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INEQUALITY

We Are the World – And They Are Not: Prototypicality for the World  
Community, Legitimacy, and Responses to Global Inequality

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## Abstract

The relation between developed and developing countries is characterized by inequalities that appear to hinder actions against worldwide problems. Based on the Ingroup Projection Model (Mummendey & Wenzel, 1999), the current research presents an intergroup approach towards an analysis of psychological processes that perpetuate global inequality on a social group level. Precisely, we argue that people from developed countries perceive their group as more prototypical for the world population than they perceive people from developing countries. These perceptions of ingroup prototypicality should in turn relate to legitimacy beliefs and predict unfavorable behavioral intentions towards people from developing countries. We present two studies that corroborate our hypotheses: In Study 1, participants from a developed country perceived their ingroup as more prototypical for the superordinate group (i.e., world population) than the outgroup (i.e., developing countries), which in turn was related to stronger beliefs that global inequality is legitimate. This finding was replicated in Study 2, and the predicted effect of ingroup prototypicality on behavioral intentions was mediated by legitimacy beliefs. These findings demonstrate that intergroup processes contribute to understanding global inequality, and have practical and theoretical implications.

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## We Are the World – And They Are Not: Prototypicality for the World Community, Legitimacy, and Responses to Global Inequality

The solution to some of the most pressing problems humanity is facing (e.g., climate change, poverty) depends on coordinated action of developed and developing nations. Their relation, however, is characterized by enduring inequalities that often impede such action. In fact, inequality between members of developed and developing societies is enormous (Bata & Bergesen, 2002), and, based on figures of the United Nations Development Program (UNDP) and the World Bank, differences in life quality, economic power, social welfare, and health are still increasing in various regions of the world (UNDP, 2005; World Bank, 2001; see also Babones, 2002; Ruiz & Mínguez, 2001). According to World Bank reports, the per capita Gross Domestic Product (GDP) in the richest twenty countries was thirty-seven times that of the poorest twenty countries, and reflected a widening gap in income inequality since the 1960s. Or as Bata and Bergesen note, “the greatest inequalities are between those individuals and households that live in developed versus less developed societies” (2002, p. 7). An overall increase of global income inequality between 1965 and 1992 was also reported by Korzeniewicz and Moran (1997; for an earlier period, see Berry, Bourguignon, & Morrisson, 1983), with between-country inequality being a stronger predictor for global inequality than within-country inequality. Subsequent researchers confirmed these findings (e.g., Babones, 2002; Bornschieer, 2002; see also Korzeniewicz & Moran, 2000). Although there has been debate about the amount of the *increase* in global inequality (e.g., Firebaugh, 1999), there is clear evidence of its extremely high level (Moellendorf, 2009) – in absolute figures, nearly 3 billion of the world population lived on less than 2\$ a day at the end of the last millennium (World Bank, 2001). Surely, income inequality is only one of several kinds of inequality—yet, it is quite plausibly causally related to other inequalities (e.g., health, education, under-five mortality rate; see Moellendorf, 2009).

Many scholars in the social sciences have investigated processes and determinants of global inequality. These analyses are primarily based on sociological theories and economic approaches that focus on mechanisms on a macro level, such as institutions, states, or trade unions. On the level of social groups or individual agents (i.e., citizens of developed versus developing countries), however, research is scarce. The goal of the current research is a social psychological analysis of global inequality, taking an intergroup perspective. Precisely, we test predictions of a social-psychological model that we think can map processes that abide global inequality on the level of individual actors as social group members.

### Approaches to Global Inequality

The issue of global inequality has become an extensively analyzed topic in the social sciences. Here, it is necessary to highlight that the core disciplines investigating mechanisms of global inequality (e.g., sociology, economics, political sciences) do so on a macro level of analysis, and contributed substantially to the understanding of global inequality. For example, one prominent explanation for global inequality is global trade and globalization in general. According to Babones (2002), the increase in global trade after 1960 parallels the increase in inequality among market economies (i.e. between developed and developing countries), which suggests that higher levels of international trade are associated with higher levels of exploitation (see also Chase-Dunn, Kawano, & Brewer, 2000). Another reason for global inequality is colonial history (Beer & Boswell, 2002; Boswell & Dixon, 1990), arguing that inequality arises due to land ownership and corporate agriculture that stems from colonial land ownership and its resulting dependencies. Another line of research identified foreign corporate penetration (i.e. corporate investment) as a primary means through which international, socio-economic inequality is created. Numerous empirical studies showed significant correlations between foreign corporate penetration and inequality (for an overview, see Beer & Boswell, 2002), with several mechanisms being responsible for this

link (e.g., foreign investment in developing countries generates disparities between economic sectors; see Crenshaw and Ameen 1994). Other potential explanations for global inequality include deregulated economies, diffusion of new technologies or growing education disparities (see Bornschieer, 2002). This research well reflects the primary level of analysis when it comes to antecedents of global inequality: the macro level of states, institutions, or trade regulation.

These approaches, fruitful as they are, do not take into account the level of actors as individuals or social group members. Therefore, they cannot map psychological processes that help abiding global inequality. We propose that a focus on psychological processes is a necessary extension for understanding why global inequality persists. Surprisingly though, psychology has largely neglected research on global inequality.

#### The Psychological Level of Analysis in Explaining Global Inequality

Knowledge about psychological mechanisms and processes that contribute to global inequality is scarce. In fact, the sole substantial work we are aware of that explicitly addresses global inequality from a psychological viewpoint is conceptual work by Olson (1997). In making the case for empirical investigations of global inequality, Olson presented a variety of psychological issues that would need to be addressed when pursuing research on global inequality. Based on the idea that global inequality has come into citizens' perceptions and public awareness, Olson (1997) claims that these perceivers should come into focus of research on global justice. In an exploratory study, she asked students to respond to a paragraph that described a group of peasants from a developing country. Overall, the analyses of respondents' essays revealed that participants attempted to differentiate themselves from the peasants, suggesting that intergroup processes affect people's responses to cross-national inequality (e.g., in terms of constructed community boundaries). Based on these findings, Olson (1997) suggested 19 variables that should be specified in psychological (justice)

research on global inequality. Many of these variables, such as the evaluator's identity, broadness of perceivers' group boundaries or the units being evaluated, are in line with the notion that intergroup processes play an important role when it comes to psychological processes abiding global inequality.

In addition to this seminal work, there are social psychological constructs that could predict behavioral responses towards disadvantaged entities of global inequality, and thus contribute to the explanation of the persistence of global inequality. These constructs include social dominance orientation (SDO, Pratto, Sidanius, Stallworth, & Malle, 1994), belief in a just world (Furnham, 1993; Lerner, 1980), and conventionalism (e.g., Altemeyer, 1996; see Jost & Banaji, 1994; Jost, Banaji, & Nosek, 2004; Schmitt, Neumann, & Montada, 1995 for similar constructs). These constructs generally predict less favorable attitudes towards outgroups (e.g., Halabi, Dovidio, & Nadler, 2008; Huddy, 2004; Kessler & Cohrs, 2008; Schmitt, Branscombe, & Kappen, 2003) and relate positively to justice beliefs (e.g., Dalbert & Yamauchi, 1994) and beliefs that status inequality between social groups is legitimate (e.g., Huddy, 2004). Yet, they have neither been used to explicitly explain global inequality nor to predict behavior towards people from developing countries. Taking into account propositions by Olson (1997) and the constructs just described, we test whether an intergroup approach can help explaining responses towards the outgroup "developing countries".

### An Intergroup Approach to Global Inequality

For several reasons, we think that an intergroup approach represents an important and appropriate frame for investigating individuals' perceptions of and responses to global inequality. First, the relation between relatively poor and relatively rich people on earth is mirrored by being citizens in developed versus developing countries (e.g., Babones, 2002; Bata & Bergesen, 2002; see also World Development Report, 2001; UNDP, 2005). Second, the relation between developed and developing countries is characterized by structural

interdependence (Wade, 2004), a typical feature of relevant intergroup relations (e.g., Stroebe, Spears, & Lodewijckx, 2007) and a basis for justice judgments (Tyler & Lind, 1990). For example, the economies of most developed countries depend on the labor market in developing countries, due to their large amount of inexpensive working power. Developing countries in turn depend on developed countries, as these often provide support in terms of financial contributions or economic knowledge. A third reason why an intergroup approach could be fruitful is that the relation between developed and developing countries has become increasingly present in citizens' perceptions of the world, for example due to media attention and public awareness of a globalized economy (Olson, 1997). With the increased awareness of global economic interdependence, implications of global economy for developed and developing countries become evident in people's minds. As a consequence, beliefs about global income inequality will very likely influence citizens' support or refusal of certain approaches in international economic policy. Fourth, the relation between the rich and the poor is not static – it is a dynamic system that changes due to institutional regulations and transnational investments (see e.g. Bornschieer, 2002). This can be mapped by dynamic intergroup processes.

Given these reasons, we think that a psychological approach, and an intergroup approach in particular, could prove important in order to address why global inequality persists. This is particularly evident once becoming aware of the fact that it is individual actors who decide about which products they buy, how they invest money or which policies they support. We believe that respective behavioral intentions depend on beliefs of legitimacy of global inequality and the perceived prototypicality of developed countries' citizens for the world population.

#### Current research

We draw our predictions from the ingroup projection model (IPM, Mummendey &

Wenzel, 1999). This model, which emerged from the traditions of social identity theory (Tajfel & Turner, 1979) and self-categorization theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) posits that social groups, such as members of developed and developing countries, can only be compared to each other if there is a comparison standard that serves as a frame of reference for this comparison. According to the IPM, an inclusive, superordinate group provides this comparison standard. Within a superordinate group, subgroup members “project” their characteristics onto the prototype of the superordinate group. This leads subgroup members to perceive their group closer to this prototype than they perceive outgroups to be (Waldzus & Mummendey, 2004; Waldzus, Mummendey, Wenzel, & Boettcher, 2004). This perceived ingroup prototypicality predicts perceived legitimacy of group status differences: The more prototypical an ingroup perceives itself for the superordinate group, the more is status inequality seen as legitimate (Weber, Mummendey, & Waldzus, 2002). Legitimacy in turn is crucial for intergroup relations, because perceived (il)legitimacy of status differences predicts unequal treatment of outgroups (Vanneman & Pettigrew, 1972; Weber et al. 2002), desire for social change (e.g., Walker & Mann, 1987) and collective action (Kawakami & Dion, 1995; Wright, Taylor, & Moghaddam, 1990). For example, Weber and colleagues showed that university students perceive their group as more prototypical for the superordinate group “students” than they perceived students from polytechnic schools, legitimizing their higher status and thus, negative outgroup attitudes. Overall, research on the IPM has corroborated the central predictions of the model (for a review, see Wenzel, Mummendey, & Waldzus, 2007). In the current research, we used this model in order to test whether the unequal relations between members of developed and developing countries can be grounded in intergroup dynamics. Moreover, we extend IPM research in an important way: Waldzus and colleagues (2004) suggested that ingroups perceive their group as more prototypical than they perceive outgroups—as long as social

reality allows for such a perspective divergence. In their study, both West and East Germans perceived West Germans to be more prototypical Germans. Whether this effect was grounded in the larger West German population, or their perceived higher status was not tested. The current research allows to disentangle these factors by crossing group size and status (People from developed countries as a high status minority vs. people from developing countries as low-status majority).

Applied to the conflict-laden relation between developed and developing countries (Chomsky, 2000), we conceptualized members of developed and developing countries as subgroups within the group “world population”. In Study 1, participants were asked to indicate prototypicality using several attributes on an economic and a social dimension: These have been identified as being central for global relations (e.g., Ruiz & Mínguez, 2001). In Study 2, we relied on pretested, group-specific attributes in order to test whether the expected effects generalize over varying operationalizations of prototypicality. Based on previous IPM findings, we derived four major hypotheses. First, we predicted that members of developed countries perceive their group as more prototypical for the world’s population than they perceive members of developing countries (H1). Second, the higher perceived prototypicality of developed countries, the stronger beliefs about the legitimacy of global inequalities (H2). Third, the higher perceived prototypicality of developed nations, the less positive are attitudes and behavioral intentions towards developing countries (H3). Fourth, the effect of prototypicality on behavioral intentions and attitudes is mediated via perceived legitimacy of global inequality (H4). In addition to these hypotheses, we tested the impact of three potentially related constructs that might also explain legitimacy beliefs and behavioral intentions: Stronger beliefs in a just world, higher levels of conventionalism, and a higher social dominance orientation should relate positively to perceived legitimacy of global inequality, and negatively to behavioral intentions in favor of developing countries.

## Study 1

The first study was designed to test whether the representation of developed and developing countries as subgroups in the superordinate group world population predicts people's views on legitimacy of global relations. We asked participants to indicate how prototypical they perceived their ingroup (developed countries) and the outgroup (developing countries) to be for the superordinate group (world population). We expected that the ingroup would be perceived as more prototypical than the outgroup (H1), and we tested whether perceived prototypicality, as suggested by previous research on the IPM (Weber et al., 2002), predicts perceived legitimacy of global inequality (H2).

### *Method*

#### *Participants, Materials, and Procedure*

Participants were 77 Germans (42 of them female;  $M_{age} = 29$ ,  $SD = 14$ ) approached at public places in central Germany with a 4-page questionnaire. After consenting, perceived prototypicality was assessed adapting the procedure from Waldzus et al. (2004): Participants were asked to indicate how prototypical attributes relating to three economic (*growth oriented, corrupt, money-fixated*) and four social (*family-oriented, agreeable, close to nature, social-environmentally aware*) aspects were for members of developed countries (i.e., the ingroup), for members of developing countries (i.e., the outgroup) and for the superordinate group "world population". The attributes were selected by four researchers until total consensus was reached. The order of in- and outgroup ratings was counterbalanced while the superordinate group was always rated last. Afterwards, perceived legitimacy was assessed with two items ("I think it is justified that people from industrial countries have better opportunities for advancement", "The historical achievements of developed nations justify their superior standard of living";  $r = .60$ ). All ratings used six-point Likert scales (from 1 "I absolutely disagree" to 6 "I absolutely agree"). Finally, participants were thanked and

debriefed.

## Results

Given our directed hypotheses, all statistical tests in the current article were one-tailed. Following Waldzus et al. (2004), Euclidean distances were computed between the respective subgroup's and the superordinate group's rating for each item set as indices of prototypicality, with higher values indicating higher prototypicality (possible range = 0 – 10 for social [four items]), 0 – 8.66 for economic [three items]). Corroborating H1, a repeated measures ANOVA revealed that overall, people from developed countries were seen as more prototypical for the world population than people from developing countries,  $F(1, 76) = 8.5, p = .003, \eta^2_p = .10$ . This effect was found both on the economic dimension,  $F(1, 76) = 4.02, p = .02, \eta^2_p = .05$ , and the social dimension,  $F(1, 72) = 6.85, p = .005, \eta^2_p = .09$  (see Table 1). There was no interaction between subgroup and dimension,  $F < 1$ .

To test whether prototypicality is related to perceived legitimacy of global inequality, we computed multiple regressions for both dimensions, with subgroup ratings as regressors. The more prototypical participants perceived developed countries for the world population on the *social* dimension, the more legitimate they rated the inequalities,  $\beta = .30, p = .006$ . Prototypicality of developing countries on the social dimension for the world population, however, had no additional effect,  $\beta = .04, ns$ , overall regression  $R^2 = .09, F(2, 69) = 3.41, p = .02$ . Conversely, the less prototypical participants perceived members of developing countries for the world population on the *economic* dimension, the more were the inequalities perceived to be legitimate,  $\beta = -.26, p = .02$ . Perceived prototypicality of developed countries on the economic dimension for the world population had no additional effect,  $\beta = -.18, ns$ , overall regression  $R^2 = .05, F(2, 73) = 2.92, p = .03$ . These findings corroborate H2.

## Discussion

Study 1 provides evidence for our assumption that intergroup processes abide global

inequality. Our first main finding is that members of developed countries perceive their ingroup to be more prototypical for the world population than members of developing countries, on both economic and social attributes. This finding is also theoretically important: Given that developed countries are high-status groups with relatively small populations compared to low-status developing countries, this shows that status alone can determine the higher prototypicality perceptions often observed among majority groups (Waldzus et al., 2004).

The second innovative contribution of the present study is the demonstration that people base legitimacy beliefs of global inequality on their own and the others' prototypicality for the global community. The more prototypical Germans—members of the developed world—perceived members of developed countries for the global community, the more legitimate they judged existing inequalities. In parallel, the less prototypical developing countries were seen for the world population, the more legitimate inequality was seen. This finding is in line with recent research showing that the prototypicality of the outgroup is an important predictor of outgroup attitudes (Ullrich, 2009) while previous IPM research primarily found this relation with relative ingroup prototypicality (for a review, see Wenzel et al., 2007). From either point of view, prototypicality perceptions represent an important process for the perceived legitimacy of global inequality.

Somewhat surprising, however, is that the less prototypical developing countries were seen for the world population on economic traits, the more legitimate were inequalities perceived while conversely, the more developed countries were seen as prototypical of the world population on social traits, the more legitimate were inequalities perceived. It appears that the relatively high warmth of the ingroup and a lack of (economic) competence of the outgroup (Fiske, Cuddy, Glick, & Xu, 2002) justify their discrimination.

Overall, the current findings support our hypotheses that developed countries are

perceived as more prototypical for the world population than developing countries, and that these perceptions of prototypicality predict beliefs about legitimacy of global inequality. While IPM research usually applied pretested, group-specific attributes (see Wenzel et al., 2007), the current study focused on attributes relevant to core dimensions of the intergroup context between developed and developing countries (Ruiz & Mínguez, 2001). Yet, it is possible that citizens do not perceive such attributes as relevant for this relation, and more strongly base their views on group-specific attributes. In order to replicate and generalize the current findings, we conducted a pretest to collect group-specific attributes for both subgroups for Study 2. Additionally, the second study aims to test predictions of the IPM with regard to behavioral intentions towards the outgroup, as in our case members of developing countries. In order to test the specific contributions of other potential psychological constructs on such behavioral intentions, such as SDO or belief in a just world, we assessed these in Study 2. Finally, a limitation of Study 1 is that it is possible participants were not interested in international politics, or did not consider the relation between the subgroups as being relevant. If so, it is possible that the intergroup situation is not salient, and the obtained results are based on other processes. We addressed this issue in the following.

### Pretest Study 2

The goal of this pretest was twofold: First, we aimed to obtain commonly shared attributes seen as prototypical for members of both developed and developing countries in order to test whether the Study 1 findings generalize beyond the dimensions of economic and social typicality. Second, we wanted to rule out the possibility that participants did not care about global relations. Therefore, we asked participants to judge the relevance of the concept of developed vs. developing countries and their interest in international politics. Thirty-one participants ( $M_{\text{age}} = 24$ ,  $SD = 2$ ) listed attributes they perceived as being prototypical for people from developed countries and developing countries (the order of the subgroup was

counterbalanced). The attributes were chosen based on their frequency of occurrence. The final collection included *rich, materialistic, well-educated* and *success-oriented* for people from developed countries, and *indigent, frugal, ambitious, and family-oriented* for people from developing countries.

On seven-point Likert-Scales, participants further indicated that they found the concept of developed vs. developing countries relatively relevant ( $M = 4.32$ ,  $SD = 1.33$ ; Scale: from 1 *absolutely unimportant* to 7 *absolutely important*). Moreover, participants indicated that they were quite interested in international politics ( $M = 4.94$ ,  $SD = 1.68$ ; scale: From 1 *hardly interested at all* to 7 *very interested*), suggesting that most participants were aware of the intergroup relation between developed and developing countries.

## Study 2

Three main goals were pursued in Study 2. First, using pre-tested group-specific attributes, we aimed to replicate the initial finding that people from developed countries perceive their ingroup as more prototypical for the world population than they perceive people from developing countries (H1), and that perceived prototypicality has an impact on the perceived legitimacy of global inequality (H2). More importantly, our second goal was to test whether the IPM can predict behavioral responses related to global inequality. Therefore, we designed a measure of behavioral intentions towards members of developing countries. We expected that the higher participants' ingroup prototypicality for the world population, the less would participants behave in favor of developing countries (H3). This effect should be mediated by perceived legitimacy of global inequality (H4; see Weber et al., 2002).

Our third goal was to assess three social psychological constructs that could potentially predict perceived legitimacy of global inequality and behavioral intentions towards developing countries. The first of these constructs is social dominance orientation (SDO), conceptualized as an individual's preference for social hierarchies within any social system

(Pratto et al., 1994). As legitimating myths are a core concept of social dominance theory, SDO should have a relatively strong impact on behavioral intentions. The belief in a just world (Lerner, 1980), the tendency to believe that the world is just and everyone gets what she or he deserves, could have an impact both on perceived legitimacy and behavioral intentions towards developing countries. Prior research has shown that people with a high socio-economic status score relatively high on this construct, whereas people with low socio-economic status score relatively low (Furnham, 1993). As a third potential construct, we assessed conventionalism (Altemeyer, 1996), the adherence to traditions and social norms that are perceived to be endorsed by authorities. Right-wing-authoritarianism that includes conventionalism, has previously been shown to relate to belief in a just world (Rubin & Peplau, 1973; Wagstaff, 1984), and might therefore also impact on behavioral intentions towards developing countries.

## Method

### *Participants*

95 students (69 female, 26 male) from a large university in central Germany participated in Study 2. They were 22 years on average ( $SD = 3$ ), and received either chocolate or course credit for their participation.

### *Materials and Procedure*

Participants were recruited on campus and were asked to take part in “a study on the perception of global relations”. Seated at separate tables in a large room on campus, they received a booklet with the study materials. Participants were first asked to rate the eight attributes generated in the pretest in terms of their applicability to people from developed countries, developing countries, and the world population, with the order of the rating for the two subgroups counterbalanced and the superordinate group always rated last. Responses were given on seven-point Likert-Scales (from 1 for “*I absolutely disagree*” to 7 for “*I*

*absolutely agree*”) and the Euclidean distance between correspondent trait ratings served as the indicator of the prototypicality of the respective subgroup for the superordinate group. In detail, the differences between the ratings for the subgroup and superordinate group were squared, summed, and the square root was taken (Waldzus et al., 2004). Following the measure of prototypicality, perceived legitimacy was measured with two items (“It would be legitimate if citizens in developing countries had the same privileges as citizens in developed countries” (reverse coded), “The historical achievements of developed nations justify their superior standard of living”;  $r = .35$ ), followed by the measure of behavioral intentions. This measure consisted of statements that deal with behavior towards people from developing countries (e.g., “Developed countries should engage in stronger efforts to fight global inequality”;  $\alpha = .83$ ; see Appendix 1). Subsequently, we measured social dominance orientation (12 items, e.g. “Some groups have better chances in life than others, which I think is okay”,  $\alpha = .81$ ), belief in a just world (6 items, e.g. “I think that overall, the world is just”,  $\alpha = .81$ ) and conventionalism (2 items: “One day, renunciation from traditions will proof to be a fatal mistake”, “One should pay less attention to ancient, traditional beliefs but instead develop own ideas of morality about what is good and what is evil”,  $r = .66$ ). All of these ratings used seven-point Likert Scales (from 1 “*I absolutely disagree*” to 7 “*I absolutely agree*”). At the end of the study, demographic data were collected, and we asked participants whether they were interested in international politics, and whether they believed the relation between developed and developing countries to be a relevant concept. Finally, participants were thanked, compensated and debriefed.

## Results

The descriptive statistics and correlation patterns for the relevant measures are shown in Table 2. As depicted, participants generally score relatively low (i.e., below the scale midpoint) on the measures of legitimacy, SDO, belief in a just world, and conventionalism.

This suggests that in general, our student sample is relatively liberal. In line with the findings from the pretest, participants indicated to be interested in international politics, and indicated that they found the concept of developed vs. developing countries relevant.

With regard to our hypotheses, we first tested whether we could replicate the ingroup prototypicality effect shown in Study 1. Analogous to Study 1, Euclidean distances between the respective subgroup's and the superordinate group's rating indicated prototypicality, with higher values indicating higher prototypicality (range = 0 – 16.97 [Eight attributes]). As predicted by H1, a repeated measures ANOVA with the factor subgroup (developed country vs. developing country) revealed that members of developed countries were seen as more prototypical than members of developing countries,  $F(1, 94) = 31.73, p < .001, \eta^2_p = .27$  (see Table 2).

Second, we tested the effect of both ingroup prototypicality and outgroup prototypicality on legitimacy beliefs of global inequality. Confirming H2, the more prototypical participants perceived developed countries for the world population, the more legitimate they rated the inequalities,  $\beta = .20, p = .025, F(1, 91) = 3.93, R^2 = .05$ . Outgroup prototypicality, however, had no impact on legitimacy,  $\beta = -.04, F < 1$ .

Third, we tested the effect of prototypicality on behavioral intentions towards people from developed countries, which we expected to be mediated by perceived legitimacy. We ran several regression analyses in order to test our assumptions. First we tested the effect of prototypicality on behavioral intentions. Confirming H3, these were less positive the more prototypical participants perceived their ingroup to be for the superordinate group (see Figure 1),  $F(1, 91) = 3.19, p = .039$ . Outgroup prototypicality, however, had no impact on behavioral intentions  $\beta < .01$ . Therefore, we tested mediation only for ingroup prototypicality.

Fourth, to test for the mediating role of perceived legitimacy, we used the joint significance test recommended by MacKinnon, Lockwood, Hoffmann, West, and Sheets

(2002), because of superior statistical power compared to other tests. The joint significance test requires the independent variable to have an effect on the mediator, and the mediator to have an effect on the dependent variable after controlling for the effect of the independent variable. Thus, two regression models were computed to test mediation. The first model demonstrates the above described direct effect of ingroup prototypicality on legitimacy (see Figure 1), indicating that the more prototypical the ingroup is perceived for the superordinate group, the more legitimate is global inequality perceived. In the second model, the effect of legitimacy on behavioral intentions towards people from developing countries was shown after controlling for the effects of ingroup prototypicality: The more legitimate participants perceived global inequality, the less positive their behavioral intentions towards people from developing countries,  $F(2, 91) = 6.12, p = .002$ . As displayed in Figure 1, the direct effect of group membership on devaluation was reduced ( $\Delta\beta = .06$ ) to non-significance,  $t = -1.22, p = .11$ . Thus, the joint significance of these two models is consistent with our hypothesis that perceived legitimacy of global inequality mediates the relation between ingroup prototypicality and behavioral intentions towards people from developing countries.

Finally, as we were interested in the contribution of social equality related constructs to the explanation of global inequality, we tested the impact of SDO, belief in a just world and conventionalism on behavioral intentions towards people from developing countries, using hierarchical multiple regression analysis. Step 1 represents the effect of ingroup prototypicality on behavioral intentions. In step 2, SDO, belief in a just world, and conventionalism were entered into the regression. As can be seen in Table 2, SDO was a relatively strong predictor of behavioral intentions towards people from developed countries and explained additional variance beyond prototypicality. The higher participants' degree of SDO, the less positive were their behavioral intentions. In turn, neither belief in a just world nor conventionalism significantly predicted behavioral intentions.

## Discussion

The second study confirmed that people from a developed country perceive their ingroup as being more prototypical for the world population than people from the outgroup, and these perceptions relate to stronger legitimacy beliefs. In addition to this finding, we also found the expected mediation role of legitimacy: Higher prototypicality for the world population more strongly legitimizes inequality, which in turn predicts less positive behavioral intentions towards people from developing countries. These findings suggest that the assessment of individuals' behavior by psychological approaches can contribute to understanding the persistence of global inequality.

In the current study, outgroup prototypicality did not relate to legitimacy beliefs about global inequality (but see Ullrich, 2009). As a matter of fact, it did not relate to any of the variables assessed in Study 2, suggesting that participants truly based their intentions and legitimacy beliefs on their own group's position in the world's community. It could be that the choice of attributes used for the prototypicality measure explains why the effect of outgroup prototypicality emerged in Study 1, but not in Study 2: The attributes used in Study 1 were not group-specific, but supposed to reflect purportedly important dimensions. However, it might be that participants did not perceive these dimensions in the desired manner, and therefore based their legitimacy ratings more strongly on the economic dimension. For ingroup prototypicality, Study 1 and 2 show a consistent relation to legitimacy beliefs, strengthening our rationale that intergroup processes contribute to the perpetuation of global inequality.

To our knowledge, the current Study 2 is the first to demonstrate the (non)-impact of belief in a just world, SDO, and conventionalism on global inequality issues. Only SDO was a reliable predictor of behavioral intentions towards developing countries. As expected, the higher participants' SDO, the less positive were their intentions to act against global

inequality. Do these findings suggest that SDO is the strongest predictor of global inequality? This is not said. Indeed, it seems an important factor, being a relatively stable trait that explains responses to people from developing countries. However, we think that SDO would not be sensitive to subtle changes in the intergroup relation, and might thus not be a strong predictor when the dynamics of the relation between developed and developing countries are made more salient. Together with the prototypicality effect, the current findings suggest that individuals base their behavior towards citizens from developing countries on group-based processes.

### General Discussion

In this article, we argued that a (social) psychological perspective on global inequality represents an important step towards understanding why the world's social and economic imbalance persists. Testing predictions of the IPM (Mummendey & Wenzel, 1999), we could show that citizens from a developed country perceive their ingroup as more prototypical for the world population compared with people from developing countries. In Study 1, higher ingroup prototypicality on the social dimension and lower outgroup prototypicality on the economic dimension predicted stronger legitimacy beliefs of global inequality. This finding was conceptually replicated in Study 2 with regard to the ingroup's prototypicality, using a pretested measure of prototypicality. The most important finding is that ingroup prototypicality predicts behavioral intentions towards people from developing countries, mediated via legitimacy of global inequality: The more prototypical ingroup members perceive developed countries to be for the world population, the more legitimate is global inequality thought to be, and the less positive are behavioral intentions towards people from developing countries. The role of outgroup prototypicality, however, was not confirmed in Study 2 when the economic dimension was omitted. We speculate that deviance from the prototype on the economic dimension is specific in justifying unequal chances and standards

of living of outgroups—in the sense that they are perceived as being worse off because they failed with regard to economic achievement. Testing the influence of other psychological constructs that could potentially explain the psychological antecedents of global inequality, we present initial evidence that higher levels of SDO predict less positive behavior towards developing countries while neither belief in a just world nor conventionalism did. Taken together, these findings suggest that a psychological analysis of global inequality could add a fruitful dimension of analysis to the issue of global inequality (see also Olson, 1997).

A first theoretical implication of the current findings is that they offer theoretical elaboration of the IPM. Previous IPM research (e.g., Waldzus et al., 2004) suggested that generally, ingroups perceive their group as more prototypical than they perceive outgroups – unless consensus about prototypicality is accommodated in social reality. In their study, Waldzus and colleagues found that both West and East Germans perceived West Germans to be more prototypical Germans. Whether this was due to the larger population of West Germans (West Germans outnumber East Germans by a factor of around 4), or the perceived higher status of West Germans could not be tested. The current findings demonstrate that status alone suffices to produce this prototypicality effect: The population of developed countries clearly is a minority in the world’s community, yet they have the highest share of the global income and the power in most globally acting institutions (see UNDP, 2005; World Bank, 2001). Thus, by crossing group size and status, we theoretically extend the IPM’s predictions about the factors that drive an ingroup’s perceived prototypicality (see also Wenzel et al., 2007). The next important step for investigating these predictions, and to fully account for the relation between prototypicality and legitimacy, is to include populations from developing countries in IPM studies on global inequality. This would also help testing whether people who are less privileged perceive the unequal distribution of global goods as less legitimate (Form & Rytina, 1969; see also Weber et al., 2002).

Second, the current data show that prototypicality is an independent predictor of responses to global inequality—in our case, behavioral intentions towards an outgroup (see also Wenzel et al., 2007). It does not correlate with SDO, suggesting that SDO and prototypicality explain different shares of variance in responses to global inequality. We speculate that prototypicality could predict more flexible facets of behavior towards developing countries, whereas SDO could more strongly predict responses that support an institutional status quo. Future research should address this distinction, using measures that disentangle the shares of variance explained. Also, SDO was a stronger predictor of behavioral intentions than belief in a just world or conventionalism. This might reflect social dominance theory's idea that SDO supports "legitimizing myths" that attenuate hierarchies (Pratto et al., 1994), such as the unequal status relation between developed and developing countries. This is supported by the strong correlation between SDO and legitimacy beliefs of global inequality in Study 2.

In addition to these theoretical implications, our results show processes on a group members' level of analysis that abide global inequality and thus extend the conceptualization of global inequality antecedents. We show for the first time that an analysis on the person level—group members in an intergroup setting—can predict global inequality related, behavioral intentions. Is this relevant, given that state regulations, transnational enterprises, and other components individuals can hardly influence have such a strong impact on global inequality? We think it is, because it is the individual and its behavior that can help counteracting inequality: It is individuals deciding about the policy makers to be elected, the enterprises they choose for purchasing products or investing their money, and the lifestyle they live. Thus, it is necessary to understand the psychological processes that guide such behavior. As citizens are more and more aware of global interdependence (Olson, 1997), it is likely that they take into account their position, and thus their responsibilities, in the world

community. Future research should focus on the question whether prototypicality for the world's community will also affect real behavior, in addition to mere behavioral intentions. For example, it is likely that beliefs about (unequal) international income distribution will result in public support for or against various economic and political policies (Olson, 1997). People with the belief that developed countries are less prototypical for the world community should then more strongly support policies in favor of developing countries.

Of course, we do not claim that a psychological process analysis suffices to explain global inequality. Existing approaches across the various fields need theoretical and conceptual integration in order to gain an elaborate picture of how global inequality could be addressed: Adding a psychological component would enable to map processes that explain decisions of citizens about how and why they support the economic and political authorities who decide in favor or against equal opportunities between developed and developing countries. Future research should aim to present research that allows such an integration across the fields, for example, testing social psychological models in globally acting institutions. Here, a limitation of the current studies could also be addressed: We did not test whether prototypicality for the world population affects real behavior, but focused on behavioral intentions. The current research could thus be convincingly validated by studies showing that, for example, people spend more time reading articles about developing nations, distribute more money to institutions working against global inequality, or support political or organizational authorities that work against global inequality the less prototypical they perceive their group of developed countries for the world community.

Finally, a social psychological approach might also contribute to the long-term goals of harmonious and positive intergroup relations between people from developed and developing countries. However, recent decades have revealed developments of resistance to global capitalism and its potentially devastating effects (Bata & Bergesen, 2002) as well as

attacks on symbols of global power, clearly suggesting that it is a long way to improve these relations. In fact, as Bornschieer (2002) notes, developing countries are in danger of being no longer peripherized, but marginalized. This is reflected by our finding that people from developed countries psychologically perceive developing countries as less prototypical for the world community. Future research could test one of the other prominent predictions of the IPM: A diverse or complex representation of the superordinate group decreases prototypicality, and thereby improves attitudes towards outgroups (Waldzus, Mummendey, Wenzel, & Weber, 2003). Thus, if it is possible to manipulate the representation of the superordinate group “world population” in a way that people from developed countries perceive their group as less prototypical, attitudes and behavior towards people from developing countries should become more positive.

The current research is an initial step towards the psychological foundations of global inequality as we have revealed a process that opens pathways to increase sensitivity for global inequality. Obviously, greater sensitivity of high status groups for the problems and obstacles regarding global inequality is needed.

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## Appendix

### **Measure of behavioral intentions towards people from developing countries**

- 1) Developed countries should support developing countries more strongly.
- 2) Developed countries should make stronger efforts in order to fight against global inequality.
- 3) I would adjust my standard of living substantially if I could thereby contribute to global justice.
- 4) If other people in developed countries were willing to decrease their standard of living in order to contribute to global inequality, I would do the same.
- 5) I would constrain my standard of living if I could thereby contribute to decreasing global inequality.
- 6) It makes sense to purchase FairTrade products.
- 7) For me, it is important to know the production conditions of products I consume.

Table 1

*Descriptives for Prototypicality and Legitimacy in Studies 1 and 2*

	<i>M</i>	<i>SD</i>
<i>Study 1</i>		
Prototypicality Developed Countries	7.16	0.83
Economic Dimension	6.75	1.14
Social Dimension	7.63	1.02
Prototypicality Developing Countries	6.64	1.25
Economic Dimension	6.28	1.46
Social Dimension	7.15	1.19
Legitimacy	2.30	1.18
<i>Study 2</i>		
Prototypicality Developed Countries	13.01	1.33
Prototypicality Developing Countries	11.48	2.06
Legitimacy	2.91	1.29

Note: Study 1: Possible range of prototypicality on the economic dimension 0 – 8.66, on the social dimension 0 - 10. Study 2: Possible range of Prototypicality: 0 – 16.97.

Table 2

*Descriptive Statistics and Correlations for Primary Variables in Study 2*

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Ingroup Prototypicality	13.01	1.33								
2. Outgroup Prototypicality	11.48	2.06	-.11							
3. Legitimacy	2.91	1.29	.20*	-.04						
4. Behavioral intentions	4.80	1.04	-.18*	.00	-.33*					
5. SDO	3.01	0.88	.09	.08	.51*	-.50*				
6. BJW	2.67	0.97	.13	-.14	.18*	-.02	.20*			
7. Convention- alism	3.53	0.94	.01	-.04	.20*	-.16	.30*	.19*		
8. Political Interest	4.94	1.58	-.12	.08	.12	.15	.03	-.19*	.03	
9. Relevance	4.51	1.30	.21*	.03	.20*	-.06	.11	.05	-.05	.19*

Note: SDO = Social Dominance Orientation, BJW = Belief in a Just World, Political Interest = Interest in International Politics (from 1 *absolutely unimportant* to 7 *absolutely important*), Relevance = Relevance of the Developed/ Developing Countries Distinction (from 1 *hardly interested at all* to 7 *very interested*).

\*  $p < .05$ , one-tailed.

Table 3

*Multiple Regression Statistics for Predictors of Behavioral Intentions towards People from Developing Countries in Study 2*

Predictor	$\beta$	$t$	$p$
Step 1: $R^2 = .034, p = .04$			
Ingroup Prototypicality	-.18	-1.79	= .04
Step 2: $R^2$ change = .24, $p < .001$			
Ingroup Prototypicality	-.15	-1.66	= .05
SDO	-.50	-5.39	< .001
Belief in a Just World	.09	< 1	= .16
Conventionalism	.01	< 1	= .44

Note: Final statistics:  $F(4, 88) = 8.35, p < .001$ ; SDO = Social Dominance Orientation.

### Figure Caption

Figure 1. Study 2: The mediating role of perceived legitimacy on behavioral intentions towards developing countries. The coefficient from prototypicality to legitimacy represents a direct effect. The coefficient from perceived legitimacy to behavioral intentions represents the effect of perceived legitimacy after controlling for the effect of prototypicality. The coefficient above the lower arrow displays the direct path from prototypicality to behavioral intentions; the coefficient below the lower arrow displays the non-significant path from prototypicality to behavioral intentions after controlling for the effect of perceived legitimacy.

\* $p < .05$ , o-t.

Figure 1

