

Generalizing Trust: The Benign Force of Emancipation

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Abstract

Trust in people is general insofar as it extends to out-groups, that is, unfamiliar and dissimilar others. But whether trust in out-groups can emerge *independently* from in-group trust is controversial, and conclusive evidence has been unavailable. This article fills this gap, analyzing which conditions create out-group trust *independent* from in-group trust. Using data from 76 countries around the world, we establish three insights. First, while a high level of in-group trust is the rule, out-group trust varies greatly across countries. Second, out-group trust emerges independent from in-group trust when human empowerment emancipates people from in-group control. Third, other conditions championed as trust-crediting forces do not confound the effect of human empowerment. In conclusion, trust generalizes to out-groups as a result of human empowerment's emancipatory impulse.

Keywords

emancipation, empowerment, social capital, trust

Introduction

According to a widely held view, generalized trust in people provides the solution to any cooperation dilemma under which societies could possibly suffer (Coleman, 1988; Ostrom, 1994; Putnam, 1993). There is agreement that trust in people is general insofar as it extends to out-groups, that is, unfamiliar and dissimilar others (Fukuyama, 2000; Uslaner, 2002). An unresolved question is to what extent out-group trust emerges *independent* from in-group trust.

Some scholars suggest that in-group and out-group trust are antipodes. Advocates of this position consider in-group trust as a manifestation of group closure—something that can only be sustained if one distrusts out-groups. Others postulate a symbiotic relationship between in-group and out-group trust. This view exists in two versions. The *unity version* sees in-group and out-group trust as indistinguishable reflections of a single trust disposition; the *prerequisite version* considers in-group trust as a necessary, albeit insufficient, condition for out-group trust.

Until recently, most of this issue was speculation because there was no data allowing for cross-cultural generalizations concerning the link between in-group and out-group trust. This situation changed with the recent rounds of the World Value Surveys, which for the first time

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fielded questions addressing both types of trust. Four studies take advantage of this opportunity. Across 50 countries, Welzel (2010) finds that in-group trust always associates positively with out-group trust and does so at both the individual and country level. Despite this positive link, three other studies show that in-group and out-group trust are dimensionally distinct (Delhey, Newton & Welzel, 2011; Lolle & Torpe, 2011; van Hoorn, 2014).

We build on these findings but take a new look at how out-group trust relates to in-group trust. Specifically, we divide out-group trust into two parts. One part exists in extension of in-group trust to out-group members. This part of out-group trust derives from in-group trust. For the sake of brevity, we call it *derivative* out-group trust. The other part emerges independent from in-group trust. In that sense, it transcends in-group orientations and we call it *transcendent* out-group trust accordingly.

There are reasons to assume that modern societies increase the importance of transcendent relative to derivative out-group trust. Modern societies pool masses of remote people into aggregations as huge as entire nations (Durkheim, 1893/1988; Granovetter, 1973; Simmel, 1908/1984; Tönnies, 1887/1955). Markets and states function on a national scope because of the daily interactions between people who are unfamiliar to each other and who differ by origin. Because this means cooperation across group boundaries, modern societies need out-group trust to operate (Realo, Allik, & Greenfield, 2008). The need for out-group trust increases at the same time as the need for in-group trust decreases. The reason is that in-group cohesion loses its importance for social integration as societies modernize; modern societies sustain integration through the complementarity of the skills in which individuals specialize (Beck, 2002). This leads us to the main point: Under the dwindling centrality of in-group cohesion, rising needs for out-group trust can be satisfied only if out-group trust emerges independent from in-group trust. From this proposition follows our key question: Which conditions help to create such *transcendent* out-group trust?

In answering this question, we rely on Welzel's (2013, 2014) *evolutionary emancipation theory* (henceforth EET). EET focuses on "human empowerment" as an axial trend of modernization. Human empowerment denotes processes that allow people to develop and utilize their most distinctively "human" potential: making purposeful choices and acting in their pursuit. When increasing population segments become empowered in this sense, people's dependence on closely knit in-groups dwindles. Emancipation from in-group control opens new opportunities to engage in beneficial exchange with out-group members. In recognition of these new opportunities, people give it a try and credit trust to out-group members, anticipating that others reciprocate and act benevolently in regard of mutual benefit (Welzel, 2013, Chapter 6).

In summary, EET suggests that out-group trust diffuses in response to people's emancipation from in-group control—a process induced by human empowerment. This hypothesis is implicit in EET but has not been directly tested. This article does so for the first time, presenting the broadest evidence ever used in the study of trust.

The remainder of the article proceeds in four sections. The first section reviews the literature. Section two specifies our distinction between derivative and transcendent out-group trust and summarizes our argument about human empowerment as a trust-crediting force. Section three describes the data and methods while section four presents the findings. We close with a discussion.

Literature Review

Many scholars consider the distinction between in-group and out-group trust as crucial (Beugelsdijk & Smulders, 2004; Portes, 1998; Sztompka, 1999). In-group trust is limited to people with whom one has some familiarity, be it on the basis of kinship, acquaintance, or neighborhood. Out-group trust relates to people whom one does not know or who differ by origin, like national or religious origin—two of the most powerful sources of collective identity formation (Gat, 2013). Despite wide recognition of the in-group/out-group distinction, there are conflicting views about this distinction's divisive force.

An old strand of thought sees in-group trust as dominant in traditional societies in which lineage-based group formations establish impermeable insider/outsider boundaries (Durkheim, 1893/1988; Granovetter, 1973; Tönnies, 1887/1955). Individuals are rigidly in-group controlled (Geertz, 1963), and exchange is insured by the means of *familism*: For two parties to cooperate, a bond of intimacy must be created whose rupture is costly because it justifies private revenge by the betrayed party (Banfield, 1958). The particularistic treatment inherent in familism cements the primordial pattern of in-group favoritism and out-group discrimination (Smelser, 1965, Chapter 5), which breeds in-group trust but blocks out-group trust (Uslaner, 2012).

This antagonistic conception resonates with findings in psychology. When people perceive an in-group/out-group boundary, they trust insiders more than outsiders (Tajfel, 1970; Yuki, Maddux, Brewer & Kosuke, 2005). Several ethnographic studies confirm the antagonistic conception of in-group and out-group trust (Banfield, 1958; Chagnon, 1992; Ensminger, 2001; Gambetta, 1988; Gellner, 1983). Moreover, a sample of voluntary associations in the United States and Sweden finds that out-group trust is low among members of associations with high in-group trust (Stolle, 1998). Despite these findings, broadly comparative evidence demonstrating a uniformly inverse link between in-group and out-group trust is inexistent.

The unity-theory assumes a positive link between in-group and out-group trust. Advocates of this approach consider trust in others as a personality trait that operates indifferent of particular addressees (cf. Glanville & Paxton, 2007). Trust in others represents in this view a philanthropic belief in common people's benevolence, irrespective of origin (Allport, 1954; Clark, Putnam, & Fieldhouse, 2010; Rosenberg, 1957). We know, however, of no evidence demonstrating across many countries that in-group and out-group trust are indistinguishable reflections of a single trust dimension.

The prerequisite-theory also assumes a positive link between in-group and out-group trust, but not so strong that the two merge into a single dimension. Specifically, this theory considers in-group trust as a necessary but insufficient condition of out-group trust (Uslaner, 2002). Hence, even though the link is supposedly positive, it is expected to be so loose that the two types of trust remain dimensionally distinct (Fukuyama, 2000; Sztompka, 1999).

Some fragmented evidence confirms this expectation. A study of German respondents finds that trust in close and remote others represent two distinct but positively correlated dimensions (Freitag & Traunmueller, 2009). Likewise, a study in Russia shows that many people combine high in-group with high out-group trust (Bahry, Kosolapov, Kozyreva & Wilson, 2005). For the United States, Glanville and Paxton (2007) demonstrate that trust develops from trust in close others to trust in remote others.

Four recent studies support these views on a broader basis of evidence. A study of 50 countries shows that in-group trust always relates positively to out-group trust, at both the individual and country level (Welzel, 2010). Another three studies of the same countries add that—despite their positive link—in-group and out-group trust represent two distinct dimensions (Delhey et al., 2011; Lolle & Torpe, 2011; van Hoorn, 2014).

Despite these new insights, we lack knowledge of the extent to which out-group trust emerges independent from in-group trust and which conditions help generate such transcendent out-group trust. This is the gap in the literature that this article aims to fill.

Conceptual Framework

Out-Group Trust and Human Empowerment

Out-group trust might exist in two versions. In one version, out-group trust derives from in-group trust, which we label *derivative* out-group trust for this reason. If out-group trust exists primarily in the derivative form, by definition it varies for its most part in unison with in-group trust. In this

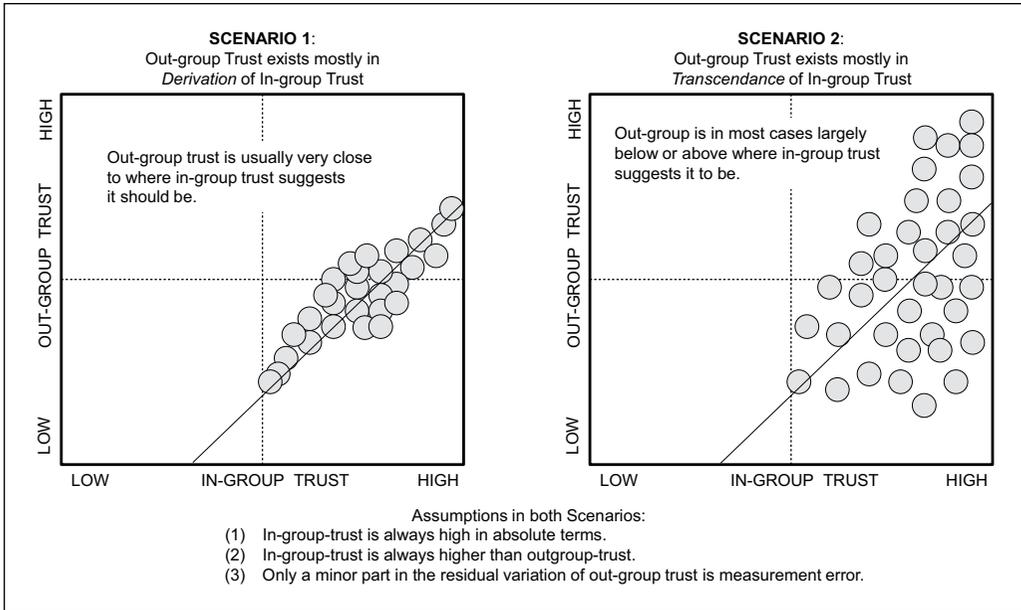


Figure 1. A model of derivative and transcendent out-group trust.

case, the relationship between in-group and out-group trust looks like in the left-hand diagram of Figure 1. If, however, out-group trust varies for its most part *independent* from in-group trust, a second version of out-group trust is present. Because this version exists independent from in-group trust, it transcends in-group orientations. We understand it as *transcendent* out-group trust in that very sense. Should this be the dominant version of out-group trust, its relationship to in-group trust would look like in the right-hand diagram of Figure 1.

Human empowerment is a key feature of modernization—a process that advances through the individuals' increasing specialization on complementary skills (Welzel, 2013). Because complementarity cuts through group boundaries, in-group cohesion diminishes and so does the individuals' dependence on in-groups. At the same time, complementarity enhances the benefits from group-bridging cooperation (Beck, 2002; Simmel, 1908/1984). To be able to reap these benefits, people need to credit trust to out-group members. But under the diminished centrality of in-groups, the needed out-group trust can grow only if it emerges independent from in-group trust. Hence, transcendent out-group trust is of special importance for modern societies.

Human empowerment denotes all processes that unlock people's potential to make purposeful choices and to act in pursuit of these choices. In this broad sense, human empowerment is a composite of various partial empowerments, of which Welzel (2014) distinguishes cognitive, motivational, behavioral, and institutional empowerments.¹

Cognitive empowerment proceeds when broadening access to education and information and tasks of an increasingly analytical character elevate people's ability to think for themselves (Flynn, 2012). Motivational empowerment advances when growing population segments internalize an emancipatory desire to live self-determined lives (Ryan & Deci, 2000). Behavioral empowerment progresses when people's action repertoire extends into impactful activities, most notably the voicing of shared concerns in social movements (Deutsch & Welzel, 2012). Institutional empowerment increases when universal rights entitle people to act in pursuit of their individual and collective choices (Welzel, 2013).

When all these partial empowerments come together in ways that include all population segments, the respective country reaches an advanced level of human empowerment.

We define human empowerment as an *aggregate* attribute of populations because our notion focuses on human empowerment's inclusiveness, which is something that can only be evaluated in the aggregate. Nevertheless, one can also identify the components that empower people at the individual level, so as to measure how much a given person is "empowered." To distinguish empowerments at the two levels, we reserve the term *human empowerment* for the aggregate level. With respect to persons, we speak about "individual empowerment."²

Whether considered at the individual level or in the aggregate, empowerment inevitably diminishes people's dependence on closely knit in-groups. Diminished in-group dependence creates new opportunities to cooperate with out-group members. And these opportunities hold greater potential for mutual benefit in countries that are advanced in human empowerment. The reason is that empowerment includes the acquisition of specialized skills, which complement each other across group boundaries. Hence, empowerment widens the opportunities and enhances the utility of cooperation across group boundaries. In recognition of this, people are more inclined to credit trust to out-groups. As we will demonstrate, the trust-crediting effects of empowerment operate simultaneously at the country and individual levels and are mutually reinforcing. This becomes manifest in four observations:

1. Irrespective of a country's aggregate empowerment level, people who are more empowered than most others, trust out-group members more.
2. A country's aggregate empowerment nevertheless matters: It elevates a person's out-group trust above the level that her own empowerment alone suggests. Thus, the countries' aggregate out-group trust increases with their aggregate empowerment.
3. A country's aggregate empowerment amplifies the trust-crediting effect of individual empowerment. Such amplifier effects represent an important regularity in multilevel contexts called "social cross-fertilization": The inherent impulse of a characteristic unfolds more freely when more people share this characteristic (Welzel, 2013, pp. 110-112, Box 3.1). In our case, the trust-crediting impulse of individual empowerment amplifies when empowerment is a more widely shared characteristic.
4. The trust-crediting effects of empowerment operate independent from in-group trust, thus creating transcendent rather than derivative out-group trust.

Alternative Sources of Out-Group Trust

We will demonstrate that the trust-crediting effect of human empowerment is not confounded by alternative forces championed in the literature. The alternative forces include associational activity, existential security, functioning institutions, social separations, cultural legacies, and some individual-level characteristics (for an overview of trust-crediting forces, see Delhey & Newton, 2005; Delhey et al., 2011).

One of the conditions cited frequently as a trust-crediting force is *activity in voluntary associations* (Fung, 2003; Paxton, 2007; Putnam, 1993; Warren, 2001). The argument is that voluntary associations bring together people who differ by origin and are unfamiliar to each other prior to entering an association. Thus, activity in voluntary associations generates cooperative experiences that bridge group boundaries.

Other scholars emphasize existential security as a trust-crediting force (Inglehart, 1997; Inglehart & Welzel, 2005). When people experience security from such fatal threats as famine, violence, and death, they lose fear of people who are unfamiliar and differ by origin. On this basis, out-group trust can grow.

Another frequently mentioned trust-crediting force is functioning institutions. When there is a stable order, rule of law, and low corruption, social interactions become predictable and agreements reliable (Alesina & La Ferrara, 2002; Axelrod, 1984). Like existential security, functioning institutions enhance feelings of certainty—which creates a trustful social climate (Freitag & Traummüller, 2009).

Still another issue is social separations in matters of income, ethnicity, language, and religion. Many scholars argue that separations are detrimental to out-group trust because they tie people more closely to their in-groups (Bjornskov, 2008; Putnam, 2007; Yamagishi & Yamagishi, 1994). In line with this thinking, Woodley and Bell (2012) argue that the prevalence of “consanguine” marriages within clan circles indicates in-group closure, which is supposedly detrimental to out-group trust. While the evidence for a negative influence of income polarization and consanguine in-group closure on out-group trust seems clear, the evidence for ethnic and linguistic fractionalization and even more so for religious pluralism is more ambivalent (Gesthuizen, van der Meer & Scheepers, 2009; Hooghe, Reeskens, Stolle & Trappers, 2009; Kesler & Bloemraad, 2010).

Trust levels of given countries are very stable, at least over time periods shorter than a decade (Delhey & Newton, 2005; Inglehart & Welzel, 2005). This pronounced persistence in aggregate patterns suggests that trust is an inherited feature of a country’s culture. Accordingly, scholars argue that certain cultural legacies are favorable and others detrimental to trust. An organizing principle sorting out the favorable from the unfavorable legacies is their relationship to individualism-versus-collectivism (Fukuyama, 2000; Hofstede, 1983; Triandis, 2005). Collectivism ties people tightly to in-groups and is considered detrimental to out-group trust for this reason; by the same token, individualism is conducive to out-group trust because it emancipates people from in-group control (Allik & Realo, 2004; Realo et al., 2008). Consistent with this interpretation, three cultural legacies are characterized as detrimental to out-group trust because of their collectivistic tradition: Confucianism (Fukuyama, 2000; Yamagishi & Yamagishi, 1994), Islam (Inglehart & Norris, 2003), and communism (Rose, 2000).³ Equally consistent, Protestantism is characterized as conducive to out-group trust because of its individualistic orientation (Delhey & Newton, 2005).

Individualist-versus-collectivist legacies are linked with the emancipatory tendencies of human empowerment, visible in a strong positive correlation between emancipative values and individualism, and an equally strong negative correlation between collectivism and emancipative values (Welzel, 2013, pp. 82–84). This linkage suggests that emancipation and empowerment are inherent features of individualism.

Scholars show an increased interest in the *original sources* of individualism, its emancipatory tendencies, and the resulting prominence of out-group trust. This renewed interest in original sources has drawn attention to language. Even though languages are in flux, most of the written languages’ grammar structures crystallized long ago. Because grammar structures shape human cognition, their persistence perpetuates certain orientations, making them an inheritable feature of culture (Kashima & Kashima, 1998; Licht, Goldschmidt & Schwartz, 2007). Accordingly, one can infer a country’s individualistic tradition from individualistic features in its main language’s grammar, such as the prominence of personal pronouns. Indeed, Meyer-Schwarzenberger (2014) created a 10-point index of “linguistic individualism” that provides scores for almost 80 countries around the globe. As the author demonstrates, a country’s degree of linguistic individualism has a strongly positive effect on its aggregate emancipative values.

Linguistic individualism indicates a culturally inherited orientation toward individualism but does not explain why this orientation became encoded in some languages but not others. By contrast, the “parasite stress theory of sociality” offers an intriguing explanation of the original source of individualism, its emancipatory tendency, and the resulting prominence of out-group trust. As Thornhill, Fincher, and Aran (2009) argue, a high incidence of communicable diseases in a country’s *preindustrial* history fostered in-group closure, diminished individual autonomy,

and, thus, prevented a culture of out-group trust. By the same token, a low natural incidence of communicable diseases had the opposite effects (Murray & Schaller, 2010).

Another feature supposed to pinpoint the original source of individualism and its positive consequences on out-group trust is the “cool water condition”—a phenomenon introduced and documented by Welzel (2013, pp. 338-344; 2014). The cool water condition represents the combination of relatively cold temperatures throughout the seasons with high continuous levels of rainfall on a given country’s inhabitable territory. The key feature of the cool water condition is that it embodies “water autonomy”: equal, easy, and permanent access to fresh water resources for all individuals on a given territory. Water autonomy forecloses the monopolization of water supply as a means of controlling people. Water autonomy is an existential root autonomy that serves as the source of derivative autonomies—such as autonomy in market access and property disposal—once urban development sets in. Welzel argues and evidences that the cool water condition is an original source of Western civilization’s orientation toward individual autonomies, contractual relations, and a culture of out-group trust.

Another original source of out-group trust could reside in genes. The burgeoning literature on gene–environment interactions establishes with increasing clarity that trait-encoding genes distribute in different frequencies across populations and might explain country-level differences in the distribution of psychological traits. Minkov, Blagoev, and Bond (2014) cite various studies that show an individual-level link between the short-allele polymorphism of the serotonin transporter gene *5-HTTLPR* and risk aversion. In addition, these authors present a strong cross-national correlation between the demographic prevalence of the short-allele polymorphism and “hypometria,” of which risk aversion is a central component. Because risk aversion makes people extracautious, its prevalence should depress out-group trust. But the original cause of this depressor effect might well be the prevalence of the “risk aversion gene.”

Linguistic individualism, parasite stress, the cool water condition, and the “risk aversion gene” are distinct from the other sources of trust because they represent remote conditions that reach far back in time. For this reason, they are plausible candidates for the original sources of human empowerment and its supposed trust-crediting effects. As these remote conditions predate the proximate sources of out-group trust, they do not compete with them in shaping out-group trust. Hence, we do not pitch the remote against the proximate conditions in a multivariate regression because this would assume that the two types of conditions have simultaneous influences on out-group trust when in fact these influences are consecutive. For this reason, we use the remote sources as “instruments” to consider the trust-crediting effects of the proximate sources free from potential endogeneity. The remote sources are ideal instruments for this purpose precisely because of their far temporal reach into the past; this reach makes them perfectly exogenous to contemporary trust.

Aggregate trust patterns vary pronouncedly across countries. But trust also varies among individuals within countries. To explain this within-country variation, individual-level characteristics must be taken into account. Thus, a full explanation of out-group trust requires a multilevel framework that examines how aggregate and individual characteristics interact in shaping trust.

With regard to individual-level characteristics, we examine country-level variables in their individual-level manifestation—provided they exist in disaggregated form. This applies to in-group trust, associational activity, and various partial empowerments. Introducing these variables simultaneously as aggregate and individual characteristics is insightful because it shows whether a certain condition shapes people’s out-group trust more by its *prevalence in a whole society* or by its *presence in individual persons*.

Previous studies tested additional individual-level characteristics, which we include merely for replication reasons. These characteristics consist of sociodemographic controls, namely, biological gender and age, as well as marital status, religious denomination, religiosity, and the importance respondents attribute to friends. In our context, none of these characteristics is of

Table 1. Welzel's Item Battery on Trust.

| | | |
|---|---|-----------------|
| I'd like to ask you how much you trust people from various groups. Could you tell me for each whether you trust people from this group completely, somewhat, not very much, or not at all? (<i>Read out and code one answer each</i>) | | |
| Your family | } | In-group trust |
| Your neighborhood | | |
| People you know personally | | |
| People you meet for the first time | } | Out-group trust |
| People of another religion | | |
| People of another nationality | | |

interest in and by itself. They are only included as controls to assure that our results are free from omitted variable bias.

Data, Variables, and Method

Our main data source are Rounds 5 and 6 of the World Values Surveys (WVS), conducted from 2005 to 2008 (Round 5) and from 2010 to 2012 (Round 6) in 76 countries around the globe (World Values Survey Association, 2014). The WVS consists of nationally representative samples of residential adult populations. The average sample size is 992. The covered countries provide a broad representation of the globe, including in each world region the largest national populations. Indeed, the sample of countries represents more than 90% of the world population.

Our article is accompanied by an online appendix (henceforth OA) available for download at this journal's website (<http://jcc.sagepub.com/supplemental>). The OA documents data sources and describes measurements and indices. The OA also includes descriptive statistics, supplementary analyses, and replication data. The review section at the end of the OA provides clarifications of issues raised in the review process for which there was no space in the article itself.

Trust is measured using a six-item battery. As shown in Table 1, each item uses a 4-point rating scheme. The first three items emphasize "familiarity" on the basis of kinship, neighborhood, and acquaintance. The next three items emphasize "non-familiarity" and "difference," addressing people one does not know and people of different religious and national origin. Welzel designed these six items with the intention to establish a "familiarity" versus "non-familiarity/difference" contrast between the first and second set of three items.

Following this design, we classify trust in the first set of groups as in-group trust and trust in the second set of groups as out-group trust. This distinction surfaces powerfully in how the six trust items associate with each other: The first set of three items and the second set of three items represent two distinct dimensions of trust.⁴ As Delhey et al. (2011) show in a multigroup confirmatory factor analysis, the dimensional separation is highly reliable across countries, showing full configurational invariance and considerable metric invariance. Lolle and Torpe (2011) and van Hoorn (2014) come to similar results.⁵

At the individual level, we compute additive indices to measure a respondent's in-group and out-group trust on a 10-point scale each.⁶ Higher scores indicate more trust. At the country level, we compute each population's mean scores on the two trust indices. Because within-country distributions over the two trust indices are mean-centered and single-peaked in each sample, the mean scores provide valid representations of each country's central tendency in matters of trust.

As we use trust measures from two rounds of the WVS, time points of measurement differ, which might question comparability across countries. However, such concerns are unfounded.

Measurement time points between Rounds 5 and 6 of the WVS differ on average by 5 years and the countries' aggregate trust does not change significantly over such a short period. This is obvious for the 34 countries from which we have trust measures from both rounds: The correlation between earlier and later measures among these countries is $R = .87$ for in-group trust and $R = .90$ for out-group trust.⁷

To isolate derivative from transcendent out-group trust, we look at out-group trust *under control of* in-group trust. This is done by including in-group trust among the predictors of out-group trust. On this condition, additional predictors explain precisely that part of out-group trust that exists *beyond* what in-group trust projects. This way, we separate the transcendent part of out-group trust from its derivative part.

Human empowerment is a multidomain concept, covering cognitive, motivational, behavioral, and institutional empowerments. To measure cognitive empowerment, we use the World Bank's "knowledge index." As outlined in OA 1, the index summarizes indicators of mass education, the spread of information technology, and per capita scientific output.⁸ Like all country-level predictors, this indicator is taken from about 5 years before the beginning of our observation period, that is, from around 2000. The exact timing of the measurement should not concern us because country-level conditions such as these change only at a glacial pace, indicating stable country differences.

With regard to the other partial empowerments, we use various indices developed and documented by Welzel: The 12-item "index of emancipative values" (Welzel, 2013, pp. 66-69) taps motivational empowerments through an emancipatory drive for self-determination, the "index of social movement activities" (Welzel, 2013, pp. 222-224) taps behavioral empowerments through expressive actions, and the "index of citizen rights" (Welzel, 2013, pp. 256-263) taps institutional empowerments through civic entitlements. All of these measures were tested extensively and evaluated positively under reliability and validity criteria.

With regard to alternative sources of out-group trust, we consider six distinct factors: associational activities, existential security, functioning institutions, social separation, cultural legacies, and original conditions. Each of these categories is represented by various measurements, comprising a set of 30 variables, as shown in Table 2. Describing all these variables in every detail would consume the entire space of this article. Hence, we outsourced the documentation into the OA where a detailed description of all measurements is available in OA-Table 1. Descriptive statistics of all variables are available in OA-Table 2 (country-level measures) and OA-Table 3 (individual-level measures).

Whenever justified by dimensional analyses and reliability tests, we summarize variables belonging to the same category into encompassing measures to cover the entire category or most of it.⁹ Thus, the partial empowerments are summarized into an encompassing human empowerment factor. Likewise, the associational activities in various single associations are summarized into an encompassing measure of associational activities. Similarly, order and stability, rule of law, and control of corruption are summarized into a functioning institutions factor. Finally, the democratic tradition, Protestant legacy, absence of an Islamic legacy, and European descent are summarized into a Western legacy factor. The factor analyses and reliability tests justifying these summaries are documented in OA-Table 1. The individual-level variables we use for our multi-level model are documented at the end of OA-Table 2.¹⁰

Our examination proceeds in four steps. First, we analyze how in-group and out-group trust relate to each other at the individual and country level. Second, we focus on aggregate trust patterns and examine which country-level conditions associate strongest with the countries' aggregate out-group trust. Third, we apply an instrumental variable approach to reexamine the strong effect of human empowerment on out-group trust free from its potential endogeneity. In the fourth and final step, we apply a multilevel model to see how country-level and individual-level characteristics interact in shaping out-group trust.

Table 2. Derivative and Transcendent Out-Group Trust Under Varying Conditions.

| Predictors | Derivative out-group trust (partial effect of in-group trust) | Transcendent out-group trust (partial effect of alternate predictor) | <i>n</i> |
|---|---|--|----------|
| Partial empowerments | | | |
| 1. Cognitive: Knowledge development | 0.36*** | 0.56*** | 71 |
| 2. Motivational: Emancipative values | 0.46*** | 0.70*** | 75 |
| 3. Behavioral: Expressive action | 0.40*** | 0.66*** | 72 |
| 4. Institutional: Civic entitlements | 0.46*** | 0.67*** | 71 |
| Human empowerment factor [1-4] | 0.44*** | 0.72*** | 72 |
| Associational activities | | | |
| 5. Most connected associations | 0.49*** | 0.54*** | 75 |
| 6. Least connected associations | 0.51*** | 0.58*** | 72 |
| Overall associations [5-6] | 0.49*** | 0.59*** | 72 |
| Existential security | | | |
| 7. Life expectancy | 0.41*** | 0.10 <i>ns</i> | 67 |
| 8. Infant mortality (inverted) | 0.39** | 0.35*** | 68 |
| 9. Conflict involvement (inverted) | 0.44*** | 0.22* | 70 |
| 10. Internal and external peace | 0.40*** | 0.35*** | 68 |
| 11. State repression (inverted) | 0.38** | 0.53*** | 70 |
| Functioning institutions | | | |
| 12. Order and stability | 0.31** | 0.57*** | 72 |
| 13. Rule of law | 0.29** | 0.64*** | 72 |
| 14. Control of corruption | 0.27* | 0.65*** | 72 |
| Functioning institutions factor [12-14] | 0.28** | 0.65*** | 72 |
| Social separations | | | |
| 15. Ethnic fractionalization | 0.43*** | -0.06 <i>ns</i> | 71 |
| 16. Linguistic fractionalization | 0.42*** | 0.14 <i>ns</i> | 70 |
| 17. Religious pluralism | 0.51*** | 0.45*** | 71 |
| 18. Income polarization (gini index) | 0.44*** | -0.03, <i>ns</i> | 63 |
| 19. In-group closure ("consanguinity") | 0.45*** | -0.54*** | 45 |
| Cultural legacies | | | |
| 20. Democratic tradition | 0.42*** | 0.64*** | 73 |
| 21. Protestant legacy | 0.37*** | 0.54*** | 74 |
| 22. Islamic legacy | 0.56*** | -0.56*** | 71 |
| 23. Soviet legacy | 0.39** | -0.20* | 73 |
| 24. Confucian legacy | 0.40*** | -0.12 <i>ns</i> | 74 |
| 25. European descent | 0.47*** | 0.40*** | 69 |
| 26. Individualism-vs.-collectivism | 0.52*** | 0.73*** | 39 |
| Western legacy factor [20-22, 25] | 0.55*** | 0.71*** | 68 |
| Original conditions (instruments) | | | |
| 27. Cool water condition | 0.34*** | 0.51*** | 71 |
| 28. Linguistic individualism | 0.48*** | 0.63*** | 58 |
| 29. Parasite stress (inverted) | 0.30** | 0.43*** | 71 |
| 30. "Risk Aversion Gene" | 0.70*** | -0.28 * | 44 |

Note. Each line represents a separate analysis in which out-group trust is regressed simultaneously on the respective predictor in the left-hand column and in-group trust. Entries are partial correlation coefficients (partial *r*).

p* < .100. *p* < .050. ****p* < .005 (*ns*: not significant).

Table 3. Explaining Out-Group Trust: Country-Level Regressions (OLS).

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|---|------------------|------------------|------------------|------------------|------------------|
| Constant | -0.28 (-3.66)*** | -0.28 (-3.64)*** | -0.29 (-3.61)*** | -0.28 (-3.49)*** | -0.42 (-4.08)*** |
| In-group trust | 0.62 (6.05)*** | 0.61 (5.89)*** | 0.64 (5.73)*** | 0.68 (6.29)*** | 0.85 (5.67)*** |
| Human empowerment factor | 0.26 (8.10)*** | 0.24 (4.96)*** | 0.29 (4.30)*** | 0.19 (3.16)*** | 0.22 (3.33)*** |
| Overall associational activities | 0.35 (3.85)*** | 0.37 (3.82)*** | 0.34 (3.74)*** | 0.31 (3.06)** | 0.35 (3.51)*** |
| Religious pluralism | 0.08 (2.65)** | 0.07 (2.53)** | 0.08 (2.68)** | 0.08 (2.56)** | |
| State repression (inverted) | | 0.03 (0.63) ns | | | |
| Functioning institutions factor | | | 0.04 (0.49) ns | | |
| Western legacy factor | | | | 0.02 (1.32) ns | |
| Individualism-vs.-collectivism ^a | | | | | 0.08 (0.81) ns |
| Adj. R ² | .76 | .75 | .75 | .76 | .80 |
| n | 65 | 65 | 65 | 63 | 36 |

Note. Entries are unstandardized regressions coefficients (b), with their t values in parentheses. All variables are standardized into a range from minimum 0 to maximum 1. White-test for heteroscedasticity, variance inflation factors for collinearity, and DFFITs for outliers and leverage cases indicate no violation of OLS assumptions. OLS = ordinary least squares.

^aWhen we replace “Individualism-vs.-Collectivism” in Model 5 with “Consanguine In-group Closure,” we cover 41 instead of 36 countries. While consanguine in-group closure shows no significant effect in this model variation, the significance and direction in the effects of all other variables remain unaffected.

*p < .100. **p < .050. ***p < .005 (ns: not significant).

Findings

The Link Between In-Group and Out-Group Trust

On a scale from 0 to 1.0, the average score for in-group trust is as high as 0.72, compared with 0.39 for out-group trust. Among 95% of the respondents, in-group trust is higher than out-group trust. Across all 75,375 respondents, in-group trust and out-group trust correlate positively at $R = .39$. Without exception, the individual-level correlation is significant and positive in each of the 76 countries, varying from $R = .14$ in Pakistan to $R = .55$ in Chile. Hence, even though the link between in-group and out-group trust varies in strength, its direction is *universally* positive.

Figure 2 depicts the trust space spanned by in-group and out-group trust. On both axes, the entire theoretical scale range is shown. Both in-group and out-group trust are divided at the scale midpoint. This categorization produces four quadrants, representing four ideal types: “only in-group” trusters, “only out-group” trusters, “no” trusters, and “general” trusters.

Only 1% of the respondents are “only out-group” trusters. This tiny percentage is within the range of sampling error. Hence, high out-group trust in the absence of high in-group trust is literally nonexistent. “No” trusters are a more sizable group. Yet, they still constitute a small minority of 11%. In contrast, an overwhelming majority of 88% fall into the two right-hand quadrants where in-group trust is high. But the larger group of these in-group trusters shows low out-group trust: 55% of all respondents. “General” trusters who combine high in-group with high out-group trust are a considerably smaller but still sizable group of 33%.¹¹

Figure 3 plots the 76 countries into the trust space. The left-hand diagram shows the trust space in its full theoretical scope; the right-hand diagram focuses on the empirically filled section. As is evident from the left-hand diagram, in-group trust is reasonably high in every country: It is always above 0.50 scale points. Moreover, variation in in-group trust is condensed in a quite narrow range between 0.56 in Peru and 0.86 in Egypt. The majority of countries cluster in an even more condensed range between 0.60 and 0.80 scale points. Out-group trust is *always* lower

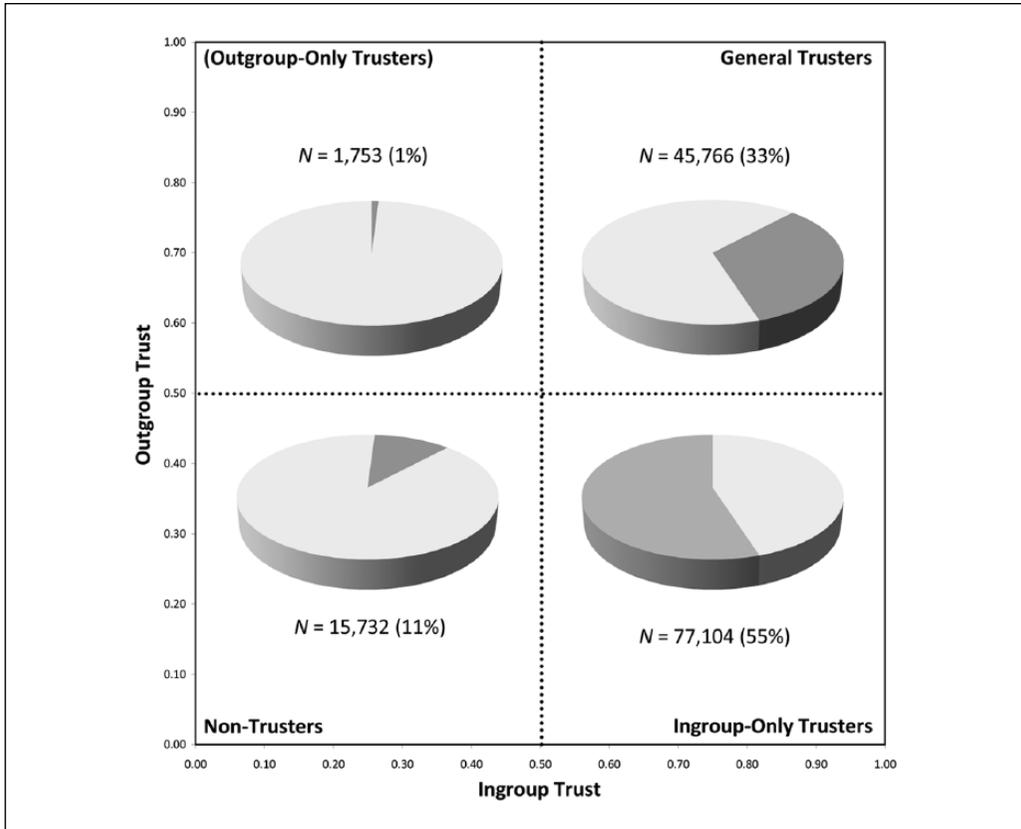


Figure 2. The distribution of individuals in the in-group/out-group trust space.

than in-group trust and shows more than double as much variation, spanning a range from 0.20 in Peru to 0.63 in Sweden.¹²

Across the 76 countries, national mean scores in in-group and out-group trust correlate at $R = .39$. Thus, out-group trust varies to 15% in unison with in-group trust, and to 85% independently from in-group trust. From the viewpoint of our framework, this means that the minor part of out-group trust is derivative out-group trust; the major part is either transcendent out-group trust or measurement error.

Sources of Out-Group Trust

Table 2 examines which country-level conditions predict the countries' aggregate out-group trust, controlling for in-group trust. The table is the result of 34 separate regressions, each of which predicts out-group trust simultaneously by in-group trust and one additional condition. The coefficients in the left-hand column indicate the effect of in-group trust under control of the respective condition. This column shows which proportion of out-group trust is derivative of in-group trust under consideration of a specific condition. Coefficients in the right-hand column display each condition's effect under control of in-group trust. Thus, they indicate which proportion of out-group trust transcends in-group trust under consideration of a particular condition.

For most conditions, the transcendent part of out-group trust is larger than the derivative part. This is obvious from the fact that most of the conditions show a stronger effect on out-group trust than in-group trust does. Two categories of conditions deviate from this pattern: With four of the

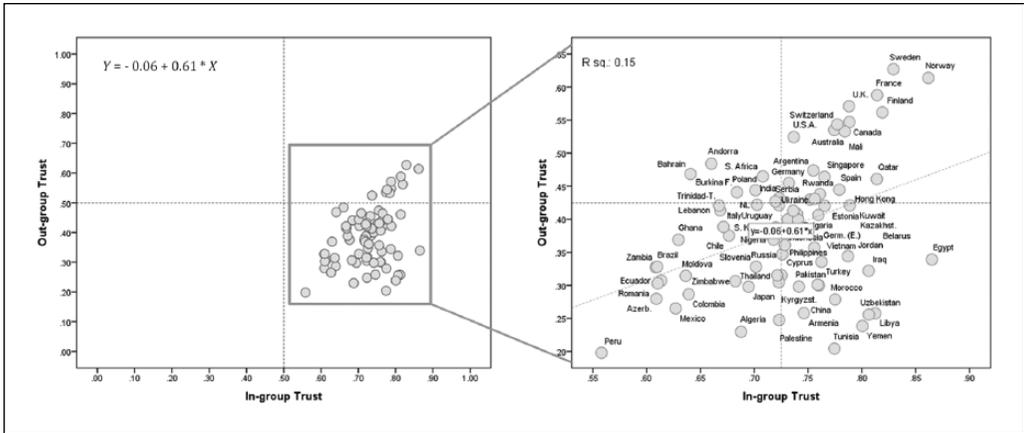


Figure 3. The distribution of countries in the in-group/out-group trust space.

five indications of existential security, transcendent out-group trust is smaller than derivative out-group trust. The same holds true for four of the five indications of social separation. This does not mean that these conditions are per se unimportant for trust. But we find that these conditions already influence in-group trust: positive in the case of existential security and negative in the case of social separation. Hence, in-group trust absorbs these conditions' effects and when we control for that, little impact is left. Put differently, existential security and social separation affect out-group trust more via the derivative part than the transcendent one.

An exception from this pattern is state repression, which is a measure of existential security when we invert it because then it indicates the absence of violence by the state. Indeed, inverted state repression significantly enhances out-group trust beyond in-group trust.

A similar exception in the category of social separation is religious pluralism. In contrast to other indicators in this category, religious pluralism retains a highly significant and—in this case—positive effect on out-group trust.

The strongest trust effect among social separation indicators derives from consanguine in-group closures, which negatively affect out-group trust. But the sharply reduced country coverage of this measure leaves doubts about the generality of its impact. The same is true for country scores of individualism-versus-collectivism, which show a limited coverage. The subsequent examination excludes measures of such restricted coverage from the main analysis and devotes them some special consideration when appropriate.

Apart from the indicators of existential security and social separation, most measures show highly significant effects on transcendent out-group trust in the expected direction. This is especially true for the summary measures that encompass an entire category or most of it. In ascending order of strength, overall associational activities, the functioning institutions factor, the Western legacy factor, and the human empowerment factor show the strongest effects on transcendent out-group trust.

In the next step, we test the strongest measures from each category against each other, provided these indicators cover most of the countries in our sample. This is done with care because in regressions with some 70 countries, collinearity easily surpasses critical levels when more than four treatment variables are included at once. Thus, we choose an explorative approach: We test which set of four of the strongest predictors is most consistently significant throughout all possible combinations. The result of several dozen regressions is shown in Model 1 of Table 3, which includes in-group trust, the human empowerment factor, overall associational activities, and religious pluralism as significant and positive predictors of out-group trust.

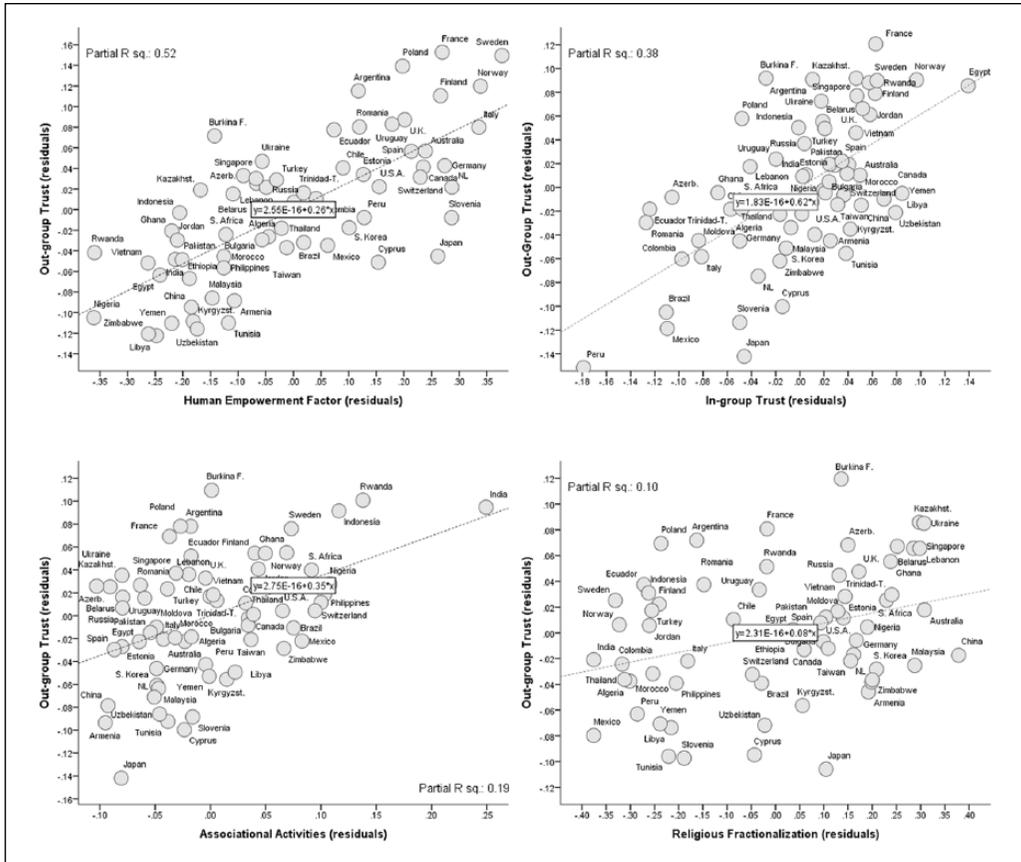


Figure 4. Visualizing the partial effects on out-group trust.
 Note. Partial regression plots from Model 1 in Table 3.

Against this reference model, Models 2 to 5 add one more of the most significant single predictors of out-group trust from the extant categories, including inverted state repression in Model 2, the functioning institutions factor in Model 3, and the Western legacy factor in Model 4. Model 5 deserves special consideration: As a surrogate for the Western legacy factor, it introduces individualism-versus-collectivism. Yet, because this replacement eliminates some 30 countries from the analyses, we need to sacrifice one of the initial four predictors to not exhaust the degrees of freedom. We deselect religious pluralism as the weakest of the predictors. In an alternate version of Model 5, we replace individualism-versus-collectivism with consanguine in-group closure.

The result of all these additions to Model 1 is the same: The core set of initial conditions remains unaffected in the significance and strength of its impact on out-group trust. At the same time, none of the additional predictors adds anything significant to the impact of the initial conditions.

In total, the four initial conditions explain 76% of the cross-national variation in out-group trust. The partial regression plots in Figure 4 visualize the effects of Model 1 in Table 3. As is obvious, the human empowerment factor explains by far most of the variance in out-group trust (52% to be precise). Because this variance is explained controlling for the influence of in-group trust, it is truly *transcendent* out-group trust that we explain.

On purpose, Table 3 does not cover the indicators classified as original conditions in Table 2. These conditions are not on the same level as all the others because they do not indicate proximate but remote sources of trust. Accordingly, it would be inappropriate to include the original

conditions in the same regression as the proximate ones. For the same reason, the original conditions are well suited as instruments for the proximate conditions. They are especially suited as instruments to consider the impact of human empowerment on out-group trust free from potential endogeneity.

Endogeneity is a problem because in the absence of rich longitudinal evidence, we cannot exclude with certainty that the relationship between human empowerment and out-group trust is driven by the opposite direction of causality that we suppose. If this was indeed the case, human empowerment would be “endogenous” to out-group trust.

Fortunately, methodologists provided an approach to solve endogeneity problems: the “instrumental variables” framework (Greene, 2011, Chapter 8). With the help of suitable instruments, it is possible to consider the relationship between a supposed treatment and its supposed outcome free from endogeneity and, hence, to confirm the causal status of the treatment with respect to the outcome. To be suitable, an instrument must meet four requirements: (a) It must be a plausible precondition of the treatment variable, (b) it must clearly predate the treatment variable, (c) it must strongly correlate with the treatment variable, and (d) it needs to be *uncorrelated* with the error term in the outcome variable. Applied to human empowerment as our supposed treatment variable and out-group trust as its supposed outcome, some of the original conditions meet these requirements.

Specifically, the cool water condition, low parasite stress, linguistic individualism, and prevalence of the “risk aversion gene” all predate human empowerment measured today. Prevalence of the “risk aversion gene” does not significantly correlate with human empowerment ($R = .12$; $n = 44$; $p = .424$) and is unsuited as an instrument for this reason.¹³ Three of the other conditions correlate significantly in the expected direction and reasonably strong with human empowerment: $R = .84$ ($n = 69$; $p < .001$) for the cool water condition, $R = -.66$ ($n = 69$; $p < .001$) for parasite stress, and $R = .78$ ($n = 56$; $p < .001$) for linguistic individualism. Two of these conditions are uncorrelated with the error term in out-group trust¹⁴ but linguistic individualism is not ($R = .32$; $n = 51$; $p = .020$). Thus, the latter is unsuited as an instrument and only the cool water condition and parasite stress remain as adequate instruments.

To make proper use of instruments, one applies a two-stage least squares regression (Greene, 2011, Chapter 8). In the first stage, one regresses the supposed treatment variable on the instruments, plus the rival treatments, and saves the predicted scores. These predicted (“instrumented”) scores now provide estimates of the treatment variable that are free from endogeneity to the outcome variable. Hence, in the second stage, we regress the outcome variable on the instrumented treatment variable plus its rivals. What we see in this stage is whether the originally discovered impact of the treatment on the outcome retains its significance, direction, and strength when considered free from endogeneity. If it does, the causal status of the treatment with respect to the outcome is more credible.

Table 4 shows the results of our two-stage least squares regression. Figure 5 visualizes the two most important patterns from the two stages. In the first stage, the cool water condition turns out to be a strong instrument of the human empowerment factor. In the second stage, instrumented human empowerment turns out to have as strong and significant an impact on out-group trust as did the original measure of human empowerment. These results lend further credibility to the causal status of human empowerment with respect to out-group trust.

Multilevel Evidence

Finally, our multilevel model illuminates how country-level conditions interact with individual-level characteristics in shaping out-group trust. The model in Table 5 uses at the country level the same variables as Model 1 in Table 3. Among the individual-level variables, the individual empowerment factor calls our main interest because it is the individual-level equivalent of a

Table 4. Explaining Out-Group Trust With Instrumented Human Empowerment: Two-Stage Least Square Regressions.

| | Stage 1: Human empowerment is DV | Stage 2: Out-group trust is DV |
|---|----------------------------------|--------------------------------|
| Constant | 0.28 (1.97)* | -0.26 (-3.12)** |
| Cool water condition (instrument) | 1.15 (9.78)** | |
| Parasite stress (instrument) | 0.26 (6.01) ns | |
| In-group trust | -0.29 (-1.47) ns | 0.59 (5.30)** |
| Overall associational activities | 0.85 (5.13)** | 0.36 (3.59)** |
| Religious pluralism | -0.02 (-0.37) ns | 0.07 (2.15)* |
| Human empowerment (instrumented values) | | 0.26 (6.65)** |
| Adj. R ² | .81 | .69 |
| n | 63 | 64 |

Note. Entries are unstandardized regressions coefficients (b), with their t values in parentheses. All variables are standardized into a range from minimum 0 to maximum 1. White-test for heteroscedasticity, variance inflation factors for collinearity, and DFFITs for outliers and leverage cases indicate no violation of OLS assumptions. DV = dependent variable; OLS = ordinary least squares.

*p < .100. **p < .050. ***p < .005 (ns: not significant).

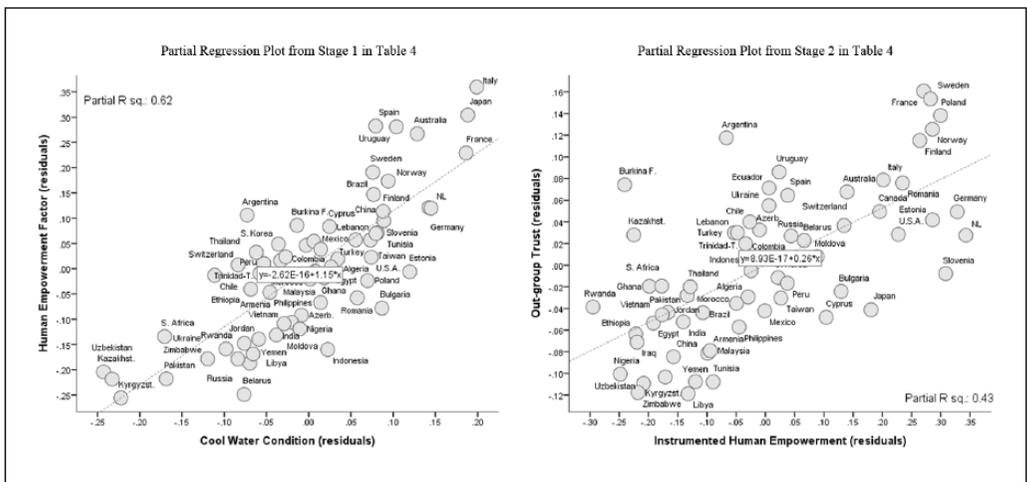


Figure 5. Visualizing the effects of the two-stage least squares regression.

country’s aggregate empowerment. We now see how human empowerment at the country level and individual-level empowerment interact in shaping out-group trust. The separation of the two contributions is possible because we measure individual-level empowerment in such a way that it indicates each individual’s deviation from the country mean. This way, we isolate the individual-level from the country-level variance in empowerment.

The results underline the importance of empowerment for out-group trust. For one, country-level and individual-level empowerment both enhance out-group trust and their effects are complementary. Thus, irrespective of whether a person lives in a country with widespread empowerment, her out-group trust grows as her own empowerment grows above the country average. But it is also true that, regardless of whether a person is herself more empowered than others in her country, living in a country in which empowerment is more widespread enhances

Table 5. Multilevel Regression of Out-Group Trust.

| Predictors | Dependent variable: Out-group trust |
|---|--|
| Constant | 0.49 (44.87)*** |
| CL effects | |
| In-group trust | 0.61 (6.94)*** |
| Human empowerment factor | 0.25 (7.48)*** |
| Overall associational activities | 0.31 (3.60)*** |
| Religious pluralism | 0.08 (3.07)** |
| IL effects | |
| In-group trust | 0.44 (34.64)*** |
| Biological gender (1 = female, 0 = male) | -0.00 (-0.13) ns |
| Biological age, indexed (100 = 1, 16 = 0) | 0.04 (5.07)*** |
| Marital status (1 = divorced, 0 = other) | -0.01 (1.98)* |
| Protestant denomination (1 = yes, 0 = no) | 0.02 (3.28)*** |
| Muslim denomination (1 = yes, 0 = no) | 0.01 (0.82) ns |
| Religiosity | 0.00 (1.23) ns |
| Importance of friends | 0.03 (6.20)*** |
| Overall associational activities | 0.04 (3.50)*** |
| Individual empowerment factor | 0.22 (17.05)*** |
| Cross-level interactions (IL × CL) | |
| In-group trust (IL) × In-group trust (CL) | 0.14 (0.93) ns |
| In-group trust (IL) × Human empowerment (CL) | 0.17 (2.69)** |
| In-group trust (IL) × Overall associational activities (CL) | -0.43 (-1.83) ns |
| In-group trust (IL) × Religious pluralism (CL) | 0.09 (1.66) ns |
| Individual empowerment (IL) × In-group trust (CL) | -0.08 (-0.38) ns |
| Individual empowerment (IL) × Human empowerment (CL) | 0.35 (5.21)*** |
| Individual empowerment (IL) × Overall associational activities (CL) | -0.38 (-1.48) ns |
| Individual empowerment (IL) × Religious pluralism (CL) | -0.20 (-3.60)*** |
| Percent error reduction | |
| Between-country variation of DV (18% of total) | 73% |
| Within-country variation of DV (82% of total) | 19% |
| Between-country variation in IL-effect of in-group trust | 10% |
| Between-country variation in IL-effect of individual empowerment | 42% |
| Number of observations (N) | 72,234 individuals in 63 societies |

Note. Entries are unstandardized regression coefficients with *t* values in parentheses based on robust standard errors. Country-level variables are “grand-mean” centered; individual-level variables are “group-mean” centered, except gender. All samples weighted to equal size (*n* = 1,080) without increasing the overall *N*. Percent error reduction calculated from empty model. All variables measured around 2005. Calculation with HLM 6.08. Individual-level effects with significant societal-level variation are random, otherwise fixed. CL = country level; IL = individual level. **p* < .050. ***p* < .005. ****p* < .001 (*ns*: not significant).

her out-group trust. What is more, aggregate empowerment amplifies the trust-crediting effect of individual-level empowerment. This is obvious from the positive interaction between the two in the multilevel model. Figure 6 visualizes this interaction.

The effect of in-group trust on out-group trust does not vary across countries in either significance or direction. But there is significant cross-country variation in the effect size. Part of this variation reflects country-level differences in human empowerment, which is obvious from the positive interaction between individual-level in-group trust and country-level human

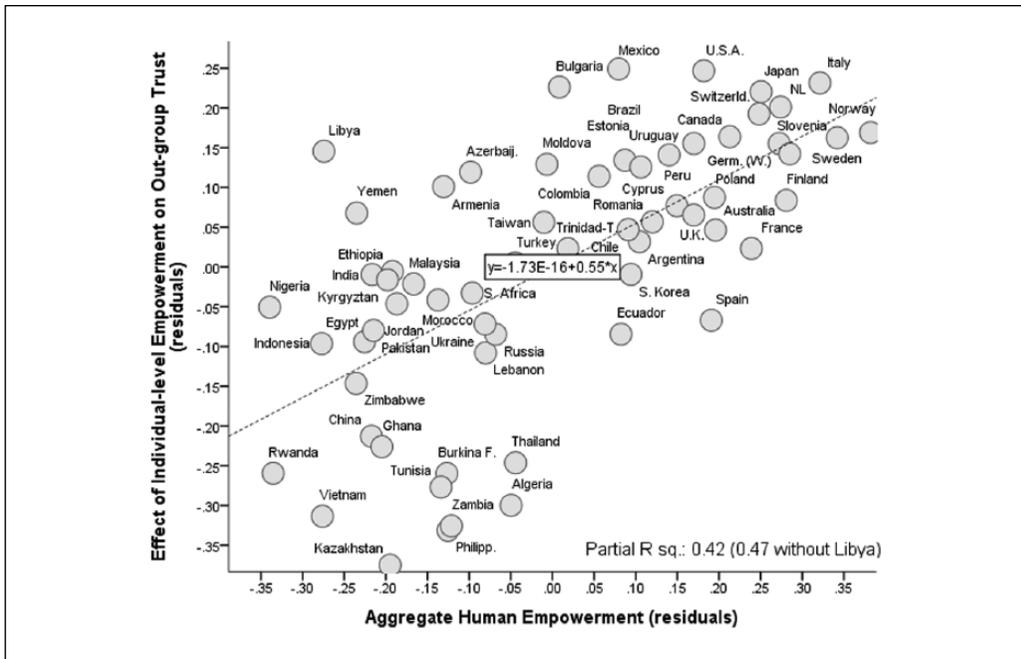


Figure 6. Cross-fertilization: Human empowerment at the country level amplifies individual-level empowerment's impact on out-group trust.

Note. Partial regression plot visualizes that more advanced human empowerment at the country level amplifies the positive effect of individual-level empowerment on people's out-group trust, controlling for the simultaneous effects of country-level in-group trust, associational activities, and religious pluralism.

empowerment in Table 5. The interaction indicates that a person's in-group trust translates easier into out-group trust when this person lives in a country whose human empowerment is more advanced. From the viewpoint of our framework, this means that human empowerment not only enhances transcendent but also derivative out-group trust. This finding further underlines the role of human empowerment as a trust-crediting force vis-à-vis out-groups. Still, the positive influence of human empowerment operates much more strongly via transcendent out-group trust—which we believe is the more important part of out-group trust under ongoing modernization.

Discussion

How do our findings relate to the literature and which new insights do they add? The literature is characterized by conflicting views about the link between in-group and out-group trust, ranging from an antagonistic view at one end to a symbiotic view at the opposite end. A few recent studies support a more nuanced interpretation between these extremes—an interpretation that we have described as the prerequisite view. Our study confirms the prerequisite view on a considerably broader country base—indeed the broadest country base ever used in the study of trust. The prerequisite view holds that in-group trust is a necessary but insufficient condition of out-group trust. In accordance with this view, we find that out-group trust is only but not always high when in-group trust is high. Thus, despite an always positive link between in-group and out-group trust, this link is relatively weak after all.

The positive but limited impact of in-group trust opens the gate for other forces to generate out-group trust. Among these, the literature has focused on associational activities, existential security, functioning institutions, social separations, and cultural legacies. Confirming this

literature, we find in all these categories at least some indicator that shows an effect on out-group trust in the expected direction. But this is only true as long as we keep human empowerment out of the equation—a force that the literature largely ignores. Indeed, in direct comparison with human empowerment, few of the conditions championed in the literature retain a significant effect on out-group trust. The only ones that do are associational activities and religious pluralism. In contrast, existential security, functioning institutions, social separations, and cultural legacies all drop insignificant after controlling their impact for human empowerment. The drop to insignificance shows that these factors do not affect out-group trust in and by themselves but only through the ways in which they are linked with human empowerment. Conversely, the trust-crediting effect of human empowerment withstands all controls that we could possibly employ and always turns out as the most powerful effect. Given the literature's neglect of human empowerment, these findings add genuinely new insights to what we already knew.

Among the original conditions of trust discussed in the literature—which range from genes to language to climate—the cool water condition is a recently developed concept that has yet received little attention. Nevertheless, the cool water condition turned out as a more influential source than those emphasized by a broader literature, especially the “risk aversion gene” and parasite stress. Using the cool water condition as an instrument for human empowerment allowed us to consider the latter's effect on out-group trust free from endogeneity. As the effect persists under this treatment, we can be more confident (albeit not ultimately certain) about its status as a true cause of out-group trust.

Our most important contribution, we think, is the distinction between derivative and transcendent out-group trust—a distinction that has indeed been missing in the literature. We believe that this is an important distinction because there are good reasons to assume that modern societies need transcendent more than derivative out-group trust. One reason is that modernization diminishes the centrality of in-group cohesion for social integration, which creates a need to grow out-group trust independent from in-group trust. From this point of view, human empowerment appears even more center stage because its contribution to out-group trust operates largely independent from in-group trust.

Evidence from our supplementary analyses suggests that derivative and transcendent out-group trust have different consequences: Transcendent out-group trust correlates much more strongly with a friendly orientation toward strangers than does derivative out-group trust.¹⁵ Hence, it seems to matter what type of out-group trust prevails. This finding is certainly preliminary but potentially so important that its further investigation should rank high on the future research agenda.

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Notes

1. For additional considerations of the definition of human empowerment, see the online appendix (OA 3).
2. The analyses in the OA 4 demonstrate that higher mean scores at the country level in each component of individual/human empowerment associate strongly with a more even distribution of these empowerments. For an explanation, see also OA 3.
3. We list communism as a legacy supposedly detrimental to trust because the literature makes this point. This is not to deny that this particular legacy is different in kind from legacies rooted in religious traditions.

4. We do not measure the two trust concepts by extracting orthogonal factors. The reason is that orthogonal factors are uncorrelated by definition, in which case their relationship cannot be analyzed.
5. For a more detailed discussion of the in-group/out-group distinction, see OA 3.
6. Added over three items, the 4-point scales of the single items turn into a 10-point scale.
7. For countries for which trust measures from both rounds are available, we calculate the average. When measures from only one round are available, we take the available one. Which measures are available for which country can be seen from our replication data sets available at this journal's website.
8. The human potential to make autonomous choices develops as a matter of cognitive maturation. For this reason, cognitive empowerment is a more important partial empowerment than material empowerment. Nevertheless, we experimented with per capita GDP as a measure of material empowerment and used it instead of the knowledge index, which measures cognitive empowerment. Our findings show that per capita GDP correlates less strongly with other partial empowerments than does the knowledge index. Specifically, the countries' per capita GDP in 2000 correlates at $R = .68$ ($n = 102$; $p < .001$) with emancipative values, a measure of motivational empowerment, and at $R = .49$ ($n = 174$; $p < .001$) with civic entitlements, a measure of institutional empowerment. By contrast, the knowledge index in 2000 correlates at $R = .80$ ($n = 101$; $p < .001$) with emancipative values and at $R = .73$ ($n = 139$; $p < .001$) with civic entitlements. These findings suggest that the knowledge index is a more reliable measure of human empowerment than per capita GDP. We prefer it over GDP measures for this reason. For a more detailed explanation, see OA 3.
9. For a discussion of what such summary indicators actually measure, see OA 3.
10. We standardize all data into the same scale range, from minimum 0 to maximum 1.0. This standardization makes regression coefficients comparable across different variables.
11. These results are obtained after weighting each national sample to equal size. If one wants to describe the world population represented in the World Values Surveys (WVS), one has to weight the national samples for the population size of the country. If one does so, one obtains the following distribution: 1.5% "only out-group" trusters, 11% "no" trusters, 57% "only in-group" trusters, 30.5% "general" trusters. These proportions are basically the same as in the unweighted distribution.
12. At the country level, the coefficient of variation in out-group trust is 0.26 compared with 0.08 for in-group trust. At the individual level, the coefficients are 0.59 for out-group trust and 0.25 for in-group trust.
13. Country-level scores for neuroticism gathered by Schmitt et al. (2011) for 50 countries do also *not* correlate with out-group trust. Neither do the country-level scores for the other Big Five personality traits gathered by these authors.
14. The error term is the residuals in aggregate out-group trust that remain unexplained by the predictors of Model 1 in Table 3.
15. For the evidence, see OA 3 and OA 4.

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