

Psychological Interventions to Improve Intergroup Relations in the Asylum Context: A Multi-Perspective Approach to Transform Social Conflict

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„If you want truly to understand something, try to change it.”

- Kurt Lewin

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Summary

The history of human kind is characterized by social conflict. Every conflict can be the starting point of social change or the escalation into more destructive forms. The social conflict in regard to rising numbers of refugees and their acceptance that arose in most host countries in 2015 already took on destructive forms – in Germany, right-wing extremists attacked refugee shelters and even killed multiple people, including political leaders who openly supported refugees. Thus, incompatible expectancies and values of different parts of the society led to violent action tendencies, which tremendously threaten intergroup relations. Psychological research has developed several interventions in past decades to improve intergroup relations, but they fall short, for example, when it comes to the inclusion of people with extreme attitudes and to precisely differentiate potential prosocial outcomes of the interventions. Thus, this dissertation aimed to a) develop psychological interventions, that could also be applied to people with more extreme attitudes, thereby putting a special emphasis on collecting a diverse sample; b) gain knowledge about target- and outcome specific effects: Who benefits from which intervention and how can specific prosocial actions be predicted in order to develop interventions that guide needs-based actions; and c) shed light on potential underlying mechanisms of the interventions.

The dissertation will be introduced by the socio-political background that motivated the line of research pursued, before providing an overview of the conceptualization of social conflicts and potential psychological inhibitors and catalyzers for conflict transformation. Based on past research on socio-psychological interventions and their limitations, the aims of the dissertation will be presented in more detail, followed by a short summary of each manuscript. Overall, the present thesis comprises four manuscripts that were summarized in the general discussion into a road map for social-psychological interventions to put them into a broader perspective. The road map aspires to provide recommendations for increasing – either approach-oriented or support-oriented actions – by the socio-psychological

interventions for a variety of host society groups depending on their pre-existing attitude towards refugees.

A *Paradoxical Intervention* targeting central beliefs of people with negative attitudes towards refugees influenced inhibitory and catalyzing factors for conflict transformation over the course of three experiments – thereby providing an effective tool to establish approach-oriented action tendencies, such as the willingness to get in contact with refugees. Further, the dissertation presents a novel mechanism – namely *Cognitive Flexibility* – which could explain the *Paradoxical Interventions'* effect of past research. By positively affecting a context-free mindset, the *Paradoxical Intervention* could impact more flexible thought processes in general, irrespective of the topic tackled in the *Paradoxical Intervention* itself. For people with rather positive attitudes addressing emotions may increase specific support-oriented action tendencies. The dissertation provides evidence of a positive relation between moral outrage and hierarchy-challenging actions, such as solidarity-based collective action, and sympathy with prosocial hierarchy-maintaining support-oriented actions, such as dependency-oriented helping. These exclusive relations between specific emotions and action intentions provide important implications for the theorizing of emotion-behavior relations, as well as for practical considerations. In addition, a diversity workshop conducted with future diplomats showed indirect effects on solidarity-based collective action via diversity perception and superordinate group identification, thereby extending past research by including action intentions and going beyond the focus on grassroots-initiatives by presenting an implementable intervention for future leaders in a real world context.

Taken together, this dissertation provides important insights for the development of socio-psychological interventions. By integrating a diverse sample, including members of institutions on meso- and macro-levels (non-governmental organizations and future politicians) of our society, this dissertation presents a unique multi-perspective of host society members on the social conflict of refugee acceptance and support. Thereby, this work contributes to theoretical

and practical advancement of how social psychology can contribute not only to negative peace – by for example (indirectly) reducing support of violence against refugees – but also to positive peace – by for example investigating precursors of hierarchy-challenging actions that enable equal rights.

1. Introduction

Ferhat Unvar

Mercedes Kieroacz

Sedat Gürbüz

Gökhan Gültekin

Hamza Kurtovic

Kaloyan Velkov

Vili Viorel Păun

Said Naésar Hashemi

Faith Saraçoğlu

These names belong to people killed in Hanau, Germany, in February 2020 by a right-wing extremist. The list of killed people in other incidents could be prolonged and their names would fill many pages in this dissertation – some more widely known than others, as for example Walter Lübcke, a German pro-migrant politician or Alan Kurdi, a young-3 year old Syrian boy, drowned while trying to cross the Mediterranean sea. The picture of his dead body went around the world as a symbol of the situation of many refugees today. In 2015 the United Nations proclaimed that the world is facing the highest number of refugees since World War II (UNHCR, 2015). Since then the number rose further, the latest statistics show more than 79.8 million forcibly displaced people (UNHCR, 2019). Most of the refugees flee to their neighboring countries, but many started a risky journey to other countries and even other continents such as Europe. Reports describe a horrendous situation in Europe's largest refugee camp Moria on the Greek island Lesbos – including children and teenagers who try to commit suicide (Hennike, 2018). Even though the number of refugees arriving to Europe

has declined, due to stricter border control and a deal between Europe and Turkey (Cremer, 2017), the situation at Europe's border continues to escalate.

This showcases how support for refugees is highly necessary – but the host society reacts ambivalently towards the higher number of refugees. For example, shortly after the number of refugees rose, an anti-refugee movement was built in Germany called *PEGIDA* (Patriotic Europeans against the Islamization of the Occident), attracting thousands of people during their weekly demonstrations and whose majority of members associated themselves with the AfD (Alternative for Germany) – a right-wing party in Germany (Geiges et al., 2015). Reports showed a very low willingness to get in contact with, for example journalists, and videos even reveal violent action tendencies (Álvarez & Miewendick, 2015). Other parts of the society welcomed refugees at train stations with Brezels and teddy bears (Hengst, 2015). Indeed, the challenge to react to the high number of refugees would have been even worse without many civil society initiatives. These initiatives were successful in satisfying basic needs for refugees by collecting old clothes, providing food and shelter as many people arrived in Europe and Germany without any own possessions. But as time passed, the question arose if the help still satisfies the needs of refugees? For example, when refugees arrive in their potential host country, the satisfaction of basic needs such as shelter, food, clothing, but also close assistance in handling formalities at authorities may be necessary, but this may differ in time and for individuals. In fact, reports accumulate that the provided help is not always based on the current needs of refugees – even prevent autonomy and foster dependency (Greyer, 2019; Omwenyeke, n.d.).

At the same time, political leaders aim to prevent further entry of refugees into the European Union by establishing treaties with other countries, which often do not lead to collaboration based on human rights considerations.

Consequently, this dissertation was motivated in finding answers to the following questions: How can openness to information and discourse be increased especially in people

who are refusing to do so? Are there specific psychological precursors for different types of help/support for refugees, which may guide the help that is needed? And last but not least, can an intervention based on socio-psychological theory positively influence collective action intention of (future) leaders which is based on human rights considerations?

Before presenting the empirical approach that aimed to answer the questions, I will shortly introduce how social conflicts are understood in this dissertation, their psychological underpinnings related to group categorization and their relation to the situation in Germany regarding refugee acceptance before drawing on potential inhibitors and catalyzers for conflict transformation from intergroup research.

1.1. Social conflict

„We don't shun conflicts“ – this slogan of the German Civil Peace service may come across to some as a threat considering the everyday understanding of conflicts as something negative and mostly violent. But in peace research and practice, conflicts are first of all understood as a divergence in interests or goals between two or more parties and therefore do not entail a negative connotation (Pruitt et al, 2003). Other definitions suppose that not only divergent interests, goals or values define a social conflict, but also when it integrates an incompatibility of action intentions (Baros, 2004). Conflicts can take place on several levels – on an intrapersonal level there are conflicts within a person. This would be the case, when two motives seem to be in conflict, for example in case of a student who aims to achieve a good grade, which would mean to stay home and study, but gets an invitation to a party at the university campus, which sh/e really likes to join. On an interpersonal level, the conflict would be between two people, for example when the student cancels on his/her friend and the friend gets mad about it. Intergroup conflicts instead can arise when the conflict is due to the membership to social groups – any unit of two or more people who share a connection of social relationship or a positive interdependence of goals (Böhm et al., in press). If individuals perceive themselves as members of the same or another group depends to a large degree

on the context according to the social identity approach (Turner et al., 1987). For example, psychology students majoring in clinical psychology may differentiate during their everyday studies between them as ingroup members – members who belong to the group – and students majoring in economic psychology as outgroup members – members who do not belong to the group. But on graduation day, this group differentiation may be less relevant as the context of the graduation makes the group identities less salient and puts emphasis on all students together. The influence of group salience on group perception and subsequent behavior gets especially noticeable, when looking at the results of the ‘minimal group paradigm’ conducted by Tajfel and colleagues (1971), which emphasized the ‘power of the group’. Participants were divided into two groups by completely trivial criteria – this division though had consequences on actions towards ingroup and outgroup members based on this trivial criteria. In a subsequent resource allocation task, participants favored their ingroup in a way that they maximized the relative difference in gains between ingroup and outgroup members, even when this meant loss in regard to the absolute gain of the ingroup (ingroup favoritism). Thus, the results strikingly show how social categorization can be the antecedent of discrimination, even when this categorization was based on an artificial group membership. The social identity perspective (Tajfel & Turner, 1986) explains this with the functionality of groups – they provide a sense of who people are and thus, people are motivated to positively differentiate one’s group from outgroups. In real life, people belong to multiple groups, so the question arises which of the possible social groups will influence perception and behavior after all. Turner and colleagues have theorized one of the reasons that explain which groups are salient in certain situations is the accessibility of social categories, which is strongly influenced by the past experiences of the individual (Turner & Reynolds, 2012). Imagine the student from the example in the beginning, who happens to have just arrived to the country a couple of years ago due to political persecution, but who is (repeatedly) not invited to the student party after all, because the host does not want to invite refugees. During graduation day, the social

category of being a 'student' may be salient, but due to his experiences, the category "refugee" is simultaneously very accessible and therefore salient. In general, research on intergroup conflict has focused on conflicts between groups that differ in gender, religion, sexual orientation and origin/ethnicity (Deutsch, 2014), because of their high salience in everyday contexts. This dissertation follows this focus as the higher number of refugees is strongly connected to identification with origin and ethnicity. In the next section, I will specify how the concept of social conflict is applied to the conflict regarding refugee acceptance.

1.2. The Asylum Context

According to the conflict barometer of the Heidelberg Institute for International Conflict Research (2020), most of the violent conflicts take place in the Middle East and North Africa—90 % of refugees don't stay in Libya— instead they embark on a life-risking route on dinghies on the Mediterranean sea in order to reach Europe (Fiedler, 2017).

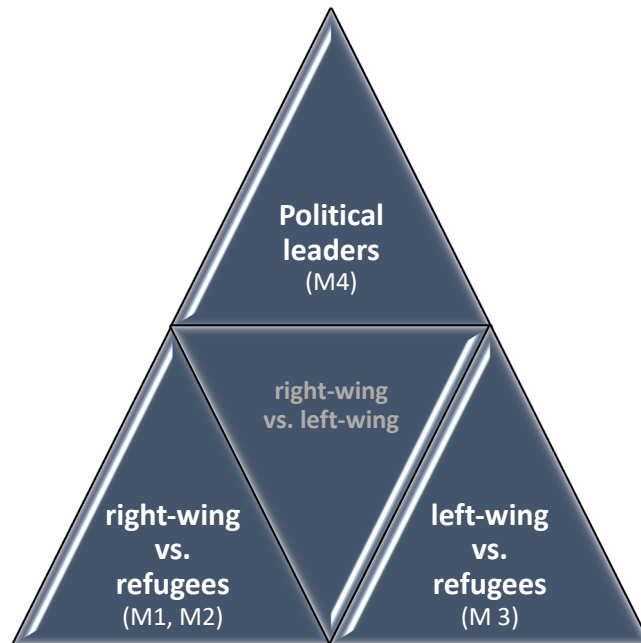
Europe's leaders were promoting different values and suggestions how to react to higher number of refugees, which made many question the concept of the European Union and its ability to jointly act upon this issue and thereby threatens the stability of the European Union. Consequently, the first relevant conflict in the refugee context takes place between political leaders and how they can act collectively to tackle the challenges associated with the rising number of refugees (see Figure 1). Second, as introduced, reaction of the host society members ranged from welcoming refugees at train stations to anti-refugee movements and violence against refugees. Both extremes could form part of a conflict in the refugee context between host society members and refugees. The more obvious one takes place between people having very negative attitudes towards refugees, and refugees themselves, thus supporting right-wing parties, participating in anti-refugee protests and maybe even showcasing violence against refugees. The less obvious conflict could take place between volunteers for refugee support – thus people who have more positive attitudes towards refugees – and refugees. Recognizing and respecting the other by being responsive to the

other's needs is one characteristic formulated by Morton Deutsch (2014) for positive intergroup relations on constructive cooperative terms. But as introduced, many people may feel the urge to support refugees by any means without necessarily taking their specific needs into consideration (Greyer, 2019). Not feeling respected during contact encounters could impede intergroup relations, for example when refugees don't accept the help offered as it does not meet their needs (Nadler & Halabi, 2006). This could lead to a perceived negative contact experience by both parties – the host society member and the person with refugee status. Many volunteers have communicated about ungrateful refugees and even quit their support (Waechter, 2016). As past research has corroborated that perceived negative contact is a stronger predictor for increased prejudice than positive contact for decreased prejudice (Barlow et al., 2012), intergroup help should be differentiated into specific forms of help to meet the needs of refugees and thereby prevent negative contact.

Thus, there are three conflicts, which were focused in this dissertation (Figure 1). There is a potential fourth conflict, which tackles the issue of political polarization between different political sections within the society regarding refugee acceptance. A fourth conflict could therefore be conceptualized between right-wing and left-wing supporters. Although this specific conflict won't be directly addressed by the research here, as one of the core issues in this conflict is the divergent opinion on how to interact with and treat refugees, part of this research could also indirectly affect and thus, depolarize relations between right-wing and left-wing supporters.

Figure 1

Intergroup conflicts in the context of refugee acceptance. Corresponding manuscripts are in brackets below.



1.3. Psychological Inhibitors and Catalyzers for Conflict Transformation

„There was a huge wall between us which you tried to build up over a quarter of a century, but it was destroyed in 1973.... Yet, there remained another wall. This wall constitutes a psychological barrier between us. A barrier of suspicion. A barrier of rejection. A barrier of fear of deception. A barrier of hallucinations around any action, deed or decision. A barrier of cautious and erroneous interpretations of all and every event or statement. It is this psychological barrier which I described in official statements as representing 70 percent of the whole problem.”

– Anwar Sadat

This section is introduced by a quote of the former Egyptian president Anwar Sadat in 1977 in front of the Israeli Knesset. As introduced, conflicts are not essentially violent nor destructive – but certain psychological factors can influence the course of the conflict. Anwar Sadat is even arguing that psychological barriers play a huge part in the destructive course of a conflict. What are these psychological barriers? The following section will provide the socio-

psychological background to answer this question, which will be applied to the refugee context of this dissertation.

Daniel Bar-Tal (2007) presented three factors relevant to a socio-psychological infrastructure that foster the maintenance of a destructive course of a conflict: collective memory, ethos of conflict, and collective emotional reactions. The factors were originally applied to intractable conflicts – conflicts of long duration with high perception of not being solvable and accompanied by physical violence. However I suggest that two of these factors could be applied to intergroup conflicts more generally that do not qualify for an intractable conflict. Collective memory seems least applicable, because even though the conflict between refugees and host country members is already characterized by violent action tendencies, it is to a lesser degree characterized by a large duration – at least when we focus on the outbreak since 2015. For this reason, collective memory will not be further embedded in this context at hand. In contrast, the ethos of conflict can be seen as relevant in this context as an inhibitory factor for conflict transformation. The ethos of conflict is defined ‘as the configuration of shared central beliefs’, that provides the epistemic base for the conflict, including images of the own group and of the ‘rival’ (Bar-Tal, 2011, p.11). Based on past research on intergroup relations between refugees or migrants on the one hand and host society members on the other hand, I identified four main themes that I aggregated and conceptualized as the ethos of conflict in the refugee context (see elaboration on each factor in Manuscript 1):

The concern for the future of one’s own country (Nationalistic Concern).

The perception that refugees threaten one’s culture and traditions (Symbolic Threat).

The perception that refugees threaten the economic welfare of the country (Economic Threat)

The perception that outgroup members are similar to each other (Outgroup Homogeneity).

Ultimately, these beliefs feed the view that the ingroup is a peace-loving victim of the outgroup – in this case refugees (Cohrs et al., 2015). The reason why these factors function as barriers

and are difficult to change is that they serve functional and motivational purposes. First, the above mentioned societal beliefs fulfill the human need for identity and differentiation or to guide the interpretation of social reality more generally (Bar-Tal, 2011). As a result people are motivated to sustain these beliefs. This has important consequences for the selection, search and processing of information concerning the conflict. For example, people actively search for information that confirms their conflict supporting beliefs (Schultz-Hardt et al., 2000). The higher the identification with these conflict supporting beliefs, the higher the resistance to information that is inconsistent or contradictory to one's beliefs (Bar-Tal, 2011, see also Porat et al., 2015). This lack in openness towards information poses a challenge for changing the beliefs that help sustain the conflict and inhibits the way to a constructive course. Figure 2 visualizes how psychological barriers may lead to a destructive course of the conflict if no intervention addresses them.

Figure 2

Potential destructive course of a conflict.



Collective emotional reactions have been mostly dealt in the context of conflicts by looking at the consequences of negative emotional reactions that function as inhibitory factors in conflict transformation. I would like to put the focus more on their catalyzing function by focusing on prosocial emotions and their potential to positively influence the course of the conflict. Emotions are mostly conceptualized as individual processes, but research has shown that the activation of a group membership influenced the report of emotions – qualitatively and quantitatively (Mackie & Smith, 2017). Thus, people experience group-based emotions as a result from social categorization and social identification. Emotions on a group-level have been found to influence behavior in intergroup conflict, but as mentioned, mostly by

functioning as inhibitors (see e.g. Baumeister & Butz, 2005; Halperin, 2008). But I argue that prosocial group-based emotions could offer a fruitful avenue for investigating precursors for a constructive course of a conflict. For example, Harth and colleagues (2008) showed that sympathy lead to less ingroup favoritism in a resource distribution task. Thus, prosocial emotions could lead to more positive intergroup behavior – but, in order to address the potential conflict between supporters and refugees mentioned in 1.2., the positive behavior has to be differentiated even more into different forms of prosocial action in order to find catalyzers that provoke specific action tendencies.

Two more factors relevant to inhibitory and catalyzing factors can be derived from the process of social categorization. In section 1.2. I introduced the salience of group membership and its influence on perception and behavior with the example of a student who on graduation day may perceive all attendees less as students from certain subdisciplines but rather as all being a student – a category that includes all students of all subdisciplines and therefore recategorizes everyone to a superordinate category. Superordinate group identification has functioned as an important catalyzer for positive intergroup relations (e.g. Gaertner et al., 2000). More pertinent to this context, the superordinate identification as a global citizen and with the world community was uniquely related to attitudes towards peace (Reysen & Katzarska-Miller, 2017) and global cooperation (Buchan et al. 2011). The observations are based on the *Common Ingroup Identity Model* which proposes that the salience of an inclusive category between in- and outgroup can reduce intergroup conflict (Gaertner & Dovidio, 2000). The possibility to recategorize into a higher order social category (and decrease salience on subgroups) seems feasible in the example of the student who feels recategorized to the overall group of students. But as mentioned, some identities are connected to experiences and biographical information, such as in the example of the student who regularly gets discriminated because s/he sought refuge in the country and whose identity of being a refugee therefore has high salience despite the recategorization context of the graduation day. Thus,

in everyday lives there are social group identities that are held by individuals with strong support and can't be easily downplayed because of its high default-salience – also even in cases in which it is possible, without subgroup salience, it remains unclear if the people perceive the situation as an intergroup situation and thus, if the positive effect gets translated to other intergroup encounters (Brown & Hewstone, 2000). For this reason, Hewstone and Brown (1986) argued for the *Mutual Intergroup Differentiation Model*, in which the subgroup's unique attributes are each positively valued. Considering the basic tendency to show ingroup favoritism this seems like a challenge as also a higher order inclusive category allows for comparisons between the subgroups. According to the *Ingroup Projection Model* (Wenzel et al., 2007) the result of this comparison is influenced by the prototype for the superordinate category – an ideal type member of the superordinate category (Oakes et al., 1998). Thus, in- and outgroups are evaluated based on the perceived relative fit to the prototype of the superordinate group. Coming back once more to the example introduced in section 1.2. – the evaluation of clinical psychology students and economic psychology students may depend on the result of their perception, which subgroup resembles more the prototype of a psychology student. Due to the fact that the representation of social categories is a social construction, combined with the tendency to view one's own group more positive, the evaluation of each group's prototypicality is subject to biased perceptions. Indeed, accumulated research based on the *Ingroup Projection Model* shows, that ingroups have a tendency to generalize, or project, characteristics of their ingroup to the superordinate category, which results in a higher perceived relative prototypicality of one's own group in comparison to the outgroup (Wenzel et al., 2007). The consequence is, that norms and standards of the superordinate group are defined by the ingroup making the outgroup a deviant to this norm and thus, evaluated negatively. As higher perceived prototypicality goes along with entitlement perceptions (e.g. see Reese et al., 2012; Wenzel, 2004) and processes of ingroup projection apply to both groups – conflicts, in a variety of forms, are easily imaginable. Decreasing the possibility to

exert ingroup projection may therefore reduce one (of the manifold) inhibitors for positive intergroup relations.

Before providing an overview of socio-psychological interventions, the words of Kurt Lewin summarize the last section: “for any type of social management, it is of great practical importance that levels of quasi-stationary equilibria can be changed in either of two ways: by adding forces in the desired direction, or by diminishing opposing factors.”

1.4. Socio-psychological Interventions

The transformation of conflicts – impacting them in constructive ways by addressing catalyzers and inhibitors – is a multidisciplinary endeavor in science, but also includes politics and the civil society. Still, even though social psychology is a relatively young discipline, researchers were eager since its beginnings – also influenced by the socio-political context – to find ways to reduce intergroup conflicts. An example provides the Robber’s cave experiment from 1961 by Muzafar Sherif, which not only provided theoretical progress in regard to intergroup conflicts but also proposed ways on how to reduce it.

Lately, Hameiri and colleagues (2014) have published a categorization of socio-psychological interventions (see also another categorization by Paluck, 2012). The authors mainly divide the interventions in a) interventions that provide (inconsistent) information or b) interventions that teach a new skill. The following elaborations focus mainly on a) as they provide the base for the subsequent thinking on new interventions.

The first category is based on the notion that providing contradictory information will cause dissonance and eventually change attitudes and behavior in regard to the conflict. For example, Gayer and colleagues (2009) provided their participants information on potential future losses for Jews in Israel if the conflict endures, which led to higher willingness to compromise to achieve a peaceful solution. Interestingly, the effects were moderated by political orientation in a way that dovish participants (more left-wing) showed higher willingness to compromise than more hawkish (more right-wing) participants. Thus, providing

new (inconsistent) information does not seem to be a successful intervention method for everyone equally. As elaborated on the section of inhibitors and catalyzers, people tend to especially attend to information, which is consistent with the conflict supporting beliefs, the more they identify with them. This issue can be further exemplified by the most known intervention in social-psychology that works with providing information by experiences, the contact intervention (Allport, 1954). It follows the simple assumption that contact between members of two groups (in conflict) improves the relation between them (see overview Pettigrew & Tropp, 2006). Even though past research overall supported this assumption, several drawbacks have been observed. First, it is unclear how diverse the sample tested has been – there is evidence, that people with stronger adherence to the ethos of conflict avoid getting in contact with the other group (Herek & Capitanio, 1996; Mozumder & Haque, 2015). In Bavaria, the most southern state of Germany, migrants and refugees are highly prevalent, still the degree of prejudice is very high (Decker, 2015). In line with this is research by Asbrock and colleagues (2012) who found that people with high social dominance orientation (Pratto et al., 1994) and right-wing authoritarianism (e.g. Altemeyer, 1988) react differently towards a contact intervention. Further, it seems that the contact intervention is more successful with children and young people than with adults (Pettigrew & Tropp, 2006, p. 746). But even when conducted with the youth, the effects seem to depend on the composition within the group. For example, the evaluation of a contact program in an Israeli youth center between Jewish and Arab students did not yield promising effects – the Arab youth indeed showed short-term positive effects, but these effects were not sustained in the long-run. For the Jewish participants the contact program even had negative effects for both, the short-run and long-run (Guffler & Wagner, 2017, see also Hässler et al., 2020).

In sum, it seems that the contact intervention's effect depends on a variety of variables – within the situation, for example power relations or nationality, but also on individual variables of the participants. Contact between members of two adversary groups, who may

even be inclined to use violence, also poses ethical constraints of implementing a contact intervention (see research on imagined contact by Miles and Crisp (2014) to address this drawback).

A third example to provide inconsistent or contradictory information is by presenting statistics in campaigns, e.g. by non-governmental organizations. Mostly, this addresses indeed, again, people who do not adhere to conflict supporting beliefs to a high degree. But even in this case, using statistics and deliberative thought has not (always) been effective and even decreased support for people in need (see e.g. Small et al., 2007).

Based on this evidence, providing inconsistent information or information more generally through experiences such as the contact intervention, does not seem the most suitable option to increase reconciliation and support for a disadvantaged group, especially for people holding strong conflict supporting beliefs.

Another issue of current socio-psychological interventions to improve intergroup conflict lies in the research design and setting. The majority has not followed an experimental approach and only 11% were conducted in real world settings – research in real world settings using an adult sample are represented even less (Paluck, 2016).

Consequently, there is a strong need to a) develop new interventions that include people who strongly adhere to conflict-supporting beliefs and usually reject inconsistent information b) implement the new and existing interventions in real world settings. This dissertation aims to address these needs and follows the overall research question: Which socio-psychological interventions can be developed and applied for a diversity of target groups within the context of refugee-host relations, that address specific inhibitors and catalyzers for conflict transformation in real world settings? In the following section, based on the limitations of past research, I will present the main aims of this dissertation in more detail, before summarizing the content of the four manuscripts and their corresponding empirical evidence.

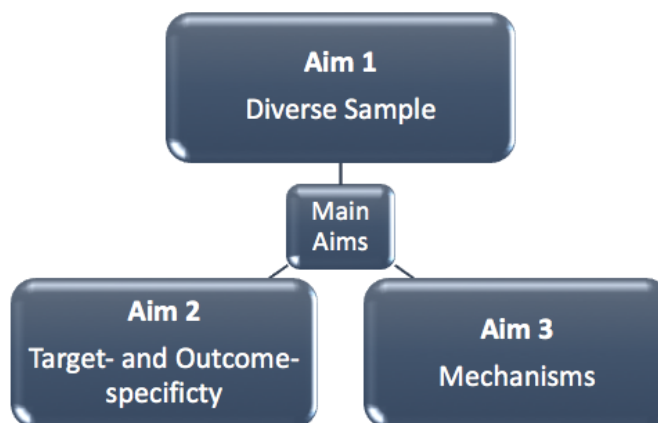
2. Present Research

2.1. Main Aims

In order to contribute to alleviating one of the most pressing issues of our times and extending previous research on socio-psychological interventions, I addressed three main aims in this dissertation (see Figure 3) – these aims are realized by all four papers included in this dissertation. In the overview I will point out how the manuscripts are connected to these research aims. The results and implications of the manuscripts will be discussed comprehensively in the general discussion.

Figure 3

Main aims of testing the interventions included in the dissertation.



The first aim is to develop and test interventions with hard to reach-samples. Psychological research in the area of improving intergroup relations faces tremendous challenges reaching a diverse population in need for such interventions. Often those people with the most detrimental intergroup attitudes are not easily reached. Social-psychological researchers interested in interventions to improve intergroup relations face the challenge, in contrast to intervention researchers in the area of health psychology, that the participants are not motivated to participate in the intervention in the first place. This leaves out important

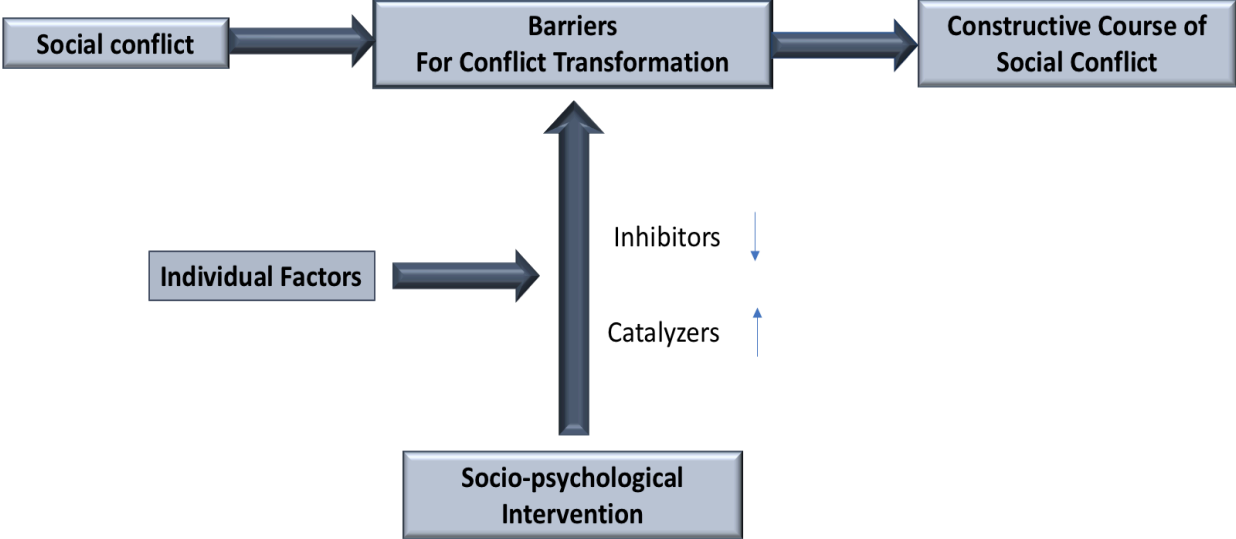
knowledge about target groups that may be in need to specific intervention approaches, which leads to the second aim of this dissertation. Not only does this dissertation aim to reach samples usually neglected due to low feasibility, but it also aims to derive to conclusions to the question on how to develop and implement (the base of) target- and outcome specific interventions. For example, including a diverse sample should allow important conclusions if there are potential moderators affecting the effectiveness of the intervention, which should be taken into account. Further, this dissertation aims to extend past research on intergroup attitudes by integrating action tendencies, which are differentiated into hierarchy-maintaining and hierarchy-challenging action tendencies. The differentiation is based on research on the “Irony of Harmony”, which claims that harmonious intergroup relations do not necessarily mean that there exists social equality between the groups (Saguy et al., 2009). This conceptualization is supported by the differentiation of positive and negative peace by Johan Galtung (1969), in which negative peace means the absence of violence (or the fear thereof), positive peace means structural equality incorporated in institutions and action tendencies of a society. Thus, even though actions of the advantaged group members may seem benign and to support social cohesion (Nadler, 2002), hierarchies, for example by unequal access to resources such as education and employment, may remain the same. The necessity of the different action tendencies may vary depending on the current situation. Taking into account that refugees often arrive in host countries with no possessions and in need of satisfying very basic needs, hierarchy-maintaining action tendencies, such as the provision of clothes, food, shelter and accompanying to authority visits may be necessary. Therefore, the dissertation aims to differentiate precursors which predict specific action tendencies that could form the base for tailored target- and outcome specific interventions. The third aim of this dissertation is to shed light on the underlying mechanisms of the interventions. Simultaneously important for basic and for applied research is an understanding about the mechanisms behind an intervention. The knowledge about mechanisms – here mostly conceptualized as inhibitors

and catalyzers – makes it possible to formulate a theoretical model of the intervention and its possible outcomes to make precise predictions – which is of outmost importance for applied settings. Consequently, in all manuscripts possible cognitive and emotional processes have been taken into account to contribute to further theorizing and the practical applications of the interventions.

Taken together, this dissertation will make important contributions to establishing a road map of tailored individualized socio-psychological interventions, based on the endeavor of including a diverse sample from various perspectives and pre-existing attitudes, precisely differentiating prosocial outcomes and shedding light on the underlying mechanisms. Psychological research thereby could support a constructive course of a conflict by examining interventions that decrease inhibitors and increase catalyzers while taking individual factors into account (see Figure 4).

Figure 4

Road map for socio-psychological interventions addressing inhibitors and catalyzers for conflict transformation depending on preexisting attitude



2.2. Manuscript 1

As stated in the sections above, the political climate is deteriorating regarding attitudes towards refugees. At the same time, people with the most negative attitudes may not be easily reached by conventional socio-psychological interventions to improve intergroup relations such as the contact intervention. Considering the predictions that the number of refugees will rather increase than decrease in the future (estimates predict alone 200 million climate refugees by 2050, see Brown, 2008), interventions that may address precursors, or inhibitory and catalyzing factors for conflict transformation are highly desirable, especially for people having very negative attitudes towards refugees. Manuscript 1 adapted a paradoxical leading questions intervention to the intergroup context of Germans and refugees. The idea behind the intervention is to avoid presenting inconsistent information, which would be easily disregarded by the participants. Instead, consistent but extreme information is presented to provoke a reflection process that eventually leads the participant to question his/her beliefs on his/her own (Hameiri et al., 2014). In order to cause a reflection process most likely to be linked with the conflict at hand, the questions were built on the ethos of conflict, which consisted of four subdimensions: Symbolic threat, economic threat, nationalistic concern and homogeneity perception of refugees (*aim 3*). For example, symbolic threat addresses the fear that traditions and other cultural symbols will change due to the higher number of refugees. Conventionally, in order to prevent that fear, one is asking a question suggesting an answer that is contradicting. In the context of the leading questions paradigm, questions would be phrased such as: Why do you think that Christmas will still be celebrated despite the higher number of refugees? The intention is to prompt thoughts that support the content of the question. In contrast, the paradoxical idea for influencing this fear would be by including content, which is consistent but more extreme than the actual fear the recipient holds, for example: Why do you think that we will never ever celebrate Christmas anymore due to the higher number of refugees? Thereby, the question does not negate the thinking of the

recipient, but phrases it in a more extreme way, hopefully making the recipient notice that cultural changes won't be that extreme. In a complex data collection, I conducted three experiments with diverse general population samples (*aim 1*), which provide evidence for a reduced ethos of conflict and a higher openness to (alternative) information and willingness to compromise in the paradoxical leading questions condition in contrast to two other conditions (one condition asking questions in a conventional way as exemplified above and one asking questions in a more neutral way). In addition, the results support the assumption that this intervention could be used as a first step before a contact intervention can successfully be applied, as we found an indirect effect of the variables mentioned onto contact intention (*aim 3*). Another important finding that corroborates the intervention's robustness in these studies was, that even when the questions were posed by supposedly an outgroup member, it increased openness to information. Especially in Experiment 3 we were able to show the target-specificity of the intervention (*aim 2*). People with negative attitudes towards refugees showed higher openness towards (alternative) information in the paradoxical leading questions condition in comparison to two other conditions. In contrast, people with rather positive attitudes towards refugees showed higher openness to (alternative) information in the other two conditions in comparison to the paradoxical leading questions condition.

2.3. Manuscript 2

Manuscript 2 is a direct extension of the findings of Manuscript 1 as it focuses on cognitive flexibility, as a context-free foundation of the effects of the paradoxical intervention in intergroup contexts found in previous research. More precisely, whereas past research has focused on specific effects of a paradoxical intervention in a given intergroup setting (e.g., on the consideration of alternative information towards the outgroup), we argue that it may also affect how people approach tasks that are unrelated to the topic at hand of the intervention. Thus, the main aim in this paper was to show that the paradoxical thinking intervention leads to a general cognitive flexible mindset independent of the context it is situated in. We used

the same material for manipulating the paradoxical leading questions intervention, contrasting the two control conditions, and aimed for reaching a diverse general population sample in regard to refugee attitudes as in Manuscript 1 (*aim 1*). The pattern of results resembled the ones in Manuscript 1 – that is, the more right-wing a participant’s political orientation (as a proxy for negative attitudes towards refugees), the more the paradoxical leading questions enhanced cognitive flexibility, compared to the other two conditions (*aim 2*). Therefore, this paper suggests cognitive flexibility as a potential mechanism between the paradoxical intervention and more context-related variables (*aim 3*).

2.4. Manuscript 3

Whereas Manuscript 1 and 2 focused on possible interventions which could be suitable for people who have rather negative attitudes towards refugees, Manuscript 3 focused on possibilities to improve support for refugees mostly in people who show positivity towards refugees. As the main goal psychological research in the area intervention research is to inform, in the long run, practical implementations of research results, an exchange between science and practice is urgently necessary. Thus, one study in Manuscript 3 integrated the perspective of employees working in charity- and human rights organizations in order to gain information on how non-governmental organization structure their campaigns and if they are in line with socio-psychological theorizing (*aim 1*). The manuscript aims to shed light on the connection between group-based emotions and specific prosocial action tendencies in order to improve outcome-specific predictions (*aim 2*). In particular, we were interested in differentiating hierarchy-maintaining prosocial actions (e.g. various forms of helping such as providing food and shelter) and hierarchy-challenging prosocial actions (e.g. participating in protests asking for equal rights for refugees, see manuscript for an elaboration on the concepts). Results indicate that the emotion of moral outrage is uniquely related to hierarchy-challenging prosocial actions, whereas the emotion of sympathy was uniquely related to hierarchy-maintaining prosocial actions. Further, there is first evidence that identification with

an authority (supposedly responsible for the unjust treatment of the refugees), here the German government, may play an important role in differentiating the two emotional reactions towards refugees as sympathy correlated positively with identification with the authority, whereas there was no relation between identification with the authority and moral outrage (*aim 3*).

2.5. Manuscript 4

In order to achieve social change that contributes to foster social equality, it is necessary to mobilize large parts of the civil society (Manuscript 1 and 3), but decisions in the socio-political field are largely based on the judgment and perception of politicians, who themselves, become subjects of their own biases that guide their decisions, with strong consequences for whole societies. Therefore there is a need to establish interventions that tackle perception biases of future leaders, therefore in a real world context. One of these biases is relative prototypicality bias, which was introduced as a inhibitory factor in 1.2. It states that group members tend to project their own attributes to the superordinate group, therefore perceiving their own group as relatively more prototypical than the other groups (e.g. Waldzus, 2009; Wenzel et al., 2007). This perception tendency has been found to be related to detrimental intergroup attitudes and, on a more relevant level for the study purposes of Manuscript 4, to the perception of developed countries that social inequality is legitimate (Reese et al., 2016). Consequently, the reasoning underlying the motivation of Manuscript 4 was, that reducing the relative prototypicality perception may increase action tendencies to combat social inequality. Thus, I adapted and applied a diversity intervention technique in a control-intervention study with future diplomats in a UN context with the aim to increase international collective action intention regarding human rights issues, including refugee relief (*aim 1*). The intervention and control group was constructed as a workshop for future diplomats, therefore the manuscript provides useful tools for a target-specific implementation of an intervention for practical purposes (*aim 2*). Results did support our hypotheses: the intervention successfully reduced

relative prototypicality perception of one's country to the UN in contrast to a control condition. Plus, the intervention provides evidence that diversity perception and superordinate identification with the UN serially mediated the effect of the intervention on action intention (aim 3).

Figure 5 summarizes the interventions and their corresponding inhibitors/catalyzers and predicted actions.

Figure 5

Overview of the interventions with their corresponding inhibitors/catalyzers, action tendencies and target groups.

Intervention	Inhibitors (I) and Catalyzers (C)	Actions	Target group
Paradoxical Intervention	Ethos of Conflict (I); Openness to (alternative) Information (C); Cognitive Flexibility (C)	Reduced Violence Contact Intention	Right-wing
Emotion-based Intervention	Moral outrage (C); Sympathy (C)	Solidarity-based Collective Action; (Dependency-oriented) Helping	Non-governmental Organization Left-wing
Diversity Intervention	Relative prototypicality (I) Superordinate Group Identification (C)	Solidarity-based Collective Action	Political Leaders

3. General Discussion

In 2.1 I was introducing the idea of establishing a road map of tailored individualized socio-psychological interventions based on the aggregated results of the four manuscripts presented in the past sections. This chapter serves to incorporate the main knowledge gained from the dissertation into a road map (see Figure 6). It further discusses specific theoretical contributions, practical implications and limitations before suggesting possible paths for future research.

Starting point of the road map is a social conflict (as specified in 1.1), which can lead to certain psychological barriers for conflict transformation and thus a heightened potential for a destructive course of the conflict. A socio-psychological intervention, which decreases either psychological inhibitory or increasing catalyzing factors could prevent such a destructive course and rather support a constructive course of the conflict. As indicators for a constructive course serve two categories of prosocial actions in this dissertation: approach-oriented and support-oriented actions (see Figure 6). In addition, I suppose that individual factors are of particular importance as they could impact the potential influence on inhibitory and catalyzing factors and thereby the degree of the prosocial action tendencies. Approach-oriented action tendencies are introduced as important in more hostile relations, for example when people show very negative attitudes towards the target group. Under these circumstances the main goal of interventions would be to increase openness towards the other group and to set the base for positive interactions, operationalized by the intention or willingness to get in contact with refugees and by indicators for potential constructive interactions – in this dissertation measured by the degree of how much people were condemning violence against refugees. In contrast, support-oriented action tendencies could be addressed in people who, in tendency, do not have negative attitudes towards refugees – so the potential base for positive interaction is already set and does not necessarily need to be addressed by psychological interventions to improve intergroup relations. Rather, the research here aimed to elicit emotional and cognitive catalyzers to foster specific action tendencies, so that refugees may get the help which is needed in the designated moment. I differentiated between prosocial hierarchy-maintaining and hierarchy-challenging action tendencies, which makes reference to the distinction between positive and negative peace introduced in 2.1. Comparable to the state of negative peace, hierarchy-maintaining prosocial actions foster non-violent actions and support, but only in a state of positive peace are power and access to resources distributed equally between social groups (see Manuscript 3 for a more in depth differentiation between

hierarchy-maintaining and hierarchy-challenging actions). In order to achieve this, actions that challenge the hierarchy need to be supported – e.g. in form of solidarity-based collective actions by protesting or asking for equal rights. In sum, the road map summarized the evidence that depending on the pre-existing attitude towards the target group (in this context refugees), certain interventions were more suitable to affect prosocial action tendencies than others.

The following paragraph will present the *Paradoxical Intervention* as a potential psychological intervention to increase approach-oriented action tendencies in people with negative attitudes towards the target group refugees and the *Diversity Intervention* and *Prosocial Emotions-based* interventions as potential psychological interventions to increase specific support-oriented action tendencies in people with rather positive attitudes towards refugees.

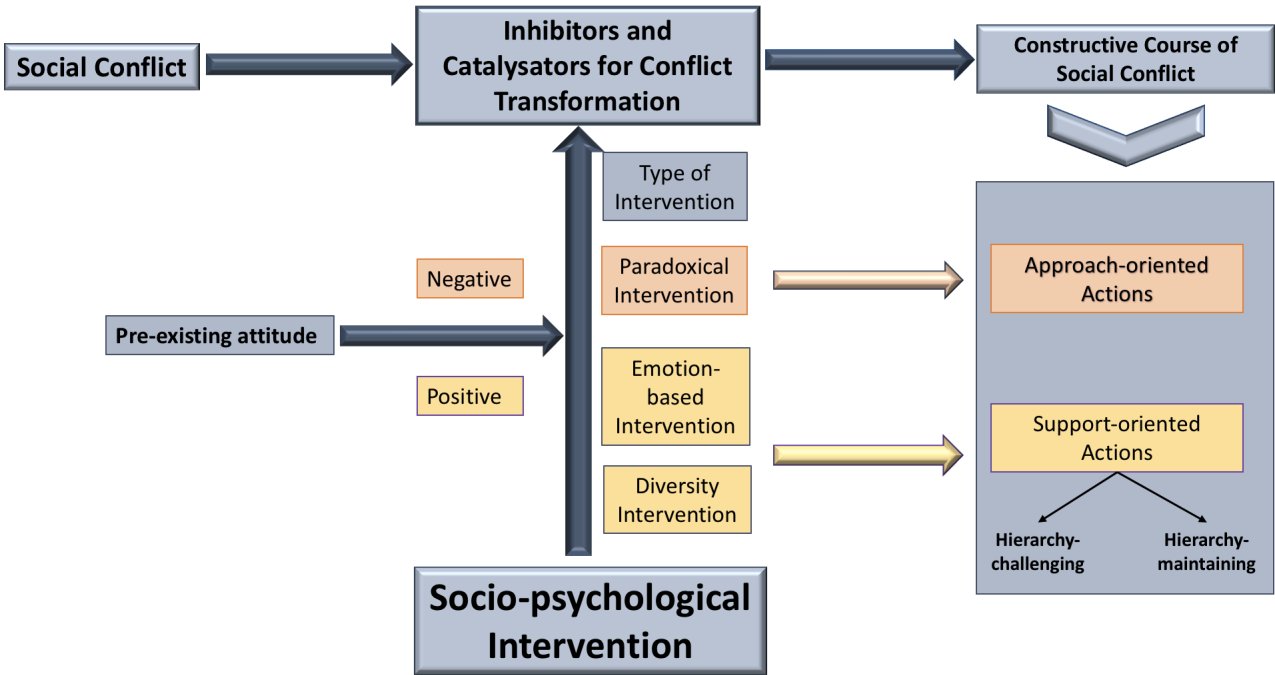
Examining the effects of the paradoxical leading questions interventions realized in Manuscript 1 indicated that people who had negative attitudes towards refugees showed important reductions of the ethos of conflict, higher openness to information and willingness to compromise, which were related to contact intention and condemnation of violence.

In addition, Manuscript 2 showed that the *Paradoxical Intervention* increased a general mental state, called cognitive flexibility, in which a broader set of mental content is available and new perspectives are applied to an issue in participants with negative attitudes towards refugees (Kleiman & Enisman, 2018; Rietzschel, De Dreu, & Nijstad, 2007; see also Diamond, 2013). Thereby, the *Paradoxical Intervention* may serve as an important bridge for people with very negative attitudes towards more traditional approaches such as information campaigns (due to higher openness to information and higher cognitive flexibility), contact interventions (due to higher contact intention) and more generally speaking, towards less violent action tendencies (due to lower support for violence). The target-specific effect of the intervention was visible in both manuscripts testing the paradoxical leading questions

intervention: There was a moderation contrasting the different intervention approaches, allowing to draw the conclusion that whereas *the Paradoxical Intervention* is successful in addressing important inhibiting and catalyzing concepts in participants with negative attitudes, for participants with more positive attitudes towards refugees, regular approaches (such as providing new information) will be more successful in eliciting prosocial action tendencies.

Figure 6

Road map for implementing socio-psychological interventions based on results of dissertation.



For people with more positive attitudes there may be no need to address for example the ethos of conflict and thus to apply the *Paradoxical Intervention*. Rather, addressing emotional processes could have high potential for not only increasing pro-social action tendencies, but also for differentiating them into distinct types, such as prosocial forms of hierarchy-maintaining action tendencies and hierarchy-challenging action tendencies (Manuscript 3). This distinction may contribute to positive peace, as only providing help which maintains intergroup hierarchy could be a starting point of further social conflict (e.g. when the

disadvantaged group perceives the inequality as illegitimate and thereby rejects the help, see Nadler & Halabi, 2006). Thus, to improve intergroup relations and positive peace in the long run, emotional processes related to moral outrage (instead of sympathy) by the advantaged group members towards the refugees' situation are necessary to provide equal opportunities to refugees in their host societies. Adding Manuscript 4 shows that a diversity workshop conducted with future diplomats showed lower levels of the inhibitory factor of relative prototypicality and further – increased diversity perception and social identification, which was related to solidarity-based collective action intention.

Especially noticeable is that social identification played an important role in all research endeavors. For example, another important finding in Manuscript 3 was that identification with the authority served as a potential distinction between sympathy and moral outrage, as only sympathy was positively associated with identification with the respective authority, whereas moral outrage was, as hypothesized, not associated with identification with the authority. Also in Manuscript 1 and 2 social identification played a role. This was the case concerning political orientation – which can be understood as a form of social identification, (see Greene, 2004) that functioned as a moderator for predicting the effects of the paradoxical intervention.

Looking at all four manuscripts together, they provide a comprehensive perspective from various parts of the civil society and macro-level entities such as (future) politicians. Consequently, this dissertation contributes to an important gap in past research, which mostly developed bottom-up interventions, aiming to impact political realities from the societal level, including the mentioned contact intervention. Without doubt, these are important processes, because “peace is the choice of ordinary people” (Desmond Tutu in the movie *Disturbing the Peace*). However, current politicians in power are also subject to psychological biases that play a role in very urgent political matters with potential far-reaching consequences. Therefore, I argue that it is likewise important to develop interventions top-down, in which political leaders influence (human-rights-based) societal processes. For this reason,

Manuscript 4 offers a possibility on how to implement a socio-psychological intervention as a leadership workshop in diplomatic trainings, which could provide the necessary tools for future diplomats to exert that (human-rights-based) influence in societies.

By integrating a diverse sample including institutions on meso- and macro-levels (non-governmental organizations and future politicians) of our society, this dissertation provides a unique multi-perspective on the social conflict of refugee acceptance. Consequently, it developed and tested intervention methods for specific groups in our society (including people with extreme views), provides preliminary evidence on potential mechanisms and presents emotional precursors for differentiating specific forms of prosocial action towards refugees.

Are the interventions and corresponding findings only applicable to the asylum context as the title of the dissertation suggests? To test the *Paradoxical Intervention* in the asylum context we constructed material addressing the ethos of conflict from the majority perspective. Thus, provided that the material gets adjusted, it can be adapted to other contexts of intergroup conflicts like it has been shown in past research (see Hameiri et al., 2014; Swann et al., 1988). In fact, results from Manuscript 2 indicate that the consequences of the *Paradoxical Intervention* are context-free and in general provoke a more cognitive flexible mindset.

When considering the connection of prosocial behavior and different types of helping behaviors (Manuscript 3), one could assume that power hierarchies between host society members and immigrants may be similar for different groups with a migration background (or even disadvantaged groups in general), but stereotypes associated with the groups could influence reactions and specific types of help provided (Fröhlich & Schulte, 2019). Becker et al. (2019) have shown that competence perceptions influence the type of help provided, in a way that group members or individuals that are perceived as more competent receive less likely dependency-oriented help. Thus, Manuscript 3 cannot answer if differences in competence perception, as one facet of group stereotypes (Fiske et al., 2002), influences the

emotional experiences and therefore the action tendencies shown by the host society (see also Cuddy et al., 2007). Last but not least, the diversity workshop was adapted to fit the context it was conducted in. Previous research has already successfully shown that the theoretical base can be translated to a variety of intergroup contexts (see Ehrke et al., 2014).

In sum, even though the research was based in the context of refugee-host relations, with adapted material, the theoretical underpinnings could be applied and tested in other intergroup contexts. This emphasizes that this dissertation does not only provide new theoretical and applied insights for improving refugee-host-relations specifically, but for improving intergroup relations more generally. The following sections 3.1. and 3.2. will summarize the main new contributions of this dissertation separated by theoretical contributions and practical implications.

3.1. Theoretical Contributions

First, one of the central barriers for conflict resolution proposed by past research are central socially shared beliefs that help maintain the conflict – these beliefs have been summarized to the ethos of conflict (e.g. see Bar-Tal et al, 2012). Originally this concept has been used to describe prolonged, intractable conflicts that exist since many years. But I argue that the conceptualization of central societal beliefs may serve also as a valuable foundation to summarize central shared beliefs in societies related to conflicts more generally. Before a conflict erupts into overt violence, most likely time has passed in which these beliefs arose. It will be an endeavor for future research to determine the exact factorial structure of the ethos of conflict in the refugee context, but the factors summarized to the ethos of conflict in this dissertation – symbolic threat, realistic threat, nationalistic concern and homogeneity perception – have already been shown to be connected to important variables related to destructive courses for intergroup relations (see elaboration in Manuscript 1). Thus, this research expands the scope of the potential use of the concept ethos of conflict in order to explain potential barriers within a more holistic framework, instead of only focusing on the

single factors usually investigated in past research. Further, Experiment 1 in Manuscript 1 was the first study showing that a *Paradoxical Intervention* may have the potential to decrease the ethos of conflict. In contrast to a control condition, participants in the paradoxical condition showed lower levels of the ethos of conflict. Thus, the *Paradoxical Intervention* has the potential to positively influence one of the main inhibitors for conflict transformation. Second, past research has shown that the *Paradoxical Intervention* can increase openness to information in the Israeli-Palestinian conflict (Hameiri et al., 2014, Hameiri et al. 2017), which was supported in Manuscript 1 when testing the intervention in the context of openness towards information regarding refugees' situation. Research in Manuscript 2 provides evidence that this effect can be translated to a context-free setting, in which participants show higher *Cognitive Flexibility* independent of the intergroup situation the paradoxical intervention was placed in. This sheds light on the cognitive foundations of *Paradoxical Interventions* more generally. Third, Manuscript 3 demonstrates that the experience of different prosocial emotions, namely sympathy and moral outrage, are connected to specific action tendencies in the context of refugee relief. Whereas sympathy was related to more hierarchy-maintaining prosocial actions, such as (dependency-oriented) helping, moral outrage was related to more hierarchy-challenging actions, such as solidarity-based collective action. By including identification with the authority (German government) and the outgroup (refugees) in study 2, the manuscript provides preliminary evidence for differing identification processes accounting for the specific relationship between the emotions and action tendencies. Thereby, this research contributes to the theorizing of emotion-behavior relationships. Forth, diversity interventions based on the ingroup projection model have mainly been tested regarding their effects on intergroup attitudes (see e.g., Ehrke et al, 2014; Wenzel et al., 2007) – effects on behavioral indicators have been scarce. Consequently, Manuscript 4 is the first testing such an intervention in a multi-group context including a measure for behavioral intention – collective action intention in regard to human rights issues. Manuscript 4 thereby extends the

growing evidence of beneficial effects of diversity interventions on intergroup attitudes towards action intentions. Fifth, Sherif (1962) conceptualized intergroup relations between two or more groups, yet most research has conceptualized intergroup relations in binary terms of one in- and one outgroup (Dixon et al., 2020). This simplification though does rarely reflect real socio-political realities of intergroup relations. Thus, neglecting the reality of the usual multi-group context, may limit the understanding of complex intergroup dynamics that play a role in conflict settings. Manuscript 3 aims to address this shortcoming by integrating identification processes with a third party. Also Manuscript 4 tries to address this shortcoming of past research by integrating multiple groups in the measurement of relative prototypicality perception.

Sixth, putting together the different research endeavors into a road map of interventions paves the way for future theorizing and empirical research as the road map offers several new lines of research, which have not yet been tested in this dissertation (see further elaboration in section future research).

3.2. Practical Implications

An advantage from basing the dissertation in a real-world context is that several implications for the practical field can be derived from the studies conducted in this dissertation.

The research investigating the *Paradoxical Intervention* in the asylum context (Manuscript 1 and 2) showed with the leading questions paradigm an effective strategy to affect important reconciling variables. In conversations in everyday contexts, asking paradoxical leading questions may therefore be an effective tool to make your conversation partner reconsider his/her opinion by him/herself, without the need to counterargue with facts. On a large scale, implementing the *Paradoxical Intervention* may be difficult when the attitude of the receiver of the messages is unknown. Recently published research by Hameiri et al. (2020) found that the paradoxical message has to hit a “sweet spot”, where the message is not perceived too extreme, but within a certain latitude of acceptance in order to be effective.

A context where the paradoxical intervention may be effective is in social media contexts, where the attitude of people is visible by their reactions (shared posts or comments) on social media platforms. Here, applying the leading questions paradigm could be an effective way in addressing comments and actions of people with extreme views, but simultaneously reaching supporters, who liked – or commented on – the content. Therefore, the intervention would reach a higher number of target-specified people than in a face-to-face conversation. Another interesting finding in Manuscript 2 was that asking the leading questions with refugee-related content led to higher cognitive flexibility in an unrelated task in the paradoxical in contrast to the other conditions. This could mean that basically any content targeted in the *Paradoxical Intervention* leads to a more flexible mindset on other topics as well. This could be especially relevant, when the topic at hand is rejected in general as a discussion topic. Other content targeted in the *Paradoxical Intervention* should lead to a higher cognitive flexibility also in the topic that is not mentioned – though, to corroborate this assumption, future research is needed (see section future research). In addition, experiment 3 in Manuscript 1 showed that the paradoxical questions could even stem from an outgroup member (operationalized by party identification) – both, the paradoxical condition without named sender and the paradoxical condition in which the question stem from an outgroup member, provide evidence for higher intention to gain information on refugees' situation compared to the control and conventional condition for people with negative attitudes towards refugees. This emphasizes the robustness of the effect and implies that the source of the paradoxical messages may not be that relevant for practical consideration. The connection to contact intention emphasizes another contribution to the practical field. The *Paradoxical Intervention* may be useful as a pre-encounter intervention for people with very negative attitudes towards the respective outgroup. Consequently, this research complements research on the contact intervention (see also Goldenberg et al., 2017, proposing another pre-encounter intervention).

Further implications from the research on the *Paradoxical Intervention* are that for people whose attitudes are not in opposition of the intervention's goal (e.g. here to improve openness towards information regarding refugees' situation), providing fact-based information or information that directly encourages reflection of the intervention's goal (comparable to the conventional leading questions in the manuscripts) could be a way to further increase support.

In a series of field experiments, Small et al. (2007) showed that deliberative thought about statistics that included information on people in need did not always increase support – even decreased support and sympathy in some occasions. In these cases, using an emotional route to increase support may be more successful. Manuscript 3 focused on prosocial emotions – sympathy and moral outrage respectively – and their relation to different forms of prosocial support by the majority towards refugees, but did not test an intervention. Rather, the contribution from this paper was to set the ground for intervention methods based on the induction of prosocial emotions. A recently published meta-analysis shows that anecdotal information can be more persuasive than statistical evidence, under the condition that emotional engagement with the topic is high (Freling et al., 2020). In an applied setting with an interventionist approach, further research could investigate if anecdotes could be framed in a way that they induce moral outrage or sympathy and therefore guide specific action tendencies. This presents an opportunity for large scale campaigns, e.g. by non-governmental organizations.

Thus, this dissertation has implications to improve intergroup relations and increase support for refugee relief regarding the way a conversation can be guided by paradoxical questions, the way emotions can be used to guide specific action tendencies and last but not least, how a workshop could look like to indirectly affect solidarity-based collective action. More specifically, the diversity training in Manuscript 4 was constructed to fill a 90-minute workshop with future diplomats. This manuscript therefore serves the most straightforward

input for practical use: the diversity workshop could be used within a larger vocational training for people in diplomatic training or other occupations relevant to international relations.

3.3. Overall Limitations

Specific limitations of the individual manuscripts are presented extensively in the respective discussion sections of the manuscripts. In this section I will point out some of the limitations that are shared by the manuscripts.

First, all manuscripts focused on action intentions instead of actual behavior. Based on the theory of planned behavior, there is a connection between action intention and actual behavior (Ajzen & Fishbein, 1977) which led to many studies in psychological science resting on evidence on action intentions or self-reports more generally (Baumeister et al., 2007). Research including measures of actual behavior in contrast show that action intentions may differ in important ways from actual behavior when risks are high for example in moral courage situations (Baumert et. al, 2013; see also Sheeran, 2002 for a general meta-analysis). According to Voigtländer (2008), the probability of intervening was systematically overestimated when it came to actual moral courage interventions. More important for this research, this lack between anticipated and actual intervention was not present for helping situations. Thus, the limitation regarding the measurement of mere action intentions may be less relevant in the contexts for those action tendencies that were more focused on interaction with the disadvantaged group directly – this includes the approach-oriented action intentions and the hierarchy-maintaining action intentions from the support-oriented actions depicted in the roadmap. Instead, hierarchy-challenging actions include potentially more interactions with a “perpetrator” (here e.g. interaction with the German government to address the inequality refugees are facing or with nationalists at demonstrations) – these action tendencies are therefore more similar to moral courage based on the conceptualization by Voigtländer (2008) and thus subject to lower relations between anticipation and actual behavior. Hierarchy-challenging actions (as part of the support-oriented actions) consequently need to be

interpreted more cautiously as tendencies. Another remark is directly related to the focus on action intentions in this dissertation. As changing attitudes were not the goal in this dissertation, the studies reported cannot give any insights if the attitudes of the participants changed due to participating in the intervention (though there is an exception in Manuscript 4 in which the post-measure of relative prototypicality could be interpreted as a proxy for intergroup attitudes). However, past research has shown that attitudes or personal beliefs are difficult to impact and not necessary to change in order to achieve reconciliatory behavior change (see Paluck, 2009).

Second, most of the studies in the manuscripts (exception in Manuscript 1: Experiment 2 and Manuscript 4) have been cross-sectional. As proposed mechanisms were included, all interpretations do not allow causality between mediators and dependent variables as they were measured simultaneously. For example, the relation between emotional and identification processes have been conceptualized as emotions preceding identification processes (see elaboration in Manuscript 3). But there is also the possibility, that certain personality factors predetermine a higher identification with an outgroup, which then influences the emotional reaction experienced. This example emphasizes, that evidence on the proposed mechanisms is preliminary and needs to be properly tested in future research. Not only did the research design not allow a clear interpretation of the order of mediator and dependent variable, also the relations between the independent variables or the mediators need further elaboration. For example, in Manuscript 3, it is assumed that the emotions of moral outrage and sympathy follow parallel paths and are experienced distinctively by the host society members towards refugees. But due to the correlational design it cannot be excluded that there is also the possibility that the emotions are experienced simultaneously. This gives rise to the potential of interactive effects. In order to detangle these potential effects, experimental research is necessary. Also in Manuscript 1 the theoretical model conceptualized several mediators in a parallel manner. But there is also the possibility that

there are serial connections between the mediators onto the dependent variable. In particular, it is also plausible that the reduction of the ethos of conflict leads to higher openness and then to higher willingness to compromise. Future research could conceptualize serial interconnected motivational (ethos of conflict), cognitive (openness, unfreezing) and behavioral (willingness to compromise) paths.

Third, one of the pitfalls of research in a new (intergroup) context represents the lack of validated measures that fit the research purpose sufficiently. One of the aims was specifically to differentiate distinct action tendencies. In order to achieve this, the studies sometimes had to draw on self-constructed scales that were not psychometrically validated before being applied in the research. This is especially an issue in Manuscript 1 and 3 – Manuscript 1 conceptualizes a mediation model, but high correlations between mediators and dependent variables could imply that they do not measure distinct concepts. Also, in Manuscript 3, the focus is on differentiating forms of refugee support into hierarchy-maintaining and hierarchy-challenging. But even though the two forms of support show high correlations according to the convention of Cohen (1988) – this is theoretically plausible and the degree does not imply multicollinearity (Field, 2017).

Forth, the intervention's effect on action intentions formed a special focus in this research endeavor. However, in Manuscript 1 and 4 important direct effect between the intervention and the action intention was not supported by the collected data. Rather, the intervention tackled the proposed inhibitors and catalyzers which exerted an indirect effect on the action intentions. A consequence of this observation is, that it may be possible that additional variables affect the relation between intervention and action intention that were not included in this research. To exemplify this, in Manuscript 4, there was no direct path from the diversity workshop to the collective action intentions, but an indirect path via diversity perception. A reason for this could be that, indeed the workshop increased the perception and representation of the superordinate category – here measured by the diversity perception of

the United Nations, but if this translates to prosocial action tendencies could depend, for example, on individual factors. Steffens and colleagues (2017) found that relative prototypicality not only functions as an outcome, but also as a moderator. The induced diversity perception from the workshop may question the ingroup's position and therefore elicit threat in people who perceive their group as more prototypical than other groups for the superordinate category. This potential impact could disguise the direct path from the intervention to collective action intention.

Fifth, the dissertation aimed to include many perspectives on the issue of refugee acceptance, which was successfully achieved from the majority or host-perspective. In order to gain a holistic impression of inhibitors and catalyzers for conflict transformation in this context, minority perspectives, in this case the perspective of refugees themselves, need to be included. As a researcher it is important to reflect on the objects of one's research and its implications – especially in a context in which power disparities take place. The fact that this dissertation focused on the majority perspective and how they can help to improve refugees' situation may provoke paternalism – the belief that only the advantaged group members can change the situation for the better for the disadvantaged group's situation, which diminishes options for empowerment by members of the disadvantaged group themselves (e.g. Jackman, 1994). Research endeavors neglecting the voices of groups can be the cause of epistemic violence in which the research itself reproduces the inequality in its methods which are present in the socio-political sphere (see e.g. Brunner, 2020). For this reason, colleagues (Prof. Eran Halperin, Boaz Hameiri, Siwar Hasan-Aslih, Eric Shuhman) and I started another project in which we apply the *Paradoxical Intervention* to disadvantaged groups (Palestinians living in Israel and refugees in Germany) to test the potential to increase collective action as one form of self-empowerment.

Sixth, this dissertation had very broad aims – including diverse samples, differentiate targets and outcomes and include mechanisms of socio-psychological interventions with the

goal to aggregate the information to an individualized road map of interventions. These broad aims may entail less depth in investigating the interventions and concepts used in this dissertation. For example, relations between the different inhibitors and catalyzers remain unknown. Further, considering the suggestion that there is the need to take individual factors into account when implementing socio-psychological interventions, the question arises on what base it is going to be decided who will participate in which intervention. In the context of this dissertation this means that the question of who qualifies for holding positive or negative attitude towards refugees arises. For sure, this will be an empirical question for future research, but it will be also connected to ethical considerations if the interventions provide evidence of negative change based on a specific individual factor. In regard to these many open questions, I hope the road map serves as a convincing base to inspire future research. In the next section I will present some ideas of direction for future research endeavors.

4. Future Research

Based on the general discussion, the limitations mentioned in the last section and on further considerations, this section presents ideas for future research. The section refrains from proposing future research questions based on the manuscripts individually, as they are countless in nature. Rather, the following section aims to provide a more general outlook for future research – divided into an outlook specifically focusing on the road map for socio-psychological interventions and into a broader outlook on research approaches.

4.1 Road Map

As already introduced, the road map conceptualized in the general discussion should not be understood as a tested theoretical model, rather it should create a base for future research endeavors. In order to test some main assumptions in the model, two steps need to be undertaken.

First, in order to test the assumption that the induction of emotions and the diversity workshop are better suited for people with more positive attitudes towards refugees, a diverse

sample needs to be recruited to test for potential negative effects when emotions or a diversity perception is induced in people with rather negative attitudes. Recruiting a diverse sample was more the focus of Manuscript 1 and 2 to present the *Paradoxical Intervention* as an effective tool especially for people with negative attitudes towards refugees, but to a lesser degree in Manuscript 3 and 4. Manuscript 3 aimed to find relations between prosocial emotions and specific support for refugees – asking people with negative attitudes about their experience of moral outrage and sympathy towards refugees would have led most likely to a termination of the survey as participants would have not felt represented in their experiences. When this line of research gets extended towards an intervention it would be interesting to see if the induction of prosocial emotions leads to negative reactions in participants having rather negative attitudes towards refugees. In regard to Manuscript 4, there can already be made some evidence-based assumptions about moderators related to attitudes influencing the diversity workshop. According to Morrison et al. (2010) ethnic identification influenced if primes related to multiculturalist ideologies positively or negatively influenced White American's intergroup attitudes – the stronger the participant's ethnic identity the higher their expression of social dominance orientation and prejudice was when primed with a multiculturalist ideology. Further, Steffens et al. (2017) found that the differences in prototypicality perception of one's ingroup function as an important moderator if diversity interventions based on the ingroup-projection model improve or impede intergroup attitudes. Translated to the context of this dissertation, these two examples show that two variables (ethnic identification and high prototypicality perception) as individual factors can affect the success of the intervention. Though, this is to a lesser degree a limitation for Manuscript 4 – in the diversity intervention conducted in this article, participants were part of a UN simulation and were willing to take the role and perspective as (another) countries' representative – it can therefore cautiously be assumed that they had rather positive attitudes towards the other countries. But the data was too limited to estimate if, for example some countries (with more

power such as the United States) exerted a higher prototypicality perception and therefore reacted differently to the *Diversity Intervention* than other countries. It could thus be an important future study with a similar simulated context as in Manuscript 4 to include these variables as moderators and test for potential negative effects. Depending on the results, this could mean for applied contexts that there is a need for a pretest based on these pre-existing attitudes before participating in a *Diversity Intervention* in order to prevent a potential backfire.

Second, based on the research in this dissertation, I propose that the *Paradoxical Intervention* is especially efficient to address approach-oriented prosocial action in people with rather negative attitudes, whereas the other two (emotions and diversity) are especially efficient to address support-oriented action tendencies in people with more positive attitudes. Until now, the supposed action tendencies have not yet been included in one study to gain support that they affect approach- or support oriented action tendencies exclusively (depending on pre-attitudes). Consequently, future research needs to integrate both options of prosocial action into their research designs.

A specific strength of the *Diversity Intervention* in prior research has been that the positive effect on intergroup relations translated to other outgroups not mentioned in the intervention (Ehrke et al., 2014). One potential future step could be to test if this also applies for the *Paradoxical Intervention*. Results of Manuscript 2, in which the *Paradoxical Intervention* showed higher levels of cognitive flexibility in an unrelated task, suggest that the *Paradoxical Intervention's* effects extend to other intergroup contexts not addressed in the paradoxical messages. Future research could test this by including prosocial actions towards other outgroups in their analysis.

4.1. General outlook

As already stated developing interventions and evaluating their consequences is a multi-disciplinary endeavor. In this section I would like to advocate for more interdisciplinary collaborations as other disciplines may already have tools or methods to address the issue at

hand. This can be exemplified by the adaptation of the *Paradoxical Intervention* to Social-and Peace Psychology, originally stemming from Clinical Psychology (Frankl, 1975). I will shortly present three ideas, from Economics/Game Theory, Neuroscience and Computer Science.

One of the most known socio-psychological field experiments in the area of conflict and cooperation research is the “Robber Cave Experiment” by Muzafar Sherif and colleagues (1961) and ideally all interventions should (eventually) be tested in field settings (Paluck & Green, 2009). However, due to feasibility reasons (financial or time constraints) this is not always possible. In the past decades, psychological research has developed several paradigms and has contributed to research approaches that may be useful in approximating actual behavior and shedding light on underlying mechanisms which are difficult to access with self-reports. Next to field research, another (a more parsimonious) option to conceptualize situations and to gain insights into conflict and cooperation potentials are economic games that were introduced to social psychology from Game Theory/Economics several decades ago (e.g. Deutsch, 1958). In contrast to field experiments, economic games allow the manipulation of the situation, precise measurement of the outcome and control of variables. To answer the question if the effects of the *Paradoxical Intervention* translate to prosocial action towards other groups or group members (not mentioned in the paradoxical message), economic games could be re-formalized to a group level with artificial groups. For example, participants take part in the leading questions intervention as presented in Manuscript 1 and 2, they then participate in presumably a second independent study. First, they get assigned to a group (based on a random characteristic) and then get introduced to public goods game, which allows the option to choose the composition of the overall group participating in contributing to the public good. The indicator for approach-oriented action would be how many members of the outgroup are chosen in relation to members of the ingroup to participate in the public goods game. An additional indicator could be how much money they invest, unaware how much the others will pay. Investing money to the public good

means that there is a certain amount of trust, which could be seen as an indicator for creating approach-oriented behaviors. It would be expected that participants with very negative attitudes towards refugees choose a higher relational composition of outgroup members and higher investment in the paradoxical condition in contrast to the other two conditions (see Manuscript 1 und 2).

Alternatives to the use of self-reports are especially pertinent when focusing on mechanisms including emotional and cognitive processes which may not be easily accessible to introspection and thus, the reliable use of self-reports. As stated, e.g. in Manuscript 3 there is a focus on emotional reactions which are operationalized by self-report measures. An opportunity to uncover the question of which emotion is experienced, neuroimaging methods may help in differentiating the emotional reactions. According to Fusar-Poli et al. (2009) the experience of emotions is connected to the activation of distinct brain regions. Though the study does not include specifically moral outrage and sympathy, there is evidence in regard to related emotions like anger and sadness. Anger, which can be seen as related to moral outrage, is associated with an activation of the right hippocampus, the amygdala, both sides of the prefrontal cortex and the insular cortex. In contrast sadness, which can be seen as related to sympathy, activates the right occipital lobe, the left insula cortex, the left thalamus, amygdala and hippocampus. Thus, even though there are shared activated regions, distinct activations have been detected. This knowledge could be used for example in evaluating an intervention technique as a manipulation check, which aims to specifically elicit moral outrage or either sympathy (see practical implications) without being reliant on self-report measures. Detecting emotional reactions with neuroimaging techniques may also be an interesting approach for testing new material for *Paradoxical Interventions*. An important mechanism for differentiating the conventional approach and the paradoxical approach is surprise, which has also been found to be associated with specific brain regions (see Hameiri et al., 2017; Fusar-Poli et al., 2009). Surprise was often measured in the end of the experiment in order to not

influence important dependent variables. Though, asking about an emotional experience post-hoc could deteriorate an exact measurement tremendously. Thereby, neuroimaging techniques could support the development of new material and the instant measurement of associated reactions towards it. Another example of instant measurement of emotional reactions stems from Computer Science – Nogueira and colleagues (2013) have developed an application for emotional state estimation with psychophysiological tools – intended to measure emotional reactions to events in a computer game. The tool provides a real-time and synchronized view of the player's gaming session from both an audio-visual and psychophysiological perspective. Adapted to interventionist approach followed in this dissertation, instead of a synchronized game session, the screen could show the material from the paradoxical leading questions intervention or a newly developed anecdotal emotions-based intervention and thereby measuring the valence and the arousal of the emotional reaction. Thus, a tool originally developed to measure the emotional impact of digital media stimuli on players could enhance the pre-testing of socio-psychological interventions.

Taken together, paradigms and tools from other disciplines could positively impact the development and evaluation of socio-psychological interventions.

5. Conclusion

Our society is facing many challenges, amongst others growing hostility and violence against refugees. It will be an interdisciplinary endeavor to combat these destructive developments and to transform the conflict. With record numbers of people fleeing and countries denying people their right for asylum, conforming to human rights is clearly visible at stake. This dissertation aimed to contribute to achieve higher support for refugees by investigating methods and strategies from a psychological perspective that makes positive intergroup relations more likely. By integrating multiple perspectives on several levels of the society, different intervention techniques, their underlying processes and precisely differentiating the prediction of prosocial outcomes, this dissertation hopefully provides

meaningful suggestions for the theoretical and practical advancement of socio-psychological interventions – and eventually for the protection of human rights more generally.

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List of Manuscripts

- Manuscript 1.** Knab, N., & Steffens, M.C. (2020) “Why Do You Think Christmas Will Never Ever Be Celebrated Again?” A Paradoxical Intervention’s Potential to Reduce Destructive Intergroup Conflict in the Asylum Context. Under review
- Manuscript 2.** Knab., N., Winter, K. *, & Steffens, M.C. (2019). Increasing Cognitive Flexibility with a Paradoxical Leading Questions Intervention. Invited to Revise and Resubmit at *Social Cognition*
*shared first-authorship.
- Manuscript 3.** Knab, N., & Steffens, M.C. (2020). Specific Prosocial Emotions Relate to Hierarchy-challenging and Hierarchy-maintaining Actions in Support of Refugees. Under Review
- Manuscript 4.** Knab, N., & Steffens, M.C. (2018). One World in Diversity – a Socio-psychological Intervention to Foster International Collective Action Intention. Published in *Journal of Social and Political Psychology*. 6, 8–26. <https://doi.org/10.5964/jspp.v6i1.601>

Manuscript 1

Knab, N., & Steffens, Melanie C. (2020)

“Why Do You Think Christmas Will Never Ever Be Celebrated Again?”

A Paradoxical Intervention’s Potential to Reduce Destructive Intergroup Conflict in
the Asylum Context

Under review

**“Why Do You Think Christmas Will Never Ever Be Celebrated Again?”
A Paradoxical Intervention’s Potential to Reduce Destructive Intergroup
Conflict in the Asylum Context**

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Abstract

The high number of refugees and the reactions in host countries towards their admission have been a major global issue. As political divides in host countries seem to increase in hostility, psychological interventions to foster intergroup relations are highly desirable especially for people having negative attitudes towards refugees as prior attitudes often prevent the effectiveness of more conventional approaches. We expected an intervention tackling the ethos of conflict (i.e., the combined concerns of the host society regarding refugee acceptance) would increase openness to information, acceptance of diverse opinions, and willingness to compromise as important preconditions to increase contact intention and condemnation of violence. In three experiments with general population samples ($N = 986$), we adapted a paradoxical leading questions intervention to the intergroup context of Germans and refugees. In addition, we explored the paradoxical message's effect when the sender of the paradoxical leading questions belongs to a political out-group and provide evidence that the intervention was still successful – thereby emphasizing the robustness of the effect and shedding light on a potential boundary condition of the intervention. Taken together, across three experiments the paradoxical intervention impacted conflict-related cognition and action tendencies towards refugees positively, paving the way for more conventional approaches such as the contact intervention. We discuss ideas for future research and its practical use, for example in social media environments.

Word count abstract: 221 words

Keywords: paradoxical intervention, compromise, contact, conflict, conflict resolution, refugees, intervention, violence, ethos of conflict, unfreezing

“Why Do You Think Christmas Will Never Ever Be Celebrated Again?”

A Paradoxical Intervention’s Potential to Reduce Destructive Intergroup Conflict in the Asylum Context

By the end of 2013, for the first time since World War II, the number of refugees worldwide surpassed 50 million people (UNHCR, 2016). Most people flee to neighboring countries, but many also try to reach Europe. In 2016 approximately 4578 people died or went missing while trying to trespass the central Mediterranean route (UNHCR, 2017). Still in 2018, every minute 25 people were forced to flee (UNHCR, 2019). The political climate towards the reception of refugees is usually mixed in every country, but polls registered a deterioration of attitudes. For example in Germany, which is the major refugee receiving country in Europe with the most filed applications for asylum (European Parliament, n.d.), agreement with the statement that Germany cannot take any more refugees rose from 41% in 2015 to 54% at the beginning of 2017 (Bertelsmann Foundation, 2017, p. 13: people between 30 and 59 years). Although the Federal Criminal Agency in Germany stated that violent attacks on homes for asylum seekers declined in 2017, approximately 1000 attacks were recorded in each 2015 and 2016 (Bundeskriminalamt, 2017). Consequently, people do not only oppose the uptake of refugees, but also accept and exert violent actions in order to achieve political goals (Zick & Klein, 2014). Conflict resolution in this context needs knowledge and methods from diverse disciplines. In the last decades, psychological research has developed and investigated various methods for improving intergroup relations which are more or less based on the contact intervention (Hewstone, 2003). As one alternative, the aim of the present research was to develop and test a paradoxical leading questions intervention for the asylum context in order to reduce destructive intergroup conflict (e.g. Hameiri et al., 2018; Hameiri

et al., 2014). Two main contributions of this research are a) testing a novel mechanism and b) testing if the intervention can function as a starting point of convergence between hostile parties, so that it eventually can be complemented with more conventional approaches.

Interventions to improve intergroup relations

The most known and researched intervention to promote positive intergroup relations is arguably the contact intervention (Allport, 1954). The contact intervention is highly renowned and many studies have demonstrated its success and underlying mechanisms (e.g. Pettigrew & Tropp, 2008). However, Allport (1954) also stressed that “contact, as a situational variable, cannot always overcome the personal variable in prejudice. This is true whenever the inner strain within the person is too tense, too insistent, to permit him [sic] to profit from the structure of the outer situation” (pp. 280-281). Thus, one disadvantage is that the contact intervention might not work with people holding already very negative attitudes or holding traits that are related to hostile intergroup relations (Altemeyer, 1988; Asbrock et al., 2012; Pettigrew & Tropp, 2006; Pratto & Stewart, 2011). Another reason for the need for new approaches is that still many campaigns with the aim of improving intergroup relations work with attitude inconsistent information to counteract detrimental stereotypes (e.g. with facts and statistics). The reasoning is that the information causes dissonance which in turn leads to an alteration of one’s beliefs (Festinger, 1957). But due to defense motivation (Ledgerwood et al., 2014) people tend to counterargue a position that threatens their preferred position (Ledgerwood et al., 2011). Also, research has shown that people do not pay much attention to attitude inconsistent information, and they think attitude consistent information is more credible, which is in line with the selective exposure literature (Hart et al., 2009; van Strien et al., 2016). Consequently, there is a lack of interventions for people

who already formed an attitude and who therefore may show resistance towards attitude inconsistent information.

Paradoxical Intervention

Recently a method termed paradoxical intervention has gained some attention (e.g. Hameiri et al., 2019). In contrast to providing attitude inconsistent information, paradoxically, attitude consistent information is provided in an extreme and exaggerated way. Originally, the idea stems from logical philosophy's principle *reductio ad absurdum* (Emeren et al., 2009) and from clinical psychology (Frankl, 1975; Watzlawick et al., 2011). As the content of the information or instruction is (at least partly) in line with the already held belief, it is expected that less resistance will result. At the same time, the exaggerated content should lead recipients to a realization that their current beliefs are irrational. This method was first translated from clinical psychology to the intergroup context of gender relations by Swann and colleagues (1988), who used a paradoxical leading questions paradigm to change gender stereotypes. In one of their studies, participants with conservative attitudes towards women's role in society had to react to conventional leading questions or paradoxical leading questions. Conventional leading questions prompt the recipients to start information processing in a way that the answer is in line with the asker's intentions – thus already suggesting the answer. If a person should be convinced, one could ask a question which is inconsistent with the recipient's original belief, letting them search for information that is in line with the question's content. Thus, whereas the conventional leading questions included attitude inconsistent information (e.g. "Why do you think that women make better bosses than men?"); paradoxical leading questions had content that was consistent but exaggerated (e.g. "Why do you sympathize with the feelings of some men that women are

better kept barefoot and pregnant?”). Results showed that those who were very certain of their (conservative) beliefs changed their beliefs to the greatest extent in the paradoxical condition. A different paradoxical intervention paradigm in the intergroup context was introduced in a large-scale longitudinal field experiment. The researchers used short video clips to construct a paradoxical intervention to promote reconciliatory attitudes in the Israeli-Palestinian context (Hameiri et al., 2014). The images used were intended to provoke a reflection about one’s own viewpoint (e.g., does the Israeli Army fit to the perception of being a heroic institution?). In previous research the paradoxical intervention affected important behavioral tendencies related to conflict resolution such as willingness to compromise (Hameiri et al., 2014). An individual’s conflict behavior has been understood to vary on two basic dimensions: assertiveness (directed to satisfy one’s own needs) and cooperativeness (directed to satisfy other person’s needs). Willingness to compromise is placed in between those two dimensions, giving up something but only to a certain degree, and willing to address an issue without tackling it in too much detail (see Thomas-Kilmann Conflict Mode Instrument, 1974). Thus, willingness to compromise as a more behavioral outcome paves an important path to conflict resolution. Not only did the exposure to the paradoxical material (compared to a control group) increase the willingness to compromise, but it also affected voting tendencies for more reconciliatory parties. Thus, there is first evidence that a paradoxical intervention may be especially useful to affect intergroup attitudes for people not easily influenced by traditional approaches.

An important question regarding this new intervention strategy is how it works. A concept that has been discussed as explaining why the paradoxical intervention works, especially for people with an existing certain attitude, is unfreezing. It is based on the

reasoning that once an attitude is formed, due to motivated reasoning, it is very difficult to affect that attitude – it almost seems that the attitude is frozen: “Freezing is characterized by rigidity and close-mindedness, such that information incongruent with the reigning cognitive-emotional structure is likely to be ignored, rejected, misinterpreted, or forgotten, whereas congruent information is accepted as valid” (Hameiri et al., 2014, p. 10996). Paradoxical interventions use attitude consistent information in an exaggerated way, which can be surprising for the recipients of the message as it is counterintuitive at first (Hameiri et al., 2018). Information that is unexpected or surprising can increase accuracy-motivated, systematic processing, leading to a revision of assumptions and an open-minded consideration of all available information (Eagly & Chaiken, 1993; Hameiri et al., 2018; Petty & Wegener, 1999). This is in line with research by Hameiri and colleagues (2018) who provide evidence that the content of the paradoxical intervention was perceived as more surprising than other content, which in turn predicted unfreezing. Another precondition proposed to be necessary for a paradoxical intervention effect is a certain degree of identity threat. Being confronted with the extreme and exaggerated content makes the recipient compare his/her held belief with the paradoxical statement or question. The confrontation with divergent beliefs may then lead to identity threat by for example comparing oneself with individuals or a group who hold the extreme beliefs – which has predicted unfreezing (Hameiri et al., 2018; Jetten & Hornsey, 2014).

In sum, past research has introduced mechanisms why paradoxical interventions were successful. Nevertheless, replication has been scarce – especially the extension to other intergroup contexts. We therefore developed and implemented a paradoxical intervention in the conflicted context of accepting refugees. We propose that the intervention is especially

successful when tackling the underlying concerns that contribute to the sustaining conflict. Therefore, we propose the reduction of the ethos of conflict as an additional mechanism.

Figure 1 provides an overview of the relationships tested in the present research.

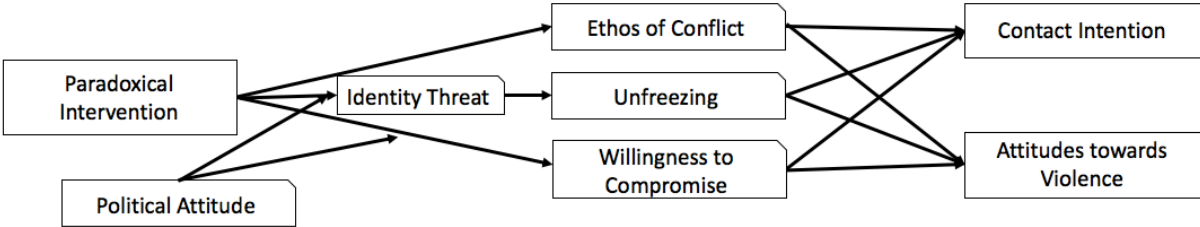


Figure 1. Tested relationships in Experiments 1-3.

Paradoxical intervention and ethos of conflict

The intervention tested tackles one of the major issues of our current time: refugee acceptance in host societies. In order to affect cognitions and action tendencies of host society members, the paradoxical intervention needs to address deeply embedded concerns and societal beliefs. We propose that several constructs that are strongly related to detrimental intergroup relations, constitute an ethos of conflict in this context (e.g., Pettigrew et al., 2015). The ethos of conflict includes societal beliefs or “shared cognitions by society members that address themes and issues with which society members are particularly occupied” (Bar-Tal et al., 2012, p. 41). In the face of growing numbers of refugees reaching Europe, which can cause ambiguity and unpredictability, the ethos provides an explanation and therefore justification of one’s actions (Bar-Tal, 2007). A first component of the ethos of conflict is perceived threat, which the host society experiences of people entering the country for a permanent time – a variable that has been investigated extensively in the migration and refugee context (Bloom et al., 2015; Fritsche et al., 2011; Murray & Marx, 2013; Quillian, 1995; Riek, et al., 2006). This research line found evidence that when people feel threatened

(regarding their symbolic and/or materialistic resources) by an out-group, their attitudes worsen. Examples for economic threat are stances like: “Refugees are taking our jobs away” or the contradictory “refugees are lazy and free riders of the German social security system”. An example for symbolic threat would be a stance like: “There are already mosques all over the place”, thus containing a threat towards cultural changes. In addition to threat, a second component of the ethos of conflict proposed here is that people tend to perceive members from an out-group as more alike than members of the ingroup (i.e., out-group homogeneity effect, e.g. Park & Rothbart, 1982). Perceiving out-group members as being all alike can cause ingroup favoritism and discrimination (Simon et al., 1990). Third, having nationalistic concerns also impedes solidarity. One aspect of nationalist concerns includes worries about the future of the nation, on which we will focus in this research (Rothmund et al., 2017). We propose that these components together form the ethos of conflict in the refugee context. With this reasoning we follow Kurt Lewin’s stance that in order to achieve change, “The change must, in short, be a change in the ‘cultural atmosphere’, not merely a change of a single item” (Lewin, 1953, p. 77).

Paradoxical intervention as a bridge to more conventional interventions and social change

Affecting underlying mechanisms may pave the way to more conventional interventions – thus we do not understand the paradoxical intervention and more conventional approaches such as the contact intervention as substitutes, but rather to complement each other to improve intergroup relations. Also, we understand conflicts not as negative per se, but aim to prevent destructive tendencies, such as the support for direct violence (Galtung, 1969). In this manner, in regard of the growing hostility and even warning by Europol of a growing

network of right-wing extremism in Europe, attitudes condemning violent behavior are necessary to give rise to social change originating from the present conflict (Council of the European Union, 2019). Thus, a second contribution of the present research is to test if the paradoxical intervention can be connected to more conventional approaches and if it entails potential for constructive social change via the proposed mechanisms (see Figure 1). We expect the following relations between the paradoxical intervention, mechanisms and behavioral intentions.

First, for ethos of conflict, past research has drawn a relation between threat perceptions, as part of the ethos of conflict, contact intention, and opposition against violence. We assume lowering the conflict supporting beliefs of the ethos of conflict with paradoxical questions will increase the intention to get in contact and the opposition to violence (Dixon et al., 2019; Maass et al., 2003; Stephan et al., 2009).

Second, we further assume that, for a contact intervention to unfold its effect, one needs to show an openness to information that is transferred by the experiential setting of a contact intervention. Thus, as the paradoxical intervention should increase unfreezing, which includes openness to information, the intention to get in contact should also increase. With regard to condemnation of violence there is evidence of a connection between (violent) extremism and rigid thinking (Zmigrod et al., 2019). As one component of extremism is the support for violence to achieve one's goals, we assume that unfreezing is positively related to condemnation of violence (Stephans et al., 2019).

Third, a content analysis of archival material revealed that compromises were associated with an affiliation motivation supporting a connection between willingness to compromise and contact intention (Langner & Winter, 2001). Thus, decreasing threat perceptions with the

paradoxical questions could increase support for compromise and in turn increase contact intention (Maoz & Mccauley, 2009; Pickett et al., 2014). In addition, the perception of diplomacy efforts as effective was positively related to opposition to violence, which makes it likely that willingness to compromise increases condemnation of violence (Shikaki, 2006). In sum, it is possible to not only connections from the paradoxical intervention to the ethos of conflict, unfreezing, and willingness to compromise, but also indirectly via the mechanisms to contact intention and attitudes towards violence.

Current research

This research extends the knowledge base theoretically and empirically by including the ethos of conflict into the analysis and bringing the paradoxical intervention and more traditional approaches such as the contact intervention together. We do so by focusing on preconditions that could function as bridges between the approaches. More specifically, we examine if the paradoxical intervention can (i) reduce conflict-supporting beliefs forming an ethos of conflict in the refugee context, increase (ii) unfreezing and (iii) willingness to compromise (see Figure 1).

Plus, until now the paradoxical intervention has only been tested in the intergroup contexts of gender and the Israel-Palestine conflict. Thus, the present research provides the important contribution of testing the intervention in another intergroup context – the intergroup context of refugees and members of the host society. Regarding interventions it is necessary to test the cognitive and behavioral effects in different contexts and in different intergroup settings to rule out the possibility that in a different context, different mechanisms are relevant which lead to different outcomes. For example, past research has yielded some evidence of identity threat as one mechanism related to the paradoxical intervention's effects in the Israeli-

Palestinian context (Hameiri et al., 2018). The role of this mechanism could depend on the context. The Israeli-Palestinian context has been a prolonged and apparently intractable conflict for many decades with high salience in people's everyday life (Bar-Tal & Halperin, 2013; Bar-Tal, 2007). In contrast, the conflict regarding refugee acceptance started mostly when numbers of refugees increased in Europe around 2015. It is therefore possible that identity threat is less relevant in the refugee context compared to the conflict in Israel-Palestine. In contrast, we expect that the paradoxical questions should lead to unfreezing due to their surprising content. Thus, an additional contribution of this research is that we test the generalizability of identity threat as a mechanism. Throughout the series of experiments we collected data from hard-to-reach samples, which allowed testing the intervention in a unique setting.

Experiment 1 examined if a) the paradoxical intervention compared to two other strategies reduces the ethos of conflict, increases unfreezing and willingness to compromise, and b) if these proposed mechanisms predict contact intention and attitudes towards violence. In particular, we hypothesized that an increased ethos of conflict predicts higher contact intention and a higher condemnation of violence, whereas higher unfreezing and willingness to compromise should predict higher contact intention and a higher condemnation of violence. Experiment 2 extends Experiment 1 by including political attitude as a moderator in order to show that the intervention is especially effective among people with negative attitudes towards refugees. Also, we measured willingness to compromise one week after the intervention took place to allow behavioral change to unfold. Experiment 3 aimed to replicate the effect on unfreezing. In addition, we tested the relevance of identity threat in this context and explored the role of the sender of the paradoxical statement as an important boundary

condition that is of theoretical as well as practical importance. The Data from the three experiments can be accessed here:

https://osf.io/ngpj7/?view_only=673c442998f24a718123552a9ec31921

Experiment 1

In Experiment 1 we tested the paradoxical intervention's effect on reducing conflict supporting beliefs (ethos of conflict) and increasing the unfreezing of rigid thinking as well as willingness to compromise. We also tested their relation to contact intention and attitudes towards violence (see Figure 1). To achieve this aim, participants were asked several questions, in one of three conditions, that were either paradoxical, conventional, or neutral. In the paradoxical condition, questions contained information consistent with the ethos of conflict but very extreme. In the conventional condition, participants received leading questions containing information that was inconsistent with the ethos of conflict, and in the control condition, they received more neutral questions that were not intended to lead participants to answer the questions in any certain way.

Method

Participants

We did not exclude any participants of the final sample, $N = 137$; 75 of them identified as female, one identified as intersexual, and 63 identified as male. Participants were invited to a laboratory situated in the center of a small city in Germany. By collecting data in the midst of the city center we aimed to attract people with a range of different attitudes towards refugees. The participants' age ranged from 19 to 78 years ($M = 47.15$, $SD = 14.93$). We approached them on a main street and invited them to spontaneously take part

in a study concerning the asylum context. When they agreed, we accompanied them to the laboratory around the corner.

Design

Independent variable was the leading questions manipulation with three levels (paradoxical, conventional, and control, between subjects); proposed mediators were unfreezing, willingness to compromise, and the ethos of conflict. Dependent variables were attitudes towards violence and contact intention.

Procedure and Materials¹

After signing informed consent, participants answered a computer-based survey. First, we asked participants about their opinion concerning certain policies that would have negative effects for refugees in order to measure their baseline political attitude. Afterwards, participants were randomly assigned to one of the three conditions (paradoxical/conventional/control). Then they were asked about the ethos of conflict, unfreezing, willingness to compromise, contact intention, and attitude towards violence. Finally, we asked for demographics, debriefed the participants, and thanked for participating.

Baseline political attitude

As party affiliation does not easily predict attitudes towards a specific topic, we used four items measuring agreement/disagreement to policy-related topics. We asked participants

¹ We also measured how well participants subjectively remembered the questions in the paradoxical, conventional, and control conditions, which can be seen as a proxy for information processing. Results showed that participants indicated to subjectively remember the paradoxical ($M = 5.47$, $SD = 1.27$) statements significantly better than the conventional ($M = 4.53$, $SD = 1.78$) or the control questions ($M = 4.65$, $SD = 1.60$), $F(132) = 4.76$, $p = .010$.

about their opinion concerning certain policies that would have negative effects for refugees (e.g. “Germany should close its borders” or “There should be a maximum limit for the acceptance of refugees”). The scale was a slide bar from 1 (*no agreement*) to 100 (*full agreement*). We expected political attitudes of experimental groups not to differ prior to being exposed to the leading questions manipulation.

Manipulation

Participants were asked to answer eight questions in an open answer format. These questions were constructed based on the ethos of conflict. Each participant received two questions each concerning symbolic threat, economic threat, nationalistic concern, and out-group homogeneity. We aimed to address current concerns of the German host society, but refrained from negating them – rather we intended to put the concerns a little bit more to the extreme so participants realize that extreme views are irrational. For example, there was some media reaction to a discussion of renaming some Christmas markets to be more culturally inclusive (e.g. Schwarzer, 2017). We used this fear of changing cultural traditions to tackle symbolic threat by putting it to the extreme in the paradoxical condition: “Why do you think that Christmas will never be celebrated anymore due to the increase in refugees?”. Correspondingly the leading questions in the conventional condition were “Why do you think that we will still celebrate Christmas although we do have an increase in refugees?”. The corresponding neutral question in the control condition was: “Do you think that the meaning of Christmas will change in the next years due to the increase in refugees?”. The full list of eight questions can be found in the Appendix.

Unfreezing

We tested the intervention's effect on unfreezing by asking participants about their openness to information, which is in close relation to unfreezing (see Hameiri et al, 2018). We asked participants if they intend to visit an information event in the town hall on a topic that was framed in a pro-refugee way: "How war forces people to flee". The scale was from 1 ("*I am certain that I won't participate*") to 7 ("*I am certain that I will participate*").

Willingness to compromise

To the best of our knowledge, there is no validated scale to measure willingness to compromise in the refugee context. Therefore, we constructed a scale consisting of eight items, for example: "I think it is alright to use the gym hall I use regularly for an emergency shelter for refugees" or "I think it is alright if doctors spend a certain time of their office hours to travel to refugee shelters, even though it reduces the doctor's availability" (full list in the online materials), $\alpha = .93$.

Ethos of conflict

The following subdimensions of the ethos of conflict were measured on a scale from 1 to 7 with two items each: Symbolic threat, for instance, "The increase in refugees will drastically change our culture", and realistic threat, "A consequence of the increase in refugees is that Germans' needs will get less attention". Nationalistic concern, for instance, "I worry when I think of the future of Germany". To measure the final aspect, out-group homogeneity, we asked one item "Out of 100 refugees how many are very similar to each other?" The scale ranged from 0 to 100, with higher numbers indicating lower out-group homogeneity. This item was later transformed into a scale ranging from 1-10. The items were

summed up to one single construct of ethos of conflict, $\alpha = .83$ (full list of 7 items in online materials).

Contact intention

We measured the intention to get in contact with refugees with four items, for example, “There is an initiative in our city called Café Asylum which intends to establish contact between Germans and refugees. How do you evaluate this initiative?” or “Do you want to visit the Café Asylum in the near future?”; $\alpha = .70$), again using a Likert-type scale from 1 (*completely disagree/very negatively*) to 7 (*fully agree/very positively*).

Attitudes towards violence

Some days prior to the data collection there was an arson attack on a refugee shelter in a small nearby town. We used this to measure negative attitudes towards violence: “In the night of December 4th unknown people carried out an arson attack at a planned accommodation for refugees. What do you think about the people who showed this behavior?” Participants answered again on a Likert-type scale anchored at 1 (*I don't condemn the behavior of the people*) and 7 (*I condemn the behavior of the people very much*), high values indicating negative attitudes towards violence.

Manipulation check

In order to test if the participants perceived the open questions as intended, we asked three questions. We asked if the questions were perceived as extreme and provocative. Additionally, we asked if participants felt the need to correct something, expecting that this could be especially the case in the paradoxical condition. Participants in the conventional condition may feel the urge to correct something as well, though we nevertheless expect participants in the paradoxical condition to have a higher need and thus differ significantly in

their answers from the other two conditions, scales 1 (*completely disagree*) to 7 (*fully agree*), $\alpha = .83$.

Results

Preanalyses

Table 1 provides correlations of all variables. In order to make sure that there are no differences prior to the manipulation concerning participants' political attitudes, we conducted a between-subjects ANOVA. Although participants had been allocated randomly to the three conditions, analysis showed a non-significant difference between the conventional ($M = 4.01, SD = 2.19$), the control ($M = 3.06, SD = 1.99$) and paradoxical condition ($M = 3.07, SD = 2.15$), $F(2, 127) = 2.96, p = .055, \eta_p^2 = .05$, scale from 1 (*disagreement*) to 10 (*agreement*) on the baseline political attitude measure. It seemed people in the conventional condition had a somewhat more negative attitude towards refugees prior to the manipulation. Therefore, attitude prior to the intervention was included as a covariate in all subsequent analysis.

Manipulation check

There was the expected significant effect of condition on the manipulation check, $F(2, 123) = 33.26, p < .001, \eta_p^2 = .36$. Post hoc comparisons indicated that the mean score for the paradoxical condition ($M = 5.58, SD = 1.60$) was significantly higher than the mean scores for the conventional ($M = 3.67, SD = 1.44$) and control condition ($M = 2.92, SD = 1.47$). In other words, people in the paradoxical condition perceived the items as more provocative, extreme, and participants felt a higher need to correct something than people in the conventional and the control condition.

Table 1*Descriptives and Correlations of Main Variables in Experiment 1*

	<i>Overall M (SD)</i>	<i>M_{subgroups} (SD)</i> Paradoxical Conventional Control	(1)	(2)	(3)	(4)	(5)
(1) Unfreezing	4.67 (2.11)	5.09 (2.03) 3.87 (2.31) 5.02 (1.69)					
(2) Ethos of Conflict	3.09 (1.34)	2.73 (1.30) 3.44 (1.56) 3.12 (1.06)	-.45**				
(3) Willingness to compromise	5.62 (1.43)	5.71 (1.51) 5.18 (1.46) 5.99 (1.19)	.55**	-.64**			
(4) Contact intention	5.14 (1.41)	5.27 (1.35) 4.64 (1.52) 5.47 (1.23)	.76**	-.64**	.68**		
(5) Attitude towards violence	6.59 (1.16)	6.80 (0.69) 6.25 (1.58) 6.72 (0.96)	.50**	-.45**	.51**	.55**	
(6) Political attitude	3.37 (2.15)	3.07 (2.15) 4.01 (2.19) 3.06 (1.99)	-.54**	.72**	-.70**	-.72**	-.56**

Note. Scales 1-7, except political attitude 1-10. VIF indices were below a threshold of concern for multicollinearity (Menard, 1995).

** $p < .01$

Main analyses

We used Hayes' PROCESS (Model 4 for mediation analyses) bootstrapping command with 5,000 iterations for a multicategorical independent variable by using Helmert coding, contrasting the paradoxical condition against the conventional and control conditions (Hayes & Montoya, 2017). We created a contrast with the paradoxical condition coded as -

.67 and the conventional and control conditions as .33, respectively, allowing us to compare the paradoxical condition with both the conventional and the control conditions in the same model. We ran two analyses, one with contact intention as the dependent variable and one with attitude towards violence as the dependent variable. Ethos of conflict, unfreezing, and willingness to compromise were entered simultaneously as mediators and political attitude prior to manipulation was included as control variable.

Ethos of conflict

We proposed that the paradoxical leading questions reduce the ethos of conflict (comprising symbolic threat perceptions, realistic threat, nationalistic concern, and out-group homogeneity) as compared to the two other conditions (conventional/control). Analyses indicated that the ethos of conflict was significantly higher when contrasting both the conventional and the control condition against the paradoxical condition, $b = .38$, $SE = .18$, $t = 2.11$, $p = .037$, 95% CI [.02, .73]. These analyses provide support that the paradoxical condition yielded lower levels of support for conflict-supporting beliefs related to the ethos of conflict. Supplementary analyses revealed that separately tested, the difference was only significant in contrast to the control condition, $b = .43$, $SE = .21$, $t = 2.07$, $p = .040$, 95% CI [.02, .85], but not in contrast to the conventional condition, $b = .32$, $SE = .21$, $t = 1.53$, $p = .127$, 95% CI [-.09, .73].

In addition, ethos of conflict was negatively related to contact intention, $b = -.19$, $SE = .07$, $t = -2.59$, $p = .011$, 95% CI [-.34, -.05], which means the lower the ethos of conflict, the higher the intention to get in contact with refugees. Data were in line with the theoretically expected indirect effect of condition on contact intention by the ethos of conflict, $b = -.07$,

$SE = .45$, 95% CI $[-.17, -.00]$. However, there was no indirect effect on attitudes towards violence, $b = -.02$, $SE = .05$, 95% CI $[-.13, .06]$.

Unfreezing

Contrasting the paradoxical condition with both the conventional and the control condition did not yield a significant effect of condition on unfreezing, $b = -.49$, $SE = .33$, $t = .46$, $p = .148$, 95% CI $[-1.15, .18]$. But supplementary analyses revealed that people in the paradoxical condition indicated a significantly higher intention to attend an information event than those in the conventional condition, $b = -.91$, $SE = .39$, $t = -2.35$, $p = .020$, 95% CI $[-1.68, -.14]$.

Regressing contact intention onto unfreezing revealed a significant effect, $b = .31$, $SE = .04$, $t = 8.06$, $p < .001$, 95% CI $[.24, .39]$. The more people indicated being open towards information regarding refugees, the higher the intention to get in contact. This supports our assumption that unfreezing could be a precondition for contact intention. There was no direct effect of the condition on contact intention, $b = .22$, $SE = .14$, $t = 1.53$, $p = .13$, 95% CI $[-.07, .50]$, nor an indirect effect when contrasting the paradoxical with both other conditions ($b = -.15$, $SE = .10$, 95% CI $[-.36, .04]$). But again supplementary analyses showed data were in line with the hypothesis that unfreezing indirectly affected contact intention when the paradoxical condition was contrasted with the conventional condition, $b = -.29$, $SE = .14$, 95% CI $[-.57, -.03]$, but not when it was contrasted with the control condition, $b = -.02$, $SE = .11$, 95% CI $[-.24, .21]$. Thus, the data are in line with the assumption that the paradoxical condition indirectly affected contact intention compared to the conventional condition by unfreezing. In other words, the paradoxical intervention yielded higher intentions to gain information by attending an event, which in turn was related to the intention to get in contact with refugees.

Also, unfreezing positively predicted attitudes towards violence, $b = .12$, $SE = .05$, $t = 2.50$, $p = .014$. Whereas there was no direct effect of condition on attitudes towards violence, $b = -.06$, $SE = .18$, $t = -.36$, $p = .717$, 95% CI $[-.42, .29]$, data supported the hypothesis of an indirect effect of condition on attitudes towards violence by unfreezing only when the paradoxical condition was contrasted with the conventional condition, $b = -.10$, $SE = .06$, 95% CI $[-.25, -.00]$, but not when it was contrasted with the control condition, $b = -.01$, $SE = .05$, 95% CI $[-.11, .08]$. Therefore, there is evidence that the paradoxical condition's effect on the intention to gain more information (by attending an information event) indirectly yielded a higher intention to get in contact with refugees and a more negative evaluation of the arson attack by the participants, with the limitation that we only found the effects in contrast to the conventional condition, but not in contrast to the control condition.

Willingness to compromise

The paradoxical condition did not yield a significantly higher willingness to compromise in contrast to the other two conditions, $b = .08$, $SE = .19$, $t = .46$, $p = .646$, 95% CI $[-.29, .47]$, although descriptives show the hypothesized tendencies between the paradoxical and the conventional condition (see Table 1). Analyses showed that willingness to compromise was positively related to contact intention, $b = .16$, $SE = .07$, $t = 2.23$, $p = .028$, 95% CI $[.02, .29]$, but there was no indirect effect from the paradoxical conditions on contact intention by willingness to compromise in contrast to the other conditions, $b = .01$, $SE = .04$, 95% CI $[-.04, .12]$. Similarly, there was no indirect effect on attitudes towards violence, $b = -.01$, $SE = .02$, 95% CI $[-.05, .06]$. Based on these data, we did not find support for the hypothesis that the paradoxical intervention has beneficial effects on willingness to compromise.

Discussion

In Experiment 1 we applied a leading questions technique to the refugee context – concretely, we used a paradoxical leading questions intervention, which was based on the ethos of conflict, and compared its effects to a conventional and a control condition testing three different preconditions for contact intention and attitudes towards violence: A mediator we introduced, ethos of conflict, and two others based on previous research, unfreezing and willingness to compromise. We found support for two mediating constructs we had hypothesized, particularly on the ethos of conflict and on unfreezing (the latter only compared to the conventional condition) – both related to contact intention and attitudes towards violence. This supports the hypothesis that the paradoxical questions increased the intention to gain information on the topic of refugees and reduced the ethos of conflict, comprising of realistic and symbolic threat, nationalistic concern, and out-group homogeneity. Also, the results provide evidence that increasing unfreezing and reducing the ethos of conflict serve as preconditions for increasing contact intention and decreasing support for violence. In contrast, results indicate that the more behavioral outcome, willingness to compromise, was not affected by the paradoxical condition in contrast to the other two conditions. A reason for this could be that it takes time for behavioral intentions to form and can therefore only be detected after a delay (see Experiment 2).

In sum, Experiment 1 provides first evidence that paradoxical leading questions could be beneficial in decreasing conflict-related cognitions such as ethos of conflict and unfreezing in the refugee context. Nevertheless, there are limitations. First, the current data only provided evidence that people experience more unfreezing in contrast to the conventional condition. Even though this could also be understood as a first success regarding the effectiveness of the

paradoxical intervention, further investigation is needed to test its effectiveness as compared to control questions. It is not entirely clear why the control condition showed similar values on unfreezing, measured by the intention to attend an information event, as the paradoxical condition did, although we controlled for political attitude. One very cautious explanation could be that answering the control questions required more knowledge which led the participants to believe that they need more information (see similar results in the supplemental material in Hameiri et al., 2018). Also the question whether the intervention's effect depends on people's political attitudes warrants further testing.

Experiment 2

First, Experiment 2 aimed to test if political attitudes moderate the effect of the paradoxical intervention, in a way that especially people with rather negative attitudes towards refugees indicate more positivity towards refugees in the paradoxical condition, in contrast to participants in the conventional and control condition. Therefore we aimed for a larger sample size to conduct the moderation analyses. Second, we were interested in testing the effects on willingness to compromise as Experiment 1 failed in supporting our assumption. We delayed the measurement of willingness to compromise approximately one week after asking the leading questions. Thus, we mainly focused on willingness to compromise as a precondition for affecting contact intention and attitudes towards violence. Unfreezing was also included, but the operationalization of unfreezing was changed to be more similar to past research (Hameiri et al., 2014). Furthermore the measures for contact intention and attitudes towards violence were adapted to fit to the trans-regional setting of this online experiment.

Method

Participants

In order to find participants with rather negative attitudes towards refugees we contacted several right-wing political parties in Germany and asked them to send the link to the online survey via their email list, and we directly contacted politicians and people on Facebook who were members of anti-asylum groups and asked them to participate in our study. Again, we welcomed them to a study concerning the asylum context. We collected data from 1,285 participants at Measurement Point 1. Among them, 1,071 identified as male, 160 as female, 43 did not respond, and 27 identified as diverse (including inter/trans and queer). Their age ranged from 18 to 89 ($M = 41.98$, $SD = 12.39$). At Measurement Point 2, 579 participants contributed data again.²

Procedure and Materials

We included several scales prior to the leading questions manipulation that were not analyzed in the present study³. After we asked for political attitude and demographical information (including age and gender), we randomly assigned participants to three conditions: the paradoxical leading questions, the conventional leading questions, and the control condition. Subsequently we measured unfreezing. In the end, participants were presented with the manipulation check. After approximately one week we contacted the

² Drop-out: Analyzing if the sample changed regarding their policy attitude revealed that the participants in the sample had slightly more negative attitudes at Measurement Point 1 in contrast to Measurement Point 2: $M_1 = 2.08$, $SD = 1.34$, $M_2 = 1.74$, $SD = 1.12$, $t(1500) = 5.07$, $p < .001$. No differences regarding age were observed: $M_1 = 41.76$, $SD = 13.07$, $M_2 = 42.21$, $SD = 12.25$, $t(1259) = -0.63$, $p = .528$.

³ For example, this included authoritarianism, need for cognitive closure, and social desirability.

participants again and asked about their willingness to compromise, contact intention, and attitudes towards violence.

Political attitude

We measured political attitude with the same four policy items as in Experiment 1, although in a dichotomous way (yes/no) and transforming them into a political attitude score. Higher scores indicate more agreement with the statements and thus more negative attitudes towards refugees (range from 1-5). In this sample, 98 participants (7%) had the highest value of 5 indicating very negative attitudes towards refugees.

Unfreezing

The measure of unfreezing was derived from Hameiri et al. (2014) and captures whether people reflect their own viewpoint and show signs of distancing from their opinion. We used three items: “Due to answering the open questions I am reassessing my viewpoint concerning refugees”, “Due to the open questions I have the feeling to see the situation regarding refugees differently”, and “Due to the open questions I feel the need to follow the refugee situation in different media outlets”, $\alpha = .76$.

Willingness to compromise

For the online sample, we shortened the scale to four items (see online material), $\alpha = .74$.

Attitudes towards violence

Items 1-3 (see online material, ranging from 1-7) were derived from the scale of Ulbrich-Herrmann (2014). We added three own items that were more directed towards refugees especially, so the final scale consisted of six items ($\alpha = .86$). Own items were “When people are new members of a society and don’t follow the rules, it is okay to use

violence”, “When values are endangered, I support people using violence to protect them”, “When an asylum request gets rejected, deportations should be realized in any case, if necessary with violence”. Higher values indicated more support for violence.

Contact intention

Two items measured contact intention on a scale from 1 to 7 (1 = *completely disagree*, 7 = *completely agree*). The first item read “I avoid places where I can meet refugees” and the second item read “I intend to participate in a joint meeting of refugees and Germans”, $r = .38, p < .001$.

Manipulation check

In addition to the items from Experiment 1 (see online material), we added a question measuring whether the open format questions were perceived as neutral and expected that the control condition differed significantly in this regard from the other two (i.e., “The open format questions were phrased in a neutral way”).

Results

Preliminary analysis

This time, political attitude prior to the manipulation did not differ between the three conditions, indicating that randomization was successful, $F(2, 1499) = 1.13, p = .325$. Table 2 shows means, *SDs*, and bivariate correlations for the main variables in Experiment 2.

Table 2*Descriptives and Correlations of Main Variables in Experiment 2*

	<i>M (SD)</i>	<i>M</i> _{subgroup} (<i>SD</i>) Paradoxical Conventional Control	(1)	(2)	(3)	(4)
(1) Unfreezing	1.88 (1.04)	1.71 (0.96) 1.90 (1.07) 2.03 (1.07)				
(2) Willingness to compromise	5.75 (1.30)	5.85 (1.20) 5.71 (1.31) 5.67 (1.40)	.03			
(3) Contact intention	5.26 (1.31)	5.20 (1.33) 5.27 (1.38) 5.25 (1.31)	.03	.56**		
(4) Attitude towards violence	2.40 (1.20)	2.38 (1.22) 2.46 (1.26) 2.31 (1.14)	.02	-.50**	-.39**	
(5) Political attitude	1.95 (1.27)	1.89 (1.23) 1.96 (1.25) 2.00 (1.35)	-.04	-.67 **	-.60**	.50**

Note. Scales from 1-7, except (5) from 1-5. VIF indices were below a threshold of concern for multicollinearity (Menard, 1995).

** $p < .01$

Manipulation check

There was a significant effect of condition, $F(2, 1282) = 27.09, p < .001, \eta_p^2 = .04$. As expected participants in the paradoxical condition ($M = 4.12, SD = .64$) perceived the questions to be significantly more extreme than in the conventional ($M = 3.90, SD = .72$) and control condition ($M = 3.79, SD = .70$). As further expected, the control questions were perceived as significantly more neutral ($M = 4.34, SD = 1.58$) in comparison to the other two

conditions (paradoxical condition: $M = 1.39$, $SD = .92$; conventional condition: $M = 2.58$, $SD = 1.58$), $F(2, 1286) = 502.04$, $p < .001$, $\eta_p^2 = .44$.

Main analyses

We used Hayes' PROCESS (Model 7 for parallel moderated mediation) bootstrapping command with 5,000 iterations for a multicategorical independent variable by using Helmert coding (Hayes & Montoya, 2017). As in Experiment 1, we created a contrast with the paradoxical condition coded as $-.67$ and the conventional and control as $.33$, respectively, allowing us to compare the paradoxical condition with both the conventional and the control conditions in the same model. Unfreezing and willingness to compromise were entered simultaneously in the analysis.

Unfreezing

Analyses did not support our assumption that the more negative participants' attitudes towards refugees were, the more unfreezing they showed in the paradoxical as compared to the other conditions, $b = -.10$, $SE = .08$, $t = -1.20$, $p = .232$, 95% CI $[-.26, .06]$. This does not change when using the whole sample of Measurement Point 1, $b = -.06$, $SE = .05$, $t = -1.32$, $p = .218$, 95 % CI $[-.157, .036]$. Unexpectedly, there was a significant main effect contrasting the paradoxical condition with the conventional and control, with lower values in the paradoxical condition, $b = .28$, $SE = .11$, $t = 2.50$, $p = .013$, 95% CI $[.059, .492]$. Analyzing the contrast separately for the conventional and the control, reveals that the result was driven by the difference between the control and the paradoxical condition ($b = .44$, $SE = .13$, $t = 3.52$, $p < .001$, 95% CI $[.120, .69]$). In other words, participants in the control condition reconsidered their viewpoint regarding the refugee topic more than participants in the paradoxical condition independent of political attitude.

Contrasting the paradoxical with the other two conditions, there was no indirect effect on contact intention via unfreezing on neither level of political attitude (+1SD: $b = .00$, $SE = .01$, 95% CI [-.01, .02]), nor on attitudes towards violence (+1SD: $b = .00$, $SE = .01$, 95% CI [-.01, .02]). There were no significant direct effects of the paradoxical intervention, contrasted with the other conditions, on contact intention ($b = .15$, $SE = .09$, $t = 1.644$, $p = .10$, 95% CI [-.030, .337]) nor on attitudes towards violence ($b = -.08$, $SE = .09$, $t = -0.88$, $p = .38$, 95% CI [-.261, .010]).

Willingness to compromise

Analyses supported the assumption that the more negative the political attitude the more willingness to compromise participants showed in the paradoxical compared to the other two conditions, $b = -.19$, $SE = .07$, $t = -2.61$, $p = .001$, 95% CI [-.34, -.05], $\Delta R^2 = .006$. Especially participants who had moderately and highly negative attitudes towards refugees showed higher willingness to compromise when asked paradoxical questions in contrast to conventional and control questions (moderate: $b = -.20$, $SE = .08$, $t = -2.46$, $p = .014$, 95% [-.37, -.04], +1SD: $b = -.42$, $SE = .12$, $t = -3.61$, $p < .001$, 95% CI [-.65, -.19]). Thus, even a week after participants had answered the leading questions, the paradoxical intervention increased their willingness to compromise. Supplementary analyses showed that this applied to both comparison conditions separately compared to the paradoxical condition (+1SD): conventional: $b = -.21$, $SE = .09$, $t = -2.32$, $p = .021$, 95% CI [-.38, -.03]; control: $b = -.18$, $SE = .09$, $t = -2.11$, $p = .035$, 95% CI [-.35, -.01]).

In addition, the data were in line with the hypothesis that there was an indirect effect by willingness to compromise onto contact intention in the paradoxical in contrast to both other conditions for people with moderately and highly negative attitudes towards refugees,

moderate: $b = -.13$, $SE = .05$, 95% CI $[-.23, -.03]$, +1SD political attitude: $b = -.26$, $SE = .10$, 95% CI $[-.45, -.08]$. Similarly, willingness to compromise was related to reduced support for violence among people with moderate to highly negative attitudes towards refugees in the paradoxical in contrast to both other conditions (moderate: $b = .11$, $SE = .04$, 95% CI $[.03, .18]$, +1SD political attitude: $b = .20$, $SE = .08$, 95% CI $[.06, .36]$). Based on these data, even one week after the paradoxical questions were asked, for people having very negative attitudes towards refugees, willingness to compromise was affected positively and was positively related to contact intention and attitudes towards violence in contrast to both other conditions, supporting our hypotheses.

Discussion

Experiment 2 had two main goals. First, we added a moderator to see if the paradoxical intervention improves unfreezing and willingness to compromise in people holding negative attitudes towards refugees. Second, we were interested in testing whether the effect can still be detected a week after the intervention. Data provide evidence that even a week after the intervention participants in the paradoxical condition showed higher willingness to compromise in contrast to the conventional and the control condition the more negative their attitudes towards refugees were. Data also supported the hypothesis that willingness to compromise exerts an indirect effect on contact intention and attitudes towards violence. We did not replicate evidence of more unfreezing caused by the paradoxical intervention as compared to the other conditions. This could have been due to the different operationalization of unfreezing in contrast to Experiment 1. An indicator of this could be the fact that that there seemed to be a floor effect (meaning that the items were in general hard to agree for participants, skewness of 1.18) and correlational analyses showed no relation of the

unfreezing measure with any of the other variables (see Table 2). Thus the operationalization seemed to be not optimal. Consequently, in Experiment 3, we tried to replicate the pattern of Experiment 1 by returning to an operationalization of unfreezing similar to that used in Experiment 1. Despite the missing replication of the paradoxical intervention's effect on unfreezing, which could be due to the different operationalization, Experiment 2 adds to the evidence on unfreezing and on the ethos of conflict provided in Experiment 1 by showing that the intervention impacts a behavioral indicator for improving intergroup relations, namely willingness to compromise. More specifically, as hypothesized, this was the case for participants with more negative attitudes towards refugees.

Experiment 3

Experiment 3⁴ aimed to replicate the effects of the paradoxical leading questions on unfreezing found in Experiment 1. In order to do so, we adapted the measurement of unfreezing to be more similar to Experiment 1 by asking if participants accept diverse opinions and are open to attend information events. Willingness to compromise was included as well and measured immediately after the intervention, even though we were aware that this could yield no effect on willingness to compromise, similar to Experiment 1. We refrained from measuring again contact intention and attitudes towards violence as their relation to willingness to compromise and unfreezing was established in the prior studies.

A first addition to Experiment 3 was that identity threat was included, which was proposed by Hameiri and colleagues as another potential mechanism, mediating the relation between the paradoxical intervention and unfreezing (Hameiri et al., 2018). Being confronted

⁴ Experiment 3 has been approved by the local ethics committee.

with the exaggerated content may threaten individuals' identity as this could lead to a comparison with people who support the beliefs transported in the paradoxical questions. We expected especially participants with negative attitudes towards refugees to feel threatened by the paradoxical content.

A second addition was to explore a potential boundary condition of the positive effects of paradoxical leading questions, namely, the role the sender of the questions. Until now, the role of the sender of paradoxical messages has not been in the focus of research on paradoxical interventions in the intergroup context. In past research, the leading questions were posed within an experimental setting by a university and thus most likely, by a more or less neutral sender. In real world contexts the sender of messages in a conversation is rarely neutral. For this reason, we added a fourth condition in which we told participants that a politician from the Green Party was asking the paradoxical questions. The Green Party is one of the major parties in Germany, known to be pro-refugees. Plus, the politician is most likely perceived as an out-group member by the participants, as participants indicated to affiliate with another party. On the one hand, it could be that when participants read that an out-group member will pose the questions, they may be less likely to process the questions (e.g. Brown & Gaertner, 2003; Mackie et al., 1992; Reese et al., 2013), resulting in an inefficiency of the paradoxical intervention. But on the other hand, it could be that participants especially felt the urge to correct something in front of an out-group member. In order to get a first idea of the effects, we explored the question: Does the specified source of the paradoxical questions influence the effectiveness of the intervention? More specifically, how does the information that the sender belongs to the Green party (pro-refugee) affect the results? Because of its explorative nature, no hypothesis is presented.

Method

Participants

We recruited 285 participants, but 15 were excluded in the new, fourth, condition because they indicated affiliating with the Green Party, the category of the sender of the paradoxical questions. This left 270 participants for further analyses (male = 117, female = 77, non-binary = 2, self-description = 12, non-specified = 17, no response = 45). Age in the sample ranged from 18 to 73 ($M = 38.22$, $SD = 15.64$). In order to gain a diverse sample regarding refugee attitudes, we collected data online in social media, contacted politicians, invited participants on the train, placed advertisements in newspapers, published a press release by the university, handed out flyers in a German medium-sized city and recruited people in our city center laboratory.

Procedure and Material

The procedure resembled the one in Experiment 1. First, participants were asked to indicate their agreement/disagreement to the four policy statements to measure political attitude (dichotomous), then we asked for party affiliation and other demographic information (including age and gender). Participants were randomly assigned to one of four conditions (paradoxical, conventional, control, and paradoxical with out-group sender). Again, in each condition they received eight leading questions. In the condition with the specified sender, we introduced a cover story indicating that questions from politicians from different parties were collected and we gather the answers from a comparably diverse sample. Participants were told that they randomly received Wolfgang Lange from the Green Party. After that, on top of every leading question, there was a heading phrased: Wolf Lange (Green Party) would like to know... Followed by each of the eight leading questions. As in Experiment 1,

unfreezing and willingness to compromise were measured immediately after the manipulation.⁵

Political attitude

The same items were used as in Experiments 1 and 2. The items were presented dichotomously and were transformed into a continuous variable using the number of yes-answers, higher numbers indicating a more negative attitude towards refugees, ranging from 1-5, 1 = *very positive opinion*, 5 = *very negative opinion* (distribution of participants: 1 = 29%, 2 = 15%, 3 = 16%, 4 = 16%, 5 = 25%).

Unfreezing

We asked participants to indicate if they appreciate different opinions regarding the refugee topic and included an item about participants' willingness to attend an information event, similar to Experiment 1. Items were: "Different opinions regarding the refugee topic are important", "I am open towards opinions other than mine regarding the refugee topic" and "I would attend an information event that incorporates different opinions, also contrary to mine". The scale ranged from 1 = *completely disagree* to 7 = *completely agree*, $\alpha = .81$.

Willingness to compromise

We used six items to measure willingness to compromise (as in Experiment 1, see online material), $\alpha = .88$.

Identity threat

We asked participants to indicate their agreement to six items similar to Hameiri et al. (2018) such as "The attitudes/beliefs contained in the questions threaten my worldview", or

⁵ We also implemented a recognition task of the leading questions to tap into information processing.

“The attitudes/beliefs contained in the questions belong to political entities I don’t want to be associated with”, $\alpha = .81$.

Results

Main analysis

Table 3 shows descriptives and correlations of the variables in Experiment 3. We used Hayes’ PROCESS (Model 1 for moderation analyses) bootstrapping command with 5,000 iterations for a multicategorical independent variable by using Helmert coding (Hayes & Montoya, 2017). We coded the paradoxical condition as $-.67$ and the conventional and control as $.33$ respectively (excluding the outgroup condition for this replication analysis).

Unfreezing

The degree to which participants indicated to be open towards diverse opinions and willing to attend an information event on the topic of refugees was significantly predicted by the interaction of people’s attitude and condition, $b = -.56$, $SE = .13$, $t = -4.43$, $p < .001$, 95% CI $[-.81, -.31]$, $\Delta R^2 = .035$. Figure 2 depicts the interaction contrasting the paradoxical with the other two conditions. Participants who had negative attitudes towards refugees ($+1SD$ political attitude) indicated significantly higher unfreezing when in the paradoxical condition ($M = 5.23$) compared to the conventional condition ($M = 4.16$) and the control condition ($M = 4.32$). In contrast, people with more positive attitudes indicated significant higher unfreezing in the conventional condition ($M = 5.13$) and the control condition ($M = 4.97$) in contrast to the paradoxical condition ($M = 4.27$). Thus, there is evidence that we can replicate the finding of target-specific effects of the intervention. For people who had very negative attitudes towards refugees, the paradoxical condition yielded more unfreezing. In contrast,

for people with positive attitudes, asking the questions in a conventional or neutral way appeared to be more suitable to spark unfreezing than the paradoxical questions.

Table 3

Descriptives and Correlations of Main Variables in Experiment 3

	<i>M (SD)</i>	<i>M</i> _{subgroups} (<i>SD</i>)	(1)	(2)	(3)
		Paradoxical Conventional Control Paradoxical outgroup			
(1) Unfreezing	4.76 (1.46)	4.78 (1.48) 4.64 (1.34) 4.67 (1.54) 4.99 (1.42)			
(2) Willingness to compromise	4.46 (1.73)	4.41 (1.71) 4.24 (1.84) 4.77 (1.67) 4.84 (1.62)	.13*		
(3) Identity threat	3.94 (1.54)	4.47 (1.39) 3.45 (1.62) 3.18 (1.21) 4.87 (1.39)	-.04	-.03	
(4) Political attitude	2.95 (1.57)	3.05 (1.55) 2.96 (1.58) 2.83 (1.60) 2.48 (1.54)	-.01	-.74**	.04

Note. Scales from 1-7, except (4) from 1-5, pictured with original scaling (non-mean centered). VIF indices were below a threshold of concern for multicollinearity (Menard, 1995).

* $p < .05$. ** $p < .01$.

Willingness to compromise

The paradoxical condition did not affect willingness to compromise in contrast to the other two conditions, $b = .09$, $SE = .28$, $t = .33$, $p = .75$, 95% CI [-.46, .64]. Moreover, taking

political attitude into account, the results showed that the degree to which participants showed willingness to compromise was not affected by an interaction of the conditions and political attitude, $b = -.08$, $SE = .11$, $t = -.69$, $p = .489$, 95% CI $[-.30, .15]$.

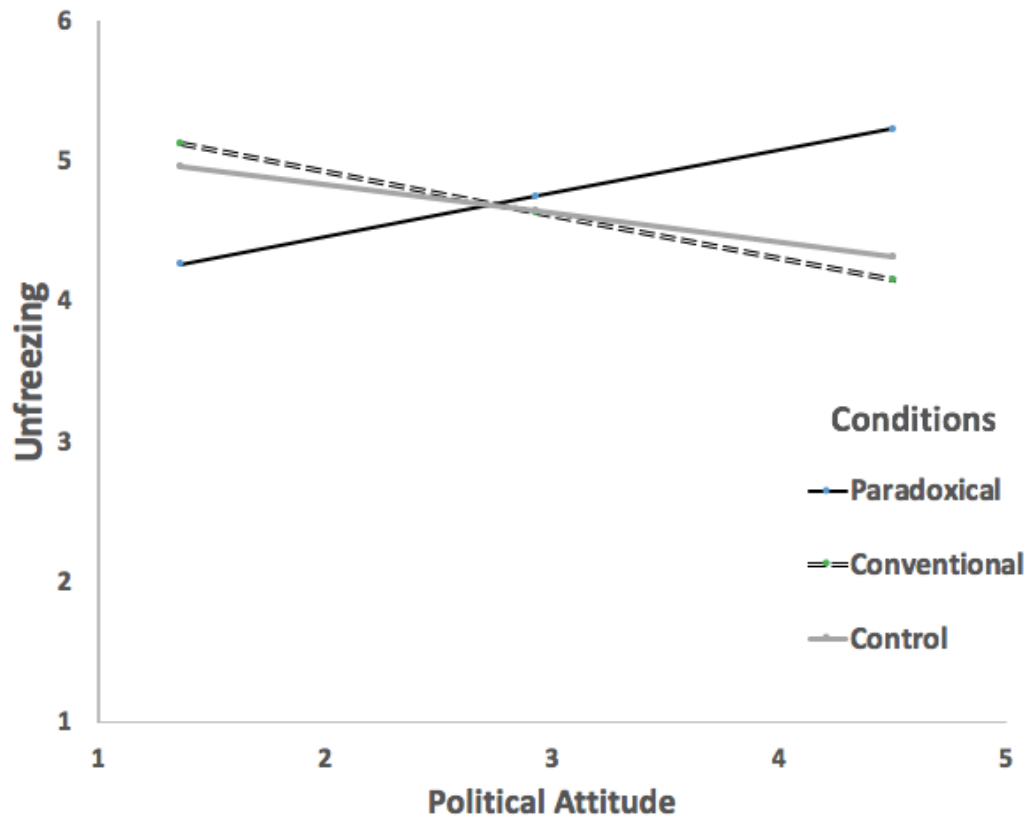


Figure 2. Interaction of experimental condition and political attitude on unfreezing.

Identity threat

Participants in the paradoxical condition showed higher identity threat compared to participants in both other conditions (conventional and control condition did not differ significantly), $b = -2.61$, $SE = .47$, $t = -5.60$, $p < .001$, 95% CI $[-3.52, -1.69]$.

Further analyses showed that only participants with positive or moderately negative attitudes felt more threatened by the paradoxical questions than the other two conditions ($-1SD$: $b = -1.97$, $SE = .31$, $t = -6.34$, $p < .001$, 95% CI $[-2.58, -1.35]$). Participants who had highly

negative attitudes did not indicate higher levels of identity threat compared to the other two conditions (+1SD: $b = -.45$, $SE = .31$, $t = -1.15$, $p = .249$, 95% CI [-.96, .25]). Not replicating past research, there was no relationship of identity threat and unfreezing (see Table 3). Also, identity threat did not mediate the relation between the intervention and unfreezing among participants with negative attitudes, neither on any other level of political attitude, +1SD: $b = .28$, $SE = .18$, 95% CI [-.02, .68], moderate level: $b = .17$, $SE = .10$, 95% CI [-.01, .40], -1SD: $b = .06$, $SE = .05$, 95% CI [-0.2, .17]. Thus, in our study, identity threat did not appear to function as a mediating mechanism.

Comparison of condition with known sender from Green Party and paradoxical condition

We found no difference between the two paradoxical conditions (that with an unspecified sender and that in which the questions allegedly stem from a member of the green party) regarding the interaction of political attitude and condition on unfreezing, $b = -.17$, $SE = .17$, $t = -.97$, $p = .334$, 95% CI [-.51, .18], M (sender Green Party) = 5.27, M (neutral sender) = 5.22, for people having negative attitudes (+1SD). Contrasting the paradoxical Green Party condition with the conventional and the control condition yielded similar patterns as in test with the paradoxical condition with unknown sender of the questions, $b = -.39$, $SE = .16$, $t = -2.44$, $p = .016$, 95% CI [-.71, -.08]. For people having very negative attitudes (+1SD) the paradoxical condition with the ascribed sender of the message yielded higher unfreezing in contrast to both other conditions, $b = -.98$, $SE = .36$, $t = -2.74$, $p = .001$, 95% CI [-1.69, -.28]. Consequently, in this study it did not seem to make a difference whether the question was posed by a person from a different party than one's preferred affiliation. For people having negative attitudes, the paradoxical questions yielded in both cases higher values on unfreezing, a finding that supports the robustness of the effect.

Discussion

Experiment 3 intended to partly replicate the findings of Experiments 1 and 2 with an adaptation of the measurement of unfreezing to tackle this variable in a supra-regional setting and address the concerns from Experiment 2. In addition, we explored how the information about the inquirer of the leading questions belonging to a different party affects the results. We found an interaction effect of political attitude and condition on unfreezing. More specifically, people having very negative attitudes showed a higher intention to attend an information event and indicated more openness towards diverse opinions when in the paradoxical compared to the control and conventional condition. In contrast, people having more positive attitudes showed less intention to attend the information event and indicated less openness towards diverse opinions when in the paradoxical condition compared to participants in the conventional and control, whereas there was no difference for people having a moderate attitude. Thus, the data provide further evidence for target-specific effects of the paradoxical intervention based on political attitude (see Figure 2).

Data provided no evidence regarding an impact on willingness to compromise by the paradoxical intervention. But as in Experiment 1, willingness to compromise was measured immediately after the intervention – in both cases we could not find effects. Measuring willingness to compromise a week apart from the intervention in Experiment 2 was effective, thus it seems behavioral intentions need some time to develop. The paradoxical questions provoked more identity threat in contrast to the other two conditions, which is in line with past research (see Hameiri et al., 2018). But in addition to the finding that this was only prevalent for participants with positive and moderate attitudes and that there was no relation to unfreezing, it can be concluded that in this study, identity threat did not seem to function

as a mediator between the intervention and unfreezing. This does not necessarily contradict the results by Hameiri et al. (2018), but rather emphasizes the importance of testing the paradoxical intervention in different intergroup contexts. Given the highly prevalent issue of the Israeli-Palestinian conflict in people's everyday lives in Israel, identity threat could be a possible mechanism in this context, but maybe to a lesser degree regarding issues that play a less important role in participants' lives, such as migration and asylum. Indeed, this assumption is in line with research on the black sheep effect and moral rebels (Monin et al., 2008; Marques & Paez, 1994). Here, threat to one's identity only emerged when the topic or area at hand was perceived to be of high relevance.

The paradoxical intervention's effect was equally effective comparing the neutral paradoxical condition with the condition in which the inquirer of the leading questions was specified being a politician from the Green Party. These results demonstrate the robustness of the effect even when the sender is varied. We included only participants in this condition affiliating with other parties, but we didn't specifically measure if participants perceived the sender as a member of an out-group. In Germany, the government consists of more than one party. The Greens, to which the sender had been assigned, often form coalitions with parties from the left spectrum, but sometimes also from the mid-right spectrum. On this base, further research should address the question if social categorization of the sender affects the effectiveness of paradoxical messages in more detail.

General Discussion

Many people in host countries showed positive reactions to the increased number of refugees, but at the same time movements against refugees and even hate crimes occurred. Research in psychology developed several intervention strategies to foster intergroup relations, but one

can question their success with individuals already holding negative attitudes towards refugees. We therefore assumed that there are preconditions that should be tackled by interventions so that contact intention rises and support for violence decreases. We investigated several mechanisms by adapting a paradoxical leading questions intervention (see Swann et al., 1988) based on beliefs of the ethos of conflict for the intergroup context of Germans and refugees. Experiment 1 showed that these beliefs were reduced for people in the paradoxical condition in contrast to two control conditions (i.e., conventional leading questions vs. neutral questions). Plus, over the course of three laboratory and online experiments, we found that this paradoxical leading questions intervention led to higher intention to gain information regarding the refugee topic (Experiments 1 and 3) and higher willingness to compromise (one week after the intervention in Experiment 2). Thus, our data overall support the notion that asking paradoxical questions tackling the ethos of conflict can support intergroup relations in the refugee context, and especially affected people having negative attitudes towards refugees (Experiments 2 and 3) – even when the paradoxical questions stem from an out-group member (Experiment 3).

One of the previously advocated preconditions, willingness to compromise, did only show a clear effect in Experiment 2. This could be due to the fact that it was measured immediately after the intervention whereas in Experiment 2 there was a one-week delay. Willingness to compromise portrays behavioral intentions, thus there is the possibility that there needs to be some time in between intervention and measurement to unfold its effect. Another main precondition previously postulated was unfreezing. Unfreezing was operationalized differently across experiments to adapt to the changing contexts of data collection. In Experiment 1 we found empirical support for the assumption that people in the paradoxical

leading questions condition showed higher openness to gain information on the topic by indicating their intention to attend an event in their city. In Experiment 2 the measurement was modeled after the original measurement by Hameiri and colleagues (2014) which asked directly if participants changed or reevaluated their opinion. Although this was the more established measurement, there were no intercorrelations with other variables indicating measurement problems. It remained unclear in which direction opinions changed or were reevaluated as there was a main effect from the control condition independent of political attitude. In Experiment 3, when asking more generally about the degree of acceptance of diverse opinions on the refugee topic, including the intention to attend an information event similar to Experiment 1, we were able to show effect of the paradoxical intervention on unfreezing (measured by the proxy of openness to information) moderated by political attitude.

A limitation of our study is that all conclusions need to be interpreted against the backdrop of having measured only behavioral intentions instead of actual behavior, thus limiting the interpretation to a certain degree. Another limitation is our “measurement-of-mediation” design. We assumed unfreezing, ethos of conflict, and willingness to compromise to function as mediators, but they were measured in a cross-sectional design and not manipulated (Spencer et al., 2005). Yet, even if our data do not permit causal interpretation, we based the preconditions on current theory and our data provide (additional) support for this theorizing.

Future directions and practical implications

Paradoxical interventions have differed regarding their operationalization and how they tackled stereotypes. For example, in our research, but also in the studies published by Swann et al. (1988) perceptions of the out-group were used in the operationalization. In

contrast, in the longitudinal study by Hameiri et al. (2014) perceptions of the ingroup (e.g. members of the Israeli Defense Forces) were in the focus. There could be a difference in effectiveness in a way that changing perceptions of an out-group is easier to achieve than changing perception formed of your own group, especially when applied in contexts of open intergroup conflict in which group categories are very salient and valued highly by individuals. Further research could contrast these approaches thus shedding more light on the best practice of the paradoxical thinking intervention.

Results from Experiments 2 and 3 indicate a high target specificity of the effects – which makes the paradoxical intervention not very useful for a broad application for campaigns in which the characteristics of the audience are unknown. But with regard to social media, a paradoxical intervention and especially the leading questions paradigm could be used to counteract refugee-negative comments below postings, without counterarguing with facts. Thus, considering the increase of hate speech on social media and the connection to real-life incidents, the paradoxical intervention could function as a useful prevention method (Müller & Schwarz, 2018). In addition, the leading questions paradigm, as it has been used here, could give practical examples on how to engage with people with very negative attitudes in everyday discussions. Instead of confronting people with contradicting information, which will be discarded most likely, one can ask questions including the general sentiment, but phrased in a more absurd and extreme way.

Academic research often tries to control as many variables as possible to draw causal conclusions. The paradoxical intervention in this case and in other publications (e.g. Hameiri et al., 2018; Swann et al., 1988) has been implemented by academic institutions to investigate the method for scientific reasons. As this research has the ultimate goal to be applied in real

world settings, people who apply the method are seldom perceived neutrally. In this case it is most likely that organizations in the social justice area will implement this technique with the goal to improve intergroup attitudes. Thus, probably they could be perceived as out-group members by the target audience. Experiment 3 intended to investigate if effects differ when the sender is explicitly stated and could be categorized to a more left-wing political party – which did not yield any differences. But, it is not entirely clear whether all participants perceived the sender of the leading questions as an out-group member. As a result, further studies should test consequences of different senders of the paradoxical messages systematically.

Conclusion

To conclude, there is growing evidence that paradoxical thinking interventions can be successfully used to foster intergroup relations in conflicts which comprise people with extreme attitudes. This research is the first in adapting the technique to the asylum context in which hostile attitudes are growing, finding evidence over the course of three experiments that a paradoxical intervention based on the ethos of conflict was beneficial for intergroup relations. Also, this research shows that contact intention is affected by the investigated mechanisms of the intervention, thereby connecting the paradoxical intervention with more conventional approaches. Thus, this project contributes drawing a cumulative picture towards a full theory of the mechanisms and behavioral outcomes affected by the paradoxical interventions. The sample used in this research was very unique and hard to reach – comprising people with diverse attitudes towards refugees and from different backgrounds (including politicians). As refugee movements will not decline due to violent conflict and climate change, methods paving the way to a higher willingness to compromise and

unfreezing are highly desirable. This approach shows a small-scale intervention method, but maybe an important possibility on how to prevent reactance in everyday discussion with people having very negative attitudes towards a social issue. Thus, aside from intra-personal and intergroup contexts, we think this method can also be applied to supra-group contexts where a rigidity of opinions prevails, for example, to topics like climate change denial or opposition to vaccination. We hope past and our current research motivated others to dive more into this topic to provide empirically based answers regarding mechanisms and boundary conditions so the method can be successfully applied for conflict resolution.

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Appendix

Leading questions for the manipulation

Ethos of Conflict	Paradoxical	Conventional	Control
Economic Threat	Why do you think that the refugees will steal every single job from Germans so that all Germans will be unemployed in the near future?	Why do you think that Germans won't be unemployed due to the increase in refugees?	Do you think the increase of refugees will have an effect on the job market?
Symbolic Threat	Why do you think that due to the refugees we won't receive a single cent for pension?	Why do you think that even though refugees are coming we will still get a pension?	Do you think that the refugees will have any effect on our pension system?
	Why do you think that Christmas will never be celebrated anymore due to the increase in refugees?	Why do you think that we will continue to celebrate Christmas even though we do have an increase in refugees	Do you think that the meaning of Christmas will change in the next years due to the increase in refugees?
Nationalistic Concern	Why do you think that we will all talk Arabic soon?	Why do you think that even though refugees are coming, German will stay the official language?	Do you think the German language will be affected by the higher number of refugees?
	Why do you think refugees are only coming to Germany to rob everything we have?	Why do you think that refugees are coming to Germany to live in peace?	Why do you think refugees are coming to Germany?
Outgroup Homogeneity	Why do you think that the refugees are turning your everyday life totally upside down?	Why do you think that the number of refugees actually hasn't affected your everyday life much?	Do you think that the refugees have an impact on your everyday life?
	Why do you think that all the refugees are totally similar?	Why do you think refugees are not all the same?	What do refugees have in common and what do they not all have in common?
	Why do you think all refugees are strong believers of Islam?	Why do you think that not all refugees are strong believers of Islam?	With which religion can most refugees identify and why do you think this is the case?

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Increasing cognitive flexibility with a paradoxical leading questions intervention
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Increasing Cognitive Flexibility with a Paradoxical Leading Questions Intervention

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Abstract

Exchanging opinions and evaluating the other side's perspective can be a challenge in polarized societal debates as the mindset of the involved parties is often too rigid. This research investigated if a paradoxical intervention targeting refugee attitudes, in contrast to two other strategies, can increase cognitive flexibility, especially among those with very negative attitudes towards refugees. Results of a preregistered online experiment with a diverse general-population sample ($N = 116$) provide evidence that participants in the paradoxical intervention condition (compared to the other two conditions) showed higher cognitive flexibility in an unrelated categorization task the more they identified with a right-wing political orientation. Thereby, this research proposes a cognitive foundation for the benefits of paradoxical interventions in intergroup contexts that have been demonstrated in past research and suggests novel indications as to why these interventions are so effective.

Word count: 138

Keywords: paradoxical techniques, intervention, cognitive flexibility, political attitudes, category inclusiveness

Increasing Cognitive Flexibility with a Paradoxical Leading Questions Intervention Targeting Attitudes towards Refugees

Reactions to the increasing number of refugees arriving in Europe in the past few years have been polarized among members of the host societies. Some welcome refugees while others protest against them. This polarization is not only reflected in citizens' actions, but also in discourses by political leaders (Banulescu-Bogdan & Collett, 2015). While politicians typically try to mitigate extremism on a socio-political level, psychologists may be able to do so by focusing on basic cognitive processes which are related, among other things, to extremist attitudes. One aim of such interventions should be to make people more open-minded towards the respective opposite position, for instance, by making them more cognitively flexible. An intervention designed to increase cognitive flexibility could conceivably depolarize diverging attitudes. In the present research, we investigate the potential of a current intervention method, the so-called paradoxical intervention, to increase cognitive flexibility.

Paradoxical Intervention in Intergroup Contexts

Conventional approaches to reduce intergroup hostility often rely on the acquisition of new and attitude-inconsistent information about the respective outgroup (e.g., intergroup contact; Allport, 1954; Pettigrew & Tropp, 2006; or stereotype disconfirmation; Richards & Hewstone, 2001; Weber & Crocker, 1983). In an attempt to change someone's attitude towards an outgroup, one could, for instance, make the person search for information which is inconsistent with the person's original belief about that outgroup by asking a question which deviates from the initial attitude. However, people who already formed an opinion against the content, will not select and start processing information to guard their opinion and

identity (Long, Eveland, & Slater, 2018). Accordingly, these approaches often remain ineffective among more prejudiced and closed-minded people (Asbrock, Christ, Duckitt, & Sibley, 2012; Binder et al., 2009; Dhont & van Hiel, 2009; Tausch & Hewstone, 2010).

In contrast, paradoxical interventions are based on the delivery of attitude-consistent information in an extreme and exaggerated way (e.g., Hameiri, Bar-Tal & Halperin, 2019). Thus, the content of the information or question is (at least partly) in line with the target's pre-existing belief. In other words, the nature of the information that is conveyed in a paradoxical intervention is located within recipients' "latitude of acceptance" (Hameiri, Nabet, Bar-Tal, & Halperin, 2018, p. 124). People confronted with this type of information (as opposed to belief-inconsistent information) are less likely to reject the message right from the start (Hameiri, Porat, Bar-Tal, Bieler, & Halperin., 2014). Still, the exaggerated content should lead recipients to recognize that their current beliefs might be irrational and worth reconsidering.

Traditionally used in clinical psychology, this method was first translated to the intergroup context by Swann, Pelham and Chidester (1988), who used a paradoxical leading questions paradigm to change gender stereotypes. Participants with conservative attitudes towards women's role in society were asked to react to conventional leading questions or paradoxical leading questions. Whereas the conventional leading questions included attitude-inconsistent information (e.g. "Why do you think that women make better bosses than men?"), paradoxical leading questions conveyed content that was consistent but exaggerated (e.g., "Why do you sympathize with the feelings of some men that women are better kept barefoot and pregnant?"). Results indicated that only the paradoxical questions made people reconsider their beliefs. These findings have recently been supported and elaborated upon by

a research program focusing on the peace-promoting impact of paradoxical interventions in the Israel-Palestinian conflict (Hameiri et al., 2014; Hameiri, Porat, Bar-Tal, & Halperin, 2016). The crucial advantage of the paradoxical intervention paradigm over conventional approaches therefore seems to be its potential of changing recipients' way of thinking to a higher degree than conventional approaches could. Thus, the cognitive processes elicited by this form of communication could be the driver of its depolarizing effects. In the following, we will outline why we assume that cognitive flexibility plays a crucial role here.

Cognitive Flexibility through Paradoxical Questions

The paradoxical leading questions intervention has recently been adapted and implemented in relation to the Israeli-Palestinian conflict, and as a measure to ameliorate refugee-host relations in Germany (Knab, & Steffens, 2019; Hameiri, Nabet, Bar-Tal and Halperin, 2018). In both adaptations, the paradoxical intervention (but not a conventional intervention) was associated with a higher likelihood of considering alternative information, cognitive unfreezing in terms of the topic at hand, and more willingness to compromise (Hameiri et al., 2018; Knab & Steffens, 2019). Thus, by opening people's minds, this intervention does not only address specific attitudes (e.g., towards an outgroup) but rather challenges fundamental underlying conflict-supporting beliefs (i.e., the so-called "ethos of conflict"; Bar-Tal, Halperin, Sharvit, & Zafran, 2012). So far, however, it is unclear whether there is a common cognitive foundation for the separate, yet related outcomes of these paradoxical interventions. In other words, does the paradoxical intervention paradigm impact cognition beyond the context in which it is implemented?

One likely candidate for such a broad cognitive foundation is cognitive flexibility which can be understood as a mental state in which a broader set of mental content is

available and new perspectives are applied to an issue at hand (Kleiman & Enisman, 2018; Rietzschel, De Dreu, & Nijstad, 2007; see also Diamond, 2013). As a result of this mental state, people are less likely to rely on their dominant responses and, thus, more willing to consider alternatives. By contrast, when people refuse to budge and block new incoming information or influences, they demonstrate cognitive “freezing” (Kruglanski & Webster, 1996). This tendency of rigidity and closed-mindedness is a defining feature of the (situationally induced or dispositional) need for cognitive closure (NCC; Webster & Kruglanski, 1994) and a direct opposite to cognitive flexibility. In light of this, it seems plausible that the increased likelihood of considering alternative information, cognitive unfreezing, and more willingness to compromise that was associated with the aforementioned paradoxical intervention may result from increased cognitive flexibility. In line with this assumption, both cognitive flexibility and the paradoxical intervention have similar effects in regard to intergroup relations. For instance, increasing cognitive flexibility reduces stereotype activation and prejudice towards outgroups (Crisp & Turner, 2011; Sassenberg & Moskowitz, 2005; Vasiljevic & Crisp, 2013; Winter, Sassenberg, & Scholl, 2019). Importantly, once activated, cognitive flexibility establishes a generalized (i.e., context-free) way of processing (or mindset) that is applied to subsequent unrelated settings (Crisp & Turner, 2011; Kleiman & Enisman, 2018; Sassenberg & Moskowitz, 2005). Consequently, whereas past research has focused on specific effects of a paradoxical intervention (e.g., on the consideration of alternative information in the particular setting in which the intervention was implemented), we argue that it may also affect how people approach tasks that are unrelated to the topic at hand of the intervention.

As noted above, a central feature of the paradoxical-intervention paradigm is that it works specifically in populations where the intervention content, in principle, is attitude-consistent. Accordingly, past research has generated results indicating that the intervention works predominantly among people with a more right-wing political orientation (Knab & Steffens, 2019; Hameiri et al., 2018). Again, this is in line with the idea that cognitive flexibility reduces people's reliance on their dominant way of thinking (Crisp & Turner, 2011; Kleiman & Enisman, 2018). As such, in an intergroup context, interventions that foster cognitive flexibility are most effective in improving outgroup attitudes among people with higher levels of prejudice (Vasiljevic & Crisp, 2013; Winter et al., 2019). This highlights the importance of including participants' political orientation in these types of intervention studies as well as when investigating paradoxical intervention effects on cognitive flexibility.

The Current Research

Past research indicates that paradoxical interventions lead to open-mindedness as it relates to the specific focus of the intervention (e.g., cognitive unfreezing, openness to information). The present research proposes that the same interventions should also lead to generalized cognitive flexibility – which could be a cognitive foundation of the context-specific effects reported earlier. As the topic of refugees arriving in Europe was one of the major topics in the media in the past years (Krininger, Ströbele, Tröger, Loos, & Skowronnek, 2018), we focused on the ethos of conflict in this context. Taken together, we predicted that a paradoxical intervention that contains anti-refugee content in line with the ethos of conflict (compared to a conventional intervention that contains pro-refugee content and a neutral control condition) would facilitate cognitive flexibility, the more right-wing the participant's political orientation is.

The study was preregistered at: <https://aspredicted.org/blind.php?x=wr8mr6>. Data files and the full protocol can be accessed through the Open Science Framework https://osf.io/aq4vb/?view_only=93050784678a47cab50b2eac7f53209. The study received ethics approval from the Board of Ethics. No additional measures were included besides the ones reported here. In the preregistration, we originally aimed to test the hypothesis with a sample comprising only people with right-wing political orientation. However, reaching this population proved difficult as these people are known to mistrust scientific endeavors in this area of research (Gauchat, 2012; McCright, Dentzman, Charters, & Dietz, 2013; Nisbet, Cooper, & Garrett, 2015). Thus, the final sample included participants of various political orientation. To test the main hypothesis that more right-wing participants show higher cognitive flexibility in the paradoxical condition, we therefore included participants' political orientation as a moderator in the analyses. In effect, we did not conduct the preregistered ANOVA (expecting a main effect of experimental condition) but a more appropriate multiple regression analysis (expecting an interaction between experimental condition and political orientation).⁶

Method

Participants

In order to gain a sample of participants with negative refugee attitudes, we employed a broad data-collection strategy. Specifically, we collected data online on social media

⁶ Analyzing the main effect of the paradoxical intervention on cognitive flexibility when political orientation is right-wing yielded a significant main effect of the focal contrast on low and highly prototypical exemplars.

platforms, contacted politicians, recruited people in our city center laboratory who filled out the survey online, invited participants while riding the train by handing out flyers with the online link and the QR-Code directing to the study, placed advertisements in newspapers and published a press release by the university, both including the online link. Twelve participants from the original sample ($N = 222$) withdrew their agreement to use their data for scientific purposes after debriefing and their data were therefore deleted. Incomplete data were provided by 86 participants: they did not respond to our measure of political orientation (i.e., the hypothesized moderator) which made it impossible to include their data in the main hypothesis test. Another 8 people were dropped because they did not match our preregistered criteria: four because they were of non-German nationality and four for being statistical outliers (i.e., having absolute Studentized Deleted Residuals > 2.69 in the main analysis). The final sample thus consisted of 116 participants (age $M = 36.35$, $SD = 15.77$). Fifty-eight participants identified as male, 52 identified as female, one person identified as non-binary, 3 indicated a self-description, and 2 people did not want to provide information; 74 % were from a higher educational background, 21 % were from a medium educational background, and 4 % were from a lower educational background.

In the preregistration we aimed at testing about 50 observations per cell (i.e., $N = 150$) to detect a medium-sized effect when conducting an ANOVA with three groups as originally planned. Sensitivity analysis indicated that we would be able to detect a small-to-medium-sized effect (i.e., $f^2 = 0.07$) for a single regression coefficient in a linear multiple regression analysis with five predictors (see main analysis), $\alpha = .05$ (one-tailed), and a power of $(1-\beta) = .90$ (Faul, Erdfelder, Buchner, & Lang, 2009; Faul, Erdfelder, Lang, & Buchner, 2007).

Procedure

Participants were randomly allocated to one of three conditions (paradoxical, conventional, and control questions). We first asked for participants' political orientation (see Measures) and assessed some additional measures (i.e., policy attitudes⁷, personal need for structure⁸). Then, we presented eight leading questions (one question per page) either from the paradoxical, the conventional, or the control condition. After the manipulation we measured participants' cognitive flexibility. In the end, we asked for demographic characteristics (gender, age, nationality, and educational background).

Measures

Political orientation. Political orientation was measured by one item asking participants to rank themselves on a Likert-type scale ranging from 1 = left to 7 = right (as used, for instance, by Hameiri et al, 2018).

Leading questions manipulation. We used the leading questions paradigm to construct the paradoxical condition and the conventional condition (see Knab, & Steffens, 2019). Participants were asked to answer eight questions in an open-answer format. Importantly, questions in the paradoxical condition were formulated to be in line with anti-refugee attitudes. An example for a question in the paradoxical condition was: "Why do you

⁷ Policy attitudes (agreement to political statements such as "I support closed national borders") were highly correlated with political orientation, $r(116) = .65, p < .001$.

⁸ Need for structure (assessed with a German short scale from Machunsky & Meiser, 2006) did not qualify the interaction effect of political orientation and the focal contrast on cognitive flexibility (see preregistration; exploratory analyses).

think that Christmas will be abolished within the next few years due to the increase in refugees? Correspondingly the leading question in the conventional condition (i.e., inconsistent with anti-refugee attitudes) was “Why do you think that we will continue to celebrate Christmas even though we do have an increase in refugees?”. The corresponding neutral question in the control condition was as follows: “Do you think that the meaning of Christmas will change in the next years due to the increase in refugees?”. The full list of the eight questions can be found in the Appendix.

Cognitive Flexibility. To measure cognitive flexibility, we used the categorization task developed by Rosch (1975; see also Isen & Daubman, 1984). Participants were asked to indicate the degree (1 does not fit – 10 does fit) to which specific exemplars fit into a given category. There were three categories (furniture, vehicles, clothing) with nine exemplars each (categories and exemplars were taken from Kleiman, Stern, & Trope, 2016; Smith & Trope, 2006). Three exemplars were highly prototypical (e.g., “car” for vehicles), three were moderately prototypical (e.g., “wheel chair”) and three were low in prototypicality of the category (e.g., “feet”). Relevant for the cognitive flexibility score is the degree to which non-prototypical exemplars are indicated to fit into the given category, with higher ratings indicating perceived broader categories, an indicator of cognitive flexibility (e.g., Friedman & Förster, 2000; Isen, 1987; Rietzschel et al., 2007).

Results

Pre-analyses

To test whether the predictors in the main analysis were uncorrelated, we computed a one-way ANOVA with experimental condition as independent variable and political orientation as dependent variable. This analysis revealed that political orientation did not

differ between experimental conditions, $F(2, 113) = 2.29, p = .339, \eta^2 = 0.02, 90\% \text{ CI } [0.00, 0.10]^9$, $M_{\text{paradox}} = 3.64 (SD = 1.53)$, $M_{\text{conventional}} = 3.80 (SD = 1.47)$, $M_{\text{control}} = 3.31 (SD = 1.33)$. Thus, the predictors used in the multiple regression analysis were independent of each other, and random assignment was successful in this regard.

Main analyses

In line with our preregistration, we ipsatized (i.e., z-standardized within subjects) cognitive flexibility scores before they were entered into the analysis (see Cunningham, Cunningham, & Green, 1977; but see Fischer & Milfont, 2010). We subtracted the individual mean of the scale scores across all three item types from each individual scale score for the items low in typicality. The outcome was divided by the within-individual standard deviation across all 27 items. This procedure accounts for substantial interindividual differences in scale usage ($min_{\text{low}} = 1.11, max_{\text{low}} = 8.22, r_{\text{low-moderate}}(116) = .67, p < .001$) and reduces unwanted error variance.

To test our hypothesis that paradoxical leading questions (vs. conventional and neutral leading questions) would enhance cognitive flexibility, the more right-wing participants' political orientation is, we conducted a multiple regression analysis. Following the recommendations of Aiken and West (1991), we mean-centered the continuous independent variable (i.e., political orientation) and coded the three-stage factor (i.e., leading questions type) using orthogonal contrasts (focal contrast: +2 paradoxical, -1 conventional, -1 control; residual contrast: 0 paradoxical, +1 conventional, -1 control). Separate interaction

⁹ CIs for η^2 were calculated using the SPSS script provided by Smithson (2001). Following the recommendations of Lakens (2014) and Steiger (2004), we report the 90% CI of these effect sizes.

terms with political orientation were calculated for each of the two contrasts. The predicted pattern of results would statistically emerge in a significant interaction between the focal contrast and the continuous independent variable.

In line with our hypothesis, there was a significant interaction effect of the focal contrast and political orientation on cognitive flexibility, $B = 0.03$, $SE = 0.01$, 95% CI [0.01, 0.04], $t(110) = 3.25$, $p = .002$. That is, the more right-wing a participant's political orientation, the more the paradoxical leading questions enhanced cognitive flexibility, compared to the other two conditions (see Figure 1). This is evident in the simple comparisons at $\pm 1 SD$ of the continuous predictor. When political orientation was *left-wing* (i.e., $-1 SD = -1.45$), the paradoxical ($M = -0.85$) leading questions did not lead to more cognitive flexibility compared to the conventional ($M = -0.80$) and the control ($M = -0.75$) leading questions, $B = -0.02$, $SE = 0.02$, 95% CI [-0.06, 0.01], $t(110) = -1.35$, $p = .179$. However, as expected, when political orientation was more *right-wing* (i.e., $+1 SD = 1.45$), the paradoxical ($M = -0.73$) leading questions enhanced cognitive flexibility compared to both the conventional ($M = -0.85$) and the control ($M = -0.95$) condition, $B = 0.06$, $SE = 0.02$, 95% CI [0.02, 0.09], $t(110) = 3.22$, $p = .002$. No other effects in the multiple regression analysis were significant, all $|t|s < 1.55$, all $ps > .124$.

Comparing the individual slopes between experimental conditions reveals a pattern that dovetails nicely with the regression analyses. In the control condition, a negative relationship between political orientation and cognitive flexibility could be observed ($\beta = -0.49$, $p = .007$); this was absent in the conventional condition ($\beta = -0.12$, $p = .470$), and even reversed in the paradoxical condition ($\beta = 0.29$, $p = .037$). This indicates that more right-wing political orientation was associated with less cognitive flexibility in the control condition.

The paradoxical condition, however, changed this pattern insofar as more right-wing political orientation, here, was related to higher cognitive flexibility.

It is important to note that this pattern of results does not emerge for exemplars with moderate or high prototypicality (these scores were also ipsatized before averaging). Thus, a general response tendency caused by the paradoxical leading questions seems unlikely. For exemplars moderate in typicality, we observed no effects of the independent variables and their interactions in a multiple regression analysis, all $|t|s < 0.90$, all $ps > .372$. Interestingly, the paradoxical leading questions intervention also influenced how people categorized the exemplars high in prototypicality but conversely to the exemplars low in prototypicality. In a multiple regression analysis, a significant interaction effect between the focal contrast and political orientation emerged, $B = -0.03$, $SE = 0.01$, 95% CI [-0.05, -0.01], $t(110) = -3.16$, $p = .002$. When political orientation was *right-wing*, participants in the paradoxical ($M = 0.71$) condition, compared to participants in the conventional ($M = 0.86$) and the control ($M = 0.99$) conditions, perceived the exemplars high in prototypicality as less fitting with the respective category, $B = -0.07$, $SE = 0.02$, 95% CI [-0.11, -0.03], $t(110) = -3.41$, $p = .001$. No such difference between paradoxical ($M = 0.86$), conventional ($M = 0.78$) and control ($M = 0.81$) condition was observed for *left-wing* participants, $B = 0.02$, $SE = 0.02$, 95% CI [-0.02, 0.06], $t(110) = 1.05$, $p = .296$. This pattern of results was not hypothesized, but it fits well with the argument that cognitive flexibility is reflected in the individual's propensity to reconsider his/her dominant way of thinking. The dominant response, in this case, to see highly prototypical exemplars (e.g., car for the category of vehicles) as fitting the category was diminished by the paradoxical leading questions. No other effect was significant in this multiple regression analysis, all $|t|s < 1.66$, all $ps > .100$.

Discussion

In this research we aimed to show that a paradoxical leading-questions intervention, containing extreme anti-refugee statements, in contrast to two other strategies of asking questions in the refugee context, increases cognitive flexibility for people with more right-wing political attitudes. We conducted a preregistered online experiment in which we were able to show the hypothesized pattern. More specifically, we found higher category inclusiveness of non-prototypical exemplars (i.e., cognitive flexibility; Crisp & Turner, 2011; Rietzschel et al., 2007) among right-wing participants in the paradoxical condition compared to the other two conditions. In addition, our results suggest that the paradoxical condition caused right-wing participants to deviate from the default way of categorizing highly prototypical examples – that is, they saw them as less prototypical. This supports the view that increased cognitive flexibility is associated with less reliance on dominant responses. These findings provide further insight into the cognitive consequences of paradoxical interventions and make a theoretical contribution by suggesting cognitive flexibility as a potential context-free cognitive foundation of the context-specific cognitive effects reported earlier (i.e., consideration of alternative information, cognitive unfreezing related to the topic at hand; Hameiri et al., 2018). Importantly, the current research is to our knowledge the first to show that paradoxical questions influence cognitions outside the intergroup context (in this case, the categorization of objects), which again indicates that the paradoxical intervention, indeed, targets recipients' underlying way of thinking.

Hameiri and colleagues (2018) found that surprise serves as an emotional explanation as to why the paradoxical intervention leads to open-mindedness in the targeted context. They explain their finding with previous evidence that the emotion of surprise is related to

more in-depth information processing (Petty, Fleming, Priester, & Feinstein, 2001; see also Ziegler, Diehl, & Ruther, 2002). Interestingly, surprise could also play a role in the emergence of cognitive flexibility (Gocłowska, Baas, Crisp, & De Dreu, 2014; Vasiljevic & Crisp, 2013). Future research could investigate if surprise functions as an emotional consequence of being confronted with paradoxical stimuli, which in turn could serve as a trigger for more cognitive flexibility.

The effectiveness of paradoxical interventions has been shown in various intergroup contexts, though these have been highly politicized. To expand the scope, it would be interesting to test the intervention's effects in contexts with less politicized topics like vaccination. Also, in regard to future research ideas, we found that there was a negative relationship between cognitive flexibility and political orientation in the control condition, suggesting that the more right-wing people were, the less cognitively flexible they were. Notwithstanding the ongoing debate on whether conservatism or political extremism is related to cognitive inflexibility (see Jost, 2017; Jost, Glaser, Kruglanski, & Sulloway, 2003; Zmigrod, Rentfrow, & Robbins, 2018; but see Conway et al., 2016; van Hiel, Onraet, & De Pauw, 2010; van Prooijen & Krouwel, 2018), the current research raises the question whether the paradoxical intervention works better among people with low (chronic) cognitive flexibility. This conclusion could be drawn with some caution from the present data but from a theoretical point of view we would also assume an increase in cognitive flexibility among the political left when the paradoxical questions address their prior beliefs (i.e., pro-refugee attitudes in the current case). Although this would be an interesting avenue for future research from a theoretical perspective, it should be noted that among the political left, this intervention could reduce positive attitudes towards refugees (i.e., the default among the left).

Taking ethical considerations into account, we refrained from this endeavor.

Conclusion

The current research provides novel insight into the consequences of paradoxical leading questions interventions. In line with our predictions, we found these interventions, as compared to control conditions, to increase cognitive flexibility predominantly among right-wing participants. This finding suggests that the paradoxical intervention induces a specific (i.e., flexible) way of thinking that leads to openness towards opposite positions. Thus, the paradoxical intervention constitutes a promising approach to not only improve relations between groups, but also to reduce polarization within societies.

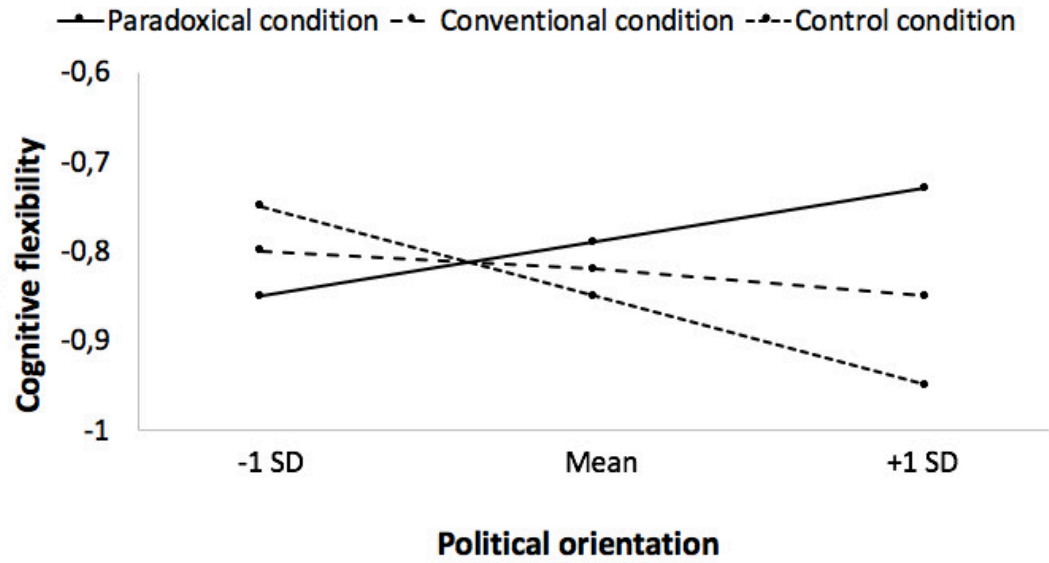


Figure 1. Interaction effect of condition moderated by political orientation on cognitive flexibility. Values of 1SD above the mean portray a rather right-wing orientation, values of 1SD below the mean indicate a rather left-wing political orientation. Mean and standard deviation of non-standardized score of political orientation across all conditions.

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Appendix

Leading questions for the manipulation

Ethos of Conflict	Paradoxical	Conventional	Control
Economic Threat	<p>Why do you think that the refugees will steal every single job from Germans so that all Germans will be unemployed in the near future?</p> <p>Why do you think that due to the refugees we won't receive a single cent for pension?</p>	<p>Why do you think that Germans won't be unemployed due to the increase in refugees?</p> <p>Why do you think that even though refugees are coming we will still get a pension?</p>	<p>Do you think the increase of refugees will have an effect on the job market?</p> <p>Do you think that the refugees will have any effect on our pension system?</p>
Symbolic Threat	<p>Why do you think that Christmas will never be celebrated anymore due to the increase in refugees?</p> <p>Why do you think that we will all talk Arabic soon?</p>	<p>Why do you think that we will continue to celebrate Christmas even though we do have an increase in refugees</p> <p>Why do you think that even though refugees are coming, German will stay the official language?</p>	<p>Do you think that the meaning of Christmas will change in the next years due to the increase in refugees?</p> <p>Do you think the German language will be affected by the higher number of refugees?</p>
Nationalistic Concern	<p>Why do you think refugees are only coming to Germany to rob everything we have?</p> <p>Why do you think that the refugees are turning your everyday life totally upside down?</p>	<p>Why do you think that refugees are coming to Germany to live in peace?</p> <p>Why do you think that the number of refugees actually hasn't affected your everyday life much?</p>	<p>Why do you think refugees are coming to Germany?</p> <p>Do you think that the refugees have an impact on your everyday life?</p>
Outgroup Homogeneity	<p>Why do you think that all the refugees are totally similar?</p> <p>Why do you think all refugees are strong believers of Islam?</p>	<p>Why do you think refugees are not all the same?</p> <p>Why do you think that not all refugees are strong believers of Islam?</p>	<p>What do refugees have in common and what do they not all have in common?</p> <p>With which religion can most refugees identify and why do you think this is the case?</p>

Manuscript 3

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Specific prosocial emotions relate to hierarchy-challenging and hierarchy-
maintaining actions in support of refugees
Under Review

Specific prosocial emotions relate to hierarchy-challenging and hierarchy-maintaining actions in support of refugees

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Author contributions

Nadine Knab developed the study concept. Both authors contributed to the study design.

Data collection, data analysis and interpretation was performed by Nadine Knab under the supervision of Melanie Steffens. Nadine Knab drafted the manuscript, and Melanie Steffens provided critical revisions. Both authors approved the final version of the manuscript for submission.

Abstract

As millions of people are fleeing their countries due to violent conflict and climate change, high support from host societies is desperately needed. One option to increase support could be to induce emotional reactions that elicit prosocial action. To facilitate a needs-adequate support it is important to know if prosocial emotions lead to specific prosocial action tendencies. We asked employees of charity and human-rights organizations ($N = 150$) which emotions and action tendencies they wish to elicit with their campaigns. As expected, we found a connection only of sympathy with *hierarchy-maintaining prosocial actions* (e.g., dependency-oriented helping) whereas only moral outrage was related to *hierarchy-challenging actions* (e.g., solidarity-based collective action for refugees' human rights). Asking a general population sample ($N = 203$) about their experienced emotions and action tendencies replicated these specific connections of emotions and prosocial action. We discuss implications for interventions to satisfy specific needs of refugees.

148 (max. 150 words)

Keywords: emotions, helping behavior, collective action, refugees, moral outrage, sympathy, hierarchy

Statement of Relevance

In this research we provide evidence for specific connections between emotions and prosocial action tendencies to support refugees. We investigated this by including a unique sample of people working in charity and human-rights organizations. By predicting different prosocial actions and differentiating them into *hierarchy-maintaining* and *hierarchy-challenging actions* based on previous similar research, we provide important theoretical and empirical knowledge to tailor and develop interventions addressing current needs of refugees. For this reason, this research provides implications beyond academic research, for instance, for organizations interested in fostering support for refugees or migrant groups more general.

Specific prosocial emotions relate to hierarchy-challenging and hierarchy-maintaining actions in support of refugees

We are facing the biggest refugee and displacement crisis of our time. Above all, this is not just a crisis of numbers; it is also a crisis of solidarity.

– Ban Ki Moon

According to a UN report the number of people in need of humanitarian assistance will increase in 2020 to another 20 million in contrast to 2019, summing up to about 170 million people in need, most of them in war regions such as Syria, Yemen, and the Congo (UN News, 2019). War and climate change make people flee their countries, mostly to neighboring countries, but many also try to reach Europe. Thus, there will be an even higher need for support and help for refugees in the future. In general, helping is characterized by unequal power relations – but the specific form of help differs regarding its potential to challenge this power imbalance in the future or to rather maintain it (Nadler, 2002). In this paper, we propose that specific emotional reactions predict which kind of help will be shown by members of the host society towards refugees. Thereby, this research contributes to theories on collective emotions (see Goldenberg, Garcia, Halperin, & Gross, 2020).

Hierarchy-maintaining and hierarchy-challenging actions

In recent years there has been more and more research about specific action tendencies which are prosocial in nature but have different consequences for power relations (Jackson, & Esses, 2000; Nadler, 2002; see also Wright, & Lubensky, 2009). In the asylum context, on the one hand people can provide help to refugees that enable them to satisfy their basic needs by giving food and shelter, but still making refugees dependent on the goodwill of the advantaged. On the other hand, people can provide help by challenging the power disparities, for example by enabling refugees to fight for their own rights and to become

equal members of society. Thus, the first example provides the full solution to the problem at hand, whereas the second example aims to provide the tools to the recipient to solve the problem on his/her own. Recent research connected the two forms to a different potential to elicit social change (Alvarez, van Leeuwen, Montenegro-Montenegro, & van Vugt, 2018; Becker, Ksenofontov, Siem, & Love, 2018). Providing the full solution entails acceptance of social inequality (at least in that specific moment) and thus maintains the hierarchy whereas a focus on providing the tools to improve the situation of the disadvantaged entails that the inequality is perceived to be illegitimate and aimed to be reduced – thus challenging the currently present hierarchy in intergroup relations. Consequently, only *hierarchy-challenging* actions such as fighting for educational and professional rights of refugees will in the long run integrate refugees successfully into a host society as equal members (Dixon, Durheim, Stevenson, Cakal, 2016; Wright, & Lubensky, 2009). Nevertheless, *hierarchy-maintaining* support may be necessary to assist in emergency situations to satisfy refugees' basic needs. Thus, depending on the specific context it is necessary to address different needs of refugees and therefore to elicit specific action tendencies in the host-society. Psychological research can help in this endeavor by theoretically developing and empirically testing potential precursors of these action tendencies.

Emotions, identification, and prosocial action

In view of the growing numbers of people migrating due to violent conflict and climate change, increasing support for refugees is highly necessary – but aiming for this by using statistics and deliberative thought has not (always) been effective and even decreased support for people in need (see e.g. Small, Loewenstein, Slovic, 2007). In contrast, eliciting specific emotions may form an opportunity to induce those prosocial actions which satisfy

the current needs of refugees. Emotional reactions on the group level have been shown to have important effects on intergroup reconciliation and prosocial action (Bar-Tal, Halperin, & de Rivera, 2007; Harth, Leach, & Kessler, 2013; Nadler, & Liviatan, 2006). More specifically, there is growing evidence that specific emotions lead to specific action tendencies (e.g. Harth, Kessler, & Leach, 2008; Thomas, McGarty, & Mavor, 2009; Van de Vyver, & Abrams, 2015). We focus on group based emotions, which can be experienced by advantaged group members regarding other people's grievances. An emotion used by charity organizations and empirically related to helping behavior is sympathy (e.g. Eisenberg, Miller, Schaller, Fabes, Fultz, Shell, & Shea, 1989; Harth, Kessler, & Leach, 2008; Iyer, Leach & Crosby, 2003; Stürmer, Snyder & Omoto, 2005). Sympathy is characterized by an increased awareness of another person's or group's suffering with the aim to mitigate the suffering of the disadvantaged (Lazarus, 1991; Wispé, 1986). As this emotion cannot be shared by the disadvantaged, group boundaries between advantaged and disadvantaged stay intact (Thomas et al., 2009).

In contrast, moral outrage, described by Batson and colleagues (2007) as “anger provoked by the perception that a moral standard – usually a standard of fairness or justice – has been violated” (p. 1272), has the potential to be shared by the advantaged and disadvantaged, forging the possibility of higher inclusiveness and thus identification (Subašić, Reynolds, & Turner, 2008). Whereas sympathy does not entail a direction of blame due to the deprivation of the disadvantaged, moral outrage directs blame to a third party, possibly the government or another authority (Montada & Schneider, 1989). Thus, identification with the authority or third party may play an important role in differentiating the specific emotions, sympathy and moral outrage. Based on the reasoning above, sympathy

and moral outrage both go along with positive attitudes towards the disadvantaged group, but only moral outrage directs the blame of the deprivation to a specific transgressor (third party) and therefore challenges the authority's status quo (Subašić et al., 2008). We therefore argue that moral outrage is associated with low identification with the authority and more *hierarchy-challenging actions*, such as solidarity-based collective action that has the potential to provoke social change (see also Van de Vyver & Abrams, 2015).

Though aiming for mitigating the suffering of the disadvantaged, people experiencing mainly sympathy should identify to a certain degree with the authority (which would be able to change the injustice) and therefore should not have the intention to challenge the status quo. Differently put, sympathy should be associated with prosocial actions aiming to alleviate the suffering of the disadvantaged, without changing the system of inequality in general (Wright & Lubensky, 2009). In line with this reasoning there is preliminary evidence in the international development context showing that even though participants experienced sympathy towards the suffering of people in developing nations, this was not the strongest predictor for political action (Thomas, 2005).

Current research

We investigated in two studies the proposed relations between specific emotions, identification processes, and action tendencies. We mainly focus on two prosocial emotions and their relation to behavioral tendencies: sympathy and moral outrage. Study 1 drew on a unique sample of people working in charity and human-rights organizations and investigated the intended emotions and action tendencies the organization aims to elicit with their work. We hypothesized that the aim to elicit moral outrage about the treatment and circumstances of refugees is related to *hierarchy-challenging actions* such as solidarity-based collective

action. In contrast, the aim to elicit sympathy should be related to *hierarchy-maintaining actions* such as dependency-oriented helping. We also explored if type of organization (self-categorized: charity or human rights) predicts specific emotional processes and actions. In Study 2 we drew on a general population sample investigating how their perceived emotions are related to specific action tendencies. In addition, we investigated if identification processes with refugees and the government provide evidence for specific identification processes underlying the relationship between emotions and action tendencies (see Subašić et al., 2008). Including the perspective of people working in charity and human-rights organizations (Study 1) and the general population sample (Study 2) allows us to base our findings on a unique multi-perspective. Figure 1 shows the hypothesized relations between emotions and action tendencies.

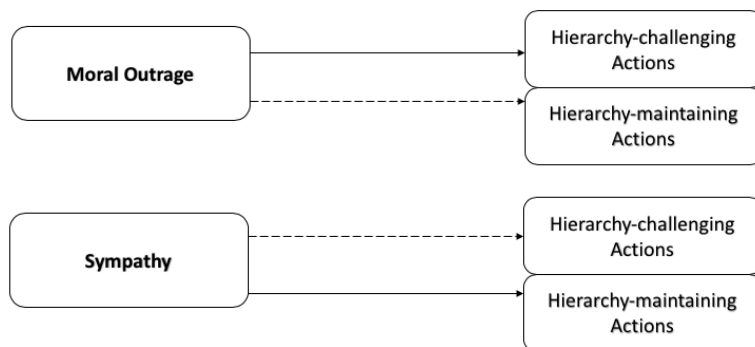


Figure 1. Assumed relations between emotions and action tendencies. Solid lines represent assumed (positive) significant correlations, dashed lines represent assumed non-significant correlations.

Study 1

Method

The study was preregistered (<http://aspredicted.org/blind.php?x=ui7cq3>) and data files can be found here:

https://osf.io/j4rcn/?view_only=a4dc47f80583484a89f5fd22d11ecdad. We contacted charity

and human-rights organizations in Germany specializing in refugee support and invited employees to take part in a study about emotions and action tendencies. Participants ($N = 150$, of whom 103 volunteered to provide information on age and 134 provided information on gender: $M_{\text{age}} = 42.31$, $SD = 14.65$, gender: 46% male, 54% female) were asked which campaign they are involved in and if they categorize their organization as a charity or human-rights organization. Sympathy ($\alpha = .93$) and moral outrage ($\alpha = .92$) were measured with three items each, for example, “*An aim of my work at the organization is that people feel sympathy with refugees*” and “*An aim of my work at the organization is that people get angry when they get to know how refugees are treated*” respectively. *Hierarchy-challenging actions* ($\alpha = .91$) were measured by eight items such as “*My work at the organization wants to encourage people to give money to projects which aim to enable refugees to fight for their rights*”. *Hierarchy-maintaining prosocial actions* ($\alpha = .90$) were measured by eight items such as “*My work at the organization wants to encourage people to give money to projects which aim for medical assistance for refugees*” (some items adapted from Becker et al., 2018). Participants also had the chance to indicate more options in an open text field. Finally, we asked whether they volunteered demographic information (age and gender), participants were informed about the study’s hypotheses and had the opportunity to enter their e-mail address (saved separately from the answers in the survey to protect anonymity) to receive information about the results. Tables 1 shows descriptives and correlations of the collected variables in Study 1.

Table 1

Descriptives and Bivariate Correlations

	<i>M (SD)</i>	Hierarchy-challenging actions	Hierarchy-maintaining actions
Moral outrage	3.44 (1.53)	.51**	.11
Sympathy	2.99 (1.48)	.13	.51**
Hierarchy-challenging actions	4.02 (1.26)		.52**
Hierarchy-maintaining actions	3.24 (1.25)		

Note. Correlation between moral outrage and hierarchy-challenging/maintaining actions controlling for sympathy. Correlation between sympathy and hierarchy-challenging/maintaining action controlling for moral outrage.

** $p < .001$, scales ranged from 1-6 (1 = completely disagree, 6 = completely agree).

Results

We conducted multiple regression analyses to test if employees of charity and human rights organizations only connect moral outrage to hierarchy-challenging actions, such as solidarity-based collective action and only sympathy to hierarchy-maintaining actions such as dependency-oriented helping. Results of the multiple linear regression with *hierarchy-challenging actions* as the outcome yielded a significant effect of the emotions on the action tendency, $F(2, 141) = 42.29, p < .001, R^2 = .39$. The individual predictors were inspected further and supported our hypothesis: Predicting hierarchy-challenging actions, including both sympathy and moral outrage, yielded a significant effect only by moral outrage ($b = .45, SE = .07, p < .001$), but not by sympathy ($b = .10, SE = .07, p = .12$). In contrast, the regression analyses with *hierarchy-maintaining actions* also yielded a significant result, $F(2, 141) = 41.90, p < .001, R^2 = .37$, but only by sympathy ($b = .46, SE = .07, p < .001$), not

by moral outrage ($b = .09$, $SE = .06$, $p = .17$). The behavioral tendencies therefore seem related to specific prosocial emotions as expected.

Exploring if human rights organizations (0 = charity, 1 = human rights) rather aim to induce moral outrage than sympathy, which should then relate to hierarchy-challenging actions, yielded a significant direct effect of organization type on hierarchy-challenging actions: $b = .41$, $SE = .18$, $p = .028$, as well as an indirect effect by moral outrage: $b = .35$, $SE = .12$, CI 95% [.14, .59]. Thus, human rights organizations tend to evoke more moral outrage than charity organizations, which predicts the aim to motivate recipients of the campaigns for actions of social change such as solidarity-based collective action (see Figure 2). Although there was a direct effect of organization type on hierarchy-maintaining actions ($b = -.45$, $SE = .18$, $p = .16$), there was no indirect effect via sympathy ($b = -.01$, $SE = .12$, CI 95% [-.24, .22]).

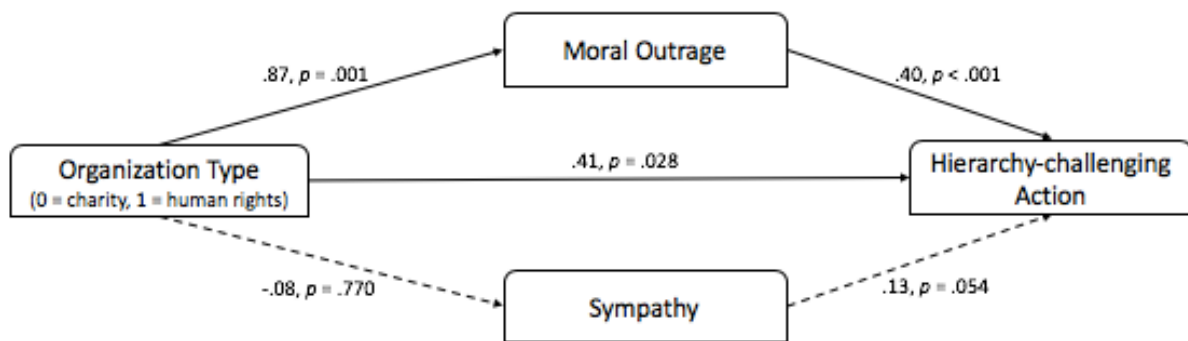


Figure 2. Results for predicting emotions and action aims based on organization type (self-categorized).

Study 2

Method

We first asked participants ($N = 203$, $M_{age} = 27.09$, $SD = 9.08$, range = 18-70 years, gender: 76% female, 23% male, 1% other) what they feel when thinking of the situation of

refugees using a 7-point Likert-type scale with 11 items, including moral outrage ($\alpha = .86$) and sympathy ($\alpha = .89$)¹⁰. Then, participants indicated their identification with refugees and with the German government using 7-level inclusion-of-other-in-the-self pictorial scales (Aron, Aron, & Smollan, 1992). Hierarchy-maintaining prosocial actions were measured by six items such as “*Would you volunteer to distribute food to refugees?*”. Hierarchy-challenging actions ($\alpha = .91$) were measured with five items such as “*Would you actively engage in supporting the uptake and integration opportunities of refugees (e.g. by contacting local politicians)?*” (items from Becker, Ksenofontov, Love, & Borgert, 2018).

Results

Again, we conducted multiple regression analyses to test if moral outrage specifically predicts hierarchy-challenging actions, whereas sympathy specifically predicts hierarchy-maintaining actions. The multiple regression analysis predicting *hierarchy-challenging actions* yielded a significant effect, $F(2, 193) = 67.71, p < .001, R^2 = .41$. As predicted, analyses indicate that only moral outrage predicts this type of help ($b = .68, SE = .11, p < .001$), but not sympathy ($b = .05, SE = .10, p = .601$). A second multiple regression analysis with *hierarchy-maintaining actions* as the outcome was also significant: $F(2,199) = 131.80, p < .001, R^2 = .57$. *Hierarchy-maintaining actions* were predicted both by sympathy ($b = .37, SE = .07, p < .001$), as predicted, but also by moral outrage ($b = .38, SE = .08, p < .001$). In order to gain insight into the connection of emotions, identification processes, and action tendencies Bivariate correlations are presented in Table 2 and 3.

¹⁰ We also measured shame/guilt and autonomy-oriented helping and explored if concern of one’s own financial situation relates to specific type of behavior. Results can be found in the supplementary online material.

They reveal that, as hypothesized, moral outrage and *hierarchy-challenging actions* were positively associated with identification with refugees ($M = 3.03$, $SD = 1.70$), but not associated with identification with the German government ($M = 2.32$, $SD = 1.33$).

Hierarchy-maintaining actions were associated with identification with refugees, but also with identification with the German government, as predicted. Contrary to our predictions, sympathy did not show significant relationships with any identification variable.

Table 2

Bivariate Correlations Controlling for Sympathy

	<i>M</i> (<i>SD</i>)	Identification with refugees	Identification with the German government	Hierarchy- challenging
Moral outrage	4.95 (1.42)	.19**	-.07	.41**
Hierarchy- challenging	4.57 (1.61)	.24**	-.03	

Note. $N = 199$.

** $p \leq .001$, scale range from 1-7 (1 = completely disagree, 7 = completely agree).

Table 3

Bivariate Correlations Controlling for Moral Outrage

	<i>M</i> (<i>SD</i>)	Identification with refugees	Identification with the German government	Hierarchy- maintaining
Sympathy	5.23 (1.49)	.12	.05	.34**
Hierarchy-maintaining	5.14 (1.38)	.20*	.15*	

Note. $N = 199$.

* $p \leq .05$

** $p \leq .001$, scale range from 1-7 (1 = completely disagree, 7 = completely agree).

Discussion

Two studies aimed to corroborate distinct relationships of collective emotions of the advantaged group on prosocial behavior towards refugees capturing multiple perspectives. Study 1 investigated which emotions and action tendencies employees from charity and human rights organizations aim to elicit in the target audience of their campaigns, thereby testing lay theories of the connection of specific emotions and action tendencies. Study 2 investigated the experienced emotions and connections to actions tendencies in a general population sample. Results indicate that moral outrage predicted more *hierarchy-challenging actions* such as solidarity-based collective action, whereas sympathy predicted prosocial, but rather *hierarchy-maintaining actions* such as dependency-oriented helping thereby contributing to the growing theoretical and empirical base that emotions relate to specific prosocial action (see Van de Vyver & Abrams, 2015). Knowledge provided by these studies could function as a base for establishing interventions eliciting emotions which give rise to those action tendencies that are currently needed to support refugees or other social groups in unjust situations.

A limitation of this research is the correlational design. Future research could manipulate the specific emotions to test for causality of the proposed relations. One could consider an additional limitation the generalizability of the findings to other intergroup contexts. Power hierarchies between host society members and different immigrants may be similar for different groups with a migration background, but different stereotypes could influence reactions and specific types of help provided (Fröhlich & Schulte, 2019). Thus, further research should extend the relationships found here to other social groups in need. In Study 2 *hierarchy-maintaining actions* were predicted both by sympathy and moral outrage.

An explanation for this could be that the unique sample of employees of charity and human rights organizations in Study 1 had clearer goals and some lay theory which emotions relate to which behavior than the general population in Study 2.

A specific strength in this research is the inclusion of identification with the outgroup and the third party, here the German government. Past research often conceptualizes intergroup interactions as in- and outgroup settings. But in reality, many different social groups are involved in socio-political contexts. We therefore propose that it is important to include identification processes with the current political system that is involved in the injustice at hand. Thus, regarding identification processes, we provide first evidence that identification with the authorities has a distinct relation to *hierarchy-maintaining* and *hierarchy-challenging actions*. It seems that the more people identify with the authorities the more they are inclined to provide *hierarchy-maintaining prosocial actions*, such as dependency-oriented helping (while identifying with refugees). In contrast, and as hypothesized, the present data indicates that identification with the authorities is not related to *hierarchy-challenging actions* such as solidarity-based collective action. Therefore, when thinking of interventions, a fruitful route seems to take into account identification processes with the authority, which is connected to the situation of the disadvantaged group.

Conclusion

Prosocial action is manifold in the refugee context – the actions can satisfy basic needs of refugees but still make refugees dependent on the suppliers' goodwill. But also, the actions can provide the tools so refugees can integrate into society as equal members who can satisfy their own needs. Our studies provide novel insights into the relation of emotions, identification processes, and specific reaction tendencies towards refugees. These results

have the potential to inform organizations on how to develop interventions addressing the specific needs of refugees. If they aim for monetary donations for satisfying basic needs for refugees, such as food, water and medical assistance, campaigns eliciting sympathy are an option. If the support should challenge current social hierarchy, campaigns eliciting moral outrage may be the better choice. Thereby, this research provided important evidence establishing interventions to either enhance *hierarchy-challenging* or *hierarchy-maintaining prosocial actions*.

Open Practice Statement

The preregistration for Study 1 can be accessed at

[<http://aspredicted.org/blind.php?x=ui7cq3>].

De-identified data for both experiments are posted at

[https://osf.io/j4rcn/?view_only=a4dc47f80583484a89f5fd22d11ecdad]

Conflict of Interest

The authors declared no conflicts of interest with respect to the authorship or the publication of this article.

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Supplementary material

Study 2 also included shame and guilt as predictors and a measure for autonomy-oriented help as a dependent variable.

Including shame and guilt in the regression analysis does not change the results reported in Study 2.

Hierarchy-challenging action

Overall effect: $F(195) = 34.31, p < .001$. Moral outrage remains the only significant predictor, $b = .63, SE = .12, p < .001$, whereas shame ($b = .03, SE = .10, p = .742$), guilt ($b = 0.8, SE = .06, p = .221$) and sympathy ($b = .03, SE = .11, p = .805$) do not significantly predict hierarchy-challenging action.

Hierarchy-maintaining action

Overall effect: $F(201) = 67.49, p < .001$. Moral outrage and sympathy both predict hierarchy-maintaining action as reported in the results section when including shame and guilt (moral outrage: $b = .33, SE = .09, p < .001$, sympathy: $b = .35, SE = .08, p < .001$). Shame and guilt did not predict hierarchy-maintaining action (shame: $b = .03, SE = .07, p = .678$, guilt: $b = .08, SE = .05, p = .076$).

Thus, in this study, shame and guilt show no significant relationship to neither hierarchy-maintaining nor hierarchy-challenging actions.

Autonomy-oriented help

Autonomy-oriented help in Study 2 was highly correlated with dependency-oriented help ($r = .82, p < .001$). Exploring the factorial structure (main component analysis with oblimin rotation) of all items of dependency-oriented help, autonomy-oriented help, and solidarity-based collective action did indeed yield three factors (Eigenvalue above 1) but the factor loadings were not clear (see Table S1). Therefore, we decided to not include the items for autonomy-oriented help in the analysis. Adding Item Aut1 and Aut4, which based on the results in Table 1 also loaded on the factor for solidarity-based collective action, did not change the results for predicting hierarchy-challenging actions. Still, only moral outrage predicted hierarchy-challenging actions ($b = .69, SE = .10, p < .001$), whereas sympathy did not ($b = .14, SE = .10, p = .166$).

Table S1

Results of exploratory factorial analysis.

	Factor 1	Factor 2	Factor 3
Dep1: Would be like to be involved in a project, which voluntarily collects clothes-and toy give aways	-.00	.92	.01
Dep2: Would you donate money to an organization which organizes conservators for refugees , who will responsible for the refugees' legal situation?	.04	.03	-.84
Dep3: Would you voluntarily help with supplying food in a shelter for refugees?	.06	.84	-.06
Dep4: would you donate money to an organization which provides refugees with the necessary food and clothes?	-.03	.20	-.78
Dep5: Would you sort your own clothes or other likely essentials that you don't need any more and donate them for refugees?	-.17	.72	-.25
Aut1: Would you sign a petition that financially supports refugees so they can care for themselves?	.30	.31	-.25
Aut2: Would you donate money to an organization which makes it possible for student refugees to continue their studies?	.11	-.07	-.87
Aut3: Would you give money to an organization, which educates refugees concerning their rights?	.04	-.05	-.93
Aut4: Would you screen with refugees the current housing opportunities to assist in finding an apartment?	.36	.70	.12
Solidarity1: Would you share posts supporting the uptake of refugees on your social media?	.85	.00	-.08
Solidarity2: Would you publicly voice concern regarding refugee-hostile content?	.87	-.02	-.04
Solidarity3: Would you participate in protests for the rights of refugees?	.63	.22	-.14
Solidarity4: Would you actively engage yourself to support the uptake of refugees (e.g. by initiating contact with a political authority)?	.66	.26	-.02
Solidarity5: Would you voice concern regarding refugee-hostile contents on your social media?	.93	-.14	-.05

Exploratory analysis of relation between concern for one's financial situation and type of help

	Hierarchy-challenging	Hierarchy-maintaining
Concern for one's financial situation	.08	.03
Hierarchy-challenging		.63**
Hierarchy-maintaining		

** $p \leq .001$

There is no relation between concern for one's financial situation type of help indicated by the participants in study 2.

Manuscript 4

Knab, N., & Steffens, M. C. (2018).

One World in Diversity – A socio-psychological intervention to foster international collective action intention. *Journal of Political and Social Psychology*, 6, 8–26.

Original Research Reports

One World in Diversity – A Social-Psychological Intervention to Foster International Collective Action Intention

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Abstract

Although effective interventions to increase international collective action for human rights are highly desirable, the validation of theory-based interventions and their transfer to this practical field is still scarce. We investigated whether collective action intention can be improved by using a diversity intervention technique rooted in social psychology. The intervention builds on the ingroup projection model, postulating that negative intergroup relations are based on the perception of ingroups as more typical of a common superordinate group than outgroups (i.e., relative prototypicality). Thereby, the (quasi-)experimental study tested the ingroup projection model's theoretical assumptions in the context of Model United Nations (MUN) conferences. We hypothesized that the diversity intervention leads to a higher perceived diversity within the superordinate group (the United Nations, UN) as well as identification with the superordinate group (UN). Furthermore, we hypothesized an indirect effect of the intervention on collective action intention mediated by perception of diversity of, and identification with, the superordinate group. In comparison to the control group ($n = 45$), those participants who received the diversity workshop intervention ($n = 55$) perceived less relative prototypicality and more diversity of the UN. In addition, we provide evidence of a serial mediation: Compared to the control group, the diversity workshop group perceived the UN as relatively more diverse, facilitating identification with the UN. In turn, this was associated with a stronger intention to act collectively. This study shows the importance of including psychological theories in the field of international relations.

Keywords: prototypicality, collective action, Model United Nations, diversity training, psychological intervention, ingroup projection, global issues, international relations, human rights

Zusammenfassung

Obwohl effektive Interventionen zur Förderung internationalen kollektiven Handelns dringend notwendig scheinen, ist die Validierung theoriebasierter Interventionen und deren Transfer in die Praxis selten. Folglich haben wir untersucht, ob kollektives Handeln durch eine Diversity-Intervention erhöht werden kann. Die Intervention basiert auf dem Eigengruppenprojektionsmodell, das die Annahme beinhaltet, dass Personen ihre Eigengruppe als typischer für eine gemeinsame übergeordnete Gruppe ansehen als Fremdgruppen, was als relative Prototypikalität bezeichnet wird. Die vorliegende (quasi-)experimentelle Studie testet die Annahmen des Eigengruppenprojektionsmodells im Kontext von Model-United-Nations-Simulationen (MUN). Wir nahmen an, dass die Diversity-Intervention zu einer erhöhten Vielfaltswahrnehmung der UN sowie zu einer erhöhten Identifikation mit der UN führt. Außerdem nahmen wir an, dass ein indirekter Effekt auf kollektives Handeln über Vielfaltswahrnehmung und Identifikation mit der UN besteht. Im Vergleich zu einer Kontrollgruppe ($n = 45$) wiesen die Teilnehmenden des Diversity-Trainings ($n = 55$) eine geringere relative Prototypikalität und eine erhöhte Vielfaltswahrnehmung auf. Auch gibt es Hinweise auf eine serielle Mediation: Im Vergleich zur Kontrollgruppe nahmen Personen nach dem Diversity-Training die UN als vielfältiger wahr, was mit einer höheren Identifikation mit der UN einher ging, die wiederum mit einer höheren Intention zusammenhing, kollektiv in Bezug auf globale Probleme zu handeln. Diese Studie verdeutlicht, dass psychologische Theorien einen wichtigen Beitrag im Diskurs um internationale Beziehungen leisten können.

Schlüsselwörter: Prototypikalität, kollektives Handeln, Model United Nations, Diversity Training, psychologische Intervention, Eigengruppenprojektion, globale Herausforderungen, internationale Beziehungen, Menschenrechte

Non-Technical Summary

Background

The world is currently facing the highest number of refugees since the aftermath of World War II. In addition, climate change poses another urgent challenge that is discussed on an international level. Decisions made by national leaders have far-reaching consequences for current and future generations. Nevertheless, national leaders are humans who are subject to psychological biases in decision making.

Why was this study done?

As social-psychological factors could inhibit or promote intentions to collaborate in support of human rights at the global level, we conducted a training for future diplomats in the context of Model United Nations simulations to reduce perception biases that could influence decision making. As a theoretical basis for the training we used a social psychological model (ingroup projection model), proposing that people perceive the group they belong to (e.g., their country) as more prototypical than other groups (e.g., other countries). Past research found a relationship of this prototypicality perception with prejudice against other groups, but also a way to reduce such prejudice. Namely, a group that includes subgroups (in our study: the United Nations, UN) needs to be mentally represented as diverse.

What did the researchers do and find?

We used an existing method to activate diversity and adapted it to the United Nations context. We conducted several trainings and investigated their effects on the intention to collaborate with other nations regarding human rights issues and on related processes (i.e., diversity perception of the UN and identification with the UN). Results indicated that the workshop reduced the prototype perception bias, as intended. Furthermore, we provide evidence that the diversity training increased perceived diversity of the UN, which in turn was positively related to the intention to act together with other nations.

What do these findings mean?

As negotiation settings within the political areas have major implications for people around the world, methods for reducing biases in perception seem especially useful. Based on our first evidence, one could cautiously assume that diversity perceptions and identification with a superordinate group (UN in our case) influence and foster the intention to work together. Policies simultaneously aiming at diversity and identity management could pave a fruitful avenue towards improving intergroup relations and collaborative action in general.

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The world is currently facing the highest number of refugees since the aftermath of World War II. Filippo Grandi (2017), United Nations High Commissioner, stated via twitter: “In 2015 the EU agreed to relocate 66,400 refugees from Greece. Less than 8000 have been relocated”. This indicates a lack of action, or action intention. Also, one year ago 193 member states of the UN worked on a Declaration for Refugees and Migrants. But experts say the obstacles to achieving the objectives are not tackled enough by the member states. Regarding the inadequate response to climate change one can also state that there is no intention to act sufficiently. When UN member states’ representatives gathered in Paris in 2015, they agreed on a new climate contract. Although this was seen as an important turn in reducing climate change, a press release in November 2016 by the United Nations Environment Programme stated that the goals were still not sufficient to stop the destructive consequences of climate change. Additionally there are country leaders who openly say they want to opt out of the Paris agreement. This begs the questions: 1) Why is there a lack of collective action intention in the face of important crises such as climate change and refugee relocation? 2) How can one increase collective action intention concerning human rights issues among people in charge? Many political and economic factors could help explaining these questions. However, social-psychological factors could also inhibit or promote collective action intention at the global level. “Sometimes you just don’t get to a solution because you don’t like each other” (anonymous diplomat in a UN discussion, personal communication).

In the last few decades, much research about fostering intergroup relations originated in psychological science (Messick & Mackie, 1989; Tajfel, 1982; Tajfel, Billig, Bundy, & Flament, 1971). The aim of the present study is to construct and evaluate a diversity workshop to endorse and facilitate collective action intention among (future) leading negotiators. Based on practical considerations, we will work with a set of simulated international negotiations, called the Model United Nations (MUN; see Methods section). Our goal is on the one hand to go beyond investigating interventions for improving attitudes, but extend research to collective action, and on the other hand to look for practical applications of social-psychological knowledge.

The Ingroup Projection Model (IPM) as a Basis for Diversity Interventions

Intergroup relations are influenced by group members’ perception of a superordinate group that includes the ingroup as well as outgroup(s). Therefore, it has been argued that intergroup relations can be improved by changing that representation (Wenzel, Mummendey, & Waldzus, 2007). The ingroup projection model (Wenzel, Waldzus, & Steffens, 2016) states that it is not sufficient to simply share a superordinate category as suggested by the common ingroup identity model (Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993). Rather, the specific cognitive representation of that common superordinate group is also important. Specifically, if someone holds a more diverse representation of the superordinate category, intergroup relations will be improved (Mummendey & Wenzel, 1999). This is because the way the superordinate category is represented affects perceived relative prototypicality. Relative prototypicality is the phenomenon that group members tend to perceive their ingroup as more prototypical for a common superordinate group than an outgroup. A prototype is defined as “the ideal-type member of a category that best represents its identity in a given context and frame of reference” (Wenzel et al., 2007, p. 335). That is, members ‘project’ characteristics of their own group to the superordinate category, and therefore feel more prototypical than members of the outgroup. Thus ingroup projection is used as “a label for the perception, or claim, of the ingroup’s greater relative prototypicality for the superordinate group” (Wenzel et al., 2007, p. 337). As Wenzel et al. (2007) reviewed, there is a correlation between intergroup attitudes and relative prototypicality. Specifically, as perceived relative prototypicality increases, intergroup attitudes worsen. For example, Reese, Berthold, and Steffens (2012) showed that people from developed countries perceived their group as more proto-

typical of the world community, and this was in turn related to beliefs that global inequality is legitimate. As developed countries are often in more powerful positions in a wide range of negotiation settings, perceived prototypicality could result in unequal living, trade, and environmental conditions or higher perceived entitlement in general. Interventions that reduce perceived relative prototypicality could therefore be useful to arrive at more equal negotiation processes and results. As Waldzus, Mummendey, Wenzel, and Weber (2003) showed, increasing perceived diversity of the superordinate category reduces the perception of relative prototypicality among (sub)groups.

Diversity Training, Identification, and Collective Action

By inducing a diverse representation of the superordinate category, Waldzus et al. (2003) successfully reduced ingroup projection (also see Waldzus, Mummendey, & Wenzel, 2005). The authors randomly assigned their German participants to one of two conditions. In the 'complex' condition participants had to think about the diversity of the superordinate category (in this case Europe), whereas participants in the control condition had to think about its unity. Those participants who were in the 'complex' condition rated the relative prototypicality of Germans lower than those in the control condition. In line with these findings, it has been reasoned that when the superordinate group is represented as complex and consisting of many different prototypes, a "single group cannot reasonably claim to be the part that represents the whole" (Wenzel et al., 2007, p. 366). Thus, diversity training based on the IPM seemed to be useful for our study. We adopt Pendry, Driscoll, and Field's (2007) definition of diversity training "as any discrete programme, or set of programmes, which aims to influence participants to increase their positive or decrease their negative intergroup behaviors, such that less prejudice or discrimination is displayed towards others perceived as different in their group affiliation(s)" (p. 29). A previous study already corroborated that the ingroup projection model can be used as a theoretical basis for diversity training to improve intergroup relations (see Ehrke, Berthold, & Steffens, 2014). Ehrke and colleagues implemented a diversity-training programme as a get-to-know-you exercise for first-year students (Experiment 1), and as a one-day training programme (Experiment 2). The training increased perceived diversity of the superordinate group, which mediated its positive effect on attitudes. As findings were limited to effects on attitudes, the main aims of the present research were to extend the effects to collective action intention and to test them in an applied setting.

In line with Becker (2012), we define collective action "as any action that promotes the interests of one's ingroup or is conducted in political solidarity" (p. 19). The global fight against climate change can be seen as a collective action task. The countries' leaders need to work out an agreement (and a course of action) to prevent further escalation of anthropogenic climate change. Past research suggests that social identification impacts on the likelihood of collective action being organized and executed by the given group. Group identification has been shown to predict not only members' motivation to ensure group success, but also the likelihood of translating this motivation into action (Stürmer & Simon, 2004). Kawakami and Dion (1993) showed that the salience of the individual's social identity, rather than personal identity, increased his or her collective action intentions. In particular, social identification was a key predictor of collective action as it directly and indirectly (by injustice and efficacy perceptions) affects collective action (van Zomeren, Postmes, & Spears, 2008). Thus, on the one hand social identification directly fosters collective action and on the other hand it increases efficacy and injustice perceptions, which, in turn, enhance collective action. Further, a multinational study focusing on intergroup behaviour in a public goods game demonstrated the importance of subscribing to a global social identity over one based on nationality in terms of finding a fair solution to a common problem (Buchan et al., 2011). Because of the fact that subgroup identity is very salient during UN discussions, interventions increasing identification with a common ingroup could be a promising avenue for collective action.

While past research has shown that diversity training can mitigate ingroup bias (Ehrke et al., 2014), it is unclear whether such training can facilitate identification with the superordinate category (and thus collective action). For example, Peker, Crisp, and Hogg (2010) found that a complex representation of the superordinate category reduced ingroup projection as well as superordinate category identification. This would be detrimental for fostering collective action as high social identification was found to be the key predictor of collective action (van Zomeren et al., 2008). However, van Knippenberg, Haslam, and Platow (2007) presented a moderator of the relationship between diversity and identification with the superordinate category. They found that in an organizational context where diversity was valued, identification with the organization strengthened. It seems that in order to induce increased identification with a superordinate group through diversity training, one must foster an appreciation and recognition of the value of diversity first. Based on the reasoning that diversity perceptions and social identification should be influenced by our diversity workshop and be positively related to collective action intention, we assume that this results in a serial mediation. We hypothesize that diversity perception of and social identification with the UN should mediate the effect of the diversity workshop on collective action intention.

The Current Study

In the current study, we conducted and evaluated the effectiveness of a diversity training, based on the ingroup projection model, on action intentions concerning human rights issues. We held several workshops before simulated United Nations negotiations took place to test if the diversity training workshops increase collective action intention.

Four hypotheses were tested.

Hypothesis 1: Participants in the diversity training condition will perceive the UN as more diverse compared to those in the control condition.

Hypothesis 2: Participants in the diversity training condition will identify more strongly with the UN (superordinate identification) compared to the control condition.

Hypothesis 3: Participants in the diversity training condition will have a higher intention to act collectively compared to the control condition.

Hypothesis 4: The impact of the diversity training on participants' intention to act collectively will be serially mediated by their perception of the UN as a diverse organization as well as by their identification with the UN.

Method

Pretest and Measurement of Relative Prototypicality

Ingroup projection was operationalized based on a pretest ($n = 10$). Previous operationalizations of ingroup projection have varied among studies (e.g. Wenzel et al., 2007). In the present multigroup context, it can be assumed that widely recognized attributes of the superordinate category (UN) are projected onto the ingroup (Wenzel et al., 2007, p. 337). Thus, attributes describing the work of the United Nations were gathered from the UN's homepage (<http://www.un.org/en/aboutun/index.shtml>). Then, participants were asked: *Please indicate how much you link the following attributes with the United Nations* (1 = I connect the UN very little with; 7 = I connect the UN very much with). Three particular attributes were selected, which had the highest mean rating and indicated a positive

evaluation of the UN. The three attributes were: providing humanitarian assistance, being diplomatic, promoting human rights. These attributes were used to construct a measure of perceived relative prototypicality (see below).

Setting: Model United Nations

The diversity training was undertaken in a Model United Nations (MUN) setting. MUN conferences are educational programmes organized by many universities in which students are assigned to function as representatives of member states of the UN (for more information, see <http://www.nmun.org>). Students discuss world politics, bearing in mind their designated nation's recent history and policies. Important negotiations between different nations are simulated so students learn to take the perspective of another nation as well as become privy to current international issues. During the last decades, MUN have been developed extensively. Today almost every big city around the world hosts MUN, with one of its goals being to function as a diplomatic training for future international leaders. The workshops conducted in this study were held before the participants of the MUN started their negotiations.

Participants and Design

Participants were invited to take part in workshops (in English language) on the United Nations with an accompanying evaluation. They were requested to answer a survey prior and after the workshop. Due to low data return at the first measurement time, we can only report these data for part of the sample (see below). Additionally because of insufficient sample size we conducted three workshops. Data were aggregated in the end (see Table 1). The three diversity training workshops did not differ in content, but they differed in three aspects (also see Figure 1). First, participants in diversity Workshop 1 and 3 were assigned different nationalities (e.g. Germany, Great Britain, India, United States, Russia, South Africa, which is common during MUN negotiations), whereas participants in the diversity Workshop 2 all participated as German citizens, which was their actual citizenship. Second, only participants in Workshop 2 and 3 completed a MUN simulation after the workshop. Participants in Workshop 1 did not participate in a MUN simulation afterwards (but received the same preparation materials; see below). There were also three control groups. Control groups 1 and 3 did not participate in a workshop, and thus only answered the survey assessing the dependent variables. Control group 2 consisted of randomly assigned participants who participated in a control workshop (see below for information on content). Additionally, the themes of the subsequent UN simulations differed. Part of the participants signed up to simulate the United Nations Environment Programme (Control group 1 and 3, Diversity group 3, see Table 1), others the Security Council (Control group 2 and Diversity group 1 and 2).

Among the 100 students and PhD candidates from different disciplines who took part in the study (control condition: $n = 45$, diversity training workshop condition: $n = 55$), 59% were female and 41% male. Workshop 3 consisted of participants with citizenship from different nations (e.g. Denmark, Switzerland, Russia), all other participants were German. Their age ranged from 19 to 35 years ($M = 23.09$, $SD = 2.94$). Participants in Workshop 2 and 3 received sweets as a compensation whereas participants in Workshop 1 received 15 €. Participants in Control group 1 received 7 € for participation. Control groups 2 and 3 did not receive compensation.

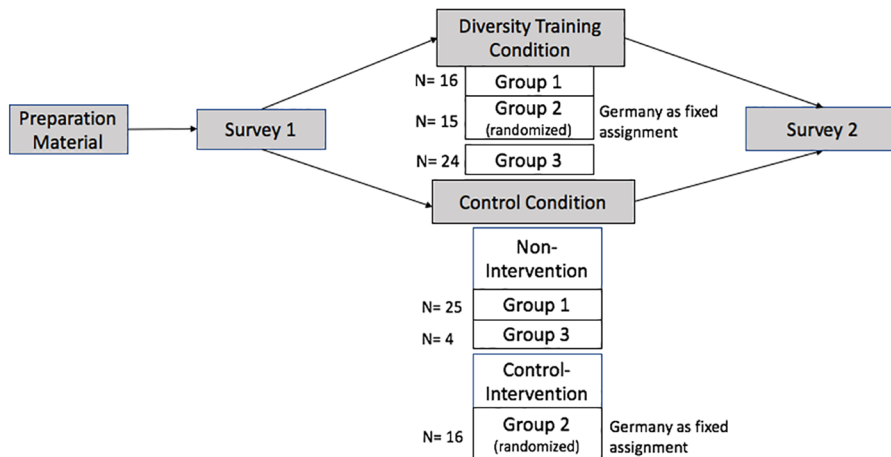


Figure 1. Illustration of research design.

The research design was (quasi-)experimental. We randomly assigned participants to Workshop 2 and Control group 2 as well as to Workshop 1 and Control group 1. Diversity Workshop 3 and Control group 3 could not be randomly assigned as they were based on two different UN simulations taking place at different locations. All groups received the same surveys. The independent variable was the condition (diversity training workshop/control), the measurement of relative prototypicality was used as a manipulation check, diversity perception and UN identification were mediators, and collective action intention was the main dependent variable.

Procedure

Several weeks before the main study, participants received preparation materials from the MUN conference organizers or from us, informing them of their political position for their simulated committee. For example, the participants simulating UNEP (United Nations Environment Programme) received a paper with general information about climate change and the distribution of CO₂ emissions among the participating countries. Consequently, each participant received a paper and had to prepare the negotiation position of their country in advance of the simulation.

We sent participants an online survey for Measurement point 1 at least one week prior to the workshop. This contained demographics, identification measures, and pretest prototypicality measures. People participating in a workshop (diversity or control) filled out a paper and pencil survey at Measurement point 2 after the workshops, whereas control participants without a workshop did it online. At the end, all participants were thoroughly debriefed via e-mail about the goals of the study.

Measures

We administered two surveys (Measurement point 1 and 2) – Measurement 1 did not contain diversity perception and collective action intention measures because that could have affected responding. Apart from that the surveys were identical. Answers ranged from 1 (strongly disagree) to 7 (strongly agree).

Negotiation Position

The survey began with a task to list key elements of the negotiation position of their (assigned) member state in order to ensure that participants were prepared to take on the negotiation position.

Prototypicality

Ingroup projection was measured using the three attributes selected after the pretest (humanitarian assistance, being diplomatic, promoting human rights). Participants were instructed to evaluate how much they link these three attributes with each participating country (scale 1 “very little connected” to 7 “very much connected”). Hence, participants indicated indirectly how much they associated each country (their own and the 12 other countries that took part in the simulation) with the UN. The attributes were consequently used as an indirect measure of group prototypicality. The difference in mean rating scores between the ingroup and the other groups was used as a prototypicality index. A positive index indicated that the person evaluated “his/her” country as more prototypical for the UN compared to the average of all other countries.

Diversity Perception

To measure perceived diversity of the superordinate category (UN), we asked: *I think the United Nations are a very diverse forum.*

Identification Measures

Participants indicated their identification with the national (i.e., assigned country; $\alpha = .88$) and superordinate category ($\alpha = .91$) with two items each that were averaged: *I identify with my nation; I have a sense of belonging to my nation* and correspondingly: *I feel that I am part of the United Nations; I identify with the United Nations* (Postmes, Haslam, & Jans, 2013).

Collective Action Intention

The survey included a nine-item scale to measure collective action intention ($\alpha = .88$; e.g., “I am willing to engage in joint action even if this implies we suffer economic losses in the short-run; all nations need to work together to be able to combat the consequences of climate change”). This scale also included items that measured collective action intention for other international problems such as handling migration movements and reducing poverty. Due to the specific context of this study the items were self-constructed (see full list Table A.1 in the Appendix). Means of participants in Workshop 3 only consisted of items measuring collective action intention concerning climate change (see Table 1).

Socio-Demographic Data

Finally, we asked for demographic information, including age, gender, study major, and career aspiration.

Workshops

Diversity Training

In order to avoid triggering threat by reflecting on the diversity of the United Nations (Steffens, Reese, Ehrke, & Jonas, 2017), the workshop started with a get-to-know-you game. Self-affirmation theory (Cohen & Sherman, 2014) postulates that reminding people of their individual abilities functions as a buffer against group threat. Therefore we asked participants to think of one of their main abilities or characteristics that best suits the goal of describing themselves to a yet unknown partner. After the self-affirmative intervention participants received input about diversity-related international developments. In particular, it was outlined that increased migration and technical development will lead to more diverse societies. Then, the diversity induction began. Similar to the laboratory studies presented by Wenzel et al. (2007), participants were invited to think about the diversity of the

Table 1

Summary of Main Results and Demographic Composition of Subgroups in the Two Conditions, all at Measurement Point 2

Subgroup	<i>n</i> ^a	Age	Gender (m/f)	Collective action ^b	Prototypicality UN	Identification	Diversity
Control							
(1)	25	23.50 (2.80)	5/20	4.58 (0.99)	1.76 (1.15)	3.95 (1.77)	4.36 (1.26)
(2)	16	20.94 (1.12)	3/12	5.60 (0.66)	1.80 (.61)	5.34 (1.17)	5.09 (1.01)
(3)	4	20.00 (2.16)	0/4	5.50 (1.09)	n/a	n/a	5.57 (1.50)
(total)	45	22.30 (2.66)	8/36	5.07 (0.99)	1.77 (1.00)	4.54 (1.68)	4.77 (1.25)
Diversity							
(1)	16	24.56 (3.14)	5/8	4.85 (1.08)	.90 (1.41)	4.77 (0.94)	5.13 (1.19)
(2)	15	21.64 (1.91)	4/11	5.79 (0.57)	1.51 (1.21)	5.47 (1.34)	5.68 (0.65)
(3)	24	24.70 (3.11)	12/8	4.85 (1.04)	1.25 (1.17)	4.48 (1.49)	5.57 (1.29)
(total)	55	23.72 (3.14)	21/27	5.42 (0.91)	1.17 (1.26)	4.89 (1.39)	5.47 (1.12)

^aThe total number of participants does not always match the indicated number of each gender, due to missing data regarding gender.

^bControl 3 and Workshop 3 scores of collective action are based on the mean of climate action items (items 1-5 in the [Appendix](#)), as the conference simulated the United Nations Environment Programme (UNEP).

United Nations as well as diversity in general. After collecting participants' ideas about diversity we posed the question of which ideologies about diversity can have the best results for intergroup relations. The two strategies people and governments may use in dealing with diversity, colorblindness and multiculturalism, were contrasted and empirical research was presented that supported a multiculturalism strategy ([Correll, Park, & Smith, 2008](#); [Wolsko, Park, Judd, & Wittenbrink, 2000](#)). In addition, the UNESCO declaration of cultural diversity ([UNESCO, 2001](#)) was presented in order to illustrate the pro-diversity climate within the UN. Finally, participants were asked to work in groups of four or five representatives. They received the following instruction: "Reflect on the diversity of the United Nations, and think of policies that can be developed within the UN to acknowledge diversity". When they were finished they were asked to present their results to the plenum. The workshop took 90 minutes.

Control Workshop

The control workshop also was described as a workshop on the UN. With regard to content, the control workshop did not discuss diversity of the UN. Instead participants received input about social psychological research on theories and concepts such as social identity theory ([Tajfel & Turner, 1979](#)), the self-fulfilling prophecy ([Rosenthal & Jacobson, 1966](#)), and the ultimate attribution error ([Pettigrew, 1979](#)). Divided into groups, they received the task to think about situations in a UN context in which these theories and concepts may apply, and reflect on possible consequences of psychological biases in negotiation processes. This workshop also took 90 minutes.

Results

Preliminary Analyses

Differences Prior to Intervention

We originally intended to analyze a pre-/post-intervention design, but due to the low quota of data return we can only investigate with a subset of the participants whether the two groups already differed on the dependent variables prior to the workshops. For those participants for whom data were available, neither identification with the UN

(diversity $M = 4.33$, $SD = 1.68$; control $M = 4.02$, $SD = 1.63$; $t(56) = -.70$, $p = .48$) nor relative prototypicality (diversity $M = 1.47$, $SD = 1.72$; control $M = 1.68$, $SD = 1.03$, $t(48) = 0.53$, $p = .60$) differed significantly between the two conditions prior to the workshop.

Correlational Analyses

Table 2 shows the correlational pattern in both groups separately. The relationships appear to be in the hypothesized direction for both conditions. Identification, diversity, and collective action all correlated positively (albeit not always significantly), suggesting the importance of diversity perception and collective action intentions. However, there were no relationships between perceived prototypicality and the other three variables.

Table 2

Correlations of Main Variables in the Two Conditions (Measurement Point 2)

Value	1	2	3	4
1. Prototypicality		.08	-.16	.11
2. Diversity	.08		.24	.32*
3. ID UN	.04	.35*		.28
4. Collective action	-.04	.46**	.54**	

Note. Below the diagonal are values for the control condition ($n = 42$), above the diagonal are values for the diversity condition ($n = 50$).

* $p < .05$. ** $p < 0.01$.

Manipulation Check

Table 3 provides the means and standard deviations for prototypicality separately for the experimental conditions. Consistent with our assumption, a t-test revealed that the difference index score was higher in the control group ($M = 1.77$, $SD = 1.00$) than in the workshop group ($M = 1.19$, $SD = 1.26$), $t(70) = 2.11$, $p = .04$, $d = 0.51$. Consequently, participants in the diversity workshop condition perceived their country as relatively less prototypical for the UN than those in the control group did.

Effects on Main Outcome Variables

Perceived Diversity of the UN

To determine whether the diversity workshop group perceived the UN as more diverse than the control group (Hypothesis 1), we computed a t-test which yielded a significant difference, $t(90) = -2.82$, $p < .01$, $d = 0.60$. In line with our prediction, the diversity workshop group perceived the UN as more diverse after the intervention compared to the control group (see Table 3).

Table 3

Effect of Diversity Training on Outcomes at Measurement Point 2

	Condition	
	Control	Diversity training
Perceived Prototypicality	1.77 (1.00)	1.19 (1.26)
Diversity	4.77 (1.25)	5.47 (1.12)
Identification	4.54 (1.68)	4.85 (1.35)
Collective Action	5.01 (1.00)	5.11 (1.02)

Note. All variables were measured on scales ranging from 1-7, with high numbers indicating higher levels of the construct. Means are shown with standard deviation in parentheses.

Identification With UN

A t-test was conducted to compare participant identification with the UN post intervention between the two conditions. The difference between the two conditions was not significant, $t(87) = -0.98, p = .33$. Controlling for pre-identification, the difference was in the same direction, larger (workshop $M = 4.65, SD = .24$; control $M = 3.99, SD = .27$), but not statistically significant, $F(46) = 3.40, p = .07$. Thus, while the relevant associations in our data appear to be in the hypothesized direction, we found no statistically significant effect of the diversity intervention on identification with the superordinate category.

Collective Action Intention

We hypothesized that the diversity workshop would lead to higher collective action intention compared to the control group (Hypothesis 3). However, there was no significant difference between the diversity group and the control group, $t(90) = -0.27, p = .79$ (see Table 3).

Analysis of Indirect effects

In order to test whether there is an indirect effect of the diversity training on collective action intention by participants' perception of diversity within the UN and their identification with the UN (Hypothesis 4), multiple regression analyses were conducted with the Process macro (Hayes, 2012). The results are displayed in Figure 2. First, they indicated that the diversity training ($0 = \text{control group}, 1 = \text{diversity group}$) led to a more diverse perception of the UN, $b = 0.80, SE = 0.25, p < .01$, compared to the control group. Diversity perception was positively associated with identification with the UN, $b = 0.38, SE = 0.13, p < .01$. Moreover, higher identification with the UN was associated with stronger intention to act collectively on international issues, $b = 0.22, SE = 0.07, p < .01$. We used a bootstrapping method with bias-corrected confidence interval estimates to assess whether the diversity training impacted on collective action intention through participants' diversity perception and identification with the superordinate category (Shrout & Bolger, 2002). Only including diversity perception as a mediator in the model results in $b = 0.17, SE = 0.10$. The 95% confidence interval of the indirect effect was estimated with 1,000 bootstrap resamples, and indicated a significant association ($CI [.02, .43]$). Adding identification with the UN to the mediation model resulted in a serial mediation on collective action intention with an effect of $b = .07, SE = 0.04, CI [.01, .20]$. The direct effect was not significant ($b = -.14, p = .50$).

Consequently there is an indirect effect of the diversity training on collective action intention through diversity perception and identification with the UN.

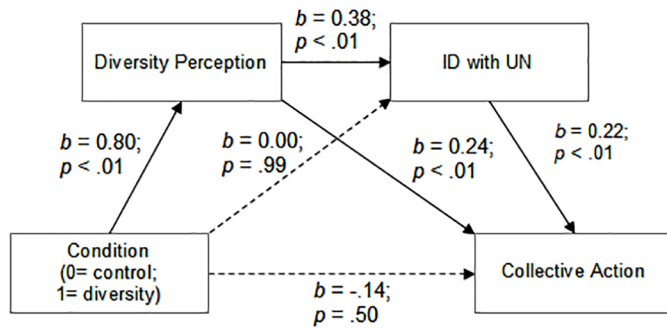


Figure 2. Mediation model with unstandardized values. Analysis of the hypothesized indirect effect of the training on collective action via diversity perception and identification with the United Nations. Coefficients of dotted paths are non-significant.

Discussion

Extensive research in psychology has investigated mechanisms and interventions to foster intergroup relations. The present study took place in a (simulated) multinational context, the United Nations. The main aims were to extend knowledge of the effects of diversity trainings on collective action intention and to test this in an applied setting. We conducted a diversity training workshop based on the ingroup projection model with the intention to decrease relative prototypicality. We hypothesized that the workshop would increase the perception of diversity within the UN, identification with the superordinate category (UN), as well as the intention to engage in collective action regarding human rights issues. Results indicated that the workshop reduced perceived relative prototypicality, as intended. Furthermore, we provide evidence that the diversity training workshop increased perceived diversity of the UN, which in turn was positively related to collective action intentions. Our data are also in line with the idea that there was an indirect effect of the diversity training workshop on participants' intention to engage in collective action, mediated by the perceived diversity of the UN and the extent of superordinate category (UN) identification. To our knowledge, this is the first study that extends research from effects on attitudes to collective action intentions in evaluations of a diversity training workshop.

It is promising that the diversity workshop group showed less ingroup projection after the workshop than the control group. The diversity workshop therefore seems effective in reducing ingroup projection.

Theoretical Implications, Limitations, and Future Research Directions

Although we cannot provide conclusive evidence that relative prototypicality did not differ between subgroups prior to the intervention, subanalyses with partial data suggest that this was not the case. Nonetheless, future efforts should be invested in replicating and extending our results with a full pre-post randomized design. Further, the finding of reduced ingroup prototypicality should be tested in a real setting (real UN negotiations), as it would corroborate the effects of ingroup projection in negotiation settings. The missing relationship between relative prototypicality and collective action intention and perceived diversity needs to be noted as a limitation. If there was a negative relationship between relative prototypicality and collective action we could corroborate the importance of reducing ingroup projection to facilitate collective action intention more clearly. In contrast to other research (e.g. Waldzus et al., 2003), we measured relative prototypicality deductively instead of inductively. Specifically,

we used attributes of the superordinate category that were projected to the subgroup instead of using subgroup attributes projected to the superordinate group. As the direction of projection has not been fully investigated yet, the direction from superordinate to subgroup seemed plausible to us in this specific context. However, measuring relative prototypicality in a rather unconventional way could be one reason for the missing relationship in our data. Also, error variance was introduced because of the different ingroups for different participants, so effects were harder to detect. Nevertheless, we consistently found that perceived diversity within the UN was higher in the diversity group compared to the control group. Further, perceived diversity, identification with the UN, and collective action intention were positively related to each other. Consequently there are indications for the importance of diversity perceptions induced by the diversity workshop for identification with a superordinate group and collective action intention.

Another limitation lies in the fact that the concept of diversity was mentioned only in the diversity groups. Future research should investigate whether the observed effect is more than mere conceptual priming. Although we did not find a statistically significant effect of the diversity training on identification with the UN, tendencies are consistent with our hypotheses. Additionally, correlational analyses yielded a positive relation between diversity perception and identification with the UN. The workshop was constructed in such a way that a positive organizational climate regarding diversity was induced in order to not reduce identification. Nevertheless, it cannot be tested empirically whether the positive organizational climate towards diversity led to a higher level of identification. To further strengthen this assumption, diversity beliefs (van Knippenberg et al., 2007) or the successful implementation of diversity norms should be included as potential moderator variables.

The present study also replicated the finding that the higher the identification the higher the collective action intention. Regression analyses yielded a significant effect of identification with the UN on collective action intentions in response to global issues. This underlines the importance of identity management in the international sphere. However, mediator and dependent variables were assessed concurrently, which does not permit causal inferences. Therefore, further investigation on the mediators is needed. Moreover, we only measured collective action intention as a proximal predictor for actual action (e.g. Ajzen & Fishbein, 1977). Future research should include actual indicators of behavior. In the Model United Nations context this could be the final resolution participants compile at the end of the simulation as delegates that serves as a draft law for the countries. It could also be beneficial to add attitude measures.

Another drawback of our pattern of findings is that the diversity training workshop did not have a direct effect on collective action intention. Thus, while no direct evidence of Hypothesis 3 was obtained, the indirect effect, mediated by diversity perception and identification, was established. A methodological explanation for this pattern could be that there are additional variables accounting for the relation between mediator and outcome that are not due to the experimental manipulation (see MacKinnon & Pirlott, 2015). Alternatively, the diversity training may have had unknown negative side effects (see Hayes, 2013, for methodological discussion). Future research is needed to determine which negative effects these could be. One assumption could be that threat plays a role, a process identified in previous research on the effects of diversity interventions on outgroup attitudes (e.g. Ehrke & Steffens, 2016). Possibly, our intention to buffer identity threat with a self-affirmation induction (Cohen & Sherman, 2014) was not successful. Self-affirmation has been shown to be an effective strategy against psychological threat. It is based on the assumption that people include several roles in their self-concept. Sherman and Cohen (2006) state that “people can respond to threats using the indirect psychological adaptation of affirming alternative self-resources unrelated to the provoking threat” (p. 190). If social identity (here: national identity) is threatened by the

diversity induction, reassuring positive personal characteristics independent of concepts being related to the negotiation or UN situation can serve as a buffer. That we did not find a direct effect in the mediation analysis could imply that the buffer did not work as intended. Future research should therefore investigate whether the self-affirmation technique used here empirically serves as an effective tool to buffer threat in diversity training or if there are other options to achieve that (e.g. see limitation for identity threat buffer for advantaged group members, [Shnabel, Purdie-Vaughns, Cook, Garcia, & Cohen, 2013](#)). Consequently, the workshop modules should be tested individually in order to detect their specific effects. Although every module was designed on the basis of empirical research, their effects on the indirect ingroup projection measurement, identification, and collective action intention cannot be assessed separately. Until now, laboratory research induced diversity simply by instructing participants to think about the diversity of a superordinate category (e.g., [Waldzus et al., 2003](#)). Thus, it has to be tested separately whether the positive induction of diversity, as done in the present study, has the same effects, as we did not measure whether the diversity training induced a positive evaluation of diversity. In addition, the focus on the superordinate category could be further strengthened. Besides the options used in our workshop (like verbal emphasis and showing the UN flag on several occasions), the UN flag could be added next to the name of the country on participants' table plaques.

Another extension for the future development for a diversity training to foster collective action intention could be to investigate its effects on injustice perceptions and efficacy beliefs, which are theorized as the other two predictors of collective action in addition to social identification ([van Zomeren et al., 2008](#)). For example, regarding injustice beliefs, based on literature showing that relative prototypicality is associated with a higher perceived legitimacy of social inequality ([Reese et al., 2012](#)), one could assume that a method reducing perceived relative prototypicality of one's own country decreases perceived legitimacy of social inequality. This could lead to an increase in perceptions of injustice.

Due to the very difficult data collection process and as fewer participants showed up than had previously registered, we had to collect data on several occasions. The control group consisted of participants from randomized control workshops and non-intervention samples. Consequently, the effect of the diversity training is contrasted against several different operationalizations of the control group.

Practical Implications

In addition to this discussion of theory and methodological limitations, we want to highlight that this study focused on (future) leaders' responsibility for collective action concerning human rights issues. But even political leaders' having established a new ambitious treaty in November 2015 does not necessarily affect the behavioral intentions of the general public. Consequently workshops like the one presented could be adapted to be included in broader education and training settings, so that potential change for supporting human rights issues is directed at a broader audience. Alternatively, based on psychological research, [van der Linden, Maibach and Leiserowitz \(2015\)](#) point out five policy recommendations that should increase public engagement: 1) emphasizing climate change as a present, local and personal risk; 2) delivering less abstract or numerical information but more experiential engagement; 3) promoting pro-environmental behavior within a community to establish group norms; 4) shifting policy conversation from potentially negative consequences in the future of not acting to positive benefits of immediate action in the present; and 5) focusing on intrinsic motivations. Our research could add with cautious first evidence a recommendation of increasing diversity beliefs for the superordinate category to affect collective action intention. These recommendations could be included in campaigns, aimed at fostering public awareness

of a given issue. We hope this study encourages other researchers to adapt their knowledge to real-world applications regarding human rights.

Finally, we should mention the potential of the chosen research setting. A Google Scholar search yielded hardly any scientific peer-reviewed articles investigating Model United Nations as a research setting. Only a few articles investigated single MUN in spheres of educational relevance (McIntosh, 2001). The potential of this setting has therefore not yet been fully acknowledged. MUN could serve as an economic tool for investigating peace processes within negotiation settings. Furthermore, there is no systematic analysis and evaluation of the results of the MUN conferences – for example in terms of MUN conferences possibly informing real UN negotiators. Nevertheless it has to be stated that MUN conferences are only simulations by students or young academics aspiring to hold a position in international relations in the future. For this reason behavioural intentions, as shown in the simulations, may not transfer to real interactions in international negotiation settings.

Conclusion

This quasi-experimental study attempted to apply psychological research on intergroup relations and collective action intentions to the sphere of the United Nations. It provides evidence that a diversity workshop decreased ingroup projection compared to a control condition. Furthermore, the diversity workshop had an indirect effect on collective action intention mediated by perceived diversity and identification with the UN. This is the first study to investigate the effect of a diversity training workshop on perceived diversity, identification with the superordinate category, and collective action intention in an applied setting. Additionally, it is the first study combining Model United Nations with psychological theories of intergroup relations. As negotiation settings within the political areas have major implications for people around the world, methods for reducing biases in perception seem especially useful. With reference to the research questions posed in the introduction, based on our first evidence, one could cautiously assume that diversity perceptions and identification with a superordinate group influence and foster collective action intention. Policies simultaneously aiming at diversity and identity management could pave a fruitful avenue improving intergroup relations and collective action in general. Although the United Nations are already advocating a pro-diversity culture, this study supports the assumption that it should be integrated not only in public policies but also in leaders' training and negotiation settings.

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Competing Interests

The authors have declared that no competing interests exist.

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Appendix

Table A.1

Items Used for Measuring Collective Action Intention

		<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>
1	All nations need to work together to be able to combat the consequences of climate change.	2	7	6.10	1.41
2	I am willing to engage in joint action with other nations even if this implies we suffer economic losses in the short-run.	1	7	4.42	1.65
3	It is of utmost importance that we reach co- operative goals to mitigate and adapt to climate change.	3	7	5.60	1.22
4	It is no option for me to take further advantage of the environment – we desperately need to change our behaviour.	1	7	4.52	1.58
5	For me no other goal is as significant as finding common strategies to combat climate change	1	7	4.47	1.73
6	I intent to support asylum seekers more than my nation is doing today.	1	6	3.84	1.34
7	Better support for asylum seekers is one of the globally most urgent tasks.	1	7	3.95	1.55
8	I think that all nations of the world should cooperate in the struggle against poverty.	2	7	5.24	1.44
9	I intent to support people in need from other nations although this implies suffering economic loss in the short run.	2	7	3.86	1.38

Note. The first five items measuring collective action regarding climate change in particular. Answers ranged from 1= strongly disagree 7= strongly agree.

CV

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Academic Education

06/2017 – now	PhD student at Social, Environmental and Economic Psychology, University Koblenz-Landau PhD thesis: Psychological interventions to improve intergroup relations in the asylum context: A multi-perspective approach to transform social conflict (Supervisor: Prof. Melanie Steffens)
05/2015 – 05/2017	PhD scholarship at Peace Academy Rhineland-Palatinate
10/2012 – 04/2015	Master of Science Psychology at University Koblenz-Landau cooperation and conflict studies, cognitive psychology & methods Minor in intercultural education, critical security studies
04/2014 – 05/2014	United Nations Institute for Training and Research Understanding Conflict and Conflict Analysis
10/2009 – 08/2012	Bachelor of Science Psychology at University Koblenz-Landau/ Eberhard-Karls-University Tübingen: minor criminology

Research Stays

10/2017	Research visit at Department of Applied Social Psychology and Conflictology, St. Petersburg State Institute of Psychology and Social Work, Russia
03/2017-06/2017	Research stay at the Psychology of Intergroup Conflict and Reconciliation Lab at Interdisciplinary Center in Herzliya, Israel (Prof. Eran Halperin)
08/2012 – 10/2012	Research stay at John Jay College of Criminal Justice/Graduate Center in New York, USA (Prof. Susan Opatow)

Professional and Academic Experience

06/2017 – until now	Vice President of the German Peace Psychology Association
10/2016 – until now	Editor of the Social Psychology Network on Asylum and Integration
08/2015 – 05/2019	Member of Editorial Board of Wissenschaft&Frieden (Science&Peace)
06/2019 and 06/2014	Participation in the Pre-conference Policy Workshop at the Conference of the Society of Psychological Study of Social Issues (SPSSI)

11/2018	Organizing committee of the international conference in Landau: Populism, Polarization and Political Alienation: Causes and Consequences of Social Diversity and Inequality?
07/2018	Participation in the EASP summer school workshop "Migration and integration: social and community psychology perspectives" led by Prof. Rupert Brown and Prof. Carolin Hagelskamp
10/2014 – 06/2017	SPSSI Internationalization Committee
07/2016	Head of organizing committee of the German Peace Psychology Conference at University Koblenz-Landau
05/2015 – 09/2015	Trainee at Ebaso e.V. (critical perspectives on global development)
03/2012 – 03/2015	Teamer at Network for Democracy and Courage e.V.
04/2015	Organizing committee of student conference on "human rights and climate change" at the UN, Geneva, Switzerland
04/2014	Establishment and spokesperson of the working group "human rights" at the student unit of the Friedrich-Ebert-Foundation

Awards and Honors

2019	Travel Award from the Society for the Psychological Study of Social Issues (SPSSI)
2019	Award for Science and Society by the University of Koblenz-Landau for engagement in science communication
2018	Göttinger Peace Award as member of the editorial board of the Journal Science&Peace
2017	Travel Award from the Society for the Psychological Study of Social Issues (SPSSI)
2016	Research Grant Minerva Foundation (Max-Planck-Inst.)
2013 – 2015	Scholarship Friedrich-Ebert-Foundation
2012	Award for (establishing a positive) campus culture
2012	Foreign exchange award of Freundeskreis e.V. from University of Koblenz-Landau

Teaching Experience

Undergraduate Level:

- Empirical practicum (Bachelor of Science, Winter term 2015/16; 2018/19)
- Introduction to Social Psychology (Bachelor of Science/Bachelor of Education, in English and German, Winter term 2016/17; 2019/20; Summer term 2017)

Graduate Level:

- Social Psychology of Cooperation and Conflict: Peace Psychology (included Policy Focus, Master of Science, Winter term 2015/16, 2016/17, 2017/18, 2018/19)
- Conflict Prevention and Cooperation (Master of Science, summer term 2018, 2020)

Funding

German Academic Exchange Service (DAAD)	1642 Euros (Travel Grant, 2019)
University Koblenz-Landau	550 Euros (Young Scientists Fund, 2020) 500 Euros (Travel Grant, Young Scientists Fund, 2020) 1300 Euros (Travel Grant, 2019) 500 Euros (Science&Society Award) 3000 Euros (International Conference 2018) 3000 Euros (Network Asylum and Integration 2018) 3000 Euros (International Conference 2016) 800 Euros (Research Stay New York, 2012)
German Research Council	1240 Euros (International Conference, 2016) 8800 Euros (International Conference 2018)
EASP	4242 Euros (International medium-sized meeting, 2018) 2661 Euros (Seedcorn-Grant, Research Project, 2018)
SPSSI	902,70 Euros (Travel Award 2019) 1198,42 Euros (Travel Award 2017)
Max-Planck-Minerva Fund	3100 Euros (Research Visit at Interdisciplinary Center in Herzliya, Israel, 2017)
	Total: 36.436,12 Euros

Publications

Published (peer-reviewed)

- Knab, N. & Steffens, M. C. (2018). One World in diversity – a social-psychological intervention to foster collective action intention. *Journal of Social and Political Psychology*, 6, 8-26.
- Maltese, S., Baumert, A., Knab, N., & Schmitt, M. (2013). Learning to interpret one's own outcome as unjustified amplifies altruistic compensation: a training study. *Frontiers in Psychology*. 4:951. doi: 10.3389/fpsyg.2013.00951.

Manuscripts in revision and under review

- Knab, N.***, Winter, K.*, & Steffens, M.C. (in revision: Social Cognition). Increasing cognitive flexibility with a paradoxical intervention. * shared first-authorship.
- Knab, N.** & Steffens, M.C. (under review: Psychological Science). Specific prosocial emotions relate to hierarchy-challenging and hierarchy-maintaining actions in support of refugees.
- Knab, N.** & Steffens, M.C. (under review: JPSP). Why do you think Christmas will never ever be celebrated again? A paradoxical intervention's potential to reduce destructive social conflict in the asylum context.
- Bareket, O., Shnabel, N., Kende, A., **Knab, N.**, Bar-Anan, Y. (in revision: JPSP). Honey, the baby is crying: Benevolent sexism encourages women to offer and men to seek dependency-oriented help in domestic tasks.
- Dupont, J., Bytzeck, E., Steffens, M.C., **Knab, N.**, & Schneider, F. (under review: Political Psychology). Do election pledges matter? The effects of broken and kept election pledges on citizens' trust in their government.

Ongoing projects

- Knab, N.**, Steffens, M.C., & Nadler, A. (manuscript finalized). A wolf in a sheep's clothing? The interplay of norms and threat for hierarchy maintaining actions towards refugees.
- Hasan-Aslih, S., Shuman, E., **Knab, N.**, Hameiri, B., & Halperin, E. (ongoing: data analysis). Effects of a paradoxical intervention on system justification and collective action intention of disadvantaged groups.
- Knab, N.**, Hameiri, B., Steffens, M.C. (ongoing: manuscript prep). Paradoxical effects of negative political communication – investigating the role of in- and outgroup processes.
- Pauen, H., Wolf, T., **Knab, N.**, & Steffens, M.C. (ongoing: data analysis). How do liberals attribute norm violations of disadvantaged out-group members? Examining attribution tendencies in the refugee context.
- Knab, N.** & Rudert, S. (ongoing: study design). Effects of observed political exclusion on prosocial emotions and behavior towards refugees.
- Hagelskamp, C., Gharaei, N., Smith, E., **Knab, N.**, Albayrak, N., Hakim, N., & Zingora, T. (ongoing: data analysis). Multiple identities in context: How identity integration of immigrants affects the relation between perceived discrimination and intergroup attitudes and psychological well-being.
- Winter, K. & **Knab, N.** (ongoing: data analysis). Satirical articles and attitudes towards sea rescue.

Books

- Cohrs, C., Knab, N., & Sommer, G. (in prep). New Edition of the German Handbook for Peace Psychology.

Other (science communication and activism)

- Pauls, I., Lienen, C., Knab, N., Harnack, K., & Cohrs, C.* (2018). Mit Psychologie Frieden fördern? Beiträge aus der psychologischen Forschung zur Reduktion von destruktiven Konflikten und Friedensförderung. (Fostering peace with psychology? Contributions from psychological research to reduce destructive conflicts and foster peace) Special Issue In-mind. *all authors contributed equally.
- Knab, N. (2017). Mehr Bewusstsein für Wechselbeziehungen – Sicherheit und Menschenrechte gemeinsam denken. (A higher focus on interactional relations – thinking security and human rights issues together) Blog contribution for the German Association of the United Nations.
- Knab, N. (2017). Wolf im Schafspelz – welche Hilfe ist im Asylkontext hilfreich?. Wissenschaft und Frieden (2-2017). (A wolf in sheep's clothing – which help is really helpful in the asylum context?)

Conference Contributions

- Knab, N., & Steffens, M.C.** (2020). *The hotter the closer? Emotions specific effects on helping and collective action for refugees.* Poster presented at SPSP, New Orleans, US.
- Knab, N., & Steffens, M.** (2020). *One world in diversity – A socio-psychological intervention to foster international collective action intention.* Poster presented at the pre-conference Conflict and Conflict Resolution at SPSP, New Orleans, US.
- Knab, N., & Steffens, M.** (2019). *Why do you think we will never ever celebrate Christmas again? A paradoxical intervention improving intergroup relations in the refugee context.* Talk presented at the German Association for Social Psychology, Cologne, Germany.
- Preuß, S., Hansen, K., **Knab, N., & Steffens, M.C.** (2019). *The role of emotions in paradoxical interventions for antigay attitude change.* Talk presented at the German Association for Social Psychology, Cologne, Germany.
- Knab, N., & Pollmanns, C.** (2019). *Science-informed practical implications for addressing conflict in the refugee context.* Talk presented at the Annual conference of the German Peace Psychology Association, Salzburg, Austria.
- Knab, N., & Flade, F.** (2019). *The network for asylum and integration: How social psychology can inform issues in the asylum context.* Talk presented at the Symposium of the National Institute of Science Communication, Karlsruhe, Germany.
- Knab, N. & Steffens, M.** (2019). *Why do you think we will never ever celebrate Christmas again? A paradoxical intervention improving intergroup relations in the refugee context.* Talk presented at the Annual conference of the Society of Psychological Study of Social Issues, San Diego, US.
- Knab, N.** (2019). *Filling the Science and Practice Gap: Refugee Integration in Germany.* Talk presented at the Annual conference of the Society of Psychological Study of Social Issues, San Diego, US.
- Knab, N.** (2018). *Paradoxical intervention in the refugee context: Behavioral effects and mechanisms.* KoMePol-Meeting, Annweiler, Germany.

- Knab, N.** & Steffens, M. (2018). *Why do you think Christmas will never ever be celebrated again? A paradoxical leading questions intervention to support conflict-reducing cognition and action tendencies towards refugees*. Talk presented at the German Psychology Association (DGPS), Frankfurt, Germany.
- Knab, N.** et al. (2018). *Multiple identities in context – developing a new measure and investigating effects on intergroup relations*. EASP Summer School, Zürich, Switzerland.
- Knab, N.** (2018). *Current challenges in the migration context – Social-psychological determinants to foster relations among equals*. Poster presented at the Summer School 2018 of the European Association of Social Psychology, Zürich, Switzerland
- Knab, N.,** Steffens, M.C., & Nadler, A. (2018). *Helpers as wolves in a sheep's clothing? The role of norms and perceived threat for action tendencies towards refugees*. Talk presented at the Conference of the American Psychological Association, San Francisco, USA.
- Knab, N.** & Steffens, M. (2017). *Why do you think Christmas will never ever be celebrated again? A paradoxical leading questions intervention as an opportunity to support conflict-reducing cognition and action tendencies towards refugees*. Talk presented at the Conference of the German Social Psychology Association, Ulm, Germany.
- Knab, N.** & Steffens, M. (2017). *One World in Diversity – a psychological intervention to foster collective action*. Talk presented at the Annual Conference of the Society for Psychological Study of Social Issues, New Mexico, US.
- Dupont, J., Bytzeck, E., Steffens, M., Schneider, F., & **Knab, N.** (2017). *The effect of information processing of political news about kept and broken election pledges on political trust*. Conference for Media Psychology, Landau, Germany.
- Knab, N.,** & Steffens, M., & Nadler, A. (2017). *Helpers as wolves in a sheep's clothing? The role of norms and perceived threat for action tendencies towards refugees*. Talk at the 30th Conference of the German Peace Psychology Association, Chemnitz, Germany.
- Dupont, J., **Knab, N.,** Bytzeck, E., Steffens, M. (2016). *How does information of broken and kept election promises affect political trust*. Talk at the 50th Conference of the German Association for Psychology (DGPS), Leipzig, Germany.
- Preuß, S., **Knab, N.,** & Steffens, M. (2016). *Make Attitude Change Happen: Effects of Interventions on Attitudes toward Lesbians and Gay Men*. Poster at the 50th Conference of the German Association for Psychology (DGPS), Leipzig, Germany.
- Knab, N.** (2016). *Jubilation and Violence: Explaining reactions towards asylum seekers and migrants from a socio-psychological perspective*. Invited talk at the University of Trier, Germany.
- Knab, N.** (2015). *Psychology and Conflict Resolution - Unfreezing conflict supporting beliefs*. Talk presented at the Third Youth Forum of the European Center for Peace and Development, Belgrade, Serbia.
- Knab, N.,** Weinlich, S., & Steffens, M. C. (2015). *One world in diversity - fostering international relations and collective action from a socio-psychological perspective*. Poster presented at 15th Conference of the German Association for Social Psychology, Potsdam, Deutschland.
- Knab, N.** (2014). *Diversity as a catalyst for cooperation*. Workshop presented at Global Negotiation Conference, 03.09.-05.09.2014, Bern, Switzerland.
- Knab, N.,** Baumert, A., Maltese, S., & Schmitt, M. (2013). *Can anybody be an altruist? Inducing a justice-sensitive interpretation tendency to foster prosocial behavior*. Talk presented at the 14th Conference of Differential and Personality Psychology, 22.-25.09.2013, Greifswald, Germany.

Knab, N., Baumert, A., Maltese, S., & Schmitt, M. (2013). *Can anybody be an altruist? Inducing a justice-sensitive interpretation tendency to foster prosocial behavior*. Talk presented at the 12th Conference of Social Psychology, 02.-04.09.2013, Hagen, Germany.

Memberships

07/2019 – until now	Graduate Student member of the Society for Personality and Social Psychology
05/2018 – until now	Associate member of the European Association of Social Psychology
03/2016 – until now	Associate member of the German Psychology Association (DGPS)
05/2014 – until now	German Association for the United Nations
06/2015 – until now	German Association for Peace Psychology
09/2012 – until now	Society of the Psychological Study of Social Issues

Eidesstaatliche Erklärung

Hiermit erkläre ich, Nadine Knab, dass ich die Synopse der vorliegenden Dissertation selbstständig verfasst habe und keine anderen als die angegebenen Hilfsmittel verwendet habe. Die aus fremden Quellen direkt oder indirekt übernommenen Gedanken habe ich als solche kenntlich gemacht.

Für die gemeinsam verfassten Publikationen habe ich folgende individuellen Beiträge erbracht.

Manuskript 1.

Knab, N. & Steffens, M.C. (2020) "Why Do You Think Christmas Will Never Ever Be Celebrated Again?" A paradoxical intervention's potential to reduce destructive intergroup conflict in the asylum context. Under Review

- Erarbeitung des theoretischen Hintergrunds, Entwicklung des Materials und Zusammenstellung der Messinstrumente, Planung, Durchführung und Auswertung aller drei Experimente sowie der ersten Fassung des Manuskripts, Weiterentwicklung des Manuskripts mit Co-Autorin

Manuskript 2.

Knab, N., Winter, K.*, & Steffens, M.C. (2019). Increasing cognitive flexibility with a paradoxical leading questions intervention. Invited to revise and resubmit at *Social Cognition*. *shared first-authorship.

- Gemeinsam verantwortlich für theoretischen Hintergrund mit zweitem Erstautor, alleinige Planung und Durchführung des Experiments, gemeinsame Auswertung und Erstellung des Manuskripts mit zweitem Erstautor, Weiterentwicklung des Manuskripts mit Co-Autor*innen

Manuskript 3.

Knab, N., & Steffens, M.C. (2020). Specific prosocial emotions relate to hierarchy challenging and hierarchy-maintaining actions in support of refugees. Under Review

- Erarbeitung des theoretischen Hintergrunds, Entwicklung des Materials und Zusammenstellung der Messinstrumente, Planung, Durchführung und Auswertung der zwei Studien sowie der Manuskripterstellung, Weiterentwicklung des Manuskripts mit Co-Autorin

Manuskript 4.

Knab., N., & Steffens, M.C. (2018). One World in Diversity – a socio-psychological intervention to foster international collective action intention. *Journal of Social and Political Psychology*, 6, 8–26. <https://doi.org/10.5964/jspp.v6i1.601>

- Erarbeitung des theoretischen Hintergrunds, Entwicklung der beiden Workshops und Zusammenstellung der Messinstrumente, Planung, Durchführung und Auswertung der Interventionsstudie sowie der Manuskripterstellung, Weiterentwicklung des Manuskripts mit Co-Autorin
- Ein Teil der Daten wurden im Rahmen meiner Masterarbeit gesammelt. Im Rahmen der Promotion wurde noch zusätzlich ein workshop für die Kontrollgruppe entwickelt und Daten hierfür erhoben. Darüber hinaus fanden noch zwei weitere Datenerhebungen für diversity workshops statt, die erst im Rahmen der Dissertation durchgeführt wurden. Die Daten aus der Erhebung der Masterarbeit wurden damit ergänzt, restrukturiert und nach veränderten methodischen Gesichtspunkten ausgewertet.

Diese Arbeit habe ich weder in gleicher noch ähnlicher Form einer staatlichen oder anderen Prüfungsbehörde vorgelegt. Jene Teilbeiträge, welche im Rahmen meiner Masterarbeit (Manuskript 4) bereits einer Prüfungsbehörde vorgelegen haben, wurden für die entsprechenden Publikationen transparent gemacht und vollständig benannt.

Landau, den

Nadine Knab, M.Sc.