

The Role of Social Identity in Global Cooperation

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Abstract

This research examines the question of whether the psychology of social identity can be extended to enhance cooperative motives in the context of very large, global collectives. Our data come from a multi-national study of the relationship between globalization and individual choice behavior in a multi-level public goods dilemma. Samples were drawn from the general populations of the United States, Italy, Russia, Argentina, South Africa, and Iran. Results demonstrate that an inclusive social identification with the world community is a meaningful psychological construct that plays a role in motivating cooperation that transcends parochial interests. Further, self-reported identification with the world as a whole predicts behavioral contributions to a global public good above and beyond expectations about what other group participants are likely to contribute. Global social identity is associated with a generalized concern for global welfare that may motivate individuals to contribute to collective goods regardless of expected investment returns.

Keywords: Social identity, cooperation, social dilemma, goal transformation, globalization

The Role of Social Identity in Global Cooperation

More than ever before in human history, many of our most pressing social and environmental problems involve global interdependence. Because of phenomena associated with global warming, destruction of rainforests, and an international marketplace, decisions made by individuals and corporations in one region of the world have consequences for the physical environment and economic opportunities of people at remote distances. Addressing problems of global warming, resource depletion, and even the international banking system requires cooperation that transcends national boundaries.

Many of these global problems take the form of social dilemmas – situations in which individuals (or nations) have to make a choice between behaviors that serve self-interest and behaviors that benefit the collective welfare. The structure of a dilemma is such that, at each decision point, it is in the individual's own best interest to act selfishly (hoard resources, discharge waste into public waters, drive cars rather than take public transport), but if everyone acts on the basis of self-interest, ultimately everyone in the collective is worse off (Dawes, 1980; Messick & Brewer, 1983). One type of social dilemma is the public goods dilemma. Public goods depend on individual contributions (from their own resources) to be created or maintained, but once created, the public good is available to all members of a collective regardless of whether they contributed to its maintenance or not. Thus, each individual's self interest is maximized if they can reap the benefits of the collective resource without contributing anything. But if everyone in the collective fails to contribute, the public good is lost and no one gets the benefits. Collectively, everyone is better off if most or all individuals cooperate and contribute, even though cooperation involves self-sacrifice at the individual level.

Individual behavior in public goods choice dilemmas has been studied extensively by behavioral economists, political scientists, and social psychologists, and results of research in laboratory and field contexts have taught us a lot about the conditions under which individuals will behave cooperatively even when it involves contributing resources to a group of anonymous strangers (see e.g., Dawes, 1980; Foddy, Smithson, Schneider, & Hogg, 1999). Both laboratory and field studies have documented that social identity plays a role in social dilemma decisions. Making salient a shared social identity has been demonstrated to increase cooperative behavior between strangers in dyadic exchanges such as prisoner's dilemma games (e.g., Dion, 1973; Miller, Downs, & Prentice, 1998) or investment games (e.g., Buchan, Croson, & Dawes, 2002; Foddy & Dawes, 2008; Tanis & Postmes, 2005), and in collective decision making situations such as resource dilemmas (e.g., Brewer & Kramer, 1986; Brewer & Schneider, 1990; Kramer & Goldman, 1995; Wit & Wilke, 1992) and public goods dilemmas (e.g., DeCremer & van Vugt, 1999; Wit & Kerr, 2002). In general, when a shared group identity is made salient, or when group members are strongly identified with the collective, levels of cooperation are significantly higher than when no shared identity is available or group identification is weak.

Most of the prior research on social identity and collective cooperation has involved relatively small laboratory groups or local communities. This leaves open the question of whether the psychology of social identity can be extended to enhance cooperative motives in the context of very large, global collectives. Extant theories of the origins of altruistic cooperation in humans suggest that large-scale cooperation is parochial in nature (e.g., Bernhard, Fischbacher, & Fehr, 2006; Choi & Bowles, 2007; Gil-White, 2001; Richerson, Boyd, & Henrich, 2003; Yamagishi, Nobuhito, & Kiyonari, 1999), biased in favor of ingroups such as ethnic groups, nations, or religious communities. But studies of cooperation in large-scale social

dilemmas have not yet directly examined the possible role of awareness of global interdependence and participation in global institutions in engaging cooperative motivation that transcends parochial interests (Shokef & Erez, 2006).

Globalization and Identity Inclusiveness

Globalization is conceptualized as the increased connectivity (Tomlinson, 2000) and interdependence (Guillen, 2001) among people worldwide, and the intensified consciousness of the ‘world as a whole’ (Robertson, 1992). It entails not only the global economy, but also networks of communication (telephone, internet, travel), international organizations, and cultural events. Increased globalization is a fact of modern life, but individuals (and nations) differ in the extent to which they are exposed to and directly participate in this global connectivity. The question addressed by the present research is whether such differences in globalization at the individual level are associated with the development of a global identity which, in turn, enhances willingness to cooperate with collectives that extend beyond the local community.

One hypothesis about the effects of globalization on social identity is that globalization reinforces parochialism by strengthening the demarcation between one’s ethnic, local or national group and the outgroup (Beck, 2006; Castells, 2004; Keating, 2001). The surge in xenophobic political parties, in movements defending local community interests, and the revival in ‘ethno-nations’ – such as Basque, Scots, Quebecois – have been interpreted as anti-globalization reactions (Scholte, 2005).

The alternative hypothesis, which we advocate here, holds that globalization strengthens cosmopolitan attitudes by weakening the relevance of ethnicity, locality or nationhood as sources of identification (Beck, 2006; Cheah & Robbins, 1998; Hannerz, 1992). Individuals overcome the ‘ingroup’-‘outgroup’ tension of parochialism, and experience a sense of common belonging

merely by virtue of inhabiting the same planet; humankind becomes an all-including ‘we,’ even in the absence of a definable outgroup (Giddens, 1990). The growth since the 1960’s of global campaigns for human rights and humanitarian relief, and of foreign aid to developing countries, is seen as a manifestation of this cosmopolitan conscience (Scholte, 2005).

To the extent that the latter hypothesis is correct, increased exposure and participation in globalization should be associated with the development of a sense of global social identity on the part of individuals. The documented relationship between a sense of shared identity and level of cooperation in collective dilemmas would then predict that increased globalization leads to increased willingness to contribute to collective welfare at the global (rather than local) level and that this relationship will be accounted for, at least in part, by the strength of global identification at the individual level.

Social Identity and Collective Cooperation: Two Mechanisms

Pursuing a hypothesis about the interrelationships among globalization, inclusiveness of social identity, and global cooperation requires some understanding of why social identification with the relevant collective enhances self-sacrificial cooperation on behalf of that group. A number of mechanisms have been proposed in the literature (Brewer, 2008; DeCremer & van Vugt, 1999; Krueger & Acevedo, 2005; Yamagishi, Jin, & Kiyonari, 1999) but we focus here on two specific mechanisms that have received the most attention—expectancies and values.

Expectations about others. One theory of ingroup cooperation is based on the idea that shared group membership gives rise to group-based trust, the general expectancy that others will be cooperative within the ingroup (Brewer, 1986; Yamagishi & Kiyonari, 2000). Ingroup trust is the expectation that others will cooperate with me *because* we are members of the same group (Foddy & Dawes, 2008; Kramer & Wei, 1999), related to norms of “generalized reciprocity”

being strong in intra-group interactions, and weaker or absent across group boundaries (Tanis and Postmes, 2005; Yamagishi, Jin, & Kiyonari, 1999).

Social dilemmas involve a decision whether or not to cooperate with the group as whole when one's own cooperative choice does not directly influence the cooperation of others. Under these circumstances, expecting that others will behave cooperatively (i.e., contribute to the public good or restrain consumption of a shared resource) reduces the fear that one's own cooperation will be wasted or be taken advantage of and hence makes cooperation more compatible with individual incentives. Thus, it is tempting to believe that if ingroup membership increases trust (i.e., expectations that other ingroup members will be cooperative), this is sufficient to account for the effect of ingroup identity on intragroup cooperative behavior. However, expectations of others' intentions to cooperate are not of themselves sufficient to generate cooperative behavior, especially in large, dispersed groups (e.g., De Cremer, Dewitte, & Snyder, 2001). Although trust reduces fear, it does not eliminate the self-interested benefit of noncooperation (greed). If everyone else can be expected to cooperate, then noncooperation takes advantage of the others' contributions to the group welfare and maximizes personal outcomes.

Ingroup trust can be exploited particularly under conditions of anonymity and diffusion of responsibility. When players are unknown to each other and there is no likelihood of future interaction, it is not rational to anticipate that one would be sanctioned by the group for failure to cooperate even with fellow ingroup members. Thus, group-based trust translates to cooperative behavior only if the individual's own behavior is constrained by the same group norms that underlie his/her expectations of the others' behavior.

Further, there is reason to question the construal of the empirical support for the idea that expectations underlie cooperation. The evidence for a relationship between trust (operationalized

as expectancies of cooperation from others) and own cooperation is almost entirely correlational, with measures of expectations usually assessed *after* the participant has already made his or her own decision about contributing or sharing. After the fact, individuals may project their own choices onto fellow group members, or use expectations to justify their previous actions. Hence, we cannot be sure that expectation about others' behavior is actually the cause of cooperative decisions or simply a concomitant of the decision once made (Dawes, McTavish, & Shaklee, 1977).

Goal transformation. Cooperation based solely on expectations that other group members will simultaneously or sequentially also cooperate is a vulnerable strategy. If there is error in the system, or too many free-riders at a particular time, or inability to sanction noncooperation, the group-based trust underlying willingness to cooperate may collapse and would be very difficult to re-establish. What is needed are additional mechanisms that are more robust and able to tolerate some imperfection in the system of mutual cooperation.

The psychological process of group identification, as elaborated in social identity theory (Tafel, 1981; Tajfel & Turner, 1979), provides a basis for intragroup cooperation that does not necessarily rely on interpersonal trust in fellow group members. When individuals attach their sense of self to their group membership, they see themselves as interchangeable components of a larger social unit (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). The consequence of such social identification is not only affective attachment to the group as a whole, but also a shift of motives and values from self-interest to group interest and concern for the welfare of fellow group members. As a result of this re-definition of the self, pursuing the group's interest becomes a direct and natural expression of self-interest, that is, collective and personal interest are interchangeable. When the definition of self changes, the meaning of self-interest and self-

serving motivation also changes accordingly (Brewer, 1991). Group identity involves a transformation of goals from the personal to the collective level (De Cremer & Van Vugt, 1999; Kramer & Brewer, 1986).

Goal transformation provides a basis for ingroup cooperation that does not depend directly on expectations that others in the group will reciprocate cooperation. When social identification is strong, then contributing to the group welfare is an end in itself, independent of what benefits ultimately accrue to the self. De Cremer and van Dijk (2002) tested this idea directly in the context of a public goods dilemma. Participants in their experiment were divided into groups of seven, and were each given 300 cents and told that they were free to contribute any amount between 0 and 300 cents to a collective pot. The total amount contributed by the group would be multiplied by two and then would be split equally among all members, with the proviso that the group as a whole had to contribute at least 1050 cents. If this amount was not reached, any money in the collective pot would be forfeited. Participants then made their first contribution decisions, following which half of the groups were told that their group had succeeded in making the criterion level of contributions while the other half of participants were told that their group had failed to meet the criterion. Then all participants made a second round of contribution decisions.

Prior to the choice dilemma, level of social identification with the group was manipulated by telling participants either that the study was about individual decision making (weak social identity salience) or that it was about group decision making and that the performance of different groups would be compared (strong social identity salience). Consistent with the findings from previous studies, participants in the strong social identity condition contributed more in the first round than did participants in the weak identification groups. More importantly,

failure motivated strong social identity participants to contribute significantly *more* in the session after feedback was given than in the one before feedback was given, whereas weak group identifiers contributed even less in the session after feedback was given than in the one before feedback. Consistent with the goal-transformation hypothesis, strong group identifiers appear to exhibit a genuine concern for the group's welfare. As such, negative group feedback may be interpreted as a threat to the group's welfare and a signal that behavioral changes are required, motivating identified individuals to cooperate more, rather than reciprocate the prior noncooperation.

Social identity-based cooperation is particularly important for large groups facing resource and public goods dilemma problems. In the absence of close monitoring and sanctioning of noncooperation, some basis for intrinsic motivation to cooperate and contribute to the group welfare is essential. When individuals extend their social identity to the global community, concern for collective outcomes may directly underlie cooperative contributions, above and beyond expectations about how others in the collective will behave.

The Present Study

The data for the research reported here came from a unique multi-national study of the relationship between globalization and individual choice behavior in a multi-level public goods dilemma (Buchan et.al. 2009). The experimental paradigm was implemented in six different countries, selected to represent a wide range of globalization at the national level. Further, participants were sampled within each country across age and socioeconomic categories so as to maximize variability of exposure to globalization at the individual level. As a consequence, the total sample from the complete study provided an unprecedented opportunity for assessing the

relationships among social identity, cooperation, and globalization across a full range of variation in exposure to and participation in global connections.

Method

The Sample

Our samples were drawn from the general population of citizens in six countries-- Argentina, Iran, Italy, Russia, South Africa, Russia and the United States. These six countries differ broadly in aggregate levels of globalization, as measured by the country-level globalization index (CGI) produced by the Centre for the Study of Globalization and Regionalisation at the University of Warwick, UK.¹ Within each country the research was conducted in a large metropolitan area and in surrounding areas that were likely to be less globalized in nature. For example, in Russia the research occurred in Kazan, a globalized city in Tatarstan, and in more rural surrounding outposts. In the United States the metropolitan area was Columbus, Ohio; in South Africa it was Johannesburg; in Italy it was Milan; in Argentina it was Buenos Aires; and in Iran it was Tehran.

Research participants were drawn from the general population. Recruitment methods varied locally according to what was considered most appropriate by a local collaborator. In three countries (Argentina, Italy and Russia) recruitment was subcontracted to survey agencies specialized in market research. In the other countries people were recruited through other methods such as distribution of posters, leaflets, or advertisements in newspapers, and personal phone solicitation. A quota sampling recruitment method was used based on three characteristics: gender; age (18- 30, 31-50, 51-70); socioeconomic status (low, medium, high). These characteristics produced an 18 cell matrix; a target quota of ten or eleven citizens per cell was to be recruited within each country, yielding approximately 190 participants per country.

The use of the same quota sampling recruitment method and the implementation of standardized experimental instructions and procedures in each country ensured the cross-country comparability of the datasets.

Approximately 190 subjects per country were recruited in each country, for a total of 1145 participants in the study. All participants possessed at least a 4th grade reading level, had lived in the given locality for at least one year, and were citizens of the country studied.

Experimental Paradigm

The research was designed to assess individual propensities to cooperate with local and global others in a Multi-level Sequential Contribution (MSC) experiment. The MSC protocol resembles that of a multi-level public goods experiment (Blackwell & McKee, 2003; Wit & Kerr, 2002) except that participants do not make decisions directly affecting those in their concurrent groups. Participants decide whether to make a contribution and their choice affects their own payoff and also affects the payoffs of others in future sessions.

The full experiment consisted of three contribution decisions-- the local, national and global public goods. For purposes of the current research we focus only on the local and global (or world) decision data. For each decision participants were given 10 tokens. One token was worth the purchasing power equivalent of US \$0.50.

In the first decision, Decision L (local), participants were faced with the same incentives as in a standard one-shot public goods game. This initial two-choice decision served to familiarize participants with the basic experimental task and to establish baseline levels of cooperation for each participant. In Decision L, the task was to decide how to allocate tokens between their “personal” account and a “local” account. Each token put into the personal account was saved and was worth a single token. Each token put into the local account was

doubled by the experimenter and shared equally between the participant and three other (anonymous) participants from the same local area. Likewise, the participant received an equal share from the tokens that the other three local participants put into their local accounts. Therefore, the return to each individual for each token allocated to the local account – namely, the Marginal Per Capita Return (MPCR) - is 0.5. In contrast, the return *to the group* – that is, the marginal social return (MSR) - equals 2. As in every public goods game, a selfish individual would allocate all their money to their personal account because the collective account has a smaller return than the personal account. Were all individuals selfish, each participant would end up with their initial 10 tokens. In contrast, were all individuals of a group to allocate their endowment to their local accounts, this would result in a payoff of 20 tokens to each group member.

In Decision W (world) participants chose how much to allocate between their personal account, their local account and their “world” account. The structure of incentives of the personal and local accounts was identical to that of Decision L. Tokens placed in the World account were instead *tripled* by the experimenter and split equally among a “world” group of 12 people. The world group was made up of the participant, a new group of three (anonymous) local people benefiting from the local account – plus two groups of four people from different countries. Participants were not told which countries these other participants were from, but were informed that these countries might have been from any of the four continents where the research was conducted. Each participant received a one-twelfth share of the allocations that all twelve people made to their world accounts.

A schematic representation of Decision W is depicted in Figure 1. The design of this game maps onto the nature of local-global relations. Globalization does not exclude the local constituency but expands inclusion to both local and non-local actors.

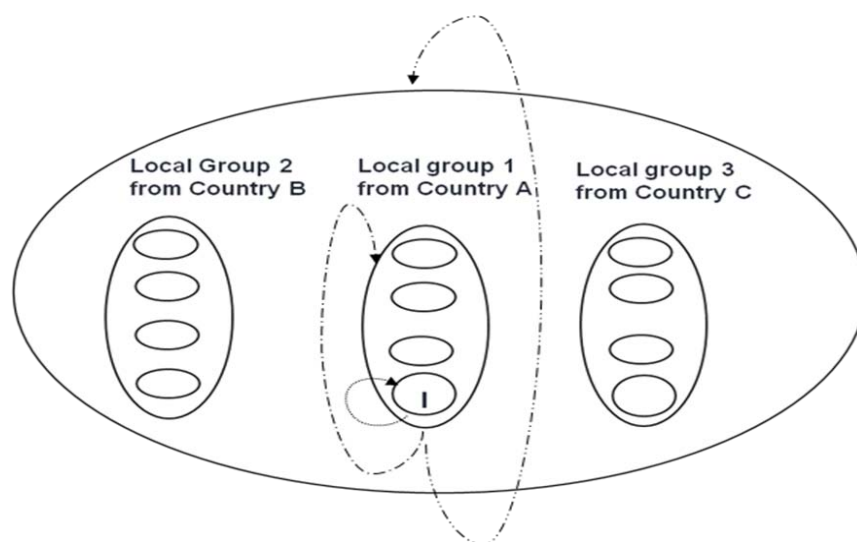


Figure 1 This diagram represents the nested nature of the third “World” decision made by participants. Individual “I” may allot the money to their personal account and/or allot it to their “Local” group account. I’s Local Group 1 contains four participants from Country A. The “World” group is made up of 12 participants; four each from Local Group 1 from Country A, from Local Group 2 from Country B, and from Local Group 3 from Country C. [Figure reprinted, with permission, from Buchan et al. (2009), copyright National Academy of Sciences, U.S.A.]

The MPCR from allocations to the world account is equal to .25, which is less than the MPCR from the Local account, .50. In contrast, the MSR of contributions to the World account is equal to 3.0, thus it is larger than the MSR of the Local account, 2.0. Consequently, if all individuals allocated their endowment to their World account in Decision W, this would result in a larger payoff (30 tokens) to each participant, than if all allocated their endowment to their local accounts (20 tokens). This structure of incentives characterizes a multi-level public goods dilemma. A contribution to a higher-order public good typically benefits a larger number of people but at a smaller rate of return than a contribution to a lower-order public good.

Expectancy Measure

Just after completing their decisions regarding the Local and World allocations in the MSC experiment, participants were asked to answer questions regarding their expectations of group members' cooperative behavior. Specifically, each participant was asked to write on a form how many tokens they believed their fellow members in the Local group allocated to the Local account in Decision L. Then on a separate form they were asked how many tokens they believed their fellow members in the Local group allocated to the Local account in Decision W, and how many tokens they believed their fellow members in the World group allocated to the World account in Decision W. This type of expectancy measure is a common operationalization of trust with the expectancy measure typically assessed after the contribution decision has been made. Because of this, any relationship between trust and cooperation is causally ambiguous; it may be that individuals are projecting their own choices onto fellow group members or using expectations to justify previous actions (Dawes, McTavish, & Shaklee, 1977). When expectancy measures are taken immediately after the decision has been made the potential for this projection is particularly strong. For this reason, we assessed expectancies about earlier decisions after some delay. Even with this delay factor, however, we assume that the relationship between an individual's own contribution decision and their reported expectancies about others' contributions is a mutually reciprocal one.

Questionnaire Measures

After participants completed the decision trials and submitted their confidential contributions, but before they received information about their final payoffs, all participants completed an 11-page questionnaire. Responses to this questionnaire provided data for our

measures of individual globalization and global social identity, as well as basic demographic information on participant sex, age, education, and income level².

Individual level globalization index. The Individual-level Globalization Index (IGI) is analogous to the Country-level Globalization Index (CGI) and measures the degree to which an individual participates in the network of global economic, social and cultural relations. A typical question asks the frequency with which the individual utilizes a certain medium of global connection. For example a cultural interaction question is, “How often do you watch a television program or movie from a different country?” A typical question may also regard the scope with which the individual utilizes a global connection. For example, a social interaction question asks, “If you use a mobile phone, do you use it to contact people living in other parts of your country, or people living in other countries?” Finally, questions may simply query whether the individual is involved in an interaction that is global in character. For example, a question regarding economic interactions is, “Do you work for a multinational or foreign-owned company?”³

Most questions on the IGI are Likert scaled, with the lowest category denoting a lack of ownership or access of a particular medium of connection and the highest category denoting the highest frequency of use or interaction. The scores to each question have been reverse-scored when necessary, and normalized to the [0,1] interval, such that a score of 0 always corresponds to the lowest possible occurrence of an event or circumstance - e.g. a lack of access to an international news source, and a score of 1 is associated with the maximum possible occurrence - e.g. highest possible frequency in watching or listening to an international news source (Buchan et al., 2009). The normalized scores have then been summed up and divided by the number of the questions answered by the individual. As for the multiple choice questions asking the area

(local, national, international) in which a subject carries out a certain activity, we assigned a lexicographic score reflecting the broadest area within which the subject has interactions. That is, scores of 1/0.5/0.25 were assigned if the subject answered she has international/national/local interactions, respectively, and a score of 0 if the subject has no such interaction.

Social identity. Also included on the questionnaire was a three-item social identification measure assessed at the levels of the local community, the nation, and the world. For example, in the Soweto experiment location in South Africa, these items read: “How strongly do you feel attachment to your community in Soweto?” “How strongly do you feel attachment to your community in South Africa?” “How strongly do you feel attachment to the world as a whole?” “How strongly do you define yourself as a member of your community in Soweto?” “How strongly do you define yourself as a member of your community in South Africa,” “... of the world as a whole?” “How close do you feel to other members of your community in Soweto?” “... in South Africa,” “... to the world as a whole?” Each item was Likert-scaled from 1 to 4 where 4=very much and 1= not at all.

Subsequent analysis demonstrated that the Cronbach alpha of the three social identity items was .78 at the local level, .72 at the national level, and .75 at the world level. Therefore, the social identification scale at each level (Local Social Identity, LSI, National Social Identity, NSI, and Global Social Identity, GSI) was summated with all three items equally weighted, resulting in possible scores ranging from 3 to 12.

Results

Of the 1145 participants in the study, there were complete dependent variables (that is, contribution data for both the Local and World accounts) for 1122 of them. However, among the 1122 individuals, missing questionnaire data – corresponding to our independent variables –

appeared randomly across people and across countries. To address this we used PROC MI, a multiple imputation procedure in SAS, to represent a random sample of the missing values. Compared to other approaches to handling missing data, MI consistently produces less biased and more efficient estimates (Rubin 1996).

Cross-national comparisons

Table 1 provides the basic descriptive statistics from our sample across countries on the key measures of interest; contributions to the world account, expectations about others' contributions to the world account and global social identity (GSI). The countries have been listed on the table in ascending order of their country level globalization (CGI).⁴ Buchan et al. (2009) demonstrated that country differences in globalization are a highly significant predictor of mean contributions to the world account; as country-level globalization increases, so too do world contributions. Given the differences among countries in globalization and also in mean levels of our predictor variables, country was always included as a control variable in our analyses of individual level effects.

TABLE 1: Means and Standard Deviations for Primary Measures: Cross-National Comparisons

		Mean	SD
IRAN (<i>N</i> =179)	World Contributions	3.42	2.81
	Expectation	3.06	3.23
	GSI	6.63	2.12
SOUTH AFRICA (<i>N</i> =159)	World Contributions	3.81	1.98
	Expectation	3.73	2.77
	GSI	7.88	2.76
ARGENTINA (<i>N</i> =201)	World Contributions	3.81	2.84
	Expectation	5.19	2.80
	GSI	7.24	2.57
RUSSIA (<i>N</i> =207)	World Contributions	4.70	2.66
	Expectation	5.89	2.79
	GSI	7.85	2.47
ITALY (<i>N</i> =205)	World Contributions	4.49	2.87
	Expectation	5.15	2.71
	GSI	8.89	2.01
USA (<i>N</i> =171)	World Contributions	5.79	3.16
	Expectation	5.78	2.75
	GSI	8.29	2.35

Intercorrelations

The individual level intercorrelations between world contributions, expectations, individual level globalization (IGI) and all levels of social identity are shown in Table 2. As expected, there is a high and significant correlation between world contributions and expectations, $r=.53$, $p<.01$, consistent with the hypothesized reciprocal relationship between the two measures.⁵ We also see the predicted significant relationship between IGI and global social identity (GSI), although the level of correlation is modest, $r=.21$, $p<.01$. Finally of note is the strong intercorrelation among the social identity measures, particularly national and global, $r=.41$, $p<.01$, and local and national, $r=.53$, $p<.01$. Despite this, only the measure of global

social identity had a significant bivariate correlation with globalization or with world contributions.

TABLE 2: Intercorrelations among World Contributions, Expectations, Individual Globalization Index (IGI) and Social Identity (Global, National and Local) (N=1122)

	World Contributions	Expectation	IGI	GSI	NSI	LSI
World Contributions						
Expectation	.531***					
IGI	.162***	.203***				
GSI	.206***	.177***	.206***			
NSI	0.004	0.004	0.047	.412***		
LSI	-0.025	-0.016	-0.014	.290***	.535***	

* $p < .10$. ** $p < .05$. *** $p < .01$.

Regression Analysis

At the heart of our analysis is the prediction of world contributions from the IGI, GSI, and expectations, controlling for country, baseline cooperation (local contributions) and local and national identity. The results of this regression are shown in Table 3. As anticipated, expectation is the most important variable in the model, affirming the reciprocal relationship between expectation of cooperative behavior and contributions. Furthermore, although IGI is correlated with world contributions, it is not a significant predictor of contributions when GSI and expectations are included in the model. This is an interesting result because IGI is a significant predictor of world contributions when these variables are not included in the regression (Buchan et al., 2009). However, individual globalization does not have any direct relationship with world contributions once its association with expectations and global identity

are taken into account. GSI, however, does have a significant independent effect, above and beyond the effect of expectation, even after the influences of country, SES, baseline cooperation and local and national identity have been taken into account.⁶

TABLE 3: Prediction of World Contribution with Control Variables

	<i>Standardized Regression Weight^a</i>
Income	.05*
Education	.04*
Local Contribution	.33***
IGI	-.01
LSI	-.02
NSI	-.01
GSI	.09***
Expectation (Global)	.41***

* $p < .10$. ** $p < .05$. *** $p < .01$.

^aRegression values after including country dummy codes as control variables

Interpreting Global Social Identity

Given the importance of global social identity in influencing contributions to the global public good, we wished to explore further what individual difference variables might be associated with GSI. In addition to the IGI and social identity items discussed previously, included in the questionnaire used in this study were items relating to voluntary association membership and concern with global issues, and these items were selected as the focus of additional analysis.

To assess Association Membership participants were asked about their level of involvement in a number of voluntary organizations such as churches, educational organizations,

health organizations, sports organizations, or environmental organizations. The level of involvement ranged on a 1-3 scale from “I do not belong and do not follow their activities” to “I do not belong but I sympathize with some of their activities” to “I belong”. The 10 items in this measure were summed and equally weighted to form the Association Membership variable for analysis (Cronbach’s $\alpha=.71$).

The measure of Concern for Global Issues was composed of four items. Participants were asked, “How concerned are you with the following issues: Global warming, The spread across the planet of potentially dangerous diseases (e.g. HIV, SARS, bird flu), Making the action of International Criminal Courts of Justice more effective, The persistent gap between rich and poor people around the world”. Again the items were summed and equally weighted to form the Concern variable (Cronbach’s $\alpha=.64$). The correlation between Concern for Global Issues and Association Membership was $r = .11$, $p < .01$, indicating that these are related but distinct variables.

We regressed the 10-item measure of Association Membership (Cronbach’s $\alpha=.71$) and the four-item measure of Concern for Global Issues (Cronbach’s $\alpha=.64$) on global social identity while controlling for the effects of LSI and NSI. The regression results are shown in Table 4. Identification with one’s local community and one’s nation and global identity were significantly positively related. This supports the idea that global identity does not entail a rejection of identification at national and local levels but rather incorporates them at a higher level of inclusiveness.

After accounting for the effects of national and local social identity, Concern for Global Issues is a significant predictor of residual GSI; the more concern individuals feel about issues of importance to the global community, the more likely they are to identify with it and vice versa.

Not surprisingly, identification and concern about the welfare of the group as a whole are generally closely related (Brewer, 1991; Leach et al., 2008) and this appears to be the case at the level of global identity as well.

Finally, Association Membership also made a significant unique contribution as a predictor of GSI in the model; the more involved someone is in voluntary associations, the stronger is their global social identification. This relationship is of interest because, although many associations may have a global reach, membership participation is usually at the local level. Nonetheless, simply belonging to such organizations may contribute symbolically to a sense of belonging to a global community.

TABLE 4: Prediction of Global Social Identity

	<i>Standardized Regression Weight</i>
Global Concern	.16***
Association Membership	.18***
NSI	.34***
LSI	.06**

* $p < .10$. ** $p < .05$. *** $p < .01$.

Having identified global concern and association membership as significant correlates of global social identity, we re-ran the regression analysis reported in Table 3, replacing GSI with these measures. Neither global concern nor association membership contributed directly to predicting global contributions. This suggests that, although these variables may be antecedents of global identity at the individual level, they do not serve as proxies for GSI and do not account for the unique relationship between GSI and global cooperation.

Discussion

To return to the original questions underlying the present investigation, the results from this multi-nation study suggest that an inclusive social identification with the world community is a meaningful psychological construct and that it plays a role in motivating cooperation that transcends parochial interests. Further, self-reported identification with the world as a whole predicts behavioral contributions to a global public good above and beyond expectations about what other participants in the group are likely to contribute. In line with the mechanism of goal transformation, global social identity is associated with a generalized concern for global welfare that may motivate individuals to contribute to collective goods regardless of whether they expect a return on their investment or not. Cooperation that does not depend exclusively on reciprocal trust may be required to solve social dilemmas under conditions where well-developed group norms, mutual recognition of shared group identity, and group sanctions for noncooperation are absent. Symbolic identification with “the world as a whole” may serve to generalize the psychology of ingroup behavior to a more inclusive collective that transcends the requirement of defined group boundaries.

Although our empirical evidence for the role of global social identity in motivating global cooperation is purely correlational, the present study has the strength of a behavioral outcome measure. Participants in this study who describe themselves as identified with the world community literally “put their money where their mouth is” in making decisions to contribute significant resources at potential cost to personal wealth. The monetary outcomes in the present experiment were not trivial; across the three decision tasks participants had the potential to acquire the equivalent of \$40 U.S. or more, depending on what they and others in their randomly assigned groups contributed to the collective accounts. Yet for each token that an individual

contributed to the world account, he/she could only count on getting .25 back as their share of the collective good, so choosing to contribute is a risky choice that sacrifices self-interest for the sake of increasing the collective wealth. Thus, the correlation between self-reported global social identity and cooperation observed in this study cannot be attributed to shared methods variance. Behavioral correlates of global social identity are also evidenced by the significant relationship between global social identity scores and reported membership in voluntary associations, which also reflect a willingness to commit time and resources to collective welfare.

The nature of our sample – taken from the general population of six countries from around the world – is unique and adds to the external validity of our findings. Our participants ranged in age from 18 to 75 and were men and women who represented a broad spectrum of levels of socio and economic status in countries that themselves ranged widely in aggregate levels of globalization. Taking our experiment out of the college laboratory into the outside world certainly provided us with the variance needed on the individual globalization index, but also gives us a greater degree of confidence that our research will have relevance to larger segments of the populations of the societies examined.

The seminal article to come out of this research project demonstrated that globalization, both at the macro (country level) and micro (individual) levels is correlated with increased cooperation at the global level (Buchan et al. 2009). In the current work we have shown that global social identification also has a powerful motivating influence on global cooperation. A key implication of the significant correlation between individual globalization and global social identity is for building global social identification via increased global connectivity. Sources of global connectivity include communication technology, travel, participation in multi-national organizations, and the consumption of cultural artifacts (art, goods, music, etc.). Through

increasing connectivity, one may increase global social identification and globalization, and will very likely increase individual motivation to cooperate at the global level.

Many of the global social dilemmas we face today – global warming, resource depletion, the international banking crisis – require overcoming nationalistic self-interest and distrust. Yet existing theories of altruistic cooperation in large groups focus on parochialism - cooperation biased in favor of ingroups such as ethnic groups or nations (e.g., Bernhard, Fischbacher, & Fehr, 2006; Choi & Bowles, 2007; Gil-White, 2001; Richerson, Boyd, & Henrich, 2003; Yamagishi, Nobuhito, & Kiyonari, 1999). Such parochial-centered theories may actually reinforce nationalistic self-interest and distrust across nations. The current research is the first to empirically demonstrate that awareness of global interdependence and participation in global associations may contribute to a sense of global social identification and to a strong motivation to cooperate in a large scale global social dilemma that ultimately transcends parochial nationalistic interests.

There is a final word of caution for this research however; anti-globalization reactance is alive and well. As an example, Chua (2003) suggests in her book *World on Fire*, that as global markets open, ethnic conflict worsens and democracy in developing nations turns violent. Using examples in Africa, Asia, Russia and Latin America, she discusses how free markets and increasing globalization have concentrated spectacular wealth in the hands of a resented ethnic minority, making these minority populations targets of violent hatred and distrust. In contrast, the majority populations in these countries feel little of the positive effects of globalization when comparing themselves to the rich ethnic minority. In essence, globalization “has repeatedly catalyzed ethnic conflict in highly predictable ways, with catastrophic consequences, including

genocidal violence and the subversion of markets and democracy themselves” (Chua, 2003, pg. 10). Thus, parochialism on an ethnic and local level is firmly entrenched.

The current research suggests that policy-makers need to be aware that the speed at which globalization is enacted is a key factor in reaping its potentially positive effects. Too fast a process of globalization may backfire. A gradual approach, on the other hand, which allows for the social and cultural components of global connectivity to be engaged - not merely the economic ones - is likely to bring about benefits associated with the development of collective identity at the global level.

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Footnotes

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- ¹ See Lockwood B, Redoano M (2005) <http://www2.warwick.ac.uk/fac/soc/csgr/index/>
- ² Income denotes the income decile to which a participant responded s/he belongs within his/her country's income distribution. It is therefore to be understood as a country-specific measure.
- ³ The full Individual Globalization Index (IGI) can be accessed online at <http://go.warwick.ac.uk/gct>.
- ⁴ According to the Country-level Globalization Index produced by the Centre for the Study of Globalization and Regionalisation at the University of Warwick, the countries in this study have the following globalization rankings (on a 0-1 scale): Iran .1996, South Africa .3398. Argentina .3839, Russia .6020. Italy .6722, USA .8700.
- ⁵ Note, however, that in at least three countries, the average reported expectation of others' contributions was substantially higher than the mean of own contributions, suggesting that, for some participants at least, trust in others' generosity provided an opportunity for exploitation rather than reciprocation.
- ⁶ The variables of gender and age were shown not to contribute significantly in our previous work predicting world contribution. Therefore, gender and age were left out of the model in this research.