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RESEARCH ARTICLE

Representatives of future generations as promoters of sustainability in corporate decision processes

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Abstract

Current protests of the young generation emphasize that interests of future generations should be taken more into account by policy makers and in corporate decision processes. As organizations contribute to enduring environmental and social problems, they are required to promote sustainability in order to preserve options for the well-being of future generations. However, organizational decision makers often take a short-term perspective and neglect investments in intergenerational justice. Previous theoretical work has acknowledged the importance of representing future generations in today's decision-making processes to adopt a long-term perspective in order to promote intergenerational justice. In a laboratory experiment, we show that appointing representatives of future generations at the organizational level can foster investments in intergenerational justice. Although this outcome is more pronounced when aligned with the representatives' individual incentives, it even persists for a representative who is monetarily penalized for advocating the interests of future generations.

KEYWORDS

intergenerational justice, negotiation, organizational behavior, representative of future generations, sustainability

1 | INTRODUCTION

Nothing illustrates the problem of protecting future generations better than the current student protests around Greta Thunberg. In many cases, the interests of future generations are not, or at least not sufficiently, considered in political and corporate decisions processes. Thus, the concern of the young generation to adequately include aspects of climate protection and their future can hardly be called into question. Besides environmental degradation, social problems such as social inequality and poverty require global and local solutions (Eller et al., 2020). Altogether, "[s]ustainable development is one of the biggest challenges society faces today" (Manzhynski & Figge, 2020, p. 827). As organizations lacked environmental consciousness during

their growth in the last decades (Shubham, Charan, & Murty, 2018), their activities have led to immense environmental and social problems through their enormous use of natural resources and pollution emissions (Hoffman & Bazerman, 2007; Shrivastava, 1995; Wade-Benzoni, 2002). The growing attention to these problems has put emphasis on the responsibility of organizations towards the natural environment (Dangelico & Pontrandolfo, 2015), as organizations do not only constitute the major cause of these problems but are also the key to solving them (Cadez, Czerny, & Letmathe, 2019). Therefore, organizations should place special emphasis on the relevance of intergenerational justice, which refers to the notion of each generation of having "the right to nondeteriorated ecological and economic capacity" (Padilla, 2002). However, organizations often struggle to

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successfully implement sustainability initiatives. This is due to problems of intertemporal choices, that is, decisions “in which the timing of costs and benefits are spread out over time” (Loewenstein & Thaler, 1989, p. 181) and “in which, with respect to maximizing profit or achieving some other objective, the course of action that is best in the short term is not the same course of action that is best over the long run” (Laverty, 1996, p. 828). In particular, organizational decision makers often aim to reduce present costs rather than recognize that incurring costs for the benefit of future generations might be in the organization's best long-term interest (Wade-Benzoni, 1999). Therefore, this paper examines the possibility of employing a representative of future generations (similar to the establishment of institutions such as an “Ombudsman for Future Generations” in the political arena, see, e.g., Göpel, 2012; Padilla, 2002; Tremmel, 2006) as a novel tool to implement long-term corporate sustainability strategies and thereby to foster intergenerational justice and the organization's long-term viability.

However, a representation of the interests of future generations brings about certain problems. As future generations cannot vote for their representatives, authorization and accountability are lacking (Ekeli, 2005, 2009; O'Neill, 2001). Furthermore, the interests of future generations cannot be assumed to be identical to those of the present generation (O'Neill, 2001; Wade-Benzoni, 2008). Hence, representatives are required to abstract from their actual interests (Bovenkerk, 2015) and to be committed to act in the best interest of future generations (Howard, 2012). Thus, it is questionable as to how representatives might cope with such conflicting roles.

Our study is informed by several strands of research. First, literature exists on the resolution of environmental disputes via negotiation (Gray & Wondolleck, 2013). For example, Howard (2012) developed a mathematical model incorporating a societal agency that represents future generations. Second, as for the inclusion of representatives in negotiations, former studies have shown that the negotiation behavior of representatives depends on variables such as their social value orientation (SVO), anticipated rewards and punishments, and identity variables (Druckman, 2015). Conclusively, research in environmental economics (Sturm & Weimann, 2006) has shown that people care about other generations' interests under certain circumstances (Chermak & Krause, 2002; Wade-Benzoni, 2002, 2008) and recognize their intergenerational responsibility (Fischer, Irlenbusch, & Sadrieh, 2004). However, experimental research addressing the impact of a representative of future generations on intraorganizational negotiations is very limited. Two studies revealed that appointing representatives of future generations in intergenerational sustainability dilemmas leads to resource allocations that favor future generations (Kamijo, Komiya, Mifune, & Saijo, 2017; Shahrier, Kotani, & Saijo, 2017). However, our study differs from previous research in several ways: Whereas we analyze the appointment of a representative of future generations on the investment in a long-term emissions reduction negotiated in a bilateral intra-organizational negotiation, the former studies

examined the appointment of such a representative in a three-person intergenerational sustainability game. In this game, three individuals each form a generation and jointly choose between two pie sizes. This choice then determines the pie size of the following generation, which is represented by other existing participants instead of not yet existing individuals. Furthermore, we analyze the effect of different incentive systems for the representative of future generations, which was not studied before.

Consequently, by conducting a laboratory experiment, our research attempts to contribute to existing research in several aspects. First, we look at the effect of a person engaging in the role of a representative of future generations in an intraorganizational setting and aim to answer the question as to whether and how such a representative can drive negotiation results in a favorable direction regarding intergenerational justice. Drawing on Social Identity Theory (SIT; Tajfel & Turner, 1986) and Self-Categorization Theory (SCT; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), we show that appointing a person as a representative of future generations leads this person to identify with future generations, and therefore, to negotiate higher investments in intergenerational justice as compared to a situation where no such representative of future generations is appointed. Second, we are interested in answering the question of whether a person assigned to the role of the representative of future generations voluntarily acts on behalf of future generations or whether this person needs monetary incentives to align her or his payoff with the enforcement of future generations' interests. Based on Goal-Framing Theory (GFT; Lindenberg & Steg, 2007), we find that even in the absence of a supportive incentive system, people in the role of a representative of future generations can identify with future generations through the priming of normative and hedonic goals and thus negotiate higher investments in intergenerational justice. Third, we concentrate on personality traits such as future orientation and SVO, because they were shown to influence cooperation in social dilemmas (Bogaert, Boone, & Declerck, 2008; Joireman, 2005).

Our results can have substantial implications for achieving goals that promote intergenerational justice as a core concept of sustainability. Based on our findings, using representatives of future generations at the organizational level can foster long-term orientation and decisions that are better aligned with sustainable development goals.

2 | THEORETICAL BACKGROUND AND HYPOTHESES

2.1 | Influence of role assignments on negotiation outcomes

The role of a representative imposes a serious role conflict on individuals as they have to cope with both the group they represent and the negotiation partner at the same time (Benton & Druckman, 1974; Frey & Adams, 1972; Gray & Wondolleck, 2013). Previous research has shown that the negotiation behavior of representatives depends on several contextual and situational variables (Druckman, 1994,

2015; Reinders Folmer, Klapwijk, De Cremer, & Van Lange, 2012). For instance, representatives express more competitive behavior if they are confronted with competitive goals or incentives (Benton & Druckman, 1974; Blake & Mouton, 1961; Vidmar, 1971), whereas representatives display cooperation if they assume that their constituencies prefer such norms (Steinel et al., 2010; Steinel, De Dreu, Ouwehand, & Ramírez-Marín, 2009). In contrast, Enzle, Harvey, and Wright (1992) show that representatives adjust their negotiation tactics to the situation in order to achieve good outcomes for their constituencies. The aforementioned results seem to have in common that representatives try to achieve favorable outcomes for their constituencies, as they may experience a feeling of responsibility towards the group they are representing (Reinders Folmer et al., 2012). This behavior can be explained by SIT (Tajfel & Turner, 1986) and SCT (Turner et al., 1987). According to these theories, people obtain an important aspect of their self-concept from their classification into social groups (Tajfel & Turner, 1986; Van Kleef, Steinel, Van Knippenberg, Hogg, & Svensson, 2007). This identification corresponds to the perception of oneness with a group and enables people to find her- or himself in the social environment (Ashforth & Mael, 1989). As people have a natural desire to feel included in and accepted by their group (Baumeister & Leary, 1995; Van Kleef et al., 2007), such an identification may lead to an attachment to and the motivation to succeed in one's role (Reitzes & Mutran, 2002). For a social category to become salient and therefore guide people's behavior (Haslam, Powell, & Turner, 2000), it has to reflect the social field and one's place within the social context subjectively and most meaningfully (Hogg & Terry, 2000). There are several empirical findings showing that even (assigned) group memberships determined on a random basis lead to actions to protect one's own group interests (Dawes & Messick, 2000; Wade-Benzoni & Tost, 2009). This behavior particularly occurs if a shared social identity is made salient (Kramer, Pommerenke, & Newton, 1993). Therefore, it can be argued that the assignment of certain roles accompanied by detailed role descriptions makes a certain group identity salient. As a consequence, assigned representatives might identify themselves as members of their associated groups and thus act on their behalf in negotiations. That is, subjects in the role of an executive board member might identify themselves with the company they represent and thus defend the company's interests in negotiations even when there are negative consequences involved for third parties such as the environment or future generations.

In contrast, the behavior of representatives of future generations is not that straightforward as individuals occupying this role have to defend the interests of future generations against the representatives of this generation and at the same time remain members of this present generation. Consequently, they are confronted with two distinct group memberships, that is, naturally belonging to the present generation and the assigned affiliation to future generations. This ambiguity might have an influence on the representative's negotiation behavior. In an experimental study, Breaugh and Klimoski (1977) showed that representatives that are members of their constituencies were more committed to their

constituencies' positions than representatives that were not part of their represented group.

However, previous research has also revealed that people can identify with future others without knowing or interacting with them (Wade-Benzoni, 2008). That is, if individuals perceive their ingroup as comprising not only their own generation but also future generations, then intergenerational identification and the feeling of a common group identity increase (Wade-Benzoni, 2003; Wade-Benzoni & Tost, 2009) leading to increased intergenerational justice (Wade-Benzoni & Tost, 2009). Several factors have been identified that affect the extent of intergenerational identification such as social group identity, the motivation of the decision maker for self-enhancement, the integral needs of the decision maker, specificity with which future others are identified, decision framing, or relations to previous generations (Wade-Benzoni, 2003; Wade-Benzoni & Tost, 2009). Thus, we suggest that appointing representatives of future generations and providing them with a detailed role description that makes a common group identity salient lead these individuals to identify with future generations and therefore to take their specific needs into account. Consequently, representatives of future generations are willing to give up some of their own economic outcome and increase investments in intergenerational justice:

Hypothesis 1. Negotiations between a representative of future generations and an executive board member will result in higher investments in intergenerational justice than negotiations between two executive board members.

2.2 | Interaction between the assigned role and the representative's incentive system

As representatives are usually members of the group they represent, it can be assumed that their interests are compatible with those of their group. However, in the case of representatives not being members of the represented groups, it is possible that the representative's interests are not only different from those of the represented group but may even be aligned with the opposing group's interests (Aaldering, Greer, Van Kleef, & De Dreu, 2013). In the case of such misaligned interests, representatives tend to achieve agreements that are beneficial to themselves, even at the expense of their constituencies (Bazerman, Neale, Valley, Zajac, & Kim, 1992; Valley, White, Neale, & Bazerman, 1992).

Thus, executive board members whose monetary self-interests are aligned with the organization's interest of avoiding costs for investments in intergenerational justice are thought to defend the organization's interests. However, representatives of future generations might face a conflict of interest depending on how their (monetary) incentives are designed. That is, if the incentive system imposes financial costs on the representative by financially penalizing the representative when investment in intergenerational justice

is increased, the feeling of belonging to the present generation is emphasized which might weaken the identification with future generations. In contrast, if the representative's incentive system financially rewards the effort of increasing intergenerational justice, the role as a representative of future generations is accentuated which might strengthen the identification with future generations.

According to GFT (Lindenberg & Steg, 2007), human behavior is guided by one of three different goals. "Hedonic goals" aim to improve an individual's feeling in a certain situation, "gain goals" increase an individual's sensitivity to changes in their personal resources such as their monetary rewards, and "normative goals" prompt individuals to focus on the appropriateness of actions (Lindenberg & Steg, 2007; Steg, Bolderdijk, Keizer, & Perlaviciute, 2014). In any situation, one of these goals is focal and influences cognitive processes and actions the most, whereas the other goals either complement the focal goal in the case of goal compatibility or question the focal goal in the case of goal incompatibility (Lindenberg & Steg, 2007; Steg et al., 2014). Determining the focal goal is an unconscious process which depends on internal and external cues that automatically prime this goal (Lindenberg & Steg, 2013). In accordance with Steg et al. (2014), normative goals are strengthened when individuals endorse particular values activated by situational cues. In such instances, people focus more on the appropriateness of their behavior, such as benefitting future generations, even if this behavior incurs personal costs.

With regard to representatives of future generations who have to bear costs to accomplish their role, we argue that the detailed role description emphasizes the normative goal of helping future generations while not prioritizing the gain goal. This is due to the fact that participants might assume a feeling of power by recognizing the powerlessness of future generations (Wade-Benzoni, Hernandez, Medvec, & Messick, 2008) as present generations have the unilateral decisional power on resource allocations across generations whereas future generations do not have the opportunity of reciprocating these actions (Li, Tost, & Wade-Benzoni, 2007; Tost, Wade-Benzoni, & Johnson, 2015). The related feeling of power activates a feeling of social responsibility (Greenberg, 1978) for taking future generations' interests into account and thus enhances intergenerational beneficence (Tost et al., 2015; Wade-Benzoni & Tost, 2009). Previous research has shown that offers in modified ultimatum games increase when recipients are completely powerless (Handgraaf, Van Dijk, Vermunt, Wilke, & De Dreu, 2008; Wade-Benzoni et al., 2008) and that the experience of power enhances allocations to others in the future (Tost et al., 2015). Therefore, we suggest that representatives of future generations might feel better if they act on behalf of future generations. In this case, the normative goal of helping future generations is supported by the hedonic goal of feeling good. Taken together, we hypothesize that even if representatives of future generations face a conflict between their monetary interests and their role, they will still identify with future generations and increase investments in intergenerational justice:

Hypothesis 2. Negotiations between a representative of future generations and an executive board member will result in higher investments in intergenerational justice than negotiations between two executive board members even if the incentive system of the representative of future generations financially penalizes higher investments.

However, if the representative's incentive system financially rewards the effort of negotiating higher investments in intergenerational justice by increasing monetary earnings, the representative's normative goal of helping future generations is supported not only by the hedonic goal but also by the gain goal of realizing a financial profit. In this case, the identification with future generations is even stronger so that these representatives are assumed to negotiate higher investments in intergenerational justice than representatives who have to bear costs when negotiating for these investments:

Hypothesis 3. Negotiations between a representative of future generations and an executive board member will result in higher investments in intergenerational justice if the incentive system of the representative of future generations financially rewards higher investments than if when the incentive system of the representative of future generations financially penalizes higher investments.

2.3 | Influence of future orientation on negotiation outcomes

Investments in intergenerational justice can be interpreted as a social and intertemporal conflict as a present action is called for, which imposes immediate costs on individuals and generates collective benefits in the future (Joireman, 2005). Therefore, people's future orientation might have a considerable impact on the decision for investments in intergenerational justice. The concept of future orientation is represented by the construct of concern for future consequences (CFC) which "refers to the extent to which individuals consider the potential distant outcomes of their current behaviors and the extent to which they are influenced by these potential outcomes" (Strathman, Gleicher, Boninger, & Edwards, 1994, p. 743). That is, people showing a high CFC are more concerned with the future consequences of their behavior compared to people with a low CFC, who are more concerned with their immediate needs (Joireman, Balliet, Sprott, Spangenberg, & Schultz, 2008; Strathman et al., 1994). Previous research has shown that compared to present-oriented people, future-oriented individuals exhibit more proenvironmental behaviors (e.g., Arnon & Carmi, 2014; Ebreo & Vining, 2001; Joireman, Lasane, Bennett, Richards, & Solaimani, 2001; Joireman, Van Lange, & Van Vugt, 2004). Furthermore, individuals high in both CFC and environmentalism cooperate more in hypothetical and real resource dilemmas (Kortenkamp & Moore, 2006). A more detailed finding revealed that environmental behavior is only positively correlated with future

orientation if this behavior is associated with a personal benefit (Carmi, 2013). Based on these results, we argue that future-oriented individuals are willing to invest more in intergenerational justice than present-oriented individuals:

Hypothesis 4. Irrespective of the assigned role, there will be a positive effect from negotiators' future orientation on the investments in intergenerational justice. That is, future-oriented negotiators will agree on higher investments in intergenerational justice than present-oriented negotiators.

2.4 | Influence of social value orientation on negotiation outcomes

Other factors which have been shown to influence negotiation and social dilemma outcomes are social motives (Joireman, 2005). Social motives can either be derived from individual differences or from the presentation of the situation (De Dreu, Weingart, & Kwon, 2000). With regard to individual differences, the leading concept is that of SVO, an approach which classifies people according to their concern for their own outcomes as well as for the outcomes of others (Messick & McClintock, 1968). Although prosocial individuals are interested in maximizing joint outcomes, individualists only care about their own outcomes regardless of the outcome to others (e.g., Beggan, Messick, & Allison, 1988; Kuhlman & Marshello, 1975; Liebrand & Van Run, 1985).

According to previous research, SVO plays a role in negotiations led by representatives. For instance, Aaldering et al. (2013) showed that when representatives' interests were misaligned to those of their constituencies, then negotiation behavior became a function of SVO. Whereas prosocials engaged in self-sacrificing behavior, proselfs only benefitted themselves.

As for proenvironmental behavior, two studies analyzing the effects of SVO and CFC failed to reveal that SVO has a significant effect on different forms of proenvironmental behavior (Joireman et al., 2001; Joireman et al., 2004). In contrast, Gärling, Fujii, Gärling, and Jakobsson (2003) showed that proself individuals' intention for proenvironmental behavior is more influenced by the awareness of personal environmental consequences, whereas prosocials were more influenced by the awareness of collective environmental consequences. In line with this result, proselfs are focused on personal costs associated with a pollution reduction program in the transportation sector and are more likely to oppose this program compared to prosocials who are more likely to support the program (Cameron, Brown, & Chapman, 1998). Accordingly, we argue that prosocials might agree on higher investments in intergenerational justice irrespective of their assigned role and the experimental treatment:

Hypothesis 5. Irrespective of the assigned role, there will be a positive effect of negotiators' SVO on the investments in intergenerational justice. That is, prosocial negotiators will agree on higher investments in intergenerational justice compared to proselfs.

3 | METHODS

3.1 | Negotiation task structure and manipulated conditions

We used a computer-based role-play simulation of a two-party negotiation in which two parties forming a dyad had to reach an agreement on the investment in intergenerational justice materialized in an investment in long-term emissions reductions. For this purpose, each negotiator received an endowment of 200 experimental currency units (ECU), and the negotiation partners had to jointly decide which integer amount of the endowment each of them would invest to reduce negative consequences for the future. Participants were given the possibility to make offers to one another over the computer accompanied by prewritten messages.¹ If negotiation dyads did not reach an agreement within 10 min, the negotiation concluded with an impasse, and the participants only received the show-up fee.

To test our hypotheses, we analyzed three experimental conditions: In the control treatment (NORFG-NOINC), two executive board members formed a negotiation dyad. In the two other conditions, a negotiation dyad consisted of one representative of future generations and one executive board member with manipulation of the representative's incentive system: In the RFG-NOINC treatment, the representative was financially penalized in order to increase the investment, that is, the representative's payoff equaled the residual between the endowment and the negotiated investment, and in the RFG-INC treatment, the representative's payoff equaled the negotiated investment and thus financially rewarded the increase in the investment. The executive board member's payoff always corresponded to the residual between the endowment and the negotiated investment. In all conditions, the roles were randomly assigned to the participants. To make these roles more salient, we presented detailed role descriptions emphasizing which kind of behavior would lead to the fulfillment of one's role.² The role-dependent payoff functions were made common knowledge in the instructions.³ We ensured that subjects understood the payoff consequences by providing them with all relevant information.⁴

3.2 | Experimental procedure

Upon arrival in the laboratory, participants were randomly seated in individual cubicles behind a computer. We started with an

¹The prewritten messages are inspired by the messages used by O'Connor, Arnold, and Burris (2005), based on Hilty and Carnevale (1993). Most of these messages were replaced by new messages to represent the different interests that might play a role in the negotiation (see experimental instructions, p. 15).

²The role descriptions are shown in the experimental instructions (see screenshots on pp. 10, 12, respectively).

³The role-dependent payoff functions are depicted in the experimental instructions (pp. 7, 8).

⁴The rationales for the payoff consequences are depicted in the experimental instructions (see second paragraph in the screenshot on p. 11 and second paragraph in the second screenshot on p. 12).

Information Phase in which subjects were informed about the initial situation and the task. Participants learned that if nothing was changed, CO₂ emissions would not sufficiently be reduced until 2,100, which would have severe negative consequences for the future. They could reduce these negative consequences by coming to an agreement in a joint decision on the investment in long-term emissions reductions. However, such an investment would impose costs on the company. Subjects were further told that their negotiated investment would be donated to one of two organizations, namely, Climate without Borders or OroVerde which aim at sustaining the living conditions for future generations by initiating and financing projects on the compensation and avoidance of CO₂ emissions and on the protection of tropical forest. A description of both organizations was provided for all participants. In the control treatment, the organization was randomly selected. In the RFG treatments, the representatives of future generations could choose the organization through which they would increase their role commitment.

In the Learning Phase, subjects learned about the random assignment of roles, the anonymous matching of dyads, the payment mechanism, and the negotiation task. They then answered several control questions, which had to be answered correctly to proceed.

The Negotiation Phase began with the random role assignment and the detailed role descriptions. Dyads had 10 min to negotiate. The negotiation concluded when dyads reached a mutual agreement or when the 10 min elapsed. At the end of the negotiation, participants answered follow-up questions, which included, among others, constructs for measuring CFC (adopted from Joireman et al., 2008, based on Strathman et al., 1994), and SVO (adopted from Murphy, Ackermann, & Handgraaf, 2011). If dyads reached an agreement long before the 10 min had elapsed, participants did math calculations disguised as a cognition test to make sure that the other dyads were not disturbed. Finally, based on their individual negotiation outcome plus the show-up fee of 80 ECU, subjects were paid at an exchange rate of 25 ECU equaling 1 Euro.

3.3 | Participants

The experiment was programmed in z-Tree (Fischbacher, 2007). Undergraduate students at a large German University participated in our experiment in February 2017. We collected data from 198 participants (99 dyads). Out of the 198 participants, three subjects and their dyads were excluded prior to the statistical analysis due to problems of understanding. Eliminating data from these subjects and their dyads led to 192 data points regarding individual negotiation outcomes and 96 data points for joint negotiation outcomes. In total, the three conditions—NORFG-NOINC, RFG-NOINC, and RFG-INC—included data from 64, 66, and 62 participants, respectively.

The average participant was 24.12 years old, 35.94% of which were female. The average subject earned 9.03 Euros for participating in the experiment which lasted less than 1 h. Negotiated investments donated to the two organizations amounted to 368.00 Euros with

227.40 Euros for Climate without Borders and 140.60 Euros for OroVerde.

3.4 | Analysis methodology

We used generalized linear models with robust standard errors to analyze the negotiation outcomes. Our dependent variable was the negotiated investment in a long-term emissions reduction.

To test the influence of the presence of a representative of future generations, the independent variable was a treatment dummy variable for the presence of a representative of future generations (Rep; 0 = absent, 1 = present). The independent variable for analyzing the difference between investments in the control treatment and the RFG-NOINC treatment was a treatment dummy variable for the presence of a representative of future generations with an incentive system that financially penalizes investments (Rep_NoInc; 0 = absent, 1 = present). To examine the influence of the representative's incentive system, we used a treatment dummy variable for the presence of an incentive system that financially penalized or financially rewarded the investment in a long-term emissions reduction (Rep_Inc; 0 = financially penalizing, 1 = financially rewarding). Finally, we analyzed the influence of the participants' CFC and SVO derived from the post-negotiation questionnaire.

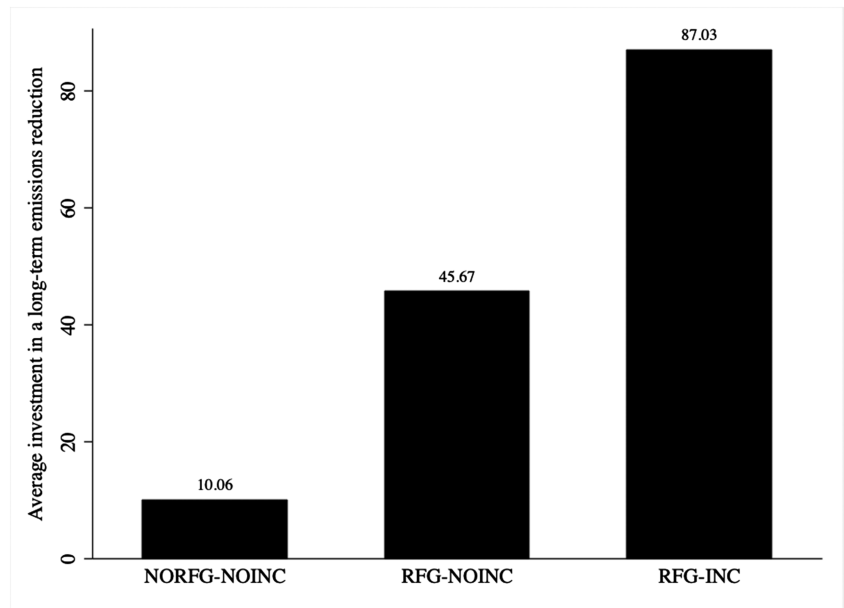
4 | RESULTS

4.1 | Descriptive statistics

The means of the investment in a long-term emissions reduction in the three treatments are depicted in Figure 1. The average investment in a long-term emissions reduction is lowest in the control treatment ($M = 10.06$; $SD = 10.87$; $N = 32$). When both RFG treatments are compared, the average investment is higher in the RFG-INC treatment ($M = 87.03$; $SD = 34.86$; $N = 31$) than in the RFG-NOINC treatment ($M = 45.67$; $SD = 39.31$; $N = 33$).

These results show that the investment in a long-term emissions reduction differs with regard to the presence of a representative of future generations. If there is a representative of future generations in a negotiation dyad, the investment increases substantially. Moreover, the investment in a long-term emissions reduction further increases if the representative's incentive system financially rewards the investment compared to when an investment is financially penalized. These findings provide preliminary support for our hypotheses. However, even in the RFG-INC treatment, the average investment in a long-term emissions reduction is smaller than half of the negotiators' endowment. This might be due to the idiosyncrasy of this treatment. Although executive board members have to relinquish a share of their endowment and can therefore only lose money, representatives of future generations are rewarded according to the investment.

FIGURE 1 Average investment in a long-term emissions reduction by treatments. NORFG_NOINC, control treatment in which two executive board members formed a negotiation dyad ($N = 32$); RFG_NOINC, treatment in which the representative of future generations was financially penalized in order to increase the investment ($N = 33$); RFG_INC, treatment in which the representative of future generations was financially rewarded in order to increase the investment ($N = 31$)



4.2 | Tests of hypotheses

4.2.1 | Influence of the presence of a representative of future generations

To test Hypothesis 1 and Hypothesis 2, we compared the control treatment with both RFG treatments (Model 1) and with the RFG-NOINC treatment (Model 2), respectively. Results are depicted in Table 1.

Consistent with our reasoning based on SIT and thus supporting Hypothesis 1, the investment in a long-term emissions reduction significantly increases if a representative of future generations

participates in a negotiation compared to if no such representative is present ($b = 55.64, p < .001$).

Furthermore, Hypothesis 2 is supported. That is, even if the representative of future generations is financially penalized for investing, the investment in a long-term emissions reduction significantly increases compared to the condition where no such representative being present ($b = 35.60, p < .001$). This finding indicates both that the assignment of the special role of the representative of future generations is sufficient to incorporate the interests of future generations and that additional monetary incentives are not the only motive to elicit role-congruent behavior. Rather, an individual in the role of the representative of future generations is even willing to sacrifice some

TABLE 1 Influence of the presence of a representative of future generations

Independent variables	Dependent variable: <i>Investment in a long-term emissions reduction</i>					
	Model 1		Model 2		Model 3	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Intercept	10.06***	1.90	10.06***	1.91	45.67***	6.79
Rep	55.64***	5.62				
Rep_NoInc			35.60***	7.05		
Rep_Inc					41.37***	9.20
<i>N</i>	96		65		64	

Note. Unstandardized coefficients (b) and robust standard errors (SE) are shown.

Abbreviations: Rep, dummy variable for the presence of a representative of future generations (0 = absent, 1 = present); Rep_NoInc, dummy variable for the presence of a representative of future generations with an incentive system that financially penalizes the investment in a long-term emissions reduction (0 = absent, 1 = present); Rep_Inc, dummy variable for the presence of an incentive system that financially penalizes or financially rewards the investment in a long-term emissions reduction (0 = financially penalizing, 1 = financially rewarding).

* $p < .05$.

** $p < .01$.

*** $p < .001$.

of her or his own payoff in favor of an increased investment benefiting future generations.

4.2.2 | Influence of the representative's incentive system

To test Hypothesis 3, we focus on the influence of the representative's incentive system and thus compared the two RFG treatments (see Model 3 in Table 1). According to GFT, which states that gain goals can support normative goals, we expected that a representative of future generations who is financially rewarded for a higher negotiated investment will lead to a higher investment in a long-term emissions reduction than a representative of future generations whose investment is financially penalized.

Our data support Hypothesis 3. Investment in a long-term emissions reduction is significantly higher if the representative's payoff increases with the negotiated investment compared to when it decreases with the investment ($b = 41.37, p < .001$). This result is consistent with the reasoning that the interplay between the role of the representative of future generations and the incentive system prompts individuals in this role to engage in negotiating an even higher investment in a long-term emissions reduction.

4.2.3 | Influence of future orientation

To test Hypothesis 4, we included variables of the participants' future and present orientation in our generalized linear models. These traits were measured by employing the CFC construct (Joireman et al., 2008) which includes a subfactor for concern with future consequences, that is, future orientation, and a subfactor for concern with immediate consequences, that is, present orientation. When testing the validity of the factor "present orientation," we had to remove three items because their factor loadings were lower than 0.5. The scale items as well as their belonging to the two sub-factors are shown in Table 2.

Cronbach's α was 0.69 for future orientation and 0.72 for present orientation. The factor values deduced from a confirmatory factor analysis were included in the analysis as follows: We examined the influence of future and present orientation on the investment in a long-term emissions reduction within each of the three treatments. In the Model 1 (control treatment), we integrated the executive board members' composite future orientation (Comp_EBM_Future), that is, the mean between both executive board members' factor values for their future orientation and the executive board members' composite present orientation (Comp_EBM_Present), that is, the mean between both executive board members' factor values for their present orientation. In the Models 2 and 3 (RFG treatments), we analyze four control variables, respectively, the future orientation of both the representative of future generations and of the executive board member as well as the present orientation of both negotiation partners. The corresponding results are shown in Table 3.

TABLE 2 Scale items to measure future and present orientation

Scale items	Belonging to subfactor
I consider how things might be in the future, and try to influence those things with my day to day behavior.	Future orientation
I only act to satisfy immediate concerns, figuring the future will take care of itself.	Present orientation
My behavior is only influenced by the immediate (i.e., a matter of days or weeks) outcomes of my actions.	Present orientation
My convenience is a big factor in the decisions I make or the actions I take. ^a	Present orientation
I am willing to sacrifice my immediate happiness or well-being in order to achieve future outcomes.	Future orientation
I think it is important to take warnings about negative outcomes seriously even if the negative outcome will not occur for many years.	Future orientation
I think it is more important to perform a behavior with important distant consequences than a behavior with less-important immediate consequences.	Future orientation
I generally ignore warnings about possible future problems because I think the problems will be resolved before they reach crisis level. ^a	Present orientation
I think that sacrificing now is usually unnecessary since future outcomes can be dealt with at a later time.	Present orientation
I only act to satisfy immediate concerns, figuring that I will take care of future problems that may occur at a later date.	Present orientation
Since my day to day work has specific outcomes, it is more important to me than behavior that has distant outcomes. ^a	Present orientation

Notes. The items were adopted from Joireman et al. (2008; based on Strathman et al., 1994), with the second item of the original item battery ("Often I engage in a particular behavior in order to achieve outcomes that may not result for many years.") being skipped because because it was not suitable for this analysis.

^aThese items were removed from the final confirmatory factor analysis, because their factor loadings were lower than 0.5 in the initial confirmatory factor analysis.

Model 1 in Table 3 indicates that neither the executive board members' composite future orientation nor their composite present orientation have a significant effect on the negotiated investment in a long-term emissions reduction. As for the treatment with an incentive system that financially penalizes the representative of future generations for increases in the investment (Model 2), an increase in the representative's future orientation leads to a significant increase of the negotiated amount ($b = 20.42, p = .001$). All other variables in Model 2 are not significant. Finally, Model 3 shows that the present orientation of the representative with an incentive system financially rewarding the investment has a significantly negative effect on the negotiated investment ($b = -15.75, p = .030$). Furthermore, the

TABLE 3 Influence of future and present orientation

Independent variables	Dependent variable: <i>Investment in a long-term emissions reduction</i>					
	Model 1		Model 2		Model 3	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Intercept	9.72***	1.82	46.37***	5.95	91.41***	6.48
Comp_EBM_Future	-5.33	4.68				
Comp_EBM_Present	-7.12	4.57				
RFG_Future			20.42**	6.43	-12.10	11.83
RFG_Present			-1.12	6.48	-15.75*	7.24
EBM_Future			-4.92	9.55	16.39*	8.06
EBM_Present			-1.05	6.81	9.19	11.36
<i>N</i>	32		33		31	

Note. Unstandardized coefficients (*b*) and robust standard errors (*SE*) are shown.

Abbreviations: Comp_EBM_Future, composite value of both executive board members' future orientation; Comp_EBM_Present, composite value of both executive board members' present orientation; RFG_Future, future orientation of the representative of future generations; RFG_Present, present orientation of the representative of future generations; EBM_Future, future orientation of the representative of future generations; EBM_Present, present orientation of the executive board member.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

executive board member's future orientation has a significantly positive effect on the negotiated investment ($b = 16.39$, $p = .042$). All other variables have no significant impact. These results indicate that in the absence of an incentive system that rewards the investment, the representative's future orientation plays a crucial role in explaining

negotiation results. By contrast, the representative's future orientation does not have a significant impact on negotiation results in the presence of such an incentive system. Taken together, these results provide evidence that the influence of a personality trait such as future orientation differs substantially depending on whether an

TABLE 4 Primary SVO slider items to measure social value orientation

1	You receive:	85	85	85	85	85	85	85	85	85
		0	0	0	0	0	0	0	0	0
	The other person receives:	85	76	68	59	50	41	33	24	15
2	You receive:	85	87	89	91	93	94	96	98	100
		0	0	0	0	0	0	0	0	0
	The other person receives:	15	19	24	28	33	37	41	46	50
3	You receive:	50	54	59	63	68	72	76	81	85
		0	0	0	0	0	0	0	0	0
	The other person receives:	100	98	96	94	93	91	89	87	85
4	You receive:	50	54	59	63	68	72	76	81	85
		0	0	0	0	0	0	0	0	0
	The other person receives:	100	89	79	68	58	47	36	26	15
5	You receive:	100	94	88	81	75	69	63	56	50
		0	0	0	0	0	0	0	0	0
	The other person receives:	50	56	63	69	75	81	88	94	100
6	You receive:	100	98	96	94	93	91	89	87	85
		0	0	0	0	0	0	0	0	0
	The other person receives:	50	54	59	63	68	72	76	81	85

Note. Social value orientation was measured by the method of Murphy et al. (2011). Participants had to make six hypothetical decisions on different distributions for themselves and another hypothetical person. Based on these decisions, an SVO angle is calculated via the equation shown in Murphy et al. (2011).

incentive system is present. As for the executive board member, results are also mixed. Consequently, we find only partial support for Hypothesis 4.

4.2.4 | Influence of social value orientation

In Hypothesis 5, we hypothesized a positive effect of the negotiators' SVO on the investment in a long-term emissions reduction. SVO was measured using the method from Murphy et al. (2011). The SVO slider items are shown in Table 4.

The analysis of the influence of SVO was organized as follows: First, we examined the influence of the executive board members' composite SVO, that is, the mean between both executive board members' SVOs on the investment in a long-term emissions reduction in the control treatment (Model 1). Second, we analyzed the influence of the negotiation partners' SVO in the RFG treatments (Models 2 and 3). Results concerning all three models are shown in Table 5.

Model 1 in Table 5 indicates that the executive board members' composite SVO has a significantly positive effect on the negotiated investment in a long-term emissions reduction ($b = 0.24$, $p = .014$). In the case of the treatment with an incentive system that financially penalizes the representative of future generations for increases in the investment (Model 2), the negotiated investment significantly goes up if the representative's SVO increases ($b = 1.19$, $p = .002$), whereas the executive board member's SVO has no significant effect. Finally, Model 3 shows that an increase in the executive board member's SVO leads to a significant increase of the negotiated investment ($b = 1.46$, $p = .006$). However, the SVO of the representative with an incentive system that financially rewards the investment does not significantly affect the negotiated investment. Thus, we conclude that the individuals' SVO have significant effects on negotiation results affecting future generations. In the absence of an incentive system financially rewarding the investment, the representative's SVO plays a crucial role in explaining the negotiation results. By contrast, the

representative's SVO does not have a significant impact on the negotiation results in the presence of such an incentive system. Furthermore, the executive board member's SVO only affects the investment when no representative of future generations is present or when there is an incentive system that financially rewards the representative of future generations for increases in the investment. These findings partially support Hypothesis 5.

Table 6 summarizes the hypotheses as well as their support by the statistical analyses.

4.2.5 | Supplementary analysis: Number of offers sent

As the negotiation partners' goals were thought to differ due to the different roles they occupied in the RFG treatments, we expected it to be more difficult to reach an agreement under these treatments. Moreover, it might be most difficult to come to an agreement when the negotiation partners' monetary interests are misaligned with one another because both parties might not be willing to concede in favor of the opponent. Therefore, we analyzed the number of offers sent as a proxy for the rigidity of the negotiation process. In the control treatment, the RFG-NOINC treatment, and the RFG-INC treatment, on average negotiation dyads send 1.97 offers ($SD = 1.53$, $N = 32$), 3.58 offers ($SD = 2.00$, $N = 33$), and 6.06 offers ($SD = 4.84$, $N = 31$), respectively. To analyze differences in the offers sent between treatments, we employed generalized linear models with robust standard errors with the number of offers sent as the dependent variable and the dummy variables described above as independent variables. Comparing the control treatment with both RFG treatments, the number of offers sent significantly increases when a representative of future generations takes part in the negotiation ($b = 2.81$, robust $SE = 0.55$, $p < .001$, $N = 96$). Even if the representative's payoff is equal to the executive board member's payoff as is the case in the RFG-NOINC treatment, negotiation partners send significantly more offers than in

TABLE 5 Influence of social value orientation

Independent variables	Dependent variable: <i>Investment in a long-term emissions reduction</i>					
	Model 1		Model 2		Model 3	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Intercept	3.50	2.46	5.50	10.46	45.13 [*]	21.14
Comp_EBM_SVO	0.24 [*]	0.10				
RFG_SVO			1.19 ^{**}	0.39	0.14	0.47
EBM_SVO			0.48	0.38	1.46 ^{**}	0.53
<i>N</i>	32		33		31	

Note. Unstandardized coefficients (*b*) and robust standard errors (*SE*) are shown.

Abbreviations: Comp_EBM_SVO, the executive board members' composite social value orientation, that is, the mean between both executive board members' SVOs; RFG_SVO, the social value orientation of the representative of future generations; EBM_SVO, the executive board member's social value orientation.

^{*} $p < .05$.

^{**} $p < .01$.

^{***} $p < .001$.

TABLE 6 Hypotheses

Hypotheses		Support
Hypothesis 1	Negotiations between a representative of future generations and an executive board member will result in higher investments in intergenerational justice than negotiations between two executive board members.	Supported
Hypothesis 2	Negotiations between a representative of future generations and an executive board member will result in higher investments in intergenerational justice than negotiations between two executive board members even if the incentive system of the representative of future generations financially penalizes higher investments.	Supported
Hypothesis 3	Negotiations between a representative of future generations and an executive board member will result in higher investments in intergenerational justice if the incentive system of the representative of future generations financially rewards higher investments than if when the incentive system of the representative of future generations financially penalizes higher investments.	Supported
Hypothesis 4	Irrespective of the assigned role, there will be a positive effect from negotiators' future orientation on the investments in intergenerational justice. That is, future-oriented negotiators will agree on higher investments in intergenerational justice than present-oriented negotiators.	Partially supported
Hypothesis 5	Irrespective of the assigned role, there will be a positive effect of negotiators' SVO on the investments in intergenerational justice. That is, prosocial negotiators will agree on higher investments in intergenerational justice compared to proselfs.	Partially supported

the control treatment ($b = 1.61$, robust $SE = 0.44$, $p < .001$, $N = 65$). This difference shows that the representative of future generations is an advocate for the interests of future generations. Finally, the comparison of both RFG treatments reveals that when the negotiation partners' payoffs are misaligned in the RFG-INC treatment, significantly more offers are sent compared to when the negotiation partners' payoffs are aligned in the RFG-NOINC treatment ($b = 2.49$,

robust $SE = 0.93$, $p = .007$, $N = 64$). Overall, we find that the rigidity of the negotiations increases when a representative is appointed and that most negotiations require even more information exchange when the representative's payoff is misaligned with the executive board member's incentive system.

5 | DISCUSSION AND CONCLUSION

In the light of the current debate about the legitimate interests of the young generation concerning climate change and the emissions of greenhouse gases, this article shows an innovative way to strengthen intergenerational justice at the organizational level. Specifically, we examined the effectiveness of a person acting as a representative of future generations and the influence of this person's incentive system on intraorganizational negotiations on investments in intergenerational justice. Based on SIT, SCT, and GFT, our experimental results emphasize that the employment of a representative of future generations leads to a strong increase in investments in intergenerational justice. This even holds if the representative's incentive system financially penalizes the investment in intergenerational justice. Hence, the pure role assignment and the provision of a detailed role description already improve negotiation results affecting the future. Furthermore, negotiation results are even more favorable for future generations if the representative has a financial incentive to increase those investments. Interestingly, our results show that an incentive system shifts the motivation of the representative from acting in favor of the future (future orientation) to acting on one's own behalf (present orientation), that is, there might be an important tradeoff as the motivation (and therefore the trustworthiness) of the representative shifts from the pure motive of promoting intergenerational justice to more selfish monetary motives. In addition, we show that in the presence of a representative of future generations, the influence of personality traits such as the negotiators' future orientation and SVO on negotiation results affecting the future's interests depends on the representative's incentive system. The representatives' future orientation and SVO only have a significant impact when the incentive system financially penalizes the investment in intergenerational justice, whereas the executive board members' future orientation and SVO only influence negotiation outcomes when her or his earnings are misaligned with the representatives' incentive system. Thus, our findings are particularly noteworthy in that they contribute to the understanding of the influence of such role assignments and associated role descriptions on negotiations affecting future generations' interests.

Our results have several practical implications. First, appointing one negotiation partner as a representative of future generations at the organizational level yields negotiation outcomes that favor the interests of future generations. Thus, organizations should recognize this role assignment as a useful mechanism in order to promote intergenerational justice and hence to safeguard the organizations' survival. Second, providing the representative with an incentive system that financially rewards her or his constituency-supportive behavior

strengthens the outcome in favor of future generations even more. Third, when no financial incentives are provided, organizations should take potential representatives' personality traits into account. That is, in the absence of financial incentives, the representatives' future orientation and SVO have a significantly positive impact on negotiated investments. This latter result is in line with previous research conducted by Aaldering et al. (2013) who found prosocial representatives to be more content to sacrifice their self-interests in favor of their constituency. Therefore, having knowledge about the potential negotiators' personality traits is a valuable tool to carefully choose representatives that will best defend their constituencies' interests. Fourth, our results indicate that representatives of future generations can make long-term (future) orientation more salient. Within organizations, powerful representatives could have the role of limiting long-term negative consequences of firm behavior and could promote costly but promising technological developments and help to overcome organizational inertia (Hannan & Freeman, 1984).

Our work is subject to several limitations, which might be addressed in future research. First, we do not consider for the uncertainty associated with future generations' interests. In real-world negotiations, one problem of accurately incorporating future generations' interests in today's decisions is the difficulty of predicting the effects and risks of today's decisions on future generations' living conditions (Bovenkerk, 2015). Nevertheless, it is important that present generations are aware of these risks (Ekeli, 2007). Accordingly, future research should examine the influence of uncertainty on the negotiation behavior in negotiations affecting future generations' interests. Second, we provided participants with an unearned endowment which they could invest to benefit future generations. Thus, participants did not have to concede the money they had earned. Even if this assumption is realistic in that present negotiations do not always involve the contribution of one's own earnings, it is indeed very possible that negotiations on specific taxes aiming at protecting the environment might call for such contributions. As previous research has shown that bargaining over earned wealth elicits more self-interest behavior (Cherry, Frykblom, & Shogren, 2002), it would be worth analyzing how abandoning money, which has previously been earned in a real effort task, would influence negotiation behavior, particularly that of representatives of future generations. Third, we used investments in long-term emissions reductions as a metric for investments in inter-generational justice. However, organizations cause several other environmental outcomes that have long-term consequences. For instance, organizations are responsible for the declining of biodiversity (Shrivastava, 1995). Therefore, it would be useful to investigate whether and how a representative of future generations could influence negotiation outcomes that refer to other harmful consequences for the future. Although long-term emissions reductions as well as the decimation of biodiversity already affect human beings and will also continue to have an impact on future human life, these topics might be considered as issues that potentially harm other living beings instead of human life. Therefore, it might be possible that applying the underlying concept of a specific representative such as a representative of future generations to negotiations to other aspects of

sustainability, which directly affect the negotiators themselves or at least future human beings such as food shortage, increased conflict and migration in the world, or the promotion of equal job opportunities in organizations, yields different results. Previous work has already dealt with analyzing the influence of delaying the outcome of a negotiation, which directly affected the negotiators themselves (e.g., Henderson, Trope, & Carnevale, 2006; Okhuysen, Galinsky, & Uptigrove, 2003). This research has shown that negotiators achieved higher individual and joint outcomes when the outcome of the negotiation is delayed (Henderson et al., 2006; Okhuysen et al., 2003). However, in these former studies, negotiators exclusively negotiated for themselves and did not represent a third party. It would therefore be interesting to investigate the influence of the presence of a specific representative on negotiation outcomes that affect the negotiation partners themselves as well as other future human beings or, more abstractly, the functioning of future ecosystems. Finally, we used undergraduate students at a large German University as participants in our study. Laboratory experiments with student participants are criticized for not yielding representative evidence (Falk & Heckman, 2009, see also Bercovitch, 2004). For instance, Donohue and Taylor (2007) state that there might be key differences between the students' role-playing and actual negotiator role behavior because the latter one is associated with the internalization of specific expectations and therefore might lead to the pursuit of different negotiation strategies. Consequently, it might be possible that the results of the present study deviate from real negotiators' behavior in real organizations. However, previous research found students and professional negotiators not to differ substantially when making ethical decisions (Aquino, 1998). Nevertheless, it would be fruitful to analyze whether the causal relationships found in our laboratory experiment can also be replicated by field experiments in real organizations, in which one employee is designated to be the representative of future generations and to negotiate with the real board members.

In summary, the appointment of a representative of future generations at the organizational level could be a valuable answer to the current student protests concerning the protection of the interests of future generations.

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