

Structural and Individual Obstacles in Delayed Institutional Adaptation and Implementation of Environmental Policies

Environmental Procrastination – Save the World Another Day

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Abstract:

While evidence for man-made Climate Change has continuously increased, we witness insufficient changes in governmental policies. In many countries, even popular support for Green parties has decreased. This phenomenon reminds on an individual level of the psychological concept of procrastination. To overcome this problem, it seems necessary to broaden our understanding of this phenomenon and develop toolkits for dealing with it. Therefore this study highlights the impact of delaying environmental adaptations, aims to integrate them into the existing framework of Transition Theory and ultimately transfers coping mechanisms from an individual to a structural level.

In analyzing current literature, I synthesize two theories of the individual concept of procrastination and the structural level of changing institutional behavior, with a particular focus on measures that can be scaled up. This is later compared to the empirical observations, for which this thesis seeks to quantify environmental procrastination for the German federal elections of 2009 and 2013, focusing on the electoral campaign of Bündnis 90/Die Grünen, by quantitatively and qualitatively assessing the party's electoral program and advertisement campaign. The strategic decision to decrease the presence of Climate Change in the electoral campaign in 2013, despite the growing urgency of the problem, is found to resemble procrastination both on a structural and individual level. This mirrors previous delayed adaptations in German politics in general and by the Greens in specific.

Comparing with existing environmentalist strategies, potential theoretical areas for solutions and specific existing practical mechanisms are identified and possibilities for improving current policies tackling structural inaction are analyzed. Possible solutions include an increase in vividness of environmental consequences, reconsidering the implications of political pragmatism vis-à-vis a stricter set of ideological rules and lowering the thresholds for mobilization by decreasing opportunity costs of individual decision-making. It is concluded that the inherent irrationality of some human (in)actions deserves stronger attention in environmental activism and that procrastination is a valuable framework for future research in this field.

Keywords: Climate Change, Behavioral Economics, Strategic Delay, Transition Theory, Environmental Psychology, Political Inaction

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1 Introduction – Saving the World another Day

Humans are complex and puzzling. We often don't do what is arguably best for us. This is particularly evident in current responses to Climate Change. We are dangerously close to exiting the safe operating space set through planetary boundaries, yet have so far failed to take the necessary countermeasures (Rockström et al., 2009).

Sometimes humans don't only violate their externally assumed rational interest, but even their genuinely expressed self-interest. This phenomenon is called procrastination. The political inaction towards Climate Change has occasionally been compared with procrastination in science and media (Mills, 2012; Malott, 2010). Some go as far as to ask if future generations will look at this epoch as 'The Great Procrastination', a period of delay and half-measures (Lemery, Williams & Farmer, 2014). The aim of this thesis is to investigate whether this comparison holds true and if we can better understand political processes, and thereby ultimately improve them, if we include psychological studies on the irrational delay of action into systems theories.

The newest Intergovernmental Panel on Climate Change (IPCC) report states with very high confidence that adaptation to climate change is constrained by social and cultural factors linked to values, world views and behavior (IPCC, 2014c). Many of their sources extensively deal with institutional, cultural and value differences, which reduce our potential for adaptation and transition (IPCC, 2014d). They critically assess the harms of an intuitive, emotion-based decision-making, as it inherently tends to prioritize short-term outcomes (IPCC, 2014d). In the core of my master thesis I agree with this observed negative outcome of currently dominant decision-making and find them to be in line with what procrastination theory would make us expect of human behavior when deciding on climate change policies.

However I am skeptical to which degree the proposed alternative metrics through expected utility theory, cost-benefit analysis or cost-effectiveness analysis (IPCC, 2014d) are a sufficient answer to the underlying problem. This thesis aims to illustrate why rational knowledge of climate change and even the genuine motivation of dealing with climate change are not fully sufficient for achieving real change, particularly not within the constraints of having to remodel a complex socio-economic system in order to do so. It is valuable to be aware that an ever-increasing number of rational arguments does not inherently lead to improved decision-making and on the contrary might stifle change, if actors strive for optimization of possible solutions as a substitute for taking action. (Haghbin et al., 2012)

Existing research often assumes rational actors with conflicts of interest that are difficult to reconcile. While this is true in many cases and particularly in international negotiations, it seems to neglect some psychological components of our actions, most notably when we fail to engage in environmental policies despite our better knowledge, potential and will. To me, putting procrastination into the spotlight of research adds this additional layer of complexity that might improve our understanding and subsequent dealing with environmental transitions.

Environmental activists need answers to what type of political and societal structures they want to shape to adapt to Climate Change, but they also need plausible strategies how to achieve an active consensus among stakeholders and broader society. Incorporating measures against procrastination into a toolbox with a variety of other variables means answering to the humanity and thereby fallibility of the actors involved. Through this thesis, I hope to show that this effect is relevant in environmental policies and deserves a deeper integration into theories dealing with how we create change in complex socio-economic systems.

1.1 Scope of Study and Scientific Contribution

While the scientific knowledge about Climate Change grows immensely, the societal and political responses trail behind, which is in itself deeply fascinating and problematic. Moreover, public attention for the issue more paradoxically seems to decline. As is Climate Change itself, the solution to it needs to be man-made, meaning that a deeper understanding of the human drivers in this context is necessary. Researching deeper into the signs of delayed institutional change and the, for me, counterintuitive ways institutions and individuals deal with the issue, reminded me increasingly of the psychological phenomenon of procrastination, which then became the focus of my thesis. Apart from this general impact and urgency of the question, I have two personal motivations for this field of research.

Firstly, Green Politics in Germany is something I deeply care about, having been engaged for several years in different green groups and working for three months as an intern in the German parliament. A better understanding for these existing structural elements, while the institutions themselves can and should of course be critically assessed, seems necessary on both a universal and personal level to increase the impact of environmental advocacy in Germany.

Secondly, I have struggled myself to a large degree with procrastination and while researching the question further, discovered the significant scale on which this phenomenon effects societal and personal progress. While the concept itself has gained popularity and attention, a proper understanding of its underlying drivers has not necessarily followed(Stroud, 2010). Aside from understanding the origins of procrastination, large part of the literature focuses particularly on how to overcome the loop of constant delays. Looking at a finally completed version of this thesis suggests that, at least for me, some of those mechanisms worked.

Because of these underlying motivations, the methods used in this thesis are both theoretical and practical.

On a theoretical level, Sustainability Science is increasingly acknowledging the need to embrace transdisciplinary methods and began, amongst many other fields, to include psychological concepts into their research. (Lang et al., 2012) However existing research on procrastination in particular is most commonly associated with the individual level, with its consequences naturally extending to environmental issues, as in delayed personal investments, i.e. profane sounding yet elementary tasks, such as delaying to change to a less energy consuming fridge(Malott, 2010). Influenced by the methods of Grounded Theory, this thesis seeks to bridge some of that gap by including analysis on the delaying nature of political and societal structures surrounding institutional transitions. Consequently, a significant part of the thesis is focused on linking Transition Theory with psychological theories on Procrastination.

On a practical level, some analysis will be done on the applicability of the theory to current politics, focusing on the delayed application of environmental institutional change in the case of Germany. Lastly, possible solutions on individual and group level are transferred to the problematic in Germany and discussed concerning potential impacts.

Clearly, the impact of a master thesis shall not be overstated. The theoretical framework created within it and the practical impact of suggested solutions is naturally limited by the possible amount of analysis. A large part of this initial research lies in identifying the right questions to ask and pathways to pursue on an academic and practical level.

1.2 Research Questions

For my thesis, after initial study of theories and some data points, I have identified two main questions.

Research Question 1: Do German environmental politics display signs of 'environmental procrastination'?

Research Question 2: Which mechanisms could reduce 'environmental procrastination' on an individual and structural level?

2 Methodology

In order to answer these questions a theoretical framework and definition of 'environmental procrastination' is necessary, which will be analyzed in chapter 3 of this thesis. The creation of this framework will follow ideas of Grounded Theory. Through a second step, i will utilize a mixed method approach by adding elements of qualitative and quantitative research to determine whether the phenomenon of procrastination can indeed be applied to German Climate Change policy. Building up on these results I will discuss the transferability of possible solutions from procrastination literature into German political practice.

2.1 Combining and Creating Theories

Different methods exist in social sciences and evidently, when dealing with human behavior it would likely be flawed to follow a naturalistic approach to try and reveal law-like behavioral patterns (Moose & Knutson, 2012). Theories serve as tools for interpretation and understanding of real life problems and are useful, insofar as they achieve that goal.

As my goal was to add theoretical interpretations while building up on my previous knowledge and being flexible in adapting the focus of the research as I assessed more qualitative and quantitative data, I was influenced by the approach of Grounded Theory. Evidently, there is more than just one interpretation of how to conduct research according to this approach, which has evolved noticeably

since its introduction by Glaser & Strauss in 1967. However, several approaches share the principle of an initial observation and broad sampling of data and ideas, which becomes more structured as the study becomes more focused. The categories to code data are in itself analytic, as they are not only labels, but also conceptualizing key ideas of the data. (Dye, 2004)

Such a largely qualitative approach seems necessary, as the aim of my research is analyzing a complex social process and in the long-run aims to combine advocacy with research (Okay, 2012).

As argued by Mitchell (2014), a purely inductive research in Grounded Theory is hardly possible, given that the researcher is involved in the initial data collection and analysis, meaning that he or she necessarily relies on some theoretical assumptions, often with a specific framework underlying his research idea. I started the study with pre-conceived thoughts, beliefs and a particular interest in the topic, which naturally underlies every researcher's questions. (Mitchell, 2014)

For this purpose, it seems more transparent towards the reader to use a constructivist approach to Grounded Theory, which clearly states this theoretical framework and highlights how it affected his research questions and interpretation of data. I will therefore proceed in chapter 3 with a synthesis of existing research on transition and procrastination, while specifically analyzing my empirical finding in the light of a potential connection between those two concepts. The potential for succumbing to confirmation bias seems evident, although hard to avoid in this specific research area, and will be dealt with in more detail in chapter 5.3. on limitations of my research.

2.2 Empirical Research

Part of this research lies in compiling existing media analysis with a specific focus on environmental policies. This is complimented by analyzing quantifiable data on the relative importance of environmental issues. As with many value judgments on the importance or relevance of a particular discourse, this includes qualitative analysis, at the very least at the moment of characterizing and classifying the data. (Ragin & Amoroso, 2011)

I agree with Hanson et al. (2005), that a variety of philosophical paradigms are compatible with differing methods. Although my thesis does not follow a naturalist worldview considering the predictability of human behavior, some quantitative methods seem like a valuable addition to the theoretical and qualitative research of this thesis, as it undermines and quantifies an observed trend. While in its nature not a sufficient answer to my research question, they provide further evidence for

or against my theoretical observations and inform my interpretations. I therefore combined elements of different methodologies, in an attempt to transfer a Mixed Method approach used amongst others in applied psychology (Hanson et al., 2005).

Quantitative elements will be the following:

Bündnis 90/Die Grünen, the biggest green party in Germany, is identified as the key actor with the strongest conviction and political interest to pursue climate change in their electoral campaign. As an indicator for the most recent relevance and problem awareness inside the Green Party the campaigns of the federal election 2009 and 2013 are compared considering:

- a) The total number of pages and percentage of all pages in the electoral program that directly mentions or refers to climate change, including how prominently those positions are placed.
- b) The total number and percentage of all campaign ads that directly mention or refer to climate change, including the degree of demands they depict.

As an indicator of the broader political landscape, the time dedicated to climate change in the most prominent TV debates between leaders of the two biggest parties, CDU (Christlich Demokratische Union) and SPD (Sozialdemokratische Partei Deutschland) is analyzed. Given that growing certainty of the existence and extent of Climate Change as well as possible solutions, I assume that a rational response would be an increase in the focus on issues surrounding it. Subsequently, a stable or reduced impact of these issues in the political discourse would indicate at a possible influence of procrastination. In that case, neither of the described variables would be expected to grow.

I will now explain the underlying theoretical framework for this research.

3 Theoretical Framework for Institutionalized Procrastination

While partly influenced by the Habermas, as many modern theories aiming for a morally progressive future through elements of communication and reasoning (Reader, 2010)¹, my theoretical contribution relies mainly on combining the pillars of Transition Theory and Procrastination. Starting with the latter, three key questions need to be asked:

Why does procrastination exist?

Why is it particularly harmful?

How can it be tackled on an individual level?

3.1 Procrastination

3.1.1 *Origins and Drivers*

To 'procrastinate' originally meant to 'put something off to the next day' and in an academic context means delaying a burdensome or unpleasant task in a way that is not previously planned and harms the final intended outcome (Ainslie, 2010). According to Klingsieck's (2013a) definition based on previous research by Ferrari (1998), there are three distinct characteristics that differentiate procrastination from a strategic delay of a task.²

- a) The delay is unnecessary or irrational.
- b) The delay is achieved despite being aware of its potential negative consequences.
- c) The delay is accompanied by subjective discomfort or other negative consequences.

Firstly, many possible policies to combat Climate Change have not been enacted both globally and nationally, although we risk missing CO₂ emissions target, which are necessary to guarantee that we remain in a safe operating space. (SRU, 2011; Rockström et al., 2009)

¹ Interestingly, Reader refers to the environmental movement as an example for a successful transition movement, although admittedly in comparison to more static religious groups.

² This concept of a reasonable strategic delay of difficult decisions might very well also exist in an environmental context. Müller & Slominski (2013) point out benefits of loose initial agreements that while delaying key decisions, overcome initial gridlock which is likely to expand the agreement's influence later on based on new institutional dynamics.

Secondly, there is overwhelming evidence gathered through the Intergovernmental Panel on Climate Change (IPCC) over decades with by now an even broader scientific base and accessible knowledge of existing technologies and policies to reduce emissions (IPCC, 2014a).

Therefore, both a) and b) seem to apply in the setting for German politicians and to a large degree German voters, opting to not sufficiently address the problem. C) should intuitively apply, simply by virtue of the impacts Climate Change is likely to have, even for rich countries in moderate climate such as Germany (IPCC, 2014b). At the very least, it should be true for Green politicians, convinced of the value of this goal. In the context of this thesis, an initial step is therefore to look at their particular behavior and statements in advocating stricter Climate Change policies. This requires a further understanding of the concept of procrastination.

According to Ainslie (2010) procrastination represents a typical impulse: a ‘temporary preference for a smaller, sooner [...] reward, over a larger, later [...] reward.’ Unlike other negative impulses, such as gambling, drugs or unhealthy diets, procrastination is a more diffuse concept. As humans constantly make choices on which activities to prioritize and even within those activities can act with different degrees of attention and care, boundaries are difficult to draw (Ainslie, 2010). This increases the difficulty to use habits and behavioral rules, which are usually tried to govern unwanted impulses, as rewards for the impulse can be either too imminent or too vague to control by a rule system.

Traditionally this type of procrastination stems from the ‘undue salience or vividness’ of a course of action (Akerlof, 1991). Immediate rewards or discomfort are so much more vividly imaginable, if not already experienced, that they disproportionately outweigh future benefits, even if those seem more beneficial from a distant vantage point. Ainslie (2010) expands that idea, as even the most mundane tasks that don't include a particularly visceral imagination of either benefit tend to be affected by procrastination. It is therefore not only through a particularly conscious imagination of an act, but rather the expected discomfort of smaller actions. In its behavior, this still follows patterns of for example overeating, except that the focus is not on the short-term consumption of pleasurable acts, but in the short-term avoidance of unpleasant ones.

As a concept, this also provides a valuable distinction towards mere acts of hypocrisy. Unlike simply paying lip-service to a cause, procrastination means not following up on initial promises or expressed preferences despite an individual motivation to fulfill that preference. This distinction is possible, as our actions regularly misrepresent our preferences, particularly when they concern global, general courses of action. (Andreou, 2007)

The likeliness of procrastination tends to increase as the task at hand becomes more aversive, ambiguous, or difficult, or when the reward for task completion is small or temporally distant (Steel, 2007). The societal extent of procrastination is difficult to measure. Several studies on undergraduate students suggest that at least 50% of them procrastinate consistently more than they would wish to and that this effect is significantly more pronounced on large self-organized task such as academic papers, compared to weekly assignments or examinations (Cao, 2012). Unfortunately, exactly these types of large, unclear tasks are most realistically representing the problems that face students once they enter the job market, let alone become politically active.

3.1.2 Negative Consequences

As soon as procrastination affects not just academic papers of graduate students, or minor consumption choices, but directly influences through voters and politicians governmental policy, it creates a severe impact, to a degree that some philosophers consider it a vice (Baker, 2010). Some degrees of delay seem highly natural and unproblematic, showing an innate motivation to wait before engaging in behavior, even when being aware that the waiting period will not provide any benefits, except a longer time-span to come to terms with your own decision (Tykocinski & Ruffle, 2003). As soon as any additional waiting time significantly harms the success of your actions, as in countermeasures to Climate Change, this tendency become problematic, particularly given the exponential nature of costs for adaptive measures.

The negative consequences happen on two levels, individuals as well as groups of people. Traditionally, the psychological perspective is an individual suffering from his or her own inaction. However, from an economic perspective, even individual inactions, through the constant accumulation of inefficient use of resources (Ainsie, 2010), let alone the emotional and medical treatment costs of side-effects of procrastination already effect society (Rice, Richardson & Clark, 2012).

Furthermore and linked to political transition, procrastination supports potentially irrational obedience to authority. As Akerlof (1991) points out, individuals find a certain degree of disutility in

disobedience, meaning that if step sizes are appropriately chosen, individuals might escalate their behavior, both against their own interest or selfishly against others.³

These effects grow particularly through repetition. From an economical perspective, this means that even when individual decisions are close to maximizing utility and result in only small losses, a series of cumulative errors may have significant consequences (Akerlof, 1991). These can be particularly catastrophic when dealing with environmental problems (Andreou, 2007). Delaying or stopping the implementation of a specific environmental policy might be rationalized on each individual act and is by itself not making a meaningful difference to Climate Change, but as an accumulation of actions over time, inside a country or globally, it does. This is even more relevant if we add the perspective of individual decision-makers to the structures of transitioning political systems in the following chapters.

3.1.3 Individual Solutions

An unusually large portion of literature in this field of research from popular science to academic papers deals with ways of overcoming procrastination. One might assume this is somewhat self-interested, as academics tend to be among those most affected by the phenomenon (Cao, 2012). Given the wide range of quite personalized solutions, I will give a brief general presentation of common mechanisms to limit procrastination in this chapter and connect this information in more depth with the theories in the following chapter and with my research on Bündnis 90/ Die Grünen and specific environmental cases from the literature in my discussion in chapter 5.1.

Pre-Commitment is generally considered as a way for ‘present you’ to exert control over the potentially skewed rational calculus you are sure that ‘future you’ will make. Some Individuals overcome procrastination by creating punishments that are externally enforced if they fail to achieve a self-set goal until a certain date (Ariely & Wertenbroch, 2002). This can be scaled to a structural level. If law makers are aware of procrastination tendencies in their constituencies or future parliamentary decisions, these mechanism can be integrated in the initial law.

³ Akerlof references the Milgram experiment in 1975 that made subjects gradually willing to administer high level electric shocks, rather than to resist authority. Similar mechanisms could be applied to environmental scenarios through gradual expansion of how much environmental destruction or exploitation we are willing to accept, if we are slowly enough eased into making moral concessions.

Andreou (2007) cites the US federal clean air laws, which not only set future deadlines for air quality goals, but also sub-deadlines that require the submission of plans on how to achieve those goals in a timely manner. These mechanisms are helpful, as they increase immediate costs of unwanted behavior. By implementing a codified sanctioning mechanism, failure to act does not result in harm when eventually and foreseeably failing a goal, but already when currently failing to formulate appropriate plans to reach the goal (Andreou, 2007).

It is furthermore possible to use nudging or other structural measures that harness procrastination, as they make options determined as preferable less complicated to obtain and thus subconsciously creates a new default modus of action (Akerlof & Kennedy, 2013). Actors can level the playing field of action versus delay for their future self or other individuals by either complicating a course of action that is identified as harmful or at the very least preventing the actor from staying in the status quo. Once decision-making, independent of outcome, is forced upon individuals, the threshold of making a decision at all has been taken and making a rational assessment of possibilities becomes more likely (Ainslie, 2010).

Another possible solution are so-called 'bright lines', clear distinction to prevent the rationalization of behavior. They represent definitions, which type of special circumstances allow a deviation from initial plans or political ideals, and thereby increase the likeliness of upholding those principles (Ainslie, 2010). The clearer this line can be drawn, the easier it becomes to uphold them, which Ainslie (2010) exemplifies by the relatively high number of smokers and alcoholics, who when willing to reduce their harmful impulse do so most successfully by no consumption at all, whereas more diffuse lines, as the reduction of overeating, see significantly lower success rates.⁴ While potentially arbitrary in nature, these concepts are confirmed vis-a-vis particularly successful ideas in Germany, such as the anti-nuclear movement and the increasing number of vegetarians and vegans (Meier & Christen, 2013).

It seems to me that pragmatism, hailed as a virtue in modern society and particularly in current politics, runs directly counter to this idea. Despite the evident advantages of pragmatism, it is worth noting that through the lens of procrastination theory it further shifts the weight in decision-making towards short-term gains and potentially entails a tacit acceptance of a broader set of values than initially expected or intended (Lo, 2012).

⁴ In the studies quoted by Ainslie, around 50% of alcoholics successfully stop alcohol consumption, whereas only 5% of overweight dieters achieve long-term weight reduction.

3.2 Transition Theory⁵

To complement the more individually focused procrastination research on a structural level, I've chosen Transition Theory, as it fits both the political development of changing priorities within German political parties (Elff, 2012; Green, 2013) and the discourse surrounding it. Therein, many actors themselves chose the framework of political transition, either in general Climate Change policy, in Germany largely associated with an energy transition, (Mez, 2012) or in the most recent electoral campaign of Bündnis 90/Die Grünen (2013b), headlining the slogan 'Grünen Wandel', i.e. 'Green change' or 'Green Transition'.

Transition Theory describes how those changes evolve and as an approach tries to reconcile structural constraints and individual influence on shaping changing systems. Having started by historically analyzing systematic changes through inventions, such as the gradual evolution and success story of the bicycle, it is increasingly applied to environmental problems. (Geels, 2005)

Elements of the theory referred to as Multi-Level-Perspective (MLP) characteristically involve three analytical levels within socio-technical systems: First of all, the *niche*, which forms the micro-level and is the locus for radical innovation. Niches are protected spaces such as laboratories or subsidized projects, and they include actors such as entrepreneurs and scientists. Niches are crucial for transitions, they are the 'incubation rooms' – because they provide the seeds for systemic change. (Geels, 2011)

The second level is the socio-technical *regime*, which is the locus of established practices and rules that stabilize systems. The regime forms the deep structure of sociotechnical -systems and it is characterized by a lock-in, meaning the established regime consistently reinforces itself. The third and highest level is the socio-technical *landscape*, understood as the wider context that influences niche and regime dynamics (Geels, 2011). It is 'the technical and material backdrop that sustains society', enhances some actions while inhibiting others and is quite static and resistant to change (Geels & Schot, 2007).

Each level refers to a 'heterogeneous configuration of elements', with increasing stability from the micro-level up, and all levels are governed by certain regulative, normative and cognitive rules that coordinate action. With respect to these three levels, transitions are defined as shifts from one regime to another. The regime is therefore the primary level of interest, with niches and landscapes

⁵ Parts of the descriptions in chapter 3.2 are built on previous research inside my LUMES courses conducted together with Hrönn Guðmundsdóttir, who I'd like to credit for her valuable analysis.

seen as derived concepts and defined in relation to the regime as practices or technologies that differ from or underpin the established regime. (Geels & Schot, 2007)

A defining element of MLP is that it does away with simple causality in transitions, emphasizing that there is no single cause or driver of change but rather that change comes about through processes in multiple dimensions and at different levels (Geels, 2011). For this reason, Geels claims that MLP has more potential of analyzing transitions than other theoretical frameworks, as it acknowledges the complexity of the task. There are many possible paths environmental innovations can follow and the ultimate aim of MLP is to understand how these innovations can replace or reconfigure existing systems. Developments at the niche-level or in the landscape can exert either stabilizing or disruptive effects on the regime. Their combined effects therefore need to be taken into account. Geels (2004) also makes the distinction between 'systems (resources, material aspects), actors involved in maintaining and changing the system, and rules and institutions which guide actor's perceptions and activities.' The interplay between these three aspects of a system decides the direction of development. Geels and Schot (2007) suggest four different transition pathways: transformation, reconfiguration, technological substitution and de-alignment and re-alignment, each of these characterized by different relationships between niches, regimes and landscapes. These pathways are not deterministic and they do not fully predict the sequence of events during a transition period, but they can be used as tools to understand how different contexts, e.g. interplay between actors and rules, provide different drivers for change.

In the literature, transitions to sustainability have been referred to as socio-technical transitions, as they involve definitive transformations in the socio-technical system, defined as a cluster of social and technical elements such as technology, infrastructure and cultural meaning (Geels, 2005). Such a restructuring does not happen overnight, but is a complex, long-term process comprising multiple actors (Geels, 2011). From the multi-level perspective, transitions are non-linear processes that result from alignments between developments at multiple levels (Geels & Schot, 2007; Geels, 2011); it is a gradual, continuous process of change which results in the transformation of the structural character of society (Rotmans et al., 2001).

To understand transition, it is vital to uncover the mechanisms that provide stability. Geels (2004) discusses rules, cognitive, normative and regulative, as the stabilizing deep structure of socio-technical systems. Cognitive rules are shared belief systems and expectations or scientific paradigms as well as competencies and knowledge that have sunk investments in the system as it is. Thus,

cognitive rules can guide people, such as engineers and scientists working on energy solutions, onto certain paths and make them 'blind' to alternative routes or practices and contribute to path dependency. From a procrastination perspective, they become the most convenient and therefore default mode of operation. Normative rules represent cultural values and norms and the role perceptions and expectations of proper behavior embedded in socio-technical systems (Geels, 2004). They influence and guide policy-making and scientific procedures. Regulative rules also contribute to path-dependence and lock-in by favoring existing technologies or practices through subsidies or through legally binding contracts. Networks of actors and organizations might also suppress innovation and change, as they have vested interests in the status quo. Furthermore there is an inherent rigidity in socio-technical systems, such as material infrastructure, power grids and established energy companies, which make drastic structural transformations less likely as they would undermine sunk investments.

Given these barriers to change, how do radical innovations emerge? According to Geels (2004), the notion of tension and mis-alignment are important to understand transitions. Those can open up 'windows of opportunity' for the breakthrough of new technologies or new ideas. Tensions and mis-alignments might be traced back to internal problems within an established regime, changed user preferences when negative externalities such as environmental impact become too evident, or to changes on the landscape level itself, e.g. when broad cultural changes take place or new values emerge. Typically, the regime will act as an inhibiting factor and fight off novelties developed in the niches – they are the real center of change, but they are also the main barrier (Rotmans et al., 2001).

Particularly for sustainability, the functioning and willingness to cooperate in these, often governmental, institutions is crucial (IPCC, 2014c). Today, we face a reality that calls for a radical transition towards sustainability. This is a goal-oriented, purposive transition, where private actors have limited incentives to act as the goal is related to a common good, sustainability, and as it often does not offer obvious user-benefits (Geels, 2011). Furthermore, the domains where radical change is most urgently needed are well established, such as the energy sector and the food industry, and governed by large and powerful firms that try their utmost to defend existing regimes. However, they can also accelerate change given the right circumstances and incentives. From all of the above it is obvious that a transition to sustainability involves interactions between technology, policy and politics, economics, business, markets, culture and public opinion.

As theorized highly influentially by Luhmann, Individuals act within systems, both shaping and being shaped by them (Moeller, 2006). In the particular context of Transition theory, the network-like character of many transition movements and activist groups should encourage us to look deeper into the psychological effects on these group processes (Farías, 2014).

3.3 Connecting the Dots – Delayed Institutional Adaptation

Germany faced a widespread call for alternative and renewable energy sources since the 1960s and definite steps have been taken in the quest for sustainable energy. However, a real transition requires deep structural changes and an overall configuration of our energy system as a whole (Geels, 2011). Policies such as the Erneuerbare-Energien-Gesetz shaped both the market structure and technological development (Bechberger, 2004). The prioritization of renewable energy sources and fixed feed-in tariffs were particularly beneficial for small investors, as it guaranteed them free market access and a reliable source of income (Gawel , Strunz & Lehmann, 2012). Through this form of subsidization it changed the main economic framework which normally benefits large firms and prevents niche technologies from growing, up to a critical level to start a reinforcing loop (Geels, 2011). It thereby broadened the ‘protected space’ of renewable energies to a larger scale of practical application, which then allowed the niche technology to have a wider acceptance and create a more unified dominant model. In the case of Germany this enabled the emergence of a decentralized production of renewable energy involving a comparatively large number of private actors (Gawel, Strunz & Lehmann 2012).

Since its introduction however, it is regularly criticized for a lack of adaptation to changing conditions in energy production and political environment. Many other policy fields show significantly less progress (Gawel, Strunz & Lehmann, 2012). Procrastination can affect the described transition process on all three levels. It characterizes both the avoidance of decision-making and undue obedience to authority, but also continued pursuit of actions and behaviors despite better knowledge (Akerlof, 1991). In other words, it is a strengthening factor among the elements that consolidate societal agreements on a regime and landscape level or prevent niche actor from seeking to emerge in the first place.

Klingsieck (2013b) introduces the concept that procrastination is domain-specific, meaning even for an individual person, it is more likely to occur in specific life settings. We might therefore assume that an effective transition process is more difficult in areas that are prone to procrastination. To

clarify this idea, I set up criteria describing those situations based on the previously analyzed literature. Transition processes prone to procrastination circle around the following key elements:

- a) Costly in the short-term, although beneficial in the long-term
- b) Consequences are distanced and difficult to vividly imagine for individuals
- c) Imprecise in target goals and mechanisms to reach those goal
- d) diffuse in regard to boundaries between acceptable and harmful behavior

The transition process towards a more sustainable future indeed seems to suffer from all of these factors.

a) Reducing emissions requires significant structural changes and thereby costs for stakeholders in large industries and energy production (Barrett, 2009) in addition to opportunity costs of having to stop certain exploitative practices (Andreou, 2007). Those actors have strong personal incentives to resist these transition processes, while individuals might fear costs being passed on to them through higher energy and product prices. Indeed, large groups inside the German energy sector try appealing to this aspect in advertisement campaigns, most notably through the neoliberal think-tank Initiative Neue Soziale Marktwirtschaft (INSM, 2013). Decisions against implementing these environmental policies regularly stem from a high priority given to the status quo and short-term decision making.

Additionally, the procrastination framework provides us with the notion of an inherent cost in making a decision to change in the first place. A large degree of institutional mechanisms also work through the habits of people living within the system. Just as much as the incentive structures to change behavior needs to be positive, the cost of changing behavior itself needs to be reduced (Eriksson, 2008). Similarly, the complexity of a system might be detrimental to the ability of individuals to maintain its sustainability (Valentinov, 2014). This becomes evident in scenarios where individuals prefer all proposed alternatives to the status quo, yet consistently delay choosing either (Andreou, 2007). Some governmental institutions find it difficult to pursue adaptation efforts as different options and preferences conflict for individuals and stakeholder groups within the community (Measham et al., 2011).

Therefore external shocks can provide necessary conditions to challenge habits, as previously used strategies are no longer possible or changed significantly enough in their properties that they are perceived as a substantially enough new choice (Andreou, 2010), while once they have allowed some degree of policy change they can create new pathways by strengthening more sustainable

production forms (Aklin & Urpelainen, 2013). Once a decision has to be made, it might as well be the most efficient one.

As Geels (2011) points out, sustainability transitions are different from many traditional transition periods, as they are not emergent, meaning eventually appearing from the societal change caused by the success of a specific form of production or policy, but purposive, i.e. specifically created to address an existing problem. This means that the initial threshold for individuals to engage in the transition process is heightened, as from their perspective the condition in which they are making a choice have not yet changed.

b) Only low numbers of people in affluent Western states believe, that either they or their family will be harmed by Climate Change.⁶ (Myers et al., 2013) Furthermore, catastrophic event in the present cannot directly be linked to specific emission policies and largely affect communities that are distant or disadvantaged in reference to Western actors (Myers et al., 2013). It could also be subject to further research to which degree abstract notions as an increase in average temperature or the concentration of CO₂ in the atmosphere are tangible enough to sufficiently impact the decision process for many individuals. Furthermore, institutions work with a high degree of uncertainty concerning the exact scale of outcomes for action or inaction (IPCC, 2014d).

c) Trust into the feasibility and reason of a mechanism are crucial to overcome procrastination. If positive outcomes seem unlikely or the approach itself unsatisfying, the action becomes more likely to be delayed, even if it is significantly preferable to the status quo. Andreou (2007) describes this phenomenon as second-order procrastination. In that case, finding a mechanism that forces you into action can in itself appear to have such high short-term costs in resources and energy that an individual delays dealing with his or her procrastination problem.

Ironically, the pressure and expectation to identify an appropriate response increases with the perceived importance of an issue, meaning that particularly for individuals that are aware of the enormous consequences of Climate Change and that are unsatisfied with their current response to it, it might seem insurmountable to find a fully adequate solution, thereby undermining the potential for at least some gradual improvements (Andreou, 2007). Here in particular, awareness of Transition Theory might be a valuable addition for stakeholders involved. As it creates a deeper understanding

⁶ Myers et al. cite studies of US Americans, suggesting that only as little as one third of the population believe they or their family might be harmed through Climate Change.

of the impact niche innovations can have on broader society, and how seemingly small niche or regime changes can start reinforcing loops promoting sustainable solutions, it seems likely to lower the mental threshold to actively engage in the transition process.

d) Boundaries between acceptable and unacceptable emission rates are necessarily vague. Even if critically high amounts of CO₂ are emitted, the effect of every singular action is negligible and cannot retrospectively be attributed to a specific harmful outcome (Andreou, 2007). Accordingly, the rationalization and ultimately acceptance of this behavior becomes more likely, particularly when the alternatives seem to involve more problematic changes. This could be seen when the Green party in a conservative government coalition in Hamburg, despite their expressed policy on state and federal level against coal power plants, agreed to the plant construction instead of jeopardizing their coalition (Hoischen, 2008). In this particular event, the joint explanatory power of the two theoretical approaches becomes quite visible. On one hand we have the sunk costs of having invested into a coalition agreement and wishing to achieve other environmental policies, which delays a more significant energy transition in Hamburg. On the other hand, the concepts of rationalization, the lack of 'bright lines' and the perceived harm of having to reengage in a new complex negotiation or reelection process, should the coalition fail, add explanatory value to the actions of leading members of the Green party.

What should therefore be expected from the following empirical analysis? Most importantly, a stable or declining focus on climate change in German politics despite a worsening problem situation. Secondly, when actually dealing with Climate Change, this will likely aim to bypass the problem by focusing on quickly solvable simple solutions.

Additionally to the policy level and its content, there are also several layers where procrastination affects the transition, which should serve us as additional angles in analyzing the case for the German energy transition:

- a) When individuals decide to form a niche and decide whether to be actively engaged in it for a substantial amount of time to initiate broader changes.
- b) When voters decide to change political preference, inform themselves about new scientific information and demand political consequences.
- c) When elected politicians decide to which degree they give in to demands of activists and other stakeholders, particularly when they come at a trade-off with valued short-term goals that fall in line with current paradigms on a landscape level.

4 Results

4.1 Electoral Program

In this subchapter, I am analyzing the total number of pages and percentage of all pages in the electoral program that directly mentions or refers to Climate Change, including how prominently those statements are placed. While a case could be made that almost all political aspects (such as gender equality, generational justice, education), in some way influence the way we handle Climate Change, for the purpose of this thesis, two characterizations are made. A chapter or subchapter 'directly' deals with Climate Change, if this is explicitly stated within the program and mitigation or adaptation are the explicit goals of the policy. It is considered as 'indirectly' dealing with Climate Change, if Climate is listed as a main motivating factor and referenced to inside the chapter, the expressive goal of the policy however prioritizes different values (i.e. job creation, increased mobility). While this distinction could be subject for discussion, it is consistently applied to two electoral programs with very similar internal structure and content, therefore in any case allowing for a comparative result.

In the 2009 elections, Bündnis 90/Die Grünen (2009a) released their electoral program titled 'Der Neue Grüne Gesellschaftsvertrag. Klima, Arbeit, Gerechtigkeit, Freiheit' (engl. 'A Green New Deal. Climate, Work, Justice, Freedom')⁷ depicting a blue Earth, which is leaking, on its cover - a clear reference to the idea of global warming, aiming at the global scale of Climate Change and directly referring to climate as the first sub-point. The electoral program itself consists of 220 pages. Out of 14 subchapters, chapter 2 (Renewable Energies, 16 pages) and chapter 7 (Environmental Protection, 10 pages) deal directly with Climate Change. Additionally, 2 pages in chapter 1 deal with subsidization and taxation to combat high emission technology and 1 additional page in chapter 14 with Environmental Protection and Global justice. In total, distributed varyingly through the program with different degrees of importance and ranging from very ambitious to very consensual goals, 29 out of 220 pages, therefore in total 13.2% of the program deal directly with Climate Change.

Difficult to classify is the first chapter on Green New Deal and a reform of the economic system. While largely focused on regulation and job creation, the impetus of the chapter is a reform of those sectors because of its environmental implications. Central concepts include ecological modernization,

⁷ All following translation made by the author. A literal translation would be 'The New Green Social Contract'. As the Greens took inspiration from Roosevelt's 'New Deal', they use the translation of 'Green New Deal' in similar campaigns on a European level and partly as an English term in their German communication as well, such as the headline of the 2009 program's first chapter: 'Ein Green New Deal für neue Arbeit und Innovation'

regulation of financial markets benefitting sustainable causes and job creation in the renewable energy sector. The 35 pages of chapter 1, equaling 15.9% of the program are therefore classified as implicitly dealing with Climate Change.

The 2013 electoral program (Bündnis 90/Die Grünen, 2013a) was titled 'Zeit für den Grünen Wandel. Teilhaben. Einmischen. Zukunft Schaffen'. ('Time for Green Transition. Take part. Influence. Create a Future') in front of a simple green background. It consists of 19 chapter and 319 pages. Directly engaging with Climate Change are Chapter 2 (Renewable Energy, 19 pages) and Chapter 9 (Environment and Agriculture, 16 pages) as well as 2 pages inside chapter 19 on the global responsibility towards Climate Change. This corresponds to a total of 37 pages, 11.6% of the total. Indirectly engaging are chapter 3 (Economic Reform, 28 pages) and chapter 10 (Transport and Mobility, 10 pages). This total of 38 pages represents 11.9% of the program.

Table 1. Representation of Climate Change in pages of B'90/Die Grünen electoral programs

	Total Number	Directly Engaging		Indirectly engaging		Overall engaging
		Number	In %	Number	In %	In %
2009	220	29	13.2	35	15.9	29.1
2013	319	37	11.6	38	11.9	23.5

4.2 Electoral Campaign

Secondly, I am analyzing the official campaign posters that advertised the party throughout the country. I am using the same metric to establish to which degree they engage in the problematic of Climate Change.⁸

The 2009 campaign consisted of 10 posters (Bündnis 90/ Die Grünen, 2009b).

Out of those, 2 directly engage with Climate Change. A sun with a worker's helmet, stating that Climate protection works, and the picture of a blue Earth beginning to melt, which was also featured in the electoral program. 3 posters indirectly refer to Climate Change. One stating 'Jobs, Jobs, Jobs', in which the letter 'O' has been substituted by symbols indicating the construction of solar and wind energy. Another one demanding more electric cars and lastly a poster linking the colors of the conservative government (black and yellow) with nuclear waste.⁹ Therefore 20% of posters directly and 50% in total refer to Climate Change.

The 2013 campaign (Bündnis 90/Die Grünen, 2013b) features 15 posters. Unusually, they did not feature the party name, but a sunflower as the party symbol, surrounding the question: 'Und du?' ('And you?') None of the posters engage directly with Climate Change, while 3 do so indirectly, although in a significantly less clear way than the 2009 campaign.

One of the images depicts a young girl with a little wind wheel and the statement 'I will one day be an energy giant'.¹⁰ Another one shows Green prime candidate Jürgen Trittin and the statement 'We are bringing new energy' ('Wir bringen neue Energie') while a third features Trittin and fellow frontrunner Katrin Göring-Eckardt with the slogan 'We think: Germany is renewable'.¹¹

In total, 20% of campaign posters are classified as engaging indirectly.

⁸ As the number of pictures is large, access to them is provided through the links in the references. In case of removal, they can be requested by contacting peer.kluessendorf@gmail.com

⁹ While clearly an environmental concern and impactful on the development and establishment of renewable energy sources, the phaseout of nuclear energy is likely to increase carbon emissions in the short term and in Germany is regularly phrased as a security and health, rather than a Climate Change issue. It therefore seems best characterized as indirectly engaging in the Climate Change debate. 3 additional posters were considered but ultimately not included in this category, which are referencing once again Job creation, although not as clearly linked to an environmental context, support for organic food and opposition to GMO's, all of which impact Climate policies, but are likely not linked to Climate Change policies by the average voter.

¹⁰ Original: 'Ich werd mal Energieriese'

¹¹ Original: 'Wir finden: Deutschland ist erneuerbar.' The German word for 'renewable' in this context implies not only renewable energies, but also creating/reinventing German politics, a double entendre that is somewhat lost in translation.

Table 2. Representation of Climate Change in B'90/Die Grünen election campaign posters

	Total Number	Directly Engaging		Indirectly engaging		Overall
		Number	In %	Number	In %	In %
2009	10	2	20	3	30	50
2013	15	0	0	3	20	20

4.3 German Media

In the following paragraphs, the media coverage of the federal elections in 2013 is briefly analyzed. As this could be a topic in its own right in future research, I will focus on the portrayal of key environmental issues, as perceived and to some degree analyzed in mainstream media.

Firstly, the German energy policy, and secondly the introduction of a 'Veggie Day'¹², which sparked the most heated environment related debates. (Caspari, 2013)

The energy transition, *Energiewende*, while agreed upon in principle, had been framed as a question of implementation and has by both sides largely been portrayed as an issue of financing and security of energy provision, only to a limited degree from a global perspective (Brackel, 2013).

The Veggie Day proposal had been a minor policy point since 2011 (Bündnis 90/Die Grünen, 2011). As it was picked up by the media over the summer it became one of the most discussed topics during the elections (Voß, 2013). Later strong criticism from inside the party followed for selecting the policy for the election campaign (Connolly, 2013; dpa/isw 2013).

A more general debate about climate change and its global consequences was lacking in the mainstream media coverage. It was noticeably absent in high profile events such as the 'Fernsehduell', a 90 minutes debate between Angela Merkel (CDU) and Peer Steinbrück (SPD) shortly before the elections. (Brackel, 2013; Arzt, 2013; Thielbörger & Dawson, 2013)

¹² a 'veggie day', in English more commonly described as a 'meat free day', refers to public or large private kitchens offering only vegetarian food options on one day per week. The original proposal was a recommendation of this policy to the canteen owners, but it was largely perceived as proposing a ban on meat on one day per week in discussions during the campaign. (Caspari, 2013)

5 Discussion

5.1 Discussion - Climate Change as a political blind spot in the 2013 elections

I will start by directly interpreting my research findings. The behavior found in all three perspectives corresponds to the behavior that would be expected in a procrastination scenario.

This is already visible, although to a lesser degree, in the electoral programs. While the program grows in size overall, the pages allocated to Climate Change also increase, but they do so disproportionately less, meaning the relative influence of Climate Change on the Green program is reduced, despite the growing urgency of the issue.

This effect however becomes more distinct, the more visible, and therefore ultimately more crucial in the electoral process, the programmatic orientation becomes. In both campaign slogan and front cover of the program, the 2009 campaign clearly prioritizes the global perspective and the overall implication of Climate on the German voters. Both of those notions are replaced in 2013 by a more vague focus on a participatory process.

This becomes even more evident in the communication of party goals through ad campaigns. The global dimension of Climate Change is no longer directly addressed and the overall communication of policies related to Climate Change is reduced in number and intensity, the only remaining perspectives linked to energy policy. This is symptomatic for the strong link between energy and climate policy in German politics (Mez, 2012). While already present in the focus on green jobs in the energy sector in the 2009 campaign, it seems that by 2013 this merger has become almost complete, mirroring the overall political discourse on energy policy instead of critically challenging it. Problematically, the energy transition, *Energiewende*, had already been framed as a financial issue and a 'problem', which Green politicians failed to tackle in the election campaign (Brackel, 2013).

This different focus in advertised policies might partly be due to a change in the German political landscape, with at least formal support for renewable energies from the CDU (Green, 2013) and the conservative government cancelling their plans to pursue nuclear energy after the Fukushima nuclear crisis (Schreurs, 2013). As a distinguishing feature of German Green politics had been conceded by most parties, it might seem no longer worth highlighting it as a distinguishing factor.

On the other hand, especially in view of the imminent nuclear phase out, it would have been a suitable moment to directly tackle the global climate dimension and the emission reduction goals, given that both SPD and CDU, the two biggest parties, are traditionally strong coal supporters (Pahle, 2010). Pahle lists the 'explicit political support for coal and [...] the ineffectiveness of public protests'

against them as key factors for growing coal investments and with the intensification of the nuclear phase out the usage of coal is projected to further increase (Oei et al., 2014).

A possible interpretation is that the clear 'bright line', an absolute no to nuclear energy that motivated large parts of the population to overcome political inaction, was no longer a determining factor for the elections. While regime barriers with strong industry actors still remained as a limiting factor on energy policies, the alternatives proposed by the Greens would necessarily be towards a more diffuse target, as coal power plants also figured in their own future energy scenarios, albeit to a lesser degree, and had been constructed during their time in government and recently in several states with green coalition governments (Rüdiger, 2014). These factors make it significantly harder to overcome both individual psychological barriers, but also subsequent structural barriers as the critical mass of environmental protests or agenda setting through media is harder to achieve, making it more difficult for the transition process to gain traction and expand its area of influence.

Broadly speaking, we see a slightly reduced role of Climate Change in the inner party discourse as represented through the electoral program, and thereby also intended as an outreach to the more politically interested part of the public. Yet this translates disproportionately to the focus of the political campaign.¹³ The most intuitive interpretation is a campaign strategy, which avoids a strong stance on Climate Change as it is unlikely to gather a large public support. Assuming that a more pronounced stance on arguably one of the most important global challenges to humanity will not attract a significant share of voters, is to some extent assuming that the voters by and large are procrastinators, who value short-term direct benefits irrationally over the greater good. That might very well be a correct assumption and a more pronounced view into the effects of procrastination on the decision-making process of voters concerning environmental issues might be worth future research. However it also says something about the decision-making process inside the party. Even if a stronger focus on Climate Change would be expected to have some electoral costs in the short-term, it is also a long-term investment. Undoubtedly, party campaigns have a large impact on media agenda, arguably a higher impact than the media have on party agendas, and if successful they also force competing parties to take more pronounced stances, possibly stronger political compromises, on the issue (Hopmann, 2012).

¹³ It might also suggest that party members are very aware of the issue and often wishing to express it more strongly, but potentially limiting themselves because of expected attitudes of voters. This could be a sensible explanation, as those party members involved in the creation of electoral programmes tend to be amongst the most motivated and engaged in party politics. Analyzing this behaviour or motivation is however outside the scope of this thesis and could be subject to future research.

This had been the case for the nuclear phase-out that started as a clear niche minority opinion in the 1960's yet gradually expanded its political influence. Exposure to, and perceived validity of environmental arguments affect the perception of both the topic and the party in the future (Guo, Vu & McCombs, 2012; Eissler, Russell & Jones, 2014). In other words, even a somewhat less successful yet ideologically progressive campaign is likely to positively affect either the political landscape in general, by a shift in focus, or the political success of the party by broadening their potential range of supporters in the future. In any case, the campaign strategy chosen means voluntarily foregoing an action that would likely (although not necessarily) increase future individual gains or reduce global harms to avoid short-term difficulties. In other words, it exactly fits the notion of procrastination.

The media selection of topics was equally representative of the procrastination hypothesis. While the bigger picture of Climate Change was left largely unaddressed, only two topics received particular attention. Particularly interesting is the controversy surrounding the Veggie Day, that caused outspoken public disapproval even from within the party (Rüdiger, 2014; dpa/isw, 2013).

A characteristic phenomenon of procrastination is seeking out smaller, yet achievable task, if the original goal seems insurmountable. Referred to as a 'Leveraging Strategy', having an immensely difficult item as a top priority might push procrastinators to achieve items lower on the list to get a feeling of achievement without having to tackle the more important issue (Andreou, 2010)¹⁴. If leveraged the correct way and with a main goal that is important yet not urgent, this might yield potentially good results. And to some degree that might be true for Climate Change on an individual level as well, when it pushes activists into creating very effective localized projects, which might not make a substantive contribution to combatting Climate Change, yet have beneficial affects compared to the stifling feeling of inaction facing an overwhelming task.

While this might be a very human urge, I would question its utility once it enters political discourse, particularly through political parties, the Veggie Day being a prime example. While both feasible and only reasonably demanding on citizens, it evidently has a disproportionately small impact compared to the issue of Climate Change or even the sub-issue of reducing meat consumption it aims to tackle. While these disparities on an individual level are often unproblematic, as accepting them or not is part of the individual decision-making, it becomes controversial when entering political discourse.

¹⁴ One could think of a student surprisingly discovering a wish to clean their apartment, answer important emails and call their family, all in itself useful yet often delayed activities, in order to avoid the comparatively much more costly activity of writing a paper.

Skillfully used by conservative advocates, it made the Green party appear as limiting individual freedom for an insufficient benefit and called into question the priorities of the party (Rüdiger, 2014). While it might well be argued whether this is an appropriate response to an overall low impact policy, let alone a fair representation of the underlying motivation of the party, it remains evident that on a larger political level, too narrow solutions might be appealing, particularly when high impact solutions seem not politically feasible under the status quo, but they potentially undermine a party's political credibility.

Interestingly, this is also an educational case on tendencies to use small occasion to tune out bigger, uncomfortable debates. While opposing political parties might have strong inner motivations to ignore the bigger policy scheme and actively misinterpret the scale of goals pursued with a Veggie Day, the media landscape might not necessarily pursue a similar agenda. However, engaging over an extended period of time with the issue of Climate Change would require a higher information burden on journalists and might as a reoccurring issue not be as interesting as a novel policy of little relevance to the broader political landscape. This prioritization of a short-term benefit, while ignoring issues that ultimately would be more relevant for a citizen's informed decision-making process provides an easy way out of a complicated debate, which apparently large numbers of both media producers and consumers are willing to take. It stays to assume that this is a broader phenomenon. Similar behavior has been visible on other complex environmental issues in the German political discourse, notably the inaction concerning disposal of radioactive waste complimented with occasional outbursts of sabotage and protest during castor transports (Darst & Dawson, 2007).

A challenge for environmental advocates is to not provide these easy outlets. Individual procrastinators try to limit the exposure to unnecessary but tempting sideways, for example through 'nanny filters' online. Similarly it should be in the interest of environmental activist to limit the exposure to those potentially counterproductive or at least distracting side-debates, even if that occasionally means to reconsider and limit the amount of publicized policy proposals to fewer, yet clearly impactful ones.

5.2 Overcoming Inactivity – Potential Policies

The 2013 Green election campaign is by large parts of the party considered as unsuccessful. Bündnis 90/Die Grünen fell from 10.7% in 2009 to 8.4% in 2013 (Bundestag, 2013). This is particularly true after the Green party had polled over 20% in the months after the nuclear incident in Fukushima and performed well at subsequent state elections (Rüdiger, 2014).

That loss in support might be due to various reasons, including proposals to increase taxation and the controversial stance on pedophilia in the 1980's which resurfaced in the media (Rüdiger, 2014). However also the Veggie day controversy is considered as particularly harmful to the political campaign (Rüdiger, 2014) and it seems plausible to analyze possible additional factor through the lens of the theoretical framework of this thesis. To begin with, we are faced with a chicken-egg dilemma. Did the Green party lose some votes because of a campaign that focused insufficiently on their key issue climate change, meaning that they failed to mobilize core voters, making both party and electorate more exposed to the negative impact of procrastination. Or is the lack of emphasis on environmental issues a response to the low traction of the topic in previous public debates, also leading to a generally lower support for the Greens. Independent of this question, a deeper understanding of the mechanisms that influence environmental activism without necessarily changing explicit convictions potentially adds valuable support for those transition processes. Build on the previous research I will now proceed to analyze several of these possible areas for improvement.

Mobilization and Certainty

One factor reoccurred throughout the reviewed literature and the findings of the thesis: the either projected or very real procrastination tendencies within the electorate that shape the election results, but also preemptively the solutions and campaign strategies proposed. Voter mobilization is an important field of study utilized by political parties, especially as pure conviction or provision of information leads to very mixed results in behavioral change (IPCC, 2014e).

In connection to this idea, another factor becomes evident when analyzing the election campaign. The reoccurring question: 'Und Du?' In the 2013 campaign statement, which Bündnis 90/Die Grünen explain as: 'We are making an offer with our electoral program and are asking for your opinion, your wishes, your demands.'¹⁵ (Bündnis 90/Die Grünen, 2013b)

¹⁵ German original: 'Wir machen mit unserem Wahlprogramm ein Angebot und fragen nach Deiner Meinung, Deinen Wünschen, Deinen Forderungen.'

While this might seem like a very participatory approach, from a procrastination point of view, this might have been a novel but unfortunate choice. As it is largely placed on campaign poster or other media that necessarily don't allow a direct participation in the party discussion, positive effects of actually increasing involvement seem low and the statement rather as a token gesture for general concern for public opinion. The idea is positive: another tool against procrastination is increased emotional investment into actions and the people surrounding those actions (Andreou, 2010). The feeling of having sacrificed a substantive amount of time and energy to be committed to that cause thereby creates a counterbalance to the usually high amount of sunk costs by adapting to the status quo, which makes it easier to remain active, particularly looking at it from a transition theory perspective where entire systems need to be changed. This inherently needs a group perspective, as broader societal change against currently prevailing norms on a regime or landscape-level rarely spontaneously emerge and persist long enough to build sufficient momentum, unless they are coordinated (Geels, 2011). Building of a group identity is therefore indeed vital, but more likely happening on a grassroots than an image campaign level, as it reaches differently motivated people in a different environment.

What the slogan much more directly suggests on a campaign level is that finding solutions and changing policies is largely dependent on the input of the voters. While that might be true, it also psychologically increases the burden for the voter and lowers the confidence in the political party being a sufficient provider of solutions. People who are aware of the scale and difficulty of existing problems concerning Climate Change are therefore most likely to feel overwhelmed and forego an active political engagement, which seems counterproductive as those people would seem most likely to potentially vote and campaign for the Green party. Especially in election campaigns that strive for mobilization, reduction in the perceived complexity of an issue and confidence in its possible solutions are beneficial strategies (Valentinov, 2014).

As an example, the Green party followed a strategy in 2009 to mitigate the harm of disproportionately weighing short-term benefits, by portraying adaptation to climate change as a win-win situation. Renewable energy to them is not costly, but something that creates sustainable jobs in Germany, which even in the short term is helpful. While this intentionally, and in election campaigns maybe wisely, avoids mentioning necessary measures that might at the very least in the short term harm economic performance, (Barrett, 2009) it obviously loses out on the possibility of discussing future scenarios with less consumption and in which an increased industry and constant growth might not be necessary for human well-being. On the other hand, the campaign remained tangible toward citizens and showed a credible concern for individual problems with Climate Change

adaptation instead of insisting on an abstract expert knowledge of what needs to be done (Gootee et al., 2010). This might increase the likeliness of engaging in or at least accepting the transition process.

Additionally, reducing or explaining complexity reduces potential for disproportionate media criticism. Akerlof et al. (2012) find that with the growing complexity of climate models, they've been publicized less and less in modern media. If they are it is usually to criticize their accuracy and validity. An intensified pre-emptive way of presenting the functioning and intended accuracy of climate models might limit the contribution of model skepticism as rationalization for uncertainty and therefore procrastination.

Pragmatism

Over decades, Bündnis 90/Die Grünen has to a larger extent than the other major German parties struggled with the concept of pragmatism. The debate in itself is too complex to be adequately represented in this thesis, however the possible additional costs of pragmatism from a procrastination point of view should be briefly analyzed. This is particularly relevant in light of increased political pragmatism, such as the formation of a coalition with the CDU in the state of Hessen in 2013 and the signing of a highly controversial law limiting asylum through the Green Minister-President of Baden-Württemberg (Schwarze, 2014). While being praised in more conservative media (Wetzel, 2014) and while certainly beneficial when agreeing to leave the opposition in favor of first state and later federal governments in the 1980's and 90's (Dickman, 1989; Blühdorn, 2004), it has increasingly become difficult to distinguish limits and clear expectations of Green politicians.

Once these 'bright lines of key political affiliations and non-negotiable policies, ' as established in chapter 3.1 of this thesis, have been undermined by precedents to the contrary, those principles might not necessarily be lost, but upholding them becomes part of the political calculus and increases the felt opportunity costs when sticking to those principles. Independent from the question of credibility and party profile towards the voters, this means that whenever critical decisions with regard to environmental principles with potential short-term harms are made, procrastination and therefore political inactivity towards those policies becomes more likely. Reestablishing those bright lines, either through binding decisions in the party program or the mandate of high-level party representatives could serve as a mitigating factor.

Focus on Windows of Opportunity

Apparently, windows for more radical change exist. Looking at the German Energiewende, in current popular discourse it is often described as a radical shift in policy by German chancellor Angela Merkel after the nuclear catastrophe in Fukushima in 2011 (Dempsey, 2012). It is presented as a chaotic reaction to please the German electorate prior to important state elections and is therefore often portrayed as an economically irrational and purely strategic political decision (Kepplinger, 2012).

Through the lens of transition theory, it seems more likely like a window of opportunity, that had been active on a niche level since the 1960's and moved to the regime level by enacting laws such as the Renewable Energy Sources Act (Erneuerbare-Energien-Gesetz) in the first Socialdemocrat-Green coalition after the federal elections of 1998 (Bechberger, 2004). Using a strong political movement and mass demonstrations after an accident of a scale that caused many people to reconsider their opinions, allowed to finally move to a landscape level, where a strong anti-nuclear consensus is currently established in Germany (Schreurs, 2012).

This strategy seems to have been efficient in the past for Bündnis 90/Die Grünen and could be continued to be more actively pursued in future elections, if necessary by focusing much of the agenda setting power on restarting a debate on a recently controversial topic. This works particularly in cases, where the cost of the policy enacted is less problematic for the individual than the perceived cost of making an action or choice in the first place (Akerlof, 1991). In other words, once an individual is forced to make a decision between several options, all of which require some degree of action because of the severity of the external event, it become more likely that parameters are considered more rationally and long-term beneficial behavior is chosen (Ainslie, 2010).

Increased Vividness

A key problem with procrastination is the 'undue salience or vividness' of a course of action (Akerlof, 1991). In environmental terms, the costs for combating climate change are often more vividly present in an individual's perception than the future costs of inaction. For him, it is an indicator that most humans perceive the value of an action as a hyperbolic function of delay, meaning that action peak in perceived value if they are immediate.

Thinking of many classical approaches of mobilizing environmental actions, we can see number driven approaches such as 350 ppm or 2°C. While it is outside the scope of this study, and likely generally difficult, to assess the exact impacts of these mobilization campaigns, it seems plausible that through numbers that are inherently hard to relate to, those projects are at a disadvantage at

gathering attention. Advantages exist in areas affected by the impacts of climate change or areas with similar living conditions (Akerlof, 2012), which tend to be easier to mobilize. While this might seem self-evident, it is relevant in highlighting the importance of identifying with a cause to overcome thresholds for action, as the consequences can now easier be perceived as personally urgently relevant.

Aside from motivating people to take action, the vividness of imagination also impacts our willingness to accept regulation. This works advantageously in very practical areas, such as laws regulating driving, as our own occasional incompetence and its harsh consequences, i.e. a crash, are something drivers regularly encounter on the road (Ariely, 2010).

Aiming to increase encounters can largely utilize modern technology to reach out to areas already affected by strong environmental pollution or the effects of climate change, for example through education policies that encourage or institutionalize these types of exchanges through Skype and other means of communication. This can be both more environmentally friendly and accessible to a broader scale of people through modern media and online access. With advances in technology, even simulations of human behavior and reactions to negative events become increasingly vivid and evoke large degrees of empathy (Bouchard et al., 2013). This equally holds true for games and simulations that show harms to the user depending on the chosen pathway (Ariely & Wertenbroch, 2002). Creating these experiences is necessary, as only low numbers of people in affluent Western states believe, that either they or their family will be harmed by Climate Change and therefore have to overcome a higher threshold of discomfort to achieve behavioral change¹⁶ (Myers et al., 2013).

Evidently information is still filtered and processed by individuals with differing beliefs and motivations, leading to mental shortcuts in favor of their preferred solution, limiting the likelihood of a change in perspective when faced with information that runs counter to their beliefs. (Akerlof & Maibach, 2011; Myers et al., 2013)

Myers study suggests this is true to a degree that those with initially strong convictions towards Climate Change seem almost immune to counterevidence, even if it occurs in their social network or geographic proximity. On the contrary, lower convictions are likely to be influenced by these events,

¹⁶ Myers et al. cite studies of US Americans, suggesting that only as little as one third of the population believe they or their family might be harmed through Climate Change.

which is particularly relevant in regions with low initial engagement with Climate Change¹⁷ (Myers et al., 2013).

It is nevertheless worth considering, to which goal and under which type of interactions this empathy is used. As empathy exercises circle around the idea of replicating the feelings and circumstances of others, it is particularly in the context of environmental problems likely to trigger emotions of guilt (Vorauer & Sasaki, 2009). Increasing the perceived awareness of being judged for your own attitudes and actions, while positive as interventions inside a more powerful group, could lead to more defensive and ultimately more harmful behavior in actual interactions between groups (Vorauer & Sasaki, 2009). This idea seems relevant in the environmental context, most ostensibly when connecting decision-makers and powerful corporate stakeholders with disadvantaged groups, but also in regular political campaigning, where a strong appeal to emotions might have unintended adverse effects.

Calling out Hypocrisy

As shown by Andreou (2007), delayed environmental protection perceived as hypocrisy can in some cases rather be the result of procrastination. She therefore questions whether some efforts to uncover hypocrisy and discredit political behavior is a rather ineffective use of media attention and resources of environmental organizations, that could to some extent be directed towards tracking procrastination and providing regional stakeholders with insights and mechanisms to cope with their unintentional delay, rather than alienating them from their cause. This is particularly true, as the Green party in Germany already suffers from a reputation of being patronizing and self-declared moral authorities, an allegation that resurfaced in the discussions surrounding the Veggie Day (Rüdiger, 2014). Additionally it reduces the perceived use of guilt in environmental campaigning that tends to exclude actors that haven't already bought into the green discourse (Plevin, 2014).

5.3 Limitations and Future Research

The possible solutions provided are clearly no panacea. Some of them might on the surface even seem conflicting. Indeed a crucial problem when dealing with procrastination is the specificity of individual cases requiring tailored responses. When pragmatism in political compromises with

¹⁷ These beliefs vary distinctly between countries. However, even in the US, which are regularly portrayed as highly polarized on the issue, 75% of the population are considered to only have a low conviction concerning their opinion on Climate Change. (Myers et al., 2013)

different interest groups can sometimes undermine an organization's position and weaken its chances to actively engage in the transition process, the opposite is true when too high expectations for idealized solutions ultimately leave inaction as the most appealing choice.

Methodologically, it remains to ask to which degree electoral programs adequately represent party motivations and to which degree they affect voting behavior. Historically they do serve as appropriate guidelines, as key points are picked up by the media and as the creation of electoral program usually activates larger groups of active party members, leading to quite representative text concerning inner party structures (Pappi & Trischer, 2009).

Evidently a span of two election cycles is a low sample size and at its best an indicator, not substantive proof for a shift in advertising strategy. Obviously, a variety of issues can possibly play into why this new approach has been chosen, such as the wish of the Green party to present itself as open to participatory approaches or as covering more than its signature environmental issues.

The degree to which procrastination directly affects the behavior of the individuals assessed in this thesis is necessarily speculative. Even trained psychologists need to rely on potentially biased self-assessments when examining student procrastination (Elster, 2010). Judging a political phenomenon that because of rationalization or pragmatism the actors themselves might only partially be aware of, creates difficulties in conducting deeper qualitative analysis of this phenomenon.

In addition to that, I need to acknowledge my potential confirmation bias, likely inadvertently selecting data points and complimentary research that supports my hypothesis (Mitchell, 2014). I tried to control for it through a large basis of scientific articles and labeling data on the Green electoral campaign through a standardized definition for each category, which I interpreted in unclear cases in chapter 4.2 in a way that if anything only limited, rather than exaggerated, the extent to which my hypothesis was confirmed.

Therefore I do not venture to diagnose the described behavior, which is already affected by a multitude of other factors, as exclusively caused by procrastination. It does seem to me though, that procrastination at the very least is a valuable lens through which we can examine the problem at hand. While this does not directly provide us with solutions, it suggests plausible areas in which to look for functioning case studies or experiment with alternatives on a grassroots level to develop more successful coping mechanisms when faced with delayed institutional change.

Another underlying assumption of procrastination is the existence of an idealized rational behavior that humans would engage in environmentally conscious actions, were it not for psychological urges (Elster, 2010). While this might be true for Climate Change from a global perspective, individual actors might have very rational reasons for deprioritizing Climate Change Policies, as either their career or financial benefits are dependent on pursuing other policies or their sentiment of responsibility towards future generations or the global community is relatively low compared to the self-interest of them and the people nearest to them. In this sense, procrastination can be externally assessed as a phenomenon of delayed action despite better knowledge, but is not necessarily at the root of the behavior itself. I sought to minimize this effect by focusing large parts of my thesis on green politicians and environmental activist who I assume by virtue of their convictions have self-interest in pursuing Climate Change policies.

Especially politicians however have to reply to the wishes of the electorate or more probably create campaigns on the presumed wishes of the people. However, the practical implication of this research still holds as this implies firstly an acceptance of insufficient political compromises, which still holds elements of procrastination, and secondly shows the necessity of broadening policies to achieve behavioral change in larger parts of the electorate.

Environmental campaigns traditionally suffer from various outreach problems. Where advantages of modern technology are focused on throughout the thesis in analyzing possible solutions, they can also have adverse effects. The increased accessibility and diversity of media platforms has led to more selective media consumption (Ellithorpe, Holbert & Palmer-Wackerly, 2013), often further splitting information access along ideological lines (Stroud, 2008) and thereby contributing to knowledge differences and less dialogue between groups (Holbert, 2005).

Furthermore, it is hypothesized that online networks and protest movements tend to strengthen activism, by reducing the initial thresholds for taking action, but through reliance on networks fails to provide the leadership and strategy needed for broader changes that might be painful to the individual. (Gladwell, 2010)

On the other hand, this seems like a simplistic view on online activism, which continues to go hand in hand with real life activism to a broad scale. With a heavily online based mobilization campaign, the network Avaaz achieved to gather over 300.000 people for a 'People's Climate March' prior to the New York Climate Summit 2014, including the active participation of UN Secretary-General Ban Ki-moon (UN News Centre, 2014). Most reasonably, the question for online activism is less the simplistic notion, if it works or not, but rather *where* it is a valuable additional tool (Freelon, 2014). While the

development is still ongoing and scientific research growing, this might be particularly the case for setting the public agenda and improve the networking within activist structures (Freelon, 2014). Moreover, while low thresholds increase likeliness to initially show support for a cause, like procrastination they can over time indeed develop an increased cost. Particularly for a public sign of support, not following up on the initial signaling may hurt both the internal and external image of a person, as framed by theories on impression-management and self-consistency (Kristofferson, White & Pelozo, 2014). Interestingly this effect is clearly more pronounced, when initial tokens of support are of low visibility or private, as it coincides with increased likeliness to invest their own time in money in an active support of their cause (Kristofferson, White & Pelozo, 2014). The study however implies as well, that public support of a cause, when it is mainly done to replicate behavior that is perceived as socially expected, rarely leads to a more meaningful contribution at a later stage. For environmental campaigns, this means that if a trade-off is required, it might be more impactful to strive for a strong value connection to some activists, over shaping a general public perception of what is the politically correct signal for individuals to send.

Finally, much of the thesis is exploratory work on the potential of a broader inclusion of psychological concepts, in particular procrastination, into frameworks for societal transitions. As promising connections were found, this seems like a useful research endeavor to me.

The contribution of my thesis is largely raising questions to which a more practical research could be pursued. Beyond the construction of a more comprehensive theoretical framework for transitions, this could include psychological studies that decipher motivations of politicians and activists in situations where their actions do not correspond to their self-expressed wishes or party lines. Additionally it leaves room to research the metrics by which environmental activists determine which demands are both environmentally sufficient and politically feasible and how perceived voter preferences towards a complex issue such as climate change are assessed.

In this line of theory, deeper looks into media dynamics, potentially concerning the almost systematic exclusion of Climate Change from the political debate in 2013, might be valuable contributions.

6 Transitions despite Procrastination – Accounting for Human Nature

Human behavior is occasionally against better knowledge and expressed self-interest. My thesis was largely exploratory work on the interplay of structural and psychological constraints at the root of this behavior. While I am in no position to make psychological judgments on the motivations of German voters and politicians, if the German political system was a patient, it would surely be diagnosed with Environmental Procrastination.

My synthesis of two theories that puts individual motivations at the core of systematic change is as any theory only an approximation to reality. Nevertheless it appears to me as a valuable lens through which we can examine the problem at hand. While this does not directly provide us with solutions due to the individually diverse nature of the phenomenon, it suggests plausible areas in which to look for functioning case studies or hints where to experiment on a niche level to develop potentially more successful coping mechanisms when faced with delayed institutional change.

A core driver for procrastination is the unknown and the inability to find convincing mechanisms to deal with it. By more closely examining a field of science offering potential solutions, I hope to have contributed on a small level to that toolbox for practitioners, or at the very least myself, aiming to speed up urgently needed change.

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