the sustainability

debate. In contrast, it is only lifestyles that can be sustainable – which requires to move the focus to the practices of a subject and their ecological consequences (90ff.). By drawing on **Immanuel Kant's categorical imperative**, Paech argues that every human would only be allowed to consume the amount of ecological resources that, if all humans behaved in the same way, would maintain the planetary capacities on the long term. In the case of climate change mitigation, and following calculations of the German Advisory Council on Global Change, this means that a subject would not exceed creating **emissions of 2.7 tonnes of CO_2 per year** – a budget that could maintain a stable ecosphere if it is generalized for 7 billions people by 2050 (52ff.) For Paech, this limit is indisputable: "Those who reject that demand either want no climate protection or no global justice" (91). The only means to visualize these effects are **eco-balances** that encompass all stages of a consumption cycle, from the extraction of resources to the disposal of an object. Once companies provide lifecycle analyses of their products (which also involve information about other environmental effects), every consumer can assess her individual eco-balance (91f.). The author counts on the voluntary responsibility of the individual instead of any sovereign way of limiting individual's practices: "Even if the target CO_2 value of approximately 2.7 tonnes cannot be achieved from one day to the next, it is **an undeniable yardstick for any sustainable development** worthy of the name. It requires no world government or eco-dictatorship, but instead just a little more honesty." (92f.).

Remediating a post-growth economy

The post-growth economy that Paech has in mind grounds in a return to a settled way of living. This would imply shorter value added chains, technologies with a shorter reach[13] and overall, individuals with less material demands (53, 105, 124). An **"economy of proximity"** would be characterized by the logic of producing "[a]s regional as possible, as global as necessary" (109) and be constituted by three kinds of supply systems: subsistent production, regional currency systems and global labor division (107ff.).

For individuals this would allow a bisection of waged employment because they would dedicate more time to **practices of "creative subsistence"**. First, they would create more goods and services by themselves and exchange them with each other (e.g. food, furniture, care, education); second, other products would be used more intensively by sharing them (e.g. cars, washing machines, video cameras); third, the lifetime of products could be extended through maintenance and reparation by individuals themselves (111ff.). Such practices of creative subsistence would turn consumers into **"prosumers"** and **"coproducers"** and rely on three "input categories": time for subsistence labor, skills for craftsmanship or repairing and social relationships for the common use of goods (114ff.).

Moreover, the orientation of the **business sector** would change towards the **optimization and re-use of goods**. By converting, refurbishing and recombining already existing manufactured goods and resources, companies would be distinguished as maintainers, repairers, renovators, re-designers, providers, intermediaries and designers (121f.). The combination with a subsistence economy would finally lead to a constant flow and stock of goods, something what Herman Daly termed a "steady state economy" (121f.).

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[13] Following Ivan Illich, these "convivial technologies" increase productivity of human labor without replacing it. Examples are bicycles, fishing rods, reusable packaging, and repairable wooden and metal products. These technologies are labor-intensive but require less energy, land and capital (53).

According to Paech, such a **post-growth economy** could be fostered by a political framework, which can include a range of technical means. A **tax fee** on all transactions on the financial markets and restricting the prerogative to create money would ease the pressure to grow economically. The same could be expected from fostering regional currencies, cooperatives and other non-profit companies. A **soil reform** would redistribute land and turn it back into commons but restrict usage rights to produce under ecological limits. The author also suggests **"Sky trust"**, an idea by Peter Barnes: companies would need to **buy carbon permissions** from the society or local communities **through an auctioning process**. The removal of all subsidies that hide external costs would set free capital for the health, education and social sector. In addition, a **moratorium** for any new projects requiring additional space or resources would be implemented (especially coal power plants), coupled with a program for dismantling infrastructure for energy and mobility. The deconstruction of nuclear and fossil fuel power plants, airports, motorways and industrial facilities would provide space for renewable energies and renaturalized areas. Paech also suggests the introduction of **caps**: on ecological resources as much as on the accumulation of income and wealth. Companies would be required **to label their products with CO_2** and ecological foot prints, promote them without advertisements in the public space and shorten and redistribute the working time of their employees. Rather sketchy, Paech's argues for a citizens' money and a basic income on the condition of financial needs and non-profit work. Finally, **education** would be opened for the pedagogy of manual capacities and a compulsory school subject on sustainability based on a subject orientation that can cope with ecological limits (124ff.).

The Objective

However, in order to achieve such a subject orientation, these governmental practices must intervene in the process of subjectification in consumer societies and replace it with a different one. Following Paech, it is only sufficiency, in combination with practices of creative subsistence, that will make "resilient" and "content" lifestyles possible (116, 121).

To support this claim, Paech refers **to happiness research** which indicates that life-satisfaction is strongly connected to human relationships, an intact social and ecological environment, self-efficacy, and the recognition of one's abilities, health and security[14]. The author acknowledges that, to a certain extent, the consumption of material objects is necessary to activate these assets of happiness. However, to be able to really enjoy an act of consumption, an individual requires enough time, a resource that is scarcer than any other in consumer societies (116f.). The key to set time free, then, is **to reduce the number of consumer options to a manageable level, that is sufficiency**. By relieving oneself from the majority of material things, one could dedicate enough attention to experience joy through the consumption of the objects that are remaining. As a consequence, this "liberation" from material excess not only leads to more independence from money, but also from market crises and paid employment (120f.). Paech summarizes the core of such a new subjectivity as follows: "Self-determination does not depend on having much, but **on needing little**." (120).

But how should one reach this controllable number of goods? A quote in the introduction of Paech's book sheds light on the answer:

> *"If an increased sense of well-being were truly qualitative, its*
> *source could only lie in the subject itself. It would originate*

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[14] Paech does not cite any source here, but these foundations of happiness resemble strongly the ones formulated by Schneidewind and Zahrnt following Skidelski.

not from production based on the division of labor and the related need to overcome spatial distance, but from one's own performance and imagination, with which to independently derive additional satisfaction or to breathe new significance into what is materially existent." (9)

As mentioned above, **it is the practices of creative subsistence that must be coupled with sufficiency to limit the need for material consumption**: the production of one's own goods and the exchange with others, the creative use and mending of things should trigger feelings of self-efficacy. It eases the want to acquire ever more goods and services from global labor division that are inevitably linked to environmental degradation, climate change and the exploitation of humans in other parts of the world.

But how is this to be achieved? Paech outlines a set of policies that is framed by the aim of limiting CO_2 emissions to a specific degree and draws on different techniques that should direct the conduct of businesses and individuals alike. **Sovereign power** is supposed to work through taxes on all financial transactions, caps on resource extraction, income and wealth, a moratorium on new infrastructure and energy projects, the deprivation of land and the banning of public advertisements. **Disciplinary power** would force companies to label their products with information about CO_2 emissions which should enable customers to compare every product based on that knowledge. Another form of disciplinary power would be exercised in schools: by teaching a "sustainability" class and through the strong training in manual and craftsmanship skills to fulfill the requirements of a limited environment.

It is the combination of these sovereign and disciplinary techniques upon which sufficiency governmentality can thrive. Companies would be enormously constrained to produce only with already existing resources and spaces while individuals find themselves in an economy that mirrors the prices of ecological extraction and does not allow the consumption of too many resources or the acquisition too much wealth. However, they are also equipped with an inner orientation to appreciate existing goods or repair and fabricate them autonomously, something that creates more freedom in the regional realm – suddenly, they hold the capacity and options to garden, build, sow etc. **It also compensates for the freedom in the global realm** – to consume what, where, and as much one wants to – that is now confined by the state's total goal to stop climate change by 2°C at 2050.

The two techniques of government that directly involve the calculation of carbon – eco-balancing and Sky Trust – also serve that purpose. Interestingly, they would mobilize two other subjectivities: the one of the *carbon manager* (as argued by Paterson & Stripple 2010 above) and the one, as I would call it, of the *global climate citizen* that should deliberate with others about a company's right to emit against the backdrop of a warming world. Taking the same example, a flight to New York would be very expensive as the ecological costs of burning kerosene in the stratosphere would be mirrored in the price for a ticket. However, an individual would also hardly buy one: not only because her income was halved but because she would pursue her life aspirations in the boundaries of the region, which forms the new spatial realm of everyday lives.

5.3 Welzer, Giesecke & Tremel: FUTURZWEI Zukunftsalmanach

> *"We think anyway that the path to a reductive modernity – a society that maintains its civilizational standard with considerable less material and energy use, with drastically reduced consumption and clearly increased personal autonomy – that such a path can only be one in which post-growth strategies, traditions of enlightenment and meaningful use of technology are combined in smart, often unexpected ways. The moral intelligence we are imagining does not draw on efficiency increases, innovation and networks but on practical knowledge, the use of the existing things, pausing, and the reduction of efficiency. Or let's say it fairly old-fashioned: on worldly wisdom."* (Welzer et al. 2014: 6, translation MD[15])

Outline of the book

The third manifestation of the sufficiency discourse that I want to analyze can be found in *FUTURZWEI Zukunftsalmanach 2015/16. Geschichten vom Guten Umgang mit der Welt (Future Almanac 2015/16. Stories of the Good Dealing with the World)*, an edition published by Harald Welzer, Dana Giesecke and Luise Tremel. Welzer is director of FUTURZWEI, a "foundation for future viability" and has served as a professor in transformation design at the University of Flensburg. Dana Giesecke and Luise Tremel hold degrees in sociology and history/literature respectively, and work as scientific director and editor of FUTURZWEI (Welzer et al. 2014: 533ff.).

In the introduction to the edition, the three authors reflect on the almanac as "a book of which one doesn't know what it actually is. A collection of interesting counter-stories, a utopia in fragments, a political manifesto, a compendium of the possible? To all of this: yes, that's right" (Welzer et al. 2014: 5). The book contains an essay by Harald Welzer with the title *Zukunftspolitik* (*Future Politics*) (Welzer 2014) that will provide the main source of the discursive material of this analysis. The bigger part of the almanac is dedicated to 82 "stories of success", of which 17 have been followed over more than two years and 33 focus on the issue of material production. They deal with people who practice experimental forms of living and economic activity and can also be understood as "building blocks of a political counter-story, which becomes powerful in its combinatorics"[16] (Welzer 2014: 32). Moreover, the book includes a leading essay on "materials" and five fictional stories about the future in 2041/42.

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[15] So far, the FUTURZWEI Zukunftsalmanach has only been published in German. All direct quotes by Welzer 2014 or Welzer et al. 2014 in this thesis are therefore translated by me (MD).

[16] I would argue that this can be understood as a way of writing a genealogy of political practice, in terms of counter-memory and re-serialization (Walters 2012: 131). By telling "stories of success" of different forms of living and economic activity, the "business as usual" in modern society is revealed as only one out of many possibilities, and an alternative history is written against the dominant version of progress and expansion.

Constructing the Problem

In the beginning of his essay, Harald Welzer diagnoses that since industrialization there exists a **deep belief in the miracles of "technological progress"**[17] to solve what has gotten **out of balance through modernization** – including **climate change** which is tackled with plans of geo-engineering and renewable energies (Welzer 2014: 15[18]). Indeed, it was the combination of technological with civilizational progress that has led to huge improvements in the living and survival conditions of people in early industrialized countries. However, gains in social equality, health care, food supply and other domains had **unintended consequences** in the ecosphere: e.g. nuclear waste, degradation of ecosystems through mining, the intoxication of soil and water through agriculture, and overall, a changing climate. Since modern societies are functionally differentiated and lacking an afterlife perspective, it is broadly accepted that state governments use technocratic bodies for dealing with these consequences while maintaining the best living standards in the presence (15ff.).

In fact though, the economic and social model of modern societies is not sustainable anymore due to two indicators: first, **it consumes its own natural conditions**, and second, there is no mentioning of "future" anymore in politics as an increasing alignment of living conditions can only be achieved through increasing ecological destruction. Numbers[19] suggest that the use of resources and energy and the emission of carbon and waste require the extraction of **more than one and a half times of what the planet can hold**. This represents a pressure that is unevenly distributed: an individual in an early industrialized country consumes and emits **five to ten times more than one does in a newly industrialized country**. Since there are limits to resources and the atmosphere, this creates political stress among states under which civilizational achievements become threatened – including statehood, human rights and democracy, public policy, health care and education (19f.). At the moment, modern societies are ill-equipped to deal with this scenario since they face a shift in power balance from state institutions and citizens to economic actors, especially financial ones (the hypothesis by Streeck). The current European Union represents a vivid example for this primacy of the economic and a lack of dealing with fundamental questions of democracy (21f.)

Another endangerment of freedom and autonomy of the individual stems from inside society: the constant diversification of products, the shortening of product cycles and increased purchase power lead to a higher acquisition of goods but also to **the devaluation and reiteration of purchases** – a process through which individuals become dependent on their consumptive practices and perceive any "less" as abstinence. This loss in personal freedom is contrasted by **happiness research** which shows that life satisfaction does not rise with increased material consumption but at least stagnates. The fear of a sudden "less" in consumption can be observed throughout the whole society which indicates that economic growth has shifted from a means for increasing common wealth to a self-referring end. The fatal consequence of this development is that any improvement in efficiency always creates an escalation in material use and energy [the often quoted *rebound-effect* (MD)] (22ff.).

In conclusion, Welzer argues that the **modern cultural model is expansive**, in terms of practices as much as norms: its success relies in the improvement of living and survival conditions of humans in the mode of expansion. There must always be more food, more living space, more education, more mobility, more health, more energy etc. Because the nature of

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[17] Without elaborating on it, the author uses quotation marks for the terms "technological progress", "innovation" and "renewable energies". I suggest that this signifies a questioning of the dominant (positive) meaning of these terms.
[18] All page numbers without an author in this subchapter will refer to Welzer 2014.
[19] Welzer does not mention the source of this finding.

capitalist economy is the production of surplus, no innovation inside the system can change the direction of this development (25f.). The author points to **contemporary climate government to support this claim**: since the publication of the IPCC report in 2007, the infrastructure of renewable energies proved to require a massive amount of resources and energy to be produced, climate conferences and emission trading schemes have failed to achieve reductions in carbon, coal energy and fracking are (re)discovered as energy sources while global CO_2 emissions are rising by three percent per year (26f., 5). Welzer traces this failure of climate government back to the primacy of the economic that is inherent in the escalating energy demand of early and newly industrialized countries (27).

Remediating practices of a reductive modernity

What is needed, then, is a cultural model of reduction: instead of formulating an "always more", societies should opt for an **"always less"** and prefer cultural practices that require the least amount of resources and energy to guarantee living and survival conditions. Renewable energies would only be powerful in reducing ecological costs if they were organized along the decrease and not the increase of energy demand, i.e. if they do not follow the logic of escalation (21). Such a counter-model could not only rely on enlightenment and the critique of the principle of economic growth but must pose something against the dominant everyday culture, politics and economy: **a combination of numerous different models of alternative cultural and economic practice**. Most importantly, this could not be realized through master-plans – since they fail answering the question of "who is the subject?" and are inflexible in times of changing conditions (31ff.). In contrast to the utopias drawn by such large-scale programs, Welzer argues for the "heterotopy" of "micro-political strategies": "[They] are limber and create islands of lived counter-practice. In that way, they also **generate experiences of self-efficacy and freedom**, especially when they change the means and claims of the system in their own way" (35). As Welzer et al. note elsewhere, this should help transform the current "expansive modernity" to a "reductive modernity" that maintains the immaterial civilizational standard **with a consumption of 80% less energy and resources** (Welzer et al 2014: 512).

   Examples of such counter-strategies include energy and purchase cooperatives, ethical banks, regional value stock companies, exchange markets or free shops. What connects them is their orientation towards the common good by avoiding costs of environmental commons, human and social rights (34f.). A way to evaluate such a performance is by calculating a **"common good balance"**, a project conceived by Christian Felber. Companies who would like to join the "economy for the common good" measure several indicators (through self-evaluation or a voluntary audit) including quality of work place, gender balance, just distribution of paid work, corporate democracy and transparency (Welzer et al. 2014: 503) and include all central groups including retail companies, customers and competitors. Around 1.600 companies have become part of this initiative which aims at implementing the common good balance as a legal instrument. Once realized on a national and international level, it should be supported by governmental practices: by public procurement, lowering taxes and guaranteeing cheaper loans to "common good businesses", fair and ecological products and services would become more affordable than ethically or environmentally problematic ones (Welzer 2014: 33f.). Moreover, Welzer suggests instruments that directly tackle destructive business models like the Fossil Free Divestment Campaign that aims at the redistribution of investments in the fossil fuel industry by universities, churches and municipalities (35).

The advantage of all practices of a culture of reduction is that the creation of surplus is not important anymore **"once one has enough"** (35), while they intervene in the economic metabolism and forge **new relations of social production and reproduction** (id.). Individuals who participate in such micro-political strategies gain new experiences with themselves and each other, which constitutes the "core of crystallization" for social movements (31). The latter are the only subject who could promote a culture of reduction and are already emerging, though they lack a political label and representation (Welzer et al. 2014: 6).

The largest part of the book is dedicated to stories of success of this emerging new social movement (id.: 41-352). I would distinguish them between different groups. First, there are cooperatives that involve individuals who jointly produce or buy renewable energy and food, or invest their money in such and other sustainable economic activities. Other stories circulate around companies or voluntary initiatives that repair electronic devices, restore houses and upcycle bicycles or clothes. Another group are start-ups which returned to the domestic production of goods which had been outsourced to newly industrialized countries, including the manufacturing of shoes, computers and textiles. Other businesses create new technologies which aim at the reduction or reuse of ecological resources like zero waste packaging, cradle-to-cradle production or hydrogen engines. The book also highlights projects which aim at the intensification of use of goods and space through "give shops" and the intermediate renting of commercial space. Finally, one can find initiatives that promote regional currencies, bicycle traffic, community gardening, the open source crafting of furniture, while others try to prevent planned obsolescence and food waste. The common determinate of all stories can be found in the personal character of these practices: it is single individuals or groups that initiate these new ways of thinking and acting through trial and error. Welzer refers to these projects on one page as "laboratories of reality" because they work "in the mode of experimenting" (31).

The Objective

Is there a sufficiency governmentality in the discourse of *FUTURZWEI Zukunftsalmanach*? Compared to the discursive statements that can be found in the books by Schneidewind/Zahrnt and Paech, I could detect much less elaborated suggestions of how government should be achieved. However, as Welzer writes in his introductory essay, "Master-plans", i.e. programs that aim at conducting the conduct of people in various domains of life, are rejected and to be replaced by local but multiple forms of self-government. As mirrored by the numerous "stories of success", individuals and groups should develop very different practices, in different places and with different goals. There is no single governmentality inherent in the "laboratories of reality". However, I argue that there is a set of governmental features in Welzer's essay after which these forms of self-government should be organized.

First, **it is the energy and resource flows but also carbon emissions that represent the starting as well as the end point of human activities**: rising climate change and other phenomena of environmental damage created in the past should be mitigated towards a clear goal in the future: 80% less consumption in energy and resources. Although there might be very different techniques of self-government (joint decisions of how to produce and order goods in cooperatives, renewal and the intensified use of things, the common use of goods in free-shops, the subsistent growing of food in gardens), they serve this goal of relative reduction, **albeit without the state who executes sovereign or disciplinary power for this purpose**. Existing forms of climate government, including emission markets, national reduction plans and investments in renewable energies, are dismissed by Welzer, due to the unhalted warming of the planet.

Second, **it is the knowledge of climate science and environmental science** that provide the visualizations for drafting the problem, while it is **happiness research** that help constructing the techniques and identities involved in the self-government. Third, and similar to Paech, it is individuals who have **internalized the will to reduce in their everyday thinking and acting and experience well-being through these**. Nevertheless, Welzer conceives subjects who have the freedom to consume and emit as much as they want to – but instead they contribute to the 80% goal because they "have enough" through the new experiences they gain in counter-practices. Although Welzer does not refer literally to "sufficiency"[20], it can be said that individuals receive a new subjectivity through a conduct of the self that is **bound to one diagram: the reduction of material resources and emissions**.

If one can speak of one governmental practice that applies to all actors of a group in society it is the common good balance. I would argue that this is a clear form of **disciplinary power** that it is at work here: every business should follow the norm of the common good by the (self-)measurement of several indicators showing the social and environmental performance of an actor. If this technique was generalized by law it would be connected with a form of sovereign power: the state cuts taxes for, invests in and enables inexpensive loans to the businesses with "top performances" according to the common good balance. The latter would also be the only technical instrument that would govern a flight to New York. It would reduce the ticket price most for the airline that proves to have the lowest energy demand and carbon emissions, the highest work place satisfaction and the fairest gender distribution. The individual would buy only a ticket from that very airline – not only because it is the cheapest but also because it represents the most "sufficient" option to her.

5.4 Synthesis: An Emerging New Climate Governmentality

As I have illustrated in the preceding subchapters, the three books hold features of a new governmentality, that is a novel way of conducting the conduct of humans, in relation to climate change. In this fourth and final analytical chapter I will draw these features together and compare them with each other. My aim is to elucidate the process of how previous governmentalities melted and have been recently recrystallized to what I term a "sufficiency governmentality". This chapter will be structured as the preceding ones along the construction of the problem, the remediating of the solution and the realization of the object. Moreover, I will reflect on the relationship between Michel Foucault's history of the art of government and the emergence of this new thought of government.

Populating the Space of Problematization

What previous forms of government are questioned, what historical events shattered their coherence and legitimacy and finally made the sufficiency governmentality necessary? How is climate change woven into these problematizations?

It is only Harald Welzer who literally refers to two conventional forms of climate government – national reduction agendas via the Kyoto Protocol and emission trading markets –

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[20] In a discussion panel with Uwe Schneidewind, Harald Welzer explains why he avoids the term "sufficiency": it sounds overly "unsexy" and lacks the potential of representing a social movement (The Extraenvironmentalist 2014).

that have lost their function and credibility due to an overall rise in CO_2. What all authors share, however, is the critique of a whole set of macroeconomic forms of government that aims at fostering individual consumption. This is indicated by a number of terms which are articulated in rather negative ways: consumer culture, consumer liberalism, consumer democracy, *homo consumens*. The state has implemented policies that extended markets to ever more countries and domains of life in order to increase what Paech calls "the benefits of global labor division": the increased production of goods and services that could feed the material demands of individuals. What has once been conceived by British political economists in the 19th century has, following the authors, now been realized through government: the *homo oeconomicus* who is driven by her personal interests. The state externalizes the ("true") ecological and social costs of economic activities so that individuals can dedicate their time and financial resources to the single enjoyment of mobility, food, housing and other consumption. This freedom to consume is guaranteed to individuals due to two reasons: on the one hand, the vast array of choices should hold the source of well-being; on the other, it creates the room to reach a higher position in society, since social capital is defined by and expressed through the possession of material objects. The modern belief in technological progress across the whole society leads to an expectation of a constant "further, faster, more". And indeed, since the state promises social cohesion through democratic processes, it meets the potentially unlimited needs and wants of its citizens by safeguarding the creation of more output of products and services. As a consequence, the Gross Domestic Product of a country becomes the most important indicator for the success of this "program of escalation".

This state of modern society is not a problem itself to the three authors; it is the "unintended consequences" of this "mode of expansion". Economic growth leads inevitably to a number of interlinked problems. First of all, climate change is directly traced back to the consumptive patterns of Western individuals, visualized by individual carbon foot prints and their comparison between different regions of the world. This knowledge, together with the projections of the devastating long-term effects of alterations in the atmosphere is derived from climate science, most prominently the International Panel on Climate Change (IPCC). Second, the escalating manufacturing and enjoyment of goods requires capacities that undermine the exploitation of ecological resources of other world regions, the unethical working conditions in the Global South and the financial possibilities of future generations. Third, although individuals receive a constant and increasing flow of material objects, they are not able to experience self-fulfillment through the consumption of them, because excess renders the valuation of things impossible. Consequently, happiness is not rising with the acquisition of material wealth above a certain threshold, an insight the authors construe from the so-called *Easterlin paradox*. Another knot of problems is fastened around the ways modern societies try to tackle these unintended consequences. The concept of *Green Economy* which aims at raising efficiency and ecological consistency of industrial production is rejected due the existence of *rebound-effects* and the fact that climate change has not been halted by technological innovations in the past.

What were the historical events that made this problematizations possible? All authors refer to a couple of crises that occurred in the industrialized countries over the last decades. The oil crisis and the appearing of inflation and public debt in the 1970s may have been the first events revealing the dependence of Western societies on economic growth. The financial crisis of 2007 and its aftermath in the European Union represent the most recent events that shattered the "program of escalation". Connected to this, all authors agree with the hypothesis of Wolfgang Streeck about the "deferred crisis of democratic capitalism", which implies a shift in interests to which the state responds: from the ones of social redistributing

of prosperity to the ones of guaranteeing private investments. Last but not least, the scientific discovery and political proliferation of anthropogenic climate change can be considered as another event shaking the belief in the future viability of Western society and its consumptive drivers.

Reshaping the Conduct Towards Reduction

How and towards what goal is human conduct to be steered? How are previous governmentalities recombined to achieve a certain goal? What is the point of contact for the process of subjectification? And after all this being said, how is the sufficiency governmentality supposed to work?

The starting point of constructing a solution to the problematic above is to reconceive humans in order to conduct their behavior in a new way. Following Skidelski, all authors encompass individuals with a set of needs: health, security, personality, harmony with nature, friendship and leisure. In order to satisfy these "true" human wants, individuals require certain resources (time, education, knowledge, self-efficacy etc.) next to a limited amount of material resources. At the same time, the state needs to comply with a new goal that follows from the "unintended consequences" of the previous way of conducting its citizens: reducing the demand of energy and resources by 80% until the year 2050 to be able to stabilize global warming at 2°C. Both challenges become linked to a new objective of government that resonates with three terms coined by the authors: the good life, enlightened happiness, and "the good dealing with the world". They all imply that the limitation of one's material possibilities is not experienced as abstinence anymore but as achievement – because it leads to qualitative well-being AND to the totalized goal of reducing energy, resources and emissions. **Finding "the right measure" or the "enough" of individual consumption then becomes the leverage point through which the state can re-organize the conduct of its citizens**.

The three authors put different emphasis on whether this leverage point should be reached mainly through the self-government of individuals (Welzer) or also through the government of groups and businesses (Schneidewind/Zahrnt and Paech). For the first two, it is through disciplinary techniques in school that individuals would learn the practices of creative subsistence and how to become prosumers, co-producers and co-consumers. A special school subject would help to individualize the state's goal of reduction but also train the freedom in how to spend one's activities within these limits. Sovereign techniques would be used especially on businesses to guarantee that freedom under material constraints: ecological pricing, the redistribution of wealth, the banning of public advertisements and planned obsolescence but also the reorganization of working time. These and other instruments like CO_2 labelling or the common good balance (following Welzer) would force companies to compete for the least input of resources and output of emissions to stay competitive.

All authors, however, place the self-government of individuals in the center of how to deal with the problem of climate change. I argue that it is two technologies that a new subject would utilize when conducting itself: the **virtues of sufficiency**, the capacity of self-balancing one's needs, and **the practices of subsistence**, the ability of satisfying one's demands oneself. The two are inherently linked and depend on each other: virtues of sufficiency ask for the "how do I want to live?"[21] which channels a subject's aspiration to create her-

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[21] This practice of self-reflection strongly resembles what Mike Hulme also calls "virtues" in the scope of a warming world: it is not science, economics, politics or the planet that should be in the center of the debate but the "thinking about what it means to be human. What is the good life and what therefore is an adequate response to climate change?" (Hulme 2014: 309)

self and exchange and consume with others in her direct environment. And it is the outcomes of these practices of subsistence that help to answer the second fundamental question of the virtues of sufficiency: "what do I require?" Both technologies together enable the subject to receive a sort of well-being that roots in experiences of asceticism and autonomy, which eases the need to consume material goods produced by others. Moreover, it is not until these two technologies are fostered inside an individual, not until "she has enough", that it is able to accept and integrate the goal of total reduction of energy, resources and emissions.

The authors also differ in the way an individual should visualize and deal with the problem in the further course. Niko Paech poses the instrument of eco-balances or carbon-footprinting with which an individual could view and manage its personal carbon budget of 2.7 tonnes of CO_2 a year. In that way, the subjectivity of sufficiency is accompanied with the one of the carbon calculator[22]. This feature is missing in the outlines by Schneidewind/Zahrnt and Welzer – in their cases the individual is allowed more space to find "the right measure" of their emissions and to be able to consume beyond that threshold. However, they must also cope themselves with how to balance these actions with the totalized goal of reduction, which implies that the virtues of sufficiency must be developed much stronger in their blueprints than in the one of Paech.

It is here now that the relationship of liberal governmentality and sufficiency governmentality can be explained. As mentioned in Chapter Two, liberal governmentality relies on techniques of security (transformed forms of sovereign and disciplinary power) that create the conditions under which individuals can use their freedoms responsibly. I argue that it is exactly the same that should be achieved through the techniques of government described by Schneidewind/Zahrnt and Paech: prices are raised, gardens provided, repairing taught, so that the individual can develop and cultivate the two technologies of sufficiency and experience well-being. And as much as liberal governmentality does not totalize the actions of individuals, sufficiency governmentality does not define the limits of human conduct in its entirety – but leaves it to the individuals themselves to manage their consumptive behavior.[23] With these similarities at hand, **I argue that sufficiency governmentality can be regarded as a remediated form of liberal governmentality**. This becomes even more intelligible if one remembers the quote by Dean about Foucault's special understanding of liberalism:

> *"For Foucault [...], it is a polymorphous and permanent instrument of critique which can be turned against the previous forms of government it tries to distinguish itself from, the actual forms it seeks to reform, rationalize and exhaustively review, and the potential forms it opposes and whose abuses it wishes to limit. This means that the key targets of liberalism can change according to the circumstances in which it is located."* (Dean 1999: 49)

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[22] It is important to note, that the two technologies of sufficiency are applied in very different locales (household, school, office, neighbourhood), while they change existing subjectivities and create new ones at the same time (the worker, the student, the gardener, the repairer).

[23] Interestingly, the techniques of security do not intervene if the individual decides to use her freedom in an "irresponsible" way. If the individual finally decides to fly to New York, nothing would stop her, there would be no "climate police" at the airport counter, but she would know about the consequences of her action and try to rectify them as soon as she comes back.

Throughout their problematizations, all authors criticize something which can be called "consumer liberalism": the idea to have the freedom to consume, regardless of the consequences for other people in a different place and time. It is this understanding of liberalism that the authors detect in the form of contemporary government: markets have to be expanded to create ever more revenues and income to spend on material goods for personal satisfaction, which again feeds the markets, and so forth – a dynamic with devastating ecological and social consequences as consistently pointed out by the authors. Thus, they critique this form of government, and the liberal governmentality behind it, for being "insufficient" to be viable for future generations. What is needed, then, is what Schneidewind and Zahrnt call a "true" or "enlightened liberalism" (2014: 22, 23): to guarantee the maximum degree of freedom to everyone on the planet, including the yet-to-be-born. **It is the unintended effects of consuming without limits that make the authors extend the liberal rationality from the present time to the future and from the national domain to the global one.** As a result, the conduct of individuals who live here and now needs to be conducted in novel ways. This is the reason why climate change functions in the discourse of sufficiency as an event that made it necessary as much as a problem that it attempts to solve. And I argue that it fulfills another, even more fundamental role – which becomes clear if one asks the question what the techniques of security are actually securing in the case of sufficiency governmentality.

As Foucault has stated in his lectures about liberal governmentality, it is the processes of the population and the markets that attain a natural quality and force government to be as frugal as possible when interfering with them. Niko Paech provides two quotes that suggest that this does not apply to sufficiency governmentality anymore. First, the process by which well-being is accomplished through practices of creative subsistence "can neither be expressed as monetary added value, nor is it compatible with what we understand by the term economy" (Paech 2012: 9). And on another page: "Buying less and instead organising more together with others, exchanging, using or producing, means reintegrating the social aspect into the economic sphere." (id.: 134). This implies that the social and the economic are not distinctive spheres anymore but merge into a single one. Markets, which have an authority-like character in liberal governmentality, loose this function completely. But lose it to what? I argue that it is the **ecosphere** that takes over this role of a second domain against which government must be tested – a *sui generis* that is defined by planetary objects and tendencies that must be respected by everyone; by those who are governing as much as by the governed. **The atmosphere and climate change as a fact appear to be the most important elements of this domain**: the possibility to increase the warming of the globe beyond 2°C in 2050 is "ruled out" completely, by all authors. Thus one can speak of this form of conducting the conduct as a **reflexive form of climate government**. It is less the climate "as such" that becomes an object of government on which a new rationality and technology are applied – but the mundane aspects of human life that need to be reconsidered and shaped by a new governmentality. This involves to reconfigure social and economic structures in order to leave the dependence on capital-accumulation and the materialistic conception of self-fulfillment.

I would like to end with the metaphor of the "crystals of power": indeed it was a "change in climate" that melted the crystal of the "program of escalation" – including its elements, the *homo consumens*, the "further, faster, more", the markets, the subsidies. And it was only through a new act of thinking that the crystal of the "program of reduction" is re-constituting – including the *homo sufficiens*, the "always less", the gardens, the existing things. The future will tell if it ever will take a solid form and find its way into new conditions of possibility.

6. Conclusion

„Alltid lite mer..." ICA Maxi

> *"An analytics of government is thus in the service not of a pure freedom beyond government, or even of a general stance against domination (despite some of Foucault's comments), but of those 'moral forces' that enhance our capacities for self-government by being able to understand how it is that we govern ourselves and others."* (Dean 1999: 37)

As I hope to have shown with this thesis, it is with climate change that new discourses enter the political space and start to reconfigure its elements. In this conclusion, I would like to take the thought experiment of sufficiency one step further by returning to my initial puzzle: *how can government be organized in a warming world?* What *if* the programs by Schneidewind/Zahrnt, Paech and Welzer were actually realized? Would the sufficiency governmentality create less power that dominates us or would the power be just of a different kind? And if the latter holds true: is power understood in this way a more preferable one?

Indeed, if these programs were implemented one-to-one (which can never take place, but let's stay hypothetical) it would decrease the exploitation of metals, the mobilization of energy and the emission of carbon to a degree in which living as much as governing becomes extremely difficult. It would ease or even diminish the situations in which power is working on individuals today, be it in school, the work place, the household – because these locales would be transformed to cope with the goal of total reduction. And then there would be new dynamics of power: a major body of taxation, new world views that are forced upon students, the self-surveiling of CO_2 emissions. Certainly, these measures would create conflict – how would the Mustang enthusiast, the Moroccan traveller, or the 150 m^2 mother react to, what they could experience as infringements of their individual freedoms? Passively at best. The programs of reduction, of deescalation would let humans experience another form of power, because government always requires to *make subjects*. In a way, these programs would shift power relations, not transcend them. As Foucault has vigorously shown, power always produces truth, and a sufficiency governmentality backed up by disciplinary and sovereign power would not be an exception to this.

One might object that such a program does not need to be realized in a radical top-down manner. And that the core of a sufficiency governmentality would be two technologies of the self that channel power in different ways: by re-balancing one's needs and by self-furnishing one's demands. For many individuals, it might be more desirable to practice these technologies on themselves than to continue to experience contemporary power, in the form of the acceleration, globalization, commercialization and cluttering of their everyday lives. And even more people might join this kind of self-government if it was not achieved with "unin-

tended" power effects of large-scale reforms. This is one reason why the stories provided by Welzer, Giesecke and Tremel are so interesting to listen to: they illustrate how orientations of sufficiency and practices of creative subsistence have been developed independently in different sites but always on the local level, and through the interaction with others. In other words: they narrate situations in which power works less individualizing and less centralizing through the state, because the governing and self-governing of people, the conduct of conduct, is achieved *in the most direct way possible*. Being member of a food cooperative and subject of collective deliberations, labor splitting and a regional economy, *is* experienced differently than being a customer at a supermarket (like ICA Maxi) and subject of marketing strategies, waged labor and the GDP imperative. And *more positively* in a lot of instances, otherwise local food initiatives would not experience such a renaissance in recent time.

It would have been interesting to know what Michel Foucault had said about a discourse like sufficiency if he was still alive. Maybe he would have recognized elements of his own late work on "the care of the self" as an ethical project and "the aesthetics of working on the self" in it (see Death 2013: 86 for a similar discussion). Foucault might also be interested in another aspect of sufficiency: the way it critiques and resituates the Enlightenment and the idea of progress through the environmental or climatic lenses. It is especially because of this turn of perspective why I believe that History and especially Environmental History should pay their attention to these discursive articulations. If climate change has become a condition of late modernity, which we moderns can neither moderate nor live with (see Hulme 2014: 302); and if the belief in the "power" of markets, technology and democracy for solving it is "a dysfunctional relic of the Western experience of industrialization" (see Welzer 2014: 21, quoting Nair 2012) – then is not every attempt of climate government that is entrenched in this ideology doomed to failure?

The three authors of the books examined in this thesis argue in this particular way. And it is, according to them, precisely *sufficiency* which eases this predicament. Harald Welzer diagnoses that "progress is not progressing anymore" (Welzer 2014: 15) and that "the path to a reductive modernity […] can only be one in which post-growth strategies, traditions of enlightenment and meaningful use of technology are combined in smart, often unexpected ways" (Welzer et al. 2014: 6). In a similar manner, Niko Paech highlights that "[strategies of omission] undermine a cramped view of the world that knows only progress and the conquest of further freedoms, so that the response to the consequences of removing restrictions is the removal of further restrictions" (Paech 2012: 133). Moreover, Uwe Schneidewind and Angelika Zahrnt assert that sufficiency means "correcting the balance [which] is not about abandoning the impressive historical gains in productivity, but about a new communion of productive progress and frugality" (Schneidewind & Zahrnt 2014: 14f.). All these quotes tell us that sufficiency does not only try to remedy liberal governmentality but also new ways to perceive and experience the last 200 years of civilizational upheavals. Indeed, like the discourse of post-growth in general, sufficiency is of a historical character by drafting a normatively loaded path from the past to the future (see von Thadden 2014: 5). In more concrete terms: climate change is about to stay, and thus modernity needs to leave.

Where does this leave us? And where am I, the political scientist and soon-to-be-graduated environmental historian? The ethos of governmentality studies might point to a direction that is worth exploring in order to gain the capacity to act upon that discovery. Because sufficiency does not only reveal the ecological blind spots of the Western self-image but also holds examples of counter-stories and counter-practices, it is possible to cultivate what William Walters calls a *political genealogy*: to "look for historically tested but perhaps long forgotten practices and ask whether they might be reactivated and put to use in the pre-

sent" (Walters 2012: 149). This implies understanding the past as a reservoir of ways of conducting ourselves that have been left behind – but that can be "refurbished" for the sake of climate change. However, how can one know and assess if a technique of government is suitable for a warming world? How can one recognize the usefulness of introducing tariffs on imported textiles, empowering the knowledge of herbal lore or banning plastic out of grocery shops? William Walters gives an answer to this as well: "Governmentality doesn't tell us what to struggle for or against. But it does teach us that nothing worth fighting for, no form of political life is gained or sustained without practice." (Walters 2012: 150). To live with climate change, then, means to start shaping modernity by doing, *doing good*.

7. Summary

Recent years have seen a rising critique against economic growth as a social and political goal and against consumptive practices as a source of individual well-being. The discourse of "sufficiency" asks to limit industrial production and consumption to "where it is enough" and develop an appreciation of the existing and individual autonomy instead. This should lead to qualitative happiness and ease the pressure on climate change, planetary resources and future generations. Over the last 25 years, the climate has become the object of various attempts of government, including national reduction plans, emission trading schemes and individual carbon managing. These programs of government have raised the attention of scholars who scrutinized the rationalities and technologies behind these efforts, in other words their "governmentality". Given the public task of finding novel ways of organizing government in a warming world, I have scrutinized three books on sufficiency through the lenses of governmentality. This enabled me to trace the ways climate change is construed and represented as a problem, as well as the ways of acting upon it in order to solve it.

Michel Foucault coined the term "governmentality" during two lecture series in the late 1970s. "Government" meant to Foucault to "conduct the conduct", to shape the behavior of individuals, groups, states and even the self. By tracing the history of "the art of government", the philosopher illustrated how particular mentalities have been invested in the process of governing, and gave rise to modern statehood and modern subjectivity. Starting from the Ancient until his present time, Foucault highlighted four forms of governmentality which can be regarded as ideal types: sovereign power which draws on violence, law and taxation; pastoral power which works through deep knowledge about individuals and through their conscience; disciplinary power which tries to totalize human behavior towards a specific norm; and liberal governmentality which allows more freedom to individuals but also requires them to act responsible within these boundaries.

In the later part of his lectures, Foucault becomes increasingly interested in how particular thinkers like the physiocrats or the British liberals question previous ways of government and develop new ways of understanding and acting in order to rectify government. To study this process of problematization is key to trace how new governmentalities emerge: first, existing ways of government lose their coherence and familiarity due to historical events; second, the conduct of humans needs to be remediated by recoding and rearranging previous governmentalities; and third, this new governmentality seeks to work on subjects in a certain way to achieve its objective. I argue that these three processes can be well-examined through an analytical framework by Mitchell Dean which focusses on four dimensions: the fields of visibility, knowledge, technical means and identities of government.

In the history of anthropogenic climate change, one can distinguish a number of governmentalities that have been developed: disciplinary power binds nation states together to reduce their individual greenhouse gas emissions; sovereign power introduces carbon taxes and is present in plans to engineer the climate; liberal governmentality creates the market conditions under which companies can trade emission certificates; while a recent neoliberal governmentality forges subjects who manage their individual carbon budget by using carbon footprinting, off-setting or dieting. I argue that some of these forms of government lose their

coherence in the sufficiency discourse, while others reoccur, albeit following another logic because their governmentality is transformed.

As objects of my discourse analysis I have chosen three books by leading advocates of the idea of sufficiency in the German (speaking) debate. All three of them conceive programs of government that try to remediate the conduct of people, which is indicated by the book titles: Uwe Schneidewind and Angelika Zahrnt speak of *The Politics of Sufficiency. Making It Easier to Live the Good Life*; Niko Paech proposes *Liberation from Excess. The Road to a Post-Growth Economy* and Harald Welzer, Dana Giesecke and Luise Tremel present the *Future Almanac 2015/16. Stories of the Good Dealing with the World* (translation MD).

The results of my analysis indicate that the authors share a certain line of problematization: a whole set of macroeconomic government has been aimed at fostering the consumption of individuals by expanding markets into new domains, externalizing social and ecological costs and creating the expectation of "further, faster, more". The oil crisis, the financial crisis of 2007 and climate change represent destabilizing events for this form of government. Over decades, it led to ever-high carbon foot prints in early industrialized countries, the exploitation of resources and possibilities of other people, and stagnation or even decrease in well-being. Attempts to solve these problems through the Green Economy are strongly rejected by the authors due to the existence of rebound effects, while Welzer also criticizes the Kyoto protocol and carbon trading schemes for not bearing any considerable reductions.

As a "sufficient" response all authors develop the goal of reducing the demand of energy and resources by about 80% until the year 2050 in order to stabilize global warming at 2°C. This reduction becomes possible because happiness research shows that satisfying the most elementary human needs only requires a limited amount of material resources, making it possible to find a universal "enough". The authors differ in some of their prescriptions of how to achieve this goal, while a strong emphasis lies on disciplinary techniques like the teaching of craftsmanship or the CO_2 labelling of products, and on sovereign techniques like ecological pricing, the redistribution of worktime or the banning of planned obsolescence. Finally, these policies should enable the self-government of individuals by cultivating two "technologies of the self" in a free way: the virtues of sufficiency (asking "what do I need?" and "how do I want to live?") and the practices of subsistence (to grow food, build, repair for oneself and exchange with others). It is exactly through the fostering of these technologies inside the subjects that they can be guided towards qualitative happiness and the total goal of reduction. In addition, Paech also suggests the CO_2 footprinting and managing by individuals, so that they can monitor their personal bit to that mission.

It becomes clear that this "sufficiency governmentality" represents a remediated form of liberal governmentality. The authors conceive techniques that allow individuals to act responsibly inside the material and atmospheric limits of the planet. These boundaries can not be overstepped any longer without diminishing the freedoms of humans who live in other places or the yet-to-be-born. In this way, it is not the economy and its markets from which government needs to refrain from, but the ecosphere and the global climate. In conclusion, it can be said that the sufficiency governmentality does not produce less power effects but different ones, with new conflicts to be expected by the ones who are subjectified. However, there exist people who have already started to cultivate the two "technologies of the self" by choice, which entails a less centralizing and individualizing working of power. Moreover, sufficiency opens up the space for political genealogy: by deconstructing the idea of modern progress, the past becomes a reservoir of forgotten practices that can be reactivated to deal better with a warming world.

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