Agency and structure

The role of individual social values and material interests in changing contribution rules to, and benefits from, a collective good

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CHAPTER 5
CONCLUSION

5.1. INDIVIDUAL ATTEMPTS TO CHANGE THE RULES

This thesis investigated whether individuals attempt to change existing formal rules, with a focus on those change attempts which would ensure cooperation and an equal allocation of benefits. We considered two rules which guide and structure cooperation within teams: (i) the rule prescribing one's level of contribution, and (ii) the rule detailing an unequal allocation of benefits.

This study was inspired by the fact that the formal rules, while creating stable expectations of the behavior of others (Hodgson 2006) and allowing for smooth interactions between individuals, do not always adequately control and regulate behavior. The rules which form the focus of this thesis determine the benefits that individuals obtain or are excluded from in a team collective (Ostrom 2005). They can, however, allow for a breakdown of cooperation or prescribe an unequal division of the benefits of cooperation (Dawes 1980; Ledyard 1995; Olson 1965; Ostrom 2005; Reuben and Riedl 2013). The question we aimed to answer was whether individuals are able to correct these consequences by changing the formal rule itself. Earlier research focused on changes of informal rules, such as the implementation of (informal) sanctioning systems and the enforcement of norms (Fehr and Gächter 1999; Gürerk, Irlenbusch, and Rockenbach 2006; Noussair and Tan 2011; Sutter, Haigner, and Kocher 2010; Van Miltenburg et al. 2014; Yamagishi 1986). However, changing a formal rule guarantees the formal enforcement of contributions and equal allocations through direct intervention in the outcome structure (Messick et al. 1983; Samuelson 1993; Van Vugt and Samuelson 1999). The first aim of this thesis thus was to study whether individuals are able to change the existing formal rules instead of investing in new ways to achieve cooperation or an equal allocation of benefits.

In doing so, we took into account that cooperative interactions do not happen in a regulatory vacuum. We considered how the existing rules guide individual behavior and team interactions and thereby influence subsequent rule change attempts, paying attention to the context dependence which plays a role in structural change (e.g., Chavance 2008). This context dependence also included consideration of the interaction between rules and norms (Nee and Ingram 1998; North 1990; Pejovich 1999; Voigt and Engerer 2002; Winiecki 2001), as well as of the heterogeneity of the individual team members with respect to their (non)material motives. By focusing on all these interrelationships and on how
individual rule change attempts take place in a social context, we sought to make a theoretical contribution to the field of institutional change literature.

In the introduction we outlined how the rules that we considered can at the same time be the subject of change attempts and the structure which allows or constrains these attempts. Because they complement the rules that guide the cooperative behavior of individuals, we also incorporated in our theory and analysis the norms that prescribe the appropriate contributions towards the team collective. Furthermore, we presented two individual motivational factors which we expected to impact these attempts: an individual’s social value orientation and the individual’s interest in providing the team collective. Lastly, we addressed how an actual change of the rules might be influenced by the ability of individuals to communicate with their team members, and the decision-making structure.

In three empirical chapters (2, 3, and 4) we focused primarily on the individual attempts to change the rules that prescribe the level of contribution and the unequal allocation of benefits. Additionally, in Chapters 2 and 4 we examined whether an actual rule change followed these attempts. In all three empirical chapters we incorporated the role of the norms of contribution, and the influence of individual social values and interests on the topic of interest.

In the remainder of this chapter we will first summarize and discuss our main findings. Next, we will discuss the limitations of our research and suggest directions for future research. Lastly, we will discuss the place of our research in the institutional literature.

5.2. MAIN FINDINGS

5.2.1. Individual attempts to change a contribution rule

We first investigated individual attempts to change a rule that mandates a low level of contribution into a rule that demands a high level of contribution (Chapters 2 and 3). We accounted for the fact that rule change attempts may present material costs for the individuals attempting them (Morrison 2006). Because a rule change would lead to an enhanced team collective, an attempt could thus be viewed as an attempt to provide a second-order public good (Ostrom 1990; Yamagishi 1986).

The first research question we addressed was whether individual rule change attempts are initiated by individuals who experience a conflict between their social value and the rule. Furthermore we investigated whether a rule change attempt is preceded by a norm change attempt. We thus considered the influence of individual social values (prosocial versus proself) on this attempt and the interplay between the contribution norm and rules that structure team interactions (Chapter 2). We found evidence that a rule change attempt is more likely to be initiated by prosocial individuals, who experience a conflict between
their social value and a rule that mandates low levels of contribution to a collective good. The conflict that they experience is the incongruence between, on the one hand, their desire to cooperate and to enhance joint outcomes (Van Lange 1999) and, on the other hand, the rule which allows for free-riding on the contributions of others (Ledyard 1995).

Furthermore, these prosocial individuals first attempted to change the descriptive contribution norm in an upward direction. Most of the time this norm change attempt failed, and as a result prosocials were then more likely to attempt to change the rule directly by proposing a formal change. This shows that prosocials ambitiously pursued enhancement of joint outcomes. First they incurred costs by attempting to change the norm. If this attempt failed, they doubled down and again incurred costs to attempt a formal change. When the norm change attempt did succeed, such a rule change attempt was less likely. This result is in line with the literature, which proposes that new descriptive norms can make it unnecessary to change formal rules (Irwin and Simpson 2013; Nee and Ingram 1998).

Next, we elaborated on the first research question by studying whether individuals attempt to change the same rule demanding low levels of contribution into a rule demanding high levels of contribution, but now when an unequal allocation of benefits from the team collective is present (Chapter 3). We thus added differences in individual benefits from cooperation in a team (low and high earners) to the differences in individual social value orientations that were already considered in Chapter 2. The question we aimed to answer was how the individual heterogeneity of interests in providing the team collective (i.e., being a high or low earner) would interact with the individual social values in a rule change attempt.

We obtained evidence that high earners, more than low earners, attempted a rule change from a low level of contribution to a high level of contribution. This is consistent with the idea that those who benefit the most from such a rule change (i.e., the high earners) take responsibility for providing the second-order public good (Gaspart et al. 1998; White and Runge 1995). Furthermore, it corroborates with research which indicates that an individual’s support for a rule regulating cooperation depends on that person’s income position (Fisher et al. 1995; Nishi and Christakis 2015; Olson 1965).

Another important finding, however, is that prosocial high earners were less inclined than proself high earners to attempt a change to a rule mandating a high level of contribution. Thus, in line with the earlier findings reported above, the initiation of a rule change depended on the initiator’s social value orientation. However, the direction of this effect of social values on a rule change attempt was contrary to the findings in Chapter 2. When benefit allocations are unequal, a prosocial value orientation decreases the likelihood of a high earner’s attempt to change a rule towards more cooperation. This is a somewhat implausible finding.
when we consider the ambitious pursuit to enhance joint outcomes witnessed above, unless we take into account that prosocial individuals regard equality of outcomes as their foremost concern, even more so than larger joint outcomes (Eek and Gärling 2006; Van Lange et al. 2013). When benefit allocations are unequal, a change towards a rule demanding a high level of contributions would increase the collective benefit but also increase the gap in the allocation of benefits (Barber and Simmering 2002). Therefore, high earning prosocials were more hesitant to initiate a change.

To summarize, combining the results of the two chapters, it becomes apparent that the consideration of social values as motivators for rule change attempts turns out to be important. Prosocials are more likely than proselfs to initiate an attempt when allocations are equal. In this context, those who value the enhancement of joint outcomes the most are willing to bear the costs of an attempt to change a rule demanding low levels of contributions into one demanding high levels. However, by addressing differences in social values as well as in the interests in providing the collective good, our understanding of the effect of social values on rule change attempts which promote cooperation becomes more nuanced.

It has been suggested that individuals who realize “the futility of voluntary-based cooperation” are more likely to attempt a structural change in order to diminish the undesirable effects of free riding and to promote mutual cooperation (Yamagishi 1986:111). This suggestion thus highlights mutual cooperation as the ultimate goal of, in this case, a rule change attempt. However, when a change towards more cooperation also entails more unequal benefits, those who value cooperation the most (prosocials) are less inclined to attempt such a change because they value equality even more. On the other hand, those who value their self-interest the most (proselfs) and have the most to gain from a change (high earners) are the ones most willing to initiate a change. The fact that others also benefit in the form of an enhanced team collective is a by-product of this change. A possible explanation for this behavior of proselfs is that a rule mandating a high level of individual contribution also ensures efficiency (Dasgupta and Heal 1979), which appeals to proselfs (Stouten et al. 2005).

5.2.2. Individual attempts to change an unequal allocation of benefits
Next we studied whether, and under what conditions, individuals will initiate a change from an unequal to an equal allocation of benefits. We incorporated the influence of the two different contribution rules on these change attempts, while also considering the contribution norm. We thus investigated attempts to change an unequal income allocation both in an environment where a rule mandated a low level of contribution to a collective good and in one where it demanded a high level of contribution. One important condition for a change attempt, we argued, was that the contribution rules would not constrain individual change attempts
directly. Instead they might, together with a social norm, constrain the possibility of making proportional contributions, i.e., prevent low and high earners from contributing proportional to their expected benefits from the team collective. This in turn would positively influence individual change attempts (Chapter 4). We aimed to find out whether an attempt to change an unequal allocation into an equal allocation is instigated by individuals who value equality, and how the individual interest in the provision of the team collective, i.e., being a high or low earner, plays a role.

Our results indicate that, when looking at individual attempts to change an unequal benefit allocation, the individual interest in the provision of the team collective of both low and high earners alone does not provide a sufficient explanation. Attempts to change inequality of benefit allocation happen through an interplay between these interests and the governing rules and norms. As expected, low earners were more likely than high earners to attempt a change of an unequal to an equal allocation of benefits, but only when they were unable to contribute proportional to a collective good. This result is in accordance with a cost-benefit analysis that the low earners engaged in; the costs of an attempt would be low compared to the gains if the attempt succeeded, as we argued in Chapter 4. Second, our results provide evidence for the suggestion that proportional contributions, although they do not resolve the inequalities of outcomes, do take away the immediate need for changing the unequal allocation of benefits (Adams 1965).

Again we found that individual social values matter; more prosocials than proselves attempted to change an unequal allocation of benefits, irrespective of which rule of contribution level was in place. As expected, an attempt to change an unequal allocation into an equal allocation is thus instigated by individuals who value equality. Prosocials attempted a change of the unequal allocation, regardless of whether proportional contributions took place. Our results thereby provide evidence to the body of research that suggests that, for prosocials, equality encompasses both equality of outcomes and equality of contributions to a collective good (Stouten et al. 2005).

5.2.3. An actual change of the rule
Finally, we examined whether an actual change of the rule was facilitated by situational factors beyond individual motivations. We therefore studied the influence on an actual change of communication (or not) before the vote to change (Chapter 2), and of the decision-making structure of the voting procedure (majority voting or dictator decision) (Chapter 4).

In Chapter 2 the actual change entailed a change from a rule demanding a low level of contribution to a rule demanding a high level of contribution. We did not find evidence that communication facilitated an actual change. We
observed that the majority of individual team members voted in favor of a rule change, irrespective of whether they were able to communicate after the attempt but before the vote. This is a surprising non-result because in earlier research communication between members of a team has proven to solve cooperation problems (Ostrom 2005). We thus expected that a change towards a rule with a higher contribution level, and hence more cooperation, would be facilitated by communication.

A possible explanation is that most participants were already in favor of formal enforcement of contributions because it would ensure efficiency (Dasgupta and Heal 1979) but were free-riding (Ledyard 1995) on the attempt to provide this second-order public good. In other words, they were hoping that a fellow team member would bear the costs of the change attempt, after which they would cast a positive vote at no cost to themselves. If this was indeed the case, the ability to communicate would not have an added positive influence. If we look back at the influence of social values on the rule change attempt itself, this explanation becomes even more plausible. Remember that because this rule change would lead to an enhanced team collective, an attempt can be viewed as an attempt to provide a second-order public good (Ostrom 1990; Yamagishi 1986). Proselfs, who value efficiency, are also known to free-ride on the provision of first-order public goods (i.e., the team collective). It makes sense to assume that in this case, they were also free-riding on the provision of the rule change, i.e., the second-order public good.

In Chapter 4 the actual change constituted a change from an unequal allocation of benefits to an equal allocation. We obtained evidence that such a change is facilitated by a majority decision-making structure, if the majority consists of low earners. Thus, a majority of low earners is more likely to be able to change an unequal allocation under a majority decision-making structure compared to a dictator decision-making structure. This is not surprising when we consider that, under a dictator decision-making structure, the decision maker can disregard such a majority (Scharpf 1989).

What does surprise is that we did not find the same effect for a majority of prosocials; when a majority consisted of prosocials, the actual change towards an equal allocation of benefits was not facilitated by a majority decision-making structure. As we already discussed in Chapter 4, we contend that our experimental design may have contributed negatively to this non-result.51

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51 The majority of prosocials was determined by a combination of endogenous individual social values and the random spread of those prosocials across groups, without experimentally controlling the split. This resulted in only one group with a majority of prosocials in the dictator decision treatment, this team consisting of five prosocials. This may have hampered our analysis of the influence of social values on an actual change.
5.3. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Considering the main findings reported above and in the empirical chapters, we can conclude that individuals are able to change existing rules, at least under the specific conditions in which we conducted our investigation. In what follows we will discuss some of these specific conditions, by considering the limitations of our research and by providing directions for further research. Lastly, in Section 5.4, we discuss the place of our research in the institutional literature.

5.3.1. The asymmetry in our results

We start by addressing the asymmetry in our results across the environments characterized by the two contribution rules, both for the change attempts and the actual change.

Although our main interest in the case of the rules of contribution was on attempts to change them towards more cooperation, we observed that rule change attempts from high to low mandatory contribution levels occurred less frequently compared to low to high contribution rule change attempts. Very few individuals who experienced a conflict between their proself values and a rule that mandates a high level of individual contribution attempted to change the latter (Chapters 2 and 3).

This result is not surprising when we consider the nature of the public goods game in our experiments. Self-interested individuals act in a way that maximizes their economic well-being (Van Lange et al. 1997). In our study, the rule that mandates a high level of individual contribution ensured not only an equal and prosocial distribution of wealth but also efficiency (Dasgupta and Heal 1979). As a consequence, a formal rule that promotes such an income distribution is expected to be supported by proself individuals. A change towards a rule that calls for a low level of contribution could jeopardize this formally enforced efficiency.

An alternative explanation could be that these two environments may have distinct effects on the way in which individuals respond to the interaction between their values and interest and the rules. In the environment where the rule mandated low levels of contribution, individuals could have experienced more autonomy compared to an environment where the rule demanded a high level of contribution (e.g., Tyler and Lind 1992). Research shows that this autonomy can lead to feelings of self-determination (Deci and Ryan 1987). Self-determination is an “individual’s sense of having choice in initiating and regulating actions” (Spreitzer 1995:1443). It can for instance lead individuals to perceive that they can deviate from formal organizational rules (Morrison 2006). We did not measure

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52 Moreover, attempts to change a rule that mandates high levels of contribution to one that demands low levels of contribution never resulted in an actual change.
these feelings directly; future research that investigates rule change attempts could test whether feelings of self-determination are related to the initiation of change under different rules.

With respect to an actual change of the unequal benefit allocation: this occurred more often in an environment where a rule mandated a low level of contribution than in an environment where a rule mandated a high level of contribution (Chapter 4). We have to nuance this finding by pointing out that, when a high level contribution rule was in place, an actual change was observed in almost three-fourth of the teams (72.73%) interacting in this environment. The attempt to change an unequal allocation was, however, even more successful (86.96%) when a rule mandating a low contribution level in place.

An explanation suggests itself if we again consider the nature of the public goods game in our experiments. First, with an unequal allocation of benefits, individual interests in contributing to this public good are unequal (Fisher et al. 1995); low earners are less inclined to contribute to this public good. Second, when the rule mandates a low level of contribution, individual contributions to the team collective are weakly enforced. These two facts combined may hamper the provision of the team collective, and a change of one of these two components could lead to enhancement of the team collective. The only way our participants could increase these collective benefits was by changing the benefit inequality.

The nature of the public goods game itself could thus be an important driver of these results. One limitation of our choice for a public goods game as our experimental paradigm is that we were unable to differentiate between these motivations. To advance our knowledge, an obvious starting point for future research would be to consider rule change attempts in other interactive environments.

5.3.2. The rules under consideration

In this thesis we specifically focused on those change attempts which promote cooperation and an equal allocation of benefits. The rules we considered were thus the ones which directly structured these outcomes. It is, however, feasible that rules indirectly influence cooperation and the allocation of benefits. Procedural rules for instance, i.e., the rules which determine how other rules are implemented, can have a significant influence on outcomes (Walker et al. 2000). Although majority voting is one of the most common formal mechanisms to

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53 And on the acceptance of these outcomes: procedural justice theory (Lind and Tyler 1988; Thibaut and Walker 1975), details “how the justice in the quality of decision-making procedures and justice in the quality of treatment that people receive from others” influences the acceptance by individuals of (social) rules (Tyler 2006:309). Procedural justice theory thereby provides another avenue for future research. However, the limited time and space available prevent further elaboration here.
enact or change a rule, voting systems come in many varieties, each with their own influence on the outcomes for the group and for the individuals concerned (Walker et al. 2000). It is possible for instance that team members will debate, or negotiate, or together design a rule which regulates the level of cooperation (Ostrom 2008). The rules which guide how and whether these interactions can take place, i.e., the procedural rules, may ultimately influence the level of cooperation or the allocation of benefits which can be achieved.

Related to this is the limitation inherent in the fact that we considered only two decision-making structures, namely majority voting or a dictator decision. In real life, however, individuals can attempt to form a coalition before a proposed change, can use representatives (e.g., through a union) to argue on their behalf, or find other ways to exert influence on the rules which prescribe contributions and allocations (Cai 2000; Van Beest and Van Dijk 2007). Combining these factors, we thus suggest first that future research might study how different decision-making structures affect not only actual rule changes, but also change attempts. An additional worthwhile line of research would be to assess whether ‘indirect’ rule change attempts, i.e., attempts to change the procedural rules, are a possible avenue by which individuals seek to promote cooperation or an equal allocation of benefits.

5.3.3. The role of emotions

In this thesis we were constrained by time, format, and disciplinary boundaries from examination of all individual motivations which could be relevant for individual attempts to change the rules. Most importantly, it prevented us from elaborating on the role of emotions as a possible underlying mechanism of individual attempts to change the rules. As Bericat (2016:495) argued, no sociological understanding of a social phenomenon is complete when emotions are kept out of the analysis. Relevant for our research topic is that emotions shape social structures, and these in turn shape emotional experiences (Clay-Warner and Robinson 2008). Emotions are thus inherently social, and they are experienced and acted upon when individuals interact with their environment and with other people (Frijda 1988).

While many different types of emotions may arise during team interactions, incorporating the individual experience of guilt when considering rule change attempts might be fruitful. That is because guilt is elicited by concerns for others rather than the self (Haidt 2003), and it would thus be likely to emerge during interdependent interactions. For instance, research shows that individuals experience this emotion when benefits are unequally allocated (Baumeister, Stillwell, and Heatherton 1994; Olson 1965). Functionalist approaches to emotions state that guilt can motivate individuals to behave prosocially (Haidt 2003; Zeelenberg et al. 2008). Because guilt stimulates people to consider the well-being
of other people (De Hooge et al. 2011), it may complement or instead oppose the influence of individual social values and material interests on the rule change attempts we considered. It may thus be a possible avenue for future research.

5.4. THE PLACE OF THIS RESEARCH IN THE (INSTITUTIONAL) LITERATURE

In this thesis we adopted the view of North (1990:4–5) regarding the distinction between institutions and organizations. Institutions can be both formal and informal. Formal institutions are the rules, while informal institutions are the social norms, as defined in Section 1.1. Organizations are groups of individuals who wish to achieve objectives that are bounded by a common purpose, while formal and informal institutions are the underlying rules of the game. Organizations in our analyses are thus systems made up of (formal) rules, (informal) social norms, and interacting individuals.

Our research contributes to the institutional literature by looking at the change of institutions which constrain or instead enable individual behavior. Our analyses focused on the micro level of individual interactions and institutional change. We took a bottom-up perspective by applying an experimental method. This enabled us to disentangle the causal mechanisms in a laboratory-controlled setting, and to consider the formal rules both as the dependent variable to be explained and as the structure which allows (or does not allow) for change.

One consequence of this approach is that we drew from existing experimental literature from the fields of social psychology, experimental economics, and sociology to build our case for the micro-level mechanisms. These fields of research do not necessarily refer to the concept of institutional change when discussing how individuals influence their environment. However, experimental studies on why and when individuals challenge rules, or how they act contrary to norms and rules, did provide us with insights on the mechanisms which could play a role in institutional change.
These insights could not be derived from the more traditional institutional change literature that focuses on agency.\textsuperscript{54} Both historical institutionalism (Campbell 2010; Streeck and Thelen 2005) and institutional bricolage literature (Cleaver 2002; Duncan 2011) for instance, focus on agents and ‘bricoleurs’ at the macro and meso level (e.g., formal changes by a government or planners and policy makers). Most research on institutional entrepreneurship (Battilana et al. 2009; DiMaggio 1988) on the other hand is based on single, in-depth, longitudinal case-studies (De Holan and Phillips 2002; Garud, Jain, and Kumaraswamy 2002; Munir and Phillips 2005). However, by studying idiosyncratic examples which focus mostly on success stories, a strong bias is introduced, and identifying the causal mechanisms becomes problematic (Battilana et al. 2009). To summarize, although these lines of research provide evidence for the possibility of rule change attempts, they cannot go deeper into what explains individual attempts to change institutions.

Our theoretical approach regarding the change of rules by individuals is thus necessarily derived from different yet, we argue, compatible lines of research. New institutionalism provided us with the theoretical link between individuals at the micro level and the norms and rules at the meso level (e.g., Nee and Ingram 1998). Furthermore, it provided us with a framework on how norms and rules together enable, motivate and guide individual (economic) behavior (Nee 2005). This framework is rarely adopted to guide research into bottom-up change (for an exception see Nee and Opper 2014), maybe because the experimental method and a focus on individual change are not common in this line of research. If individual action is included, the aim is to explain the ultimate aggregated macro structure under investigation (DiMaggio 1997). By researching the interactions and motivations at the micro level, we hopefully added knowledge to this line of research.

Last but not least, the seminal work(s) of Elinor Ostrom (1990; 2005) informed our theory on cooperation within the boundaries of rules and norms. Most of her research relates to the governing of the commons and the provision of public goods, and from it we derived important insights about the interaction of individuals within groups and about the importance of considering the social

\textsuperscript{54} Economic, political, and sociological research that addresses either structure or agency has identified different modes of institutional change (Djelic 2010; Hall and Taylor 1996; Kingston and Caballero 2009; Mahoney and Thelen 2010). Research that focuses solely on the structure of institutions is unable to provide an explanation for change that is initiated by individuals. It either allows no room for individuals to change institutions because the processes are beyond their control, or, by focusing on the exogenous shocks that urge change, it ignores the possibility of individual attempts to change institutions (Arthur 1994; Crouch and Farrell 2004; Ebbinghaus 2005; Pierson 2000). Because of our focus on individual change attempts, we thus limit the following short discussion to the literature that relates agency to institutional change.
norms. Furthermore, in her work she aims to contribute to the development of a general theory of institutional change by studying and understanding the processes of change in multiple specific settings. We did not specifically apply the IAD framework that she proposed, which constitutes “arraying a norm and rule inventory and recording changes in that inventory over time brought about by diverse processes for making changes” (Ostrom 2008:4). That is because this method is more applicable to real life situations, making it an ideal framework for case or field studies, but less so for our experimental set-up. However, from it we derived the insight that, when studying institutional change, it is first necessary to clarify the rules and norms that structure the interactions before the changes to these rules and norms can be examined.