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Cross-Country Evidence on Perceptions and Behavior**

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# **Trust and Beliefs among Europeans:**

## **Cross-Country Evidence on Perceptions and Behavior**

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### **Abstract**

We conduct an experimental study among European citizens regarding cross-cultural perceptions related to trust in two dimensions: volunteerism and honesty. We use representative samples from five major economies of the Euro area: France, Germany, Italy, the Netherlands, and Spain. We find that European citizens rely on nationality to infer behavior. Assessments of behavior show a north/south pattern in which participants from northern countries are perceived to be more honest and to provide more effort in a volunteering game than are participants from southern countries. Actual behavior is, however, not always in line with these assessments. Assessments of honesty show strong evidence of social projection: Participants expect other European citizens to be less honest if they are culturally closer to themselves. Assessments of volunteerism instead show a similar north/south-pattern in which both northern and southern Europeans expect higher performance of northerners than they do of southerners.

**Keywords:** Cross-cultural perceptions, Europe, Honesty, Real effort, Representative experiment.

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## 1. Introduction

One of the objectives of the European Union is to “ensure economic, social and territorial cohesion between Member States” (European Union, n.d.). To defend its objectives the European Union has developed a complex institutional framework. However, institutions might not be sufficient to ensure cohesion, especially in the recent crisis in the Eurozone that seems to have deeply threatened trust and harmony among northern and southern Europeans (Bowles, 2014). An essential ingredient for cohesion is trust among European citizens. In the recent debate regarding the European economic crisis, prominent newspapers have repeatedly turned readers’ attention to this topic (Garton Ash, 2013; *The Economist*, 2013). Such a focus seems reasonable, because trust among citizens has been documented as affecting important economic variables, such as trade and investment (Bottazzi et al., 2011; Guiso et al., 2009) and growth (Knack and Keefer, 1997). Indeed, a lack of trust may induce individuals to devise costly mechanisms to monitor others’ effort provision and honesty (Laffont and Martimort, 2009). Moreover, trust based on incorrect perceptions could cause inefficient investment and trade levels across countries or misjudgment of product quality due to the consumers’ inclination to choose products based on the country of origin as a signal of their quality—the so-called country-of-origin effect (Verlegh and Steenkamp, 1999).<sup>1</sup> The aim and the main contribution of this study is to shed light on trust among Europeans by eliciting people’s perceptions and behavioral predictions concerning other European citizens in a controlled environment and then comparing those perceptions to the corresponding actual behavior.

Our study builds on extensive experimental literature, which provides ample evidence that culture affects essential economic behavior, such as bargaining (Chuah et al., 2007; Henrich, 2000; Henrich et al., 2001), trust (Bornhorst et al., 2010), cooperation, positive and negative reciprocity (Gächter and Herrmann, 2009), and punishment (Henrich et al., 2006; Herrmann et al., 2008). In a controlled experiment, we elicit behavioral data as well as the related cross-cultural perceptions with respect to effort and honesty in five major European countries: France, Germany, Italy, the Netherlands, and

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<sup>1</sup> A recent article in *The Economist* cites a study, conducted by the Pew Research Center, that points out that cross-cultural perceptions often vary across countries and are probably not in line with reality (*The Economist*, 2012). For instance, Greeks considered themselves the hardest working people among the countries included, whereas citizens of other countries considered Germans the hardest working. Clearly, in order to understand who is right and who is wrong, an objective basis for comparison would be necessary. That is possible with our methodology, because we measure perceptions and the corresponding actual behavior.

Spain.<sup>2</sup> These samples are representative in terms of age, gender, education, and territorial distribution. We find that individuals clearly rely on nationality to infer behavior. Moreover, cultural proximity affects perceptions of honesty: Individuals believe that their compatriots and citizens from countries considered culturally closer to them are less honest, on average, than are citizens culturally further from them. With regard to effort, assessments follow a clear north/south pattern in which all individuals associate northern countries with better performance than southern countries. With regard to both honesty and effort, we find that perceptions are not always in line with the assessed behavior.

Previous survey evidence shows that individuals tend to deem people in northern European countries as more competent (competent, confident and skillful) but less warm (friendly, sincere, and good-natured) than people in southern European countries, suggesting that they possess structured beliefs about differences in behavior among Europeans (Cuddy et al., 2009). Indeed, nationality can represent a proxy, an observable characteristic that individuals can use to predict others' behavior. In economics literature, this behavioral pattern is typically called statistical discrimination. More generally, proxies of others' behavior may refer to ethnicity or physical appearance, including race and gender, or may be endogenously chosen, as in membership to a club. Statistical discrimination is induced by prior experience or statistical knowledge, which may or may not be correct. In contrast, taste-based discrimination is associated with preferences or dislikes for specific groups (Anderson et al., 2006; Arrow, 1973, 1998; Becker, 1971; Fang and Moro, 2010; Fershtman and Gneezy, 2001; Phelps, 1972).

In a cross-cultural context, an individual generally faces an in-group (his or her own country) and one or more out-groups (other countries). Various theories and studies in social psychology report people's tendency to judge and treat in-group members more favorably than out-group members in various aspects (Hewstone et al., 2002; Platow et al., 1990)<sup>3</sup>. Social projection theory (Krueger, 1998; Robbins and Krueger, 2005), which includes the false consensus effect (Ross et al., 1977), suggests that a person tends to project his or her own opinions, attitudes, and behaviors when making predictions about other people.<sup>4</sup> In addition, projection is stronger for in-groups than for out-groups, which indicates

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<sup>2</sup> These five countries represent a large share of the European economy. Namely, they contributed 82% of the total GDP of the Euro area in 2014 (OECD).

<sup>3</sup> Besides that, a large body of literature studies the effect of group membership on behavior for a review of the literature in economics and social psychology see Chen and Li (2009).

<sup>4</sup> Note that the label "false" has been subject to much debate among psychologists. The effect has been labeled "false" on the grounds that, because there is an actual endorsement rate in the group, systematic deviations from it in the direction of the subject's own response supposedly cannot result from an accurate estimation procedure" (Dawes, 1989) (p. 1). However, many authors argue that the effect can be completely in line with rational information processing, for example when other

asymmetric projection. Another explanation for this effect is the Social Circle Heuristic (Pachur et al., 2005), which suggests that an individual tends to make predictions by sequentially sampling instances of an event from various social circles, starting with the closest circle, himself or herself, and gradually shifting to further circles, such as friends, acquaintances, and so on. In a cross-cultural setting, this implies that not all citizens perceive citizens of other countries in the same way. Indeed, a factor like cultural proximity may play a role. For instance, individuals might have different attitudes toward a firm or product originating from their own country or a country they perceive as similar to their own. This might result in the so-called consumers' ethnocentrism, in which consumers are inclined to buy domestic products (Balabanis and Diamantopoulos, 2004), or in the tendency to invest in local companies (Bottazzi et al., 2011) and in companies that have cultural backgrounds similar to those of investors (Grinblatt and Keloharju, 2001). Indeed, people's level of experience with a specific country and its cultural proximity to their own country has been shown to lead to more accurate predictions (see, for example, Bae et al. (2008)) and, in turn, enable more efficient investment. Familiarity<sup>5</sup> based on cultural and geographical proximity is an important element in the investment decision processes of local investors: it goes beyond the mere information advantage enjoyed by local businesses and reflects people's tendency to be optimistic about what they feel to be akin (Huberman, 2001).

Our study contributes to the literature by shedding light on the following issues: (i) Do European citizens expect different behavior from other citizens based on nationality? (ii) If so, is there a misalignment between perception and behavior? (iii) Does cultural proximity influence perceptions?

This paper proceeds as follows. In Section 2, we describe the design of the experiment. In Section 3 and 4, we present the analysis of the data gathered from the experiment. Our findings are summarized in Section 5.

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information on endorsement rates is unavailable (Dawes, 1989; Engelmann and Strobel, 2000). Engelmann and Strobel (2000) argue for a more narrow definition and state that the "false consensus effect is considered to be present if people, when forming expectations concerning other people's decisions, weight their own decision *more heavily* than that of a randomly selected person from the same population" (p. 242, emphasis added).

<sup>5</sup> Familiarity is part of a broader concept called home-country bias, which refers to the phenomenon that the share of foreign securities possessed by domestic investors is rather restricted compared to the predictions of standard portfolio theory, i.e., investors tend not to diversify as internationally as they should (Huberman, 2001).

## 2. Experiment design, questionnaire, and procedure

### 2.1 Experiment design

Individuals from representative samples in Germany, France, Italy, the Netherlands, and Spain participated in an online experiment that consisted of two assignments: a volunteering game and an honesty game. Each assignment consisted of two parts. First, participants completed the game. Second, immediately after the game, they assessed the behavior of other participants in the same game.<sup>6</sup>

#### 2.1.1 *Volunteering game*

The volunteering game is meant to measure an individual's willingness to exert effort for the sake of someone else. In the experiment, we implemented a real effort task in which the earnings are donated to charity, as follows.

A table containing 150 symbols (stars (★) and squares (■)) was displayed on the participants' computer screens (see Figure 1). Their task was to count the number of stars in the table within 50 seconds. They completed this task four times, each time for a different table. A similar task was implemented by Abeler et al. (2011), who note that this type of task does not require any prior knowledge; the task is pointless, artificial, and dull; and the performance does not provide any intrinsic value to the experimenter (the person conducting the experiment). Therefore, reciprocal behavior toward the experimenter cannot explain an individual's performance in the task.<sup>7</sup> Moreover, our volunteering game has the advantage of being particularly simple to explain and implement in an online experiment. Participants knew that for every correctly counted table the experimenter would donate €0.50 (approximately \$0.54) to a charitable organization. Before starting, the game participants could choose their preferred charity from among sixteen charities. We provided both international and national charities that work in the areas of poverty, human rights, and medical aid. Individuals received a brief description of each charitable organization and could choose any one of them. The list can be found in Appendix C, Section D.3.

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<sup>6</sup> This structure has been used in previous experimental studies to elicit beliefs about others' behavior, such as unconscious stereotypes regarding gender differences in risk attitudes (Eckel and Grossman, 2002, 2008) and beliefs regarding dishonest behavior (Abeler et al., 2014).

<sup>7</sup> Other tasks that share similar characteristics have been used in previous experimental studies. These tasks include moving sliders across the screen into specific positions (Gill and Prowse, 2012), encrypting given words into numbers using a provided encryption table (Erkal et al., 2011), and typing a paragraph several times (Dickinson, 1999).

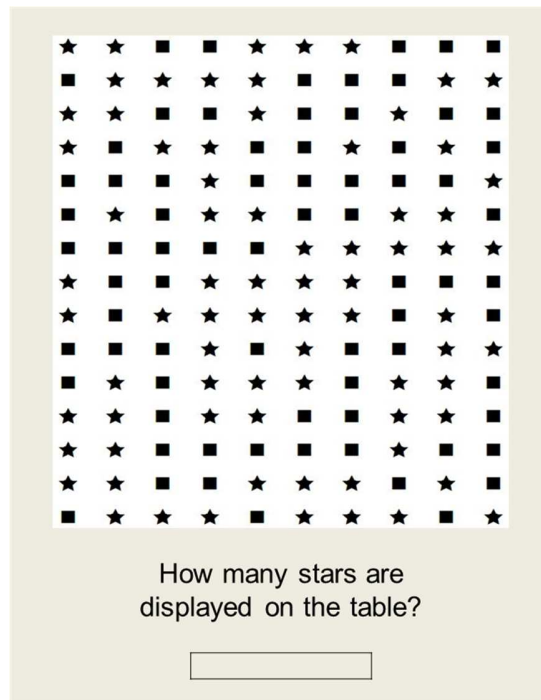


Figure 1 – Example of one of the four tables that individuals received during the volunteering game.

### 2.1.2 Honesty game

The honesty game has the objective of measuring the frequency of honest behavior. For the purpose of the experiment, we identify honest behavior as the proportion of unprofitable outcomes (heads) reported. Similar to the experiment conducted by Bucciol and Piovesan (2011), in our honesty game, participants were asked to toss a coin once privately and report the result. They were informed that they would receive €1 for themselves for each tails result they reported and €0 (unprofitable outcome) for each heads result they reported.<sup>8</sup> Reporting tails could be either honest or dishonest. We can detect dishonest behavior at the country level when statistically more than 50% of the individuals report tails results (the profitable outcome).

### 2.1.3 Assessment

In the assessment phase of each game, the order in which the countries were assessed was randomly determined for each participant and then fixed across assignments. Each individual performed 5

<sup>8</sup> Other studies use a similar game, e.g. Houser et al. (2012), Fosgaard et al. (2013), Abeler et al. (2014).

assessments per game, one per country. For the volunteering game individuals were asked to assess the average performance of the participants in each country. For the honesty game, they were asked to assess the percentage of participants who reported tails in each country. Because the assessments took place after each game, all participants were experienced in the game, which made the assessments easier for them to perform.

Their payoffs were calculated based on the accuracy of each of their assessments.<sup>9</sup> Namely, if an individual's assessment was exactly equal to the actual behavior of participants in the specific assessed country, the assessor obtained €1.50 for herself. Otherwise, the difference between the actual value and the assessment was deducted from this maximum payoff. Losses were not possible.

$$\textit{Payoff volunteering} = \max(1.50 - |\textit{Actual value} - \textit{Assessment}|; 0)$$

$$\textit{Payoff honesty} = \max(1.50 - |\textit{Actual value} - \textit{Assessment}| * 0.10; 0)$$

For each game, one of the participant's five country assessments was randomly selected to be payoff-relevant. Because participants' assessments had to be compared with actual behavior in the games, participants could not be paid immediately after the experiment but instead received their payoffs within a few days afterward.

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<sup>9</sup> Previous experimental evidence suggests this approach of including an incentive based on individuals' assessments after making a decision or performing a task. Gächter and Renner (2010) observe that in public-good games incentivizing beliefs increases the accuracy of the beliefs (Wang (2011) arrives at a similar conclusion), but incentivized beliefs elicited at the same time of the decision affect contribution levels. Various methods have been implemented to incentivize the accuracy of beliefs. The most commonly used is probably the quadratic scoring rule, which subtracts from a constant the sum of the squared deviations from the actual value. However, this rule is incentive compatible—meaning that individuals report their true beliefs—only if individuals are risk-neutral (Blanco et al., 2010; Huck and Weizsäcker, 2002; Offerman et al., 2009; Palfrey and Wang, 2009; Wang, 2011). Bidding mechanisms are another way to elicit beliefs; however that method seems to be less accurate than the quadratic scoring rule (Huck and Weizsäcker, 2002). Alternatively, an experimenter could pay the individual if he or she correctly reports the mode of the distribution (Bhatt and Camerer, 2005). We use a rule similar to the quadratic score rule, but we consider the absolute value of the deviation from the actual value instead of the squared deviation. Because our sample does not consist entirely of students but rather of individuals who have various educational backgrounds, the participants' mathematical knowledge might not be sufficient for understanding the quadratic scoring rule. A procedure similar to ours is applied by Fischbacher and Föllmi-Heusi (2013), who elicit individuals' beliefs regarding dishonest behavior of other participants and pay them a specific amount for a correct guess and reduce the payoff stepwise for each percentage-point deviation from the actual value.



## 2.2 Questionnaire

Before starting the experiment individuals were asked for socio-demographic information, such as age, gender, education level, region of residence, and the number of inhabitants in their place of residence (see Appendix D, section D.2.). After the games and assessments had been completed, participants were asked questions about their (1) perceptions of behavioral and cultural aspects of other countries, and (2) experience with other countries (see Appendix D, Section D.5).<sup>10</sup>

### 2.2.1 Behavioral and cultural aspects

The first set of questions is aimed at measuring perceptions of various attributes of the citizens of the five countries, including competence attributes, such as effort, accuracy, and discipline, and character attributes, such as fairness, morality, honesty and hospitality. The questionnaire retraces the two primary dimensions of the stereotype content model proposed by Fiske et al. (2002) and Cuddy et al. (2009)—warmth (e.g., friendliness and honesty) and competence (e.g., accuracy and productivity)—but is more extensive and allows us to collect more information related to the behavior demonstrated in the experiment. Thus, although such questions have the drawback of not being incentivized, they complement the analysis of the assessment data. We use these questions to measure the perceived behavioral and cultural proximity among countries.

### 2.2.2 Experience with a country

The second set of questions elicits experience with each of the four foreign countries (each individual's own country was excluded from these questions), including the participant's personal experience with the country's citizens, the way in which the country is portrayed by the media, the number of journeys the participant has made to the country, and whether the participant's circle of acquaintances includes a citizen of the country.

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<sup>10</sup> We asked participants about their trust in the European Union and the Euro currency. In addition, we asked for some personal information, such as the participants' income and family composition. These questions are shown in Appendix D, Section D.5. Because some individuals did not provide this personal information (such non-answers were possible for only these questions), we have not included these variables in the analyses.

### 2.3 Procedure

A total of 1,015 individuals from the following countries took part in the experiment: 202 from France, 203 from Germany, 202 from Italy, 204 from the Netherlands, and 204 from Spain. The samples were representative of the countries' populations in terms of age, gender, education, and territorial distribution. The use of a representative sample in cross-cultural experiments is an undeniable strength in cross-cultural experiments, because cultural differences among student populations are rather limited compared to those of whole societies (Henrich et al., 2001). The experiment was conducted in October 2013 and lasted about 20 minutes for each participant.<sup>11</sup> The participants received the link to the online questionnaire via e-mail so that they could undertake the experiment whenever they wanted within a period of a few days. Participants earned, on average, €5.14, including a show-up fee of €3.5. The experiment was conducted within the online marketing panels maintained by GfK SE.<sup>12</sup> Participants received instructions and made their decisions on their own personal computers. From our recruiting system, we already knew the nationality of the participants, so we did not have to ask for this information and could thus avoid the so-called stereotype threat (Spencer et al., 1999).<sup>13</sup>

### 3. Results

In Section 3.1, we introduce the reader to the result of our main variable of interest, the assessments, and summarize the questionnaire data regarding behavioral and cultural aspects. In Section 3.2, we analyze the relationship between nationality and assessment and possible discrepancies between assessment and actual behavior. In Section 3.3, we investigate potential in-group bias and social projection. In Section 3.4, we focus on additional patterns, in particular, how participants' experience with a foreign country may have influenced their assessments of that country's citizens.

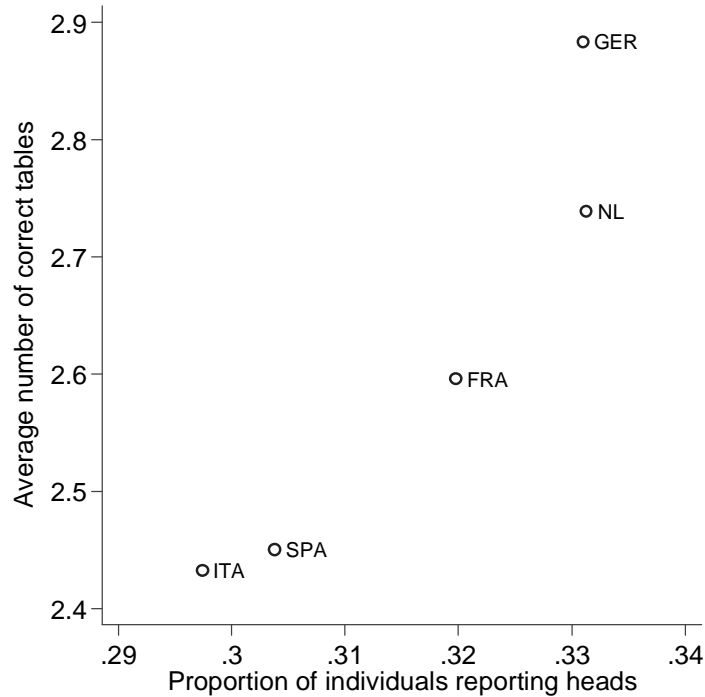
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<sup>11</sup> The participants were paid at the end of November 2013. In addition, they received information about the behavioral outcomes from the game tasks for each country and the overall total donation made to each charitable organization. As is typical, the points were credited to an account that was paid out in certain intervals depending on the panel.

<sup>12</sup> By using these online panels we deal efficiently with several issues that complicate representative online experiments. For a discussion see Chen and Konstan (2015).

<sup>13</sup> The stereotype threat can be described as follows: "When a stereotype about one's group indicts an important ability, one's performance in situations where that ability can be judged comes under an extra pressure—that of possibly being judged by or self-fulfilling the stereotype—and this extra pressure may interfere with performance" (Spencer et al. (1999), p. 6).

### 3.1 Overview of assessment and questionnaire data



**Figure 2 – Assessments of the average number of correct tables vs. assessments of the proportion of individuals reporting the unprofitable outcome (heads), by country.**

Figure 2 shows each country's average value of assessments of the volunteering game (y-axis) and of the honesty game (x-axis). We can see the north/south pattern at just a glance: participants assigned better performance in the volunteering game and more honest behavior in the honesty game to participants from the northern countries (Germany and the Netherlands) than to participants from the southern countries (Spain and Italy). France is situated in the middle of these two groups of countries. Table 1 shows the average value of the assessments, by assessing country and assessed country. For example, if we consider France, the FRA row shows how French participants assessed participants from the various countries, and the FRA column shows how French participants were assessed by participants from the various countries. For ease in reading, we have highlighted in red the cells that contain the maximum values and shaded the remaining cells in colors that gradually bleach to white, which indicates the lowest values in each table. In the honesty assessment, we observe lower in-group assessments (assessments of a participant's own country are reported in the diagonals of Table 1) than out-group assessments. We will return to this point in Section 3.3.

We also observe the north/south pattern if we look at the questions on behavioral and cultural aspects in Table 2. By performing a cluster analysis of the assessment data from both the volunteering game and the honesty game, we obtain the following three clusters:<sup>14</sup> (A) Germany and the Netherlands, (B) France, and (C) Spain and Italy. We obtain the same clusters when we exclude in-group values, that is, perceptions of a participant's own country.

**Volunteering game**

Assessing country	Assessed country					Average
	GER	NL	FRA	SPA	ITA	
GER	2.92	2.82	2.68	2.51	2.46	2.68
NL	2.78	2.77	2.47	2.34	2.30	2.53
FRA	2.95	2.81	2.75	2.55	2.55	2.72
SPA	2.81	2.63	2.47	2.41	2.25	2.51
ITA	2.95	2.66	2.61	2.45	2.61	2.66
<b>Average</b>	2.88	2.74	2.60	2.45	2.43	<b>2.62</b>

**Honesty game**

Assessing country	Assessed country					Average
	GER	NL	FRA	SPA	ITA	
GER	0.27	0.31	0.29	0.28	0.27	0.28
NL	0.33	0.28	0.34	0.34	0.33	0.32
FRA	0.37	0.38	0.34	0.36	0.36	0.36
SPA	0.36	0.37	0.34	0.27	0.32	0.33
ITA	0.32	0.33	0.29	0.28	0.21	0.29
<b>Average</b>	0.33	0.33	0.32	0.30	0.30	<b>0.32</b>

Max	Min
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**Table 1 – Average assessments in the volunteering and honesty games, by assessing country vs. assessed country.**

Note: The rows show how participants from a specific country assess participants from the various countries. The columns show how participants from a specific country are assessed by participants from the various countries. The cells highlighted in dark red indicate the maximum values in each table. The shading gradually bleaches to white, which indicates the lowest values in each table. For the volunteering game, values range from 0 to 4 and represent the assessed average number of tables counted correctly. For the honesty game, values range from 0 to 1 and represent the assessed proportion of reported unprofitable outcomes (heads).

<sup>14</sup> The cluster analysis is performed by following complete linkage, as in Rabe-Hesketh and Everitt (2007); the same result is obtained when using other types of linkage. If two clusters are imposed, France is grouped with Germany and the Netherlands. We obtain the same three clusters based on the assessment variables, whether including or excluding in-group assessments. These clusters are similar to the three clusters derived by Cuddy et al. (2009), with the exception that in their study, the Netherlands forms a cluster with France, and Germany belongs to a different cluster. However, their samples and the countries involved are different from ours.

Question abbreviation	GER	NL	FRA	SPA	ITA	Average
Trust	4.69	4.79	4.18	4.28	3.99	4.39
Hospitality	4.38	4.82	4.38	5.44	5.32	4.87
Harmony	4.56	4.87	4.38	4.65	4.51	4.60
Trustworthiness	4.75	4.76	4.21	4.10	3.86	4.33
Corruption*	4.17	4.30	3.57	2.88	2.39	3.46
Moral respectability	4.99	4.98	4.62	4.59	4.41	4.72
Honesty	4.92	4.95	4.47	4.40	4.11	4.57
Interest in money	5.25	4.94	5.03	4.84	5.00	5.01
Helpfulness	4.73	5.02	4.48	5.03	4.92	4.84
Fairness	4.93	4.98	4.52	4.51	4.28	4.64
Unreliability*	4.78	4.79	4.37	4.28	4.06	4.46
Inability to deal with money*	4.67	4.53	4.06	3.68	3.63	4.11
Arrogance*	3.45	4.21	3.13	4.17	3.75	3.74
Discipline	5.64	5.22	4.33	3.89	3.70	4.56
Accuracy	5.54	5.15	4.60	4.17	4.13	4.72
Productivity	5.62	5.31	4.80	4.39	4.35	4.89
Average	4.82	4.85	4.32	4.33	4.15	
Cluster	A	A	B	C	C	

Max | Min

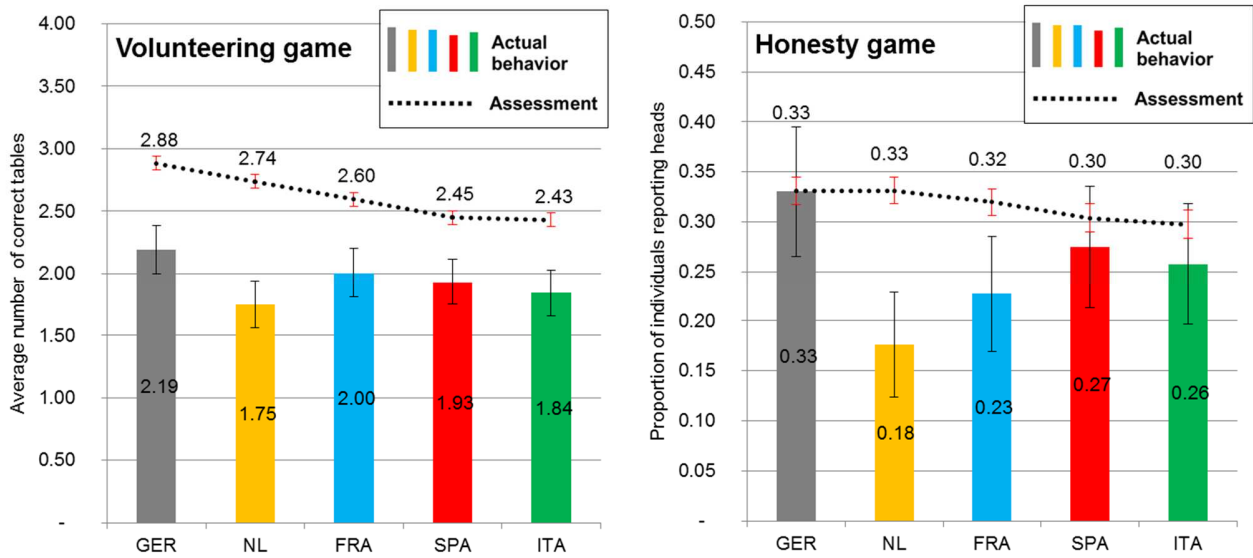
**Table 2 – Average values by assessed country of each questionnaire item regarding behavioral aspects.** Note: The list of questions is provided in Appendix D.5. The cells highlighted in dark red indicate the maximum values in each row. The shading gradually bleaches to white, which indicates the lowest values in each row. Values range on a Likert scale between 1 and 7. For negative questions (\*) the response scale was inverted compared to the version received by participants.

**RESULT 1 [ASSESSMENT PATTERNS]** *The assessment data show a north/south pattern. Specifically, similar assessments were made for Germany and the Netherlands and for Spain and Italy. A cluster analysis of the questionnaire data regarding behavioral and cultural aspects confirms this same north/south pattern, with perceptions regarding France situated between these two clusters.*

### 3.2 Assessment vs. actual behavior

In this section, we provide detailed analyses of the assessments and their possible discrepancies with the actual behavioral. Figure 3 shows the average number of tables counted correctly in the volunteering game and the proportion of reported unprofitable outcomes (heads) in the honesty game, along with the corresponding average assessments of each country's participants. Table 3 reports the pairwise comparisons of this data, by country, including significance levels. For instance, the first and second

columns (“Beh.” and “Ass.” for GER) of the first row, the one labeled NL, of the volunteering game table show, respectively, that Dutch participants correctly counted fewer (“-” sign) tables than did German participants and that they were assessed to have correctly counted fewer tables than were German participants.



**Figure 3 - Assessments vs. actual behavior in the volunteering and honesty games.** Note: The dotted lines indicate the average assessments of participants from each country, based on assessments made by participants from all countries. The bars indicate the average actual behavior of participants from each country. The error bars indicate the 95% confidence interval.

		Volunteering game							
		GER		NL		FRA		SPA	
		Beh.	Ass.	Beh.	Ass.	Beh.	Ass.	Beh.	Ass.
NL		---	°	---					
FRA		n.s.	---	+	---				
SPA		--	---	n.s.	---	n.s.	---		
ITA		--	---	n.s.	---	n.s.	---	n.s.	n.s.

		Honesty game							
		GER		NL		FRA		SPA	
		Beh.	Ass.	Beh.	Ass.	Beh.	Ass.	Beh.	Ass.
NL		---	°	n.s.					
FRA		--	---	n.s.	---				
SPA		n.s.	---	++	---	n.s.	---		
ITA		n.s.	---	++	---	n.s.	---	n.s.	---

**Table 3 - Pairwise comparisons of actual behavior (Beh.) and assessments (Ass.).** Note: A plus (+) or minus (-) sign indicates whether the average assessment of the row country was larger or smaller than the average assessment of the column country. A degree symbol (°) indicates that the comparison was confirmed via false discovery rate. All significantly different comparisons of the assessments were confirmed via false discovery rate. Significance levels are indicated as follows: +++ / --- p<1%, ++ / -- p<5%, + / - p<10%, n.s. p>10%.

### 3.2.1 *Volunteering game*

In the volunteering game, a very large share, 90.0%, of participants differentiated among countries, that is, their assessment of individuals from at least one country differed from their assessments of individuals from the other countries. The assessed performance of participants differed significantly among countries (Friedman test  $\chi^2(4)=726.119$ , Kendall=0.178, p-value=0.000). The related pairwise comparisons—from a Wilcoxon signed-rank test controlling for false discovery rate—show that the assessments are differently distributed at a significance level of  $p=0.01$ , except for Italy and Spain for which the null hypothesis is not rejected ( $z = -1.467$ , p-value=0.142). Figure 3 shows that German and Dutch individuals are assessed to have performed best in this game, followed by individuals from France, Spain, and Italy.

Actual performance also varied significantly among countries (Kruskal-Wallis  $\chi^2=12.154$ , p-value=0.016). A Wilcoxon rank-sum test of the pairwise comparisons of the performance of participants from various countries shows that the number of correctly counted tables differs between individuals from Germany and Italy, Germany and the Netherlands, and the Netherlands and France.<sup>15</sup> On average, Dutch participants correctly counted fewer tables than did French and German participants. Italians correctly counted fewer tables than did Germans.

Thus, the behavioral and assessment data for the volunteering game suggest that Dutch participants were incorrectly assessed to have performed better than French, Spanish, and Italian individuals, whereas German individuals were correctly assessed to have performed better than participants from the other countries. Overall, individuals expected the performance of participants from all countries to be better than it actually was.

### 3.2.2 *Honesty game*

We know that that if individuals reported their results completely honestly in this game we would observe approximately 50% of the reported results being unprofitable outcomes (heads). In other words, reported heads results comprising less than 50% of the total indicates some degree of dishonesty.

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<sup>15</sup> If we control for false discovery rate, only the comparison between Germany and the Netherlands holds.

In the assessments of the honesty game, a very large share, 86.6%, of participants differentiated among countries. The Friedman test shows that assessments differed across countries (Friedman test  $\chi^2(4)=50.573$ , Kendall=0.013, p-value=0.000). The related pairwise comparisons—from a Wilcoxon signed-rank test controlling for false discovery rate—are all significant, except for the one comparing Germany and the Netherlands ( $z=0.018$ , p-value=0.986). Figure 3 shows that Dutch and German participants were assessed to have reported the highest proportion of unprofitable outcomes, followed by participants from France, Spain, and Italy.

Concerning the behavioral data, the 95% confidence intervals shown in Figure 3 indicate that all countries' participants reported unprofitable outcomes of statistically less than 50%. Thus, dishonest behavior was observed by participants from each of the five European countries. However, a substantial proportion of participants from each country behaved honestly by reporting the unprofitable outcomes. This result differs from that of the Abeler et al. (2014) study, in which individuals were fully honest.<sup>16</sup> A Chi-square test shows a significant relationship between the proportion of reported unprofitable outcomes (heads) and country (Pearson  $\chi^2(4)=13.894$ , p-value=0.008). Figure 3 shows that German participants reported more unprofitable outcomes than did participants from the other countries, whereas Dutch participants reported fewer unprofitable outcomes than did participants from the other countries. Pairwise comparisons from Chi-square tests show that the proportion of reported unprofitable outcomes differs significantly between the following pairs of countries: France and Germany, the Netherlands and Germany, the Netherlands and Italy, and the Netherlands and Spain.<sup>17</sup>

If we compare the assessments with the actual behavior, we see that participants generally tended to expect others to report the unprofitable outcome (heads) more often than they actually did. In other words, they expected them to behave honestly more often than they actually did. Only for Germany did the reported proportion of unprofitable outcomes (heads) closely match the expected proportion. This result is substantially different than the one found by Abeler et al. (2014), in which individuals expected others to report the unprofitable outcome *less* often than they actually did. This is due to the difference in behavior between their study and our study. The average assessment in our study are similar to the

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<sup>16</sup> Although the method by which participants communicate outcomes in our study—via computer—differs from that in their study—personal communication via telephone—the additional laboratory experiment included in their study suggests that communication method should not substantially affect honesty. However, other factors may contribute to the difference in results. In Abeler et al. (2014) individuals were asked to provide a personal contact in order to receive payment, which may have affected the reporting of profitable outcomes.

<sup>17</sup> Only the comparison between Germany and the Netherlands holds if we control for false discovery rate.



ones observed by Abeler et al. (2014) (approximately 27%, based on only German participants), but, unlike us, they did not observe dishonest behavior from the participants.

To summarize, German participants were correctly assessed to have reported fewer profitable outcomes than did participants from other countries. In contrast, the assessment of Dutch participants was again incorrect: participants expected Dutch participants to report fewer profitable outcomes than did participants from the other countries, but the behavioral data suggest the opposite.

## **RESULT 2 [ASSESSMENT VS. BEHAVIOR]**

- (i) Individuals use other people's' nationality to infer behavior in both games.*
- (ii) The assessments follow the north/south pattern (see Result 1), but behavior does not strictly follow this pattern.*
- (iii) Thus, we observe a partial misalignment between assessment and actual behavior.*

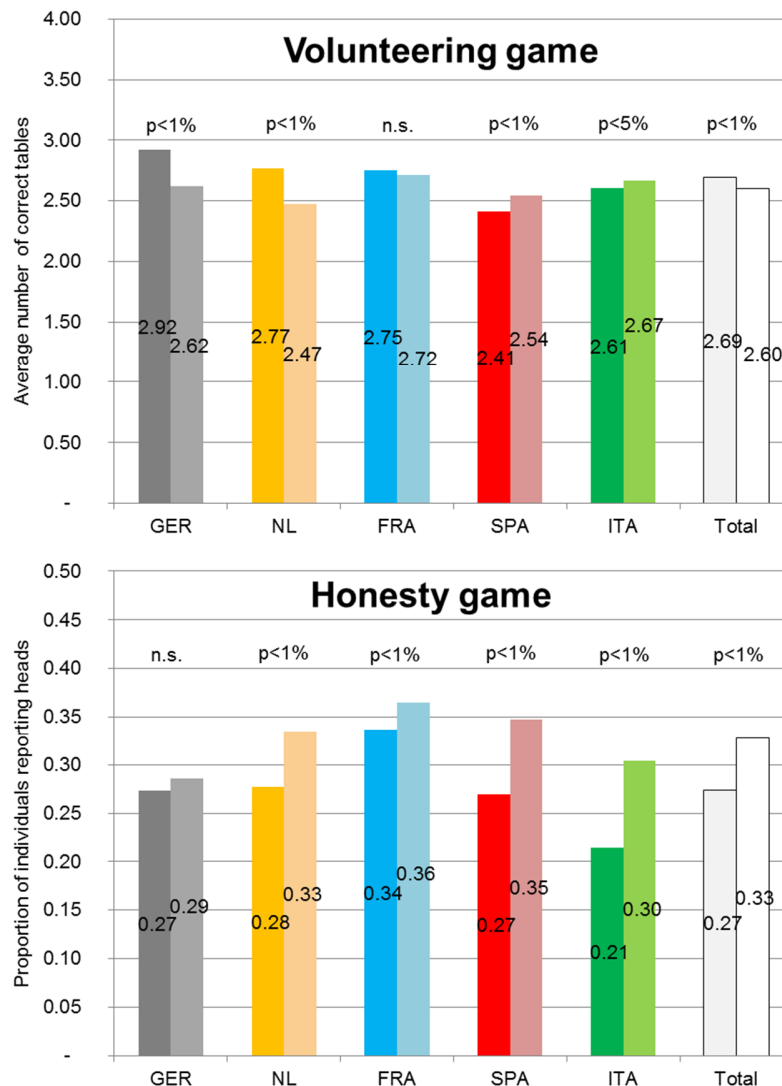
### **3.3 In-group bias and social projection**

In Section 1, we discussed in-group bias and social projection as possible patterns that may influence how people assess each other. Evidence for these patterns has been provided mainly by rating studies in social psychology in which the accuracy of judgments was not payoff-relevant. We now investigate whether these patterns also appear in our study, which includes performance-contingent payoffs.

#### *3.3.1 In-group bias*

We are interested in whether participants view their compatriots (members of the in-group) more favorably than they view participants from other countries (members of out-groups). To do that, we contrast a participant's assessment of people from his or her own country with the same participant's assessments of people from other countries. Specifically, we compare the participant's assessment of his or her compatriots with the mean of their assessments of people from the other four countries, that is, if assessor  $i$  is from country  $k$ , assessor  $i$ 's out-group assessment is calculated as follows:

$$\text{out-group assessment}_i = \frac{1}{4} \sum_{j \neq k} \text{assessment}_{ij}$$



**Figure 4 – In-group vs. out-group assessments in the volunteering and honesty games.** The darker bars represent the in-group assessments; the lighter bars represent the out-group assessments. Each bar reports the values for assessor’s country. In-group assessment is defined as assessment of individuals who are from the same country as the assessor. Out-group assessment is defined as the average assessment of individuals belonging to countries other than the assessor’s country. p is the p-value for the Wilcoxon signed-rank test. Each participant in the experiment provided one in-group and four out-group observations. We calculate the mean of each country’s average out-group observations as a synthetic measure.

Figure 4 reports the average in-group and out-group assessments provided by assessors from each country and the corresponding statistical comparisons from Wilcoxon signed-rank tests. Although the overall pattern in the volunteering game suggests that participants tended to expect better performance by their compatriots than by participants from other countries, this in-group bias differs among countries: Assessments made by Dutch and German participants about their compatriots were indeed, on average, higher than their assessments of participants from other countries. However, Spaniards and Italians expected their compatriots to perform worse than they did participants from other countries.

French participants' assessments of their compatriots were in line with their assessments of participants from other countries.

In the honesty game participants seemed to expect their compatriots to be less likely to report unprofitable outcomes (heads) than they did participants from the other countries (except for Germans, for whom in-group and out-group assessments did not differ significantly). Overall, we observe that participants expected that their compatriots would report 0.27 unprofitable outcomes but that participants from other countries would report, on average, 0.33 unprofitable outcomes. This in-group vs. out-group difference is statistically significant.

### **RESULT 3 [IN-GROUP BIAS]**

- (i) *We do not find evidence for in-group bias in the volunteering game assessments of individuals from an assessor's own country vs. individuals from other countries. Rather, assessments reflect the north/south pattern. That is, individuals from northern European countries provide a higher assessment of citizens of their own countries than they do of citizens of other countries, on average; assessments by individuals from southern European countries exhibit the reverse pattern.*
- (ii) *Assessments in the honesty game demonstrate negative in-group bias. That is, individuals expect citizens of their own countries to be less honest than they do citizens of other countries, on average.*

#### 3.3.2 Social projection

We now turn our attention to social projection by using the following statistical model:<sup>18</sup>

$$\text{Assessment}_{ij} = \lambda_i + \gamma_j + \beta_1 X_{ij} + \beta_2 Z_i + \varepsilon_{ij},$$

in which  $i$  refers to the assessor,  $j$  refers to the country being assessed,  $\lambda_i$  are random individual effects, and  $\gamma_j$  are assessed-country fixed effects that capture the common view of an assessed country's characteristics (Guiso et al., 2009).  $Z_i$  represents participant's individual controls and  $\varepsilon_{ij}$  is an idiosyncratic error term.  $X_{ij}$ , the term of interest to our analysis of social projection, includes the following variables: *Correct tables*, the number of tables correctly counted by the participant; *Unprofitable outcome (heads)*, a dummy variable equal to one if the participant reported heads; *Same*

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<sup>18</sup> This empirical approach is similar to the one used by Guiso et al. (2009).

*country*, a dummy variable equal to one for assessments of compatriots; and *Similar country*, a dummy variable that captures systematic deviations in assessments of participants from a country perceived to be similar to that of the assessor on the basis of the clusters Germany-Netherlands and Spain-Italy, which were determined in Section 3.1. The *Similar country* dummy variable is equal to one when German participants assess Dutch participants and vice versa and when Spanish participants assess Italian participants and vice versa. In addition, we include interaction terms between each of the dummy variables *Same country* and *Similar country* and each of the variables *Correct tables* and *Unprofitable outcome (heads)*.

Table 4 reports the results of individual random-effects regressions. Results of individual fixed-effects regressions with cluster-robust standard errors at the individual level are similar to those of the random-effects regressions (see Table C. 1 in Appendix C). For the regression reported in Table 4, column 1, the dependent variable is the assessment of performance in the volunteering game and ranges from 0 to 4. For the regression reported in column 2, the dependent variable is the assessment of the frequency of an unprofitable outcome being reported in the honesty game and ranges from 0 to 1.

In the volunteering game assessment analysis, the coefficient on the variable *Same country* is positive and significant. Thus, we again observe a systematic tendency for an assessor to expect a higher level of volunteering from participants who belong to his or her in-group, although this tendency is not sufficiently strong to represent clear in-group bias (see the previous section).

A participant's own behavior in the games seems to influence his or her assessments of other participants. Participants who correctly counted more tables in the volunteering game tended to have higher expectations about the number of tables other participants correctly counted (the variable *Correct tables* in Table 4, column 1) than did participants who correctly counted fewer tables. Thus, one's own performance seems to represent an anchor for the volunteering game assessments.

Similarly, participants who report a high proportion of profitable outcomes in the honesty game also expect other participants to do so (the variable *Unprofitable outcome (heads)* in Table 4, column 2).<sup>19</sup> Furthermore, there is evidence that the extent of such social projection differs between in-group assessments and out-group assessments, at least in the honesty game. The association between a

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<sup>19</sup> The p-value for the variable *Unprofitable outcome (heads)* is 0.051, only slightly above 5% significance level.

participant's own honest behavior and his or her assessment of other participants interacts with whether the assessor is evaluating compatriots (the interaction term *Unprofitable outcome (heads) × Same country*). This finding helps in interpreting the in-group/out-group differences in honesty assessments reported in Result 3. A majority participants reported a profitable outcome in the honesty game, and assessors expect other participants—especially those from their own countries—to behave in the same way as they do. Taken together, these may explain the lower assessments of honesty for participants from the assessor's own country than for participants from other countries.

A similar explanation may account for differences in honesty assessments of participants from similar and dissimilar countries, which suggest that social projection may decrease with perceived behavioral or cultural distance (the variable *Similar country* in Table 4, column 2). This interpretation is consistent with the theory regarding social projection (Robbins and Krueger, 2005), as well as the Social Circle Heuristic (Pachur et al., 2005), that is, that individuals project to in-groups but also to out-groups, though more weakly, which reveals hierarchically structured social circles across which social projection decreases. Applied to our study, at the top of the hierarchy is the assessor's own country, then the European macro-region (northern Europe or southern Europe), and finally Europe.

In the volunteering game assessment analysis, we do not find hierarchical projection of the assessor's own behavior. The coefficients on the variables *Correct tables × Same country* and *Correct tables × Similar country* are very small and not significant.

#### **RESULT 4 [SOCIAL PROJECTION]**

*We find evidence for projection of an assessor's own behavior in his or her assessment of other individuals in the honesty game. This social projection is strongest when the assessor is evaluating individuals from his or her own country (in-group). Moreover, the projection is stronger when the assessor is evaluating individuals from a foreign country that the assessor perceives as similar to his or her own country.*

Variables	(1) Volunteering-game assessment	(2) Honesty-game assessment
Variables of interest	Same country	-0.0642*** (0.00455)
	Similar country	-0.0137*** (0.00520)
	Correct tables × Same country	0.127*** (0.0377)
	Correct tables × Similar country	-5.10e-05 (0.0355)
	Unprofitable outcome (heads) × Same country	-0.0209 (0.0135)
	Unprofitable outcome (heads) × Similar country	-0.00767 (0.0131)
Assessed-country fixed effects	Germany	0.0351*** (0.00905)
	The Netherlands	0.0124 (0.0100)
	Spain	0.291*** (0.0211)
	Italy	0.145*** (0.0203)
Individual controls	Correct tables	-0.0141*** (0.00493)
	Unprofitable outcome (heads)	0.0251* (0.0140)
	Age	0.00421*** (0.00138***)
	Male	-0.108** (0.0428)
	Inhabitants	0.00378 (0.00754)
	Education	-0.0263 (0.0346)
	Assessing-country fixed effects	Yes
Constant	1.932*** (0.119)	0.446*** (0.0327)
Number of observations	5,075	5,075
R-squared	0.167	0.068
Number of participants	1,015	1,015
$\chi^2/F$	1270.85	413.51
$P>\chi^2/F$	0.0000	0.000

Robust standard errors are shown in parentheses.

Significance levels are indicated as follows: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table 4 – Random-effects regression analysis of assessments in the volunteering and honesty games.** Note: For regressions in column 1, the dependent variable is the assessment of performance in the volunteering game and ranges from 0 to 4. For regressions in column 2, the dependent variable is the assessment of the frequency of an unprofitable outcome being reported in the honesty game and ranges from 0 to 1. All regressions include both assessed-country fixed effects (France is the benchmark) and assessing-country fixed effects (not reported). Both in-group and out-group assessments are included; the observations are distinguished by the dummy variable *same country*. Fixed-effects regression results are similar to these random-effects regression results. The Hausman test for random vs. fixed effects does not reject the null hypothesis stating that the difference in coefficients is not systematic.

### 3.4 Can participants' experience with foreign countries explain their assessments?

As mentioned in Section 2.2, the questionnaire included questions about the participants' experiences with foreign countries. These questions can help us to investigate the potential sources of differences in their assessments. Thus, in this section we focus on participants' assessments of participants from foreign countries. That is, we exclude from our analysis the participants' in-group assessments and focus on how they assessed participants from the other four major European countries.

Table 5 reports the results of individual random-effects regressions. The statistical model used for this analysis has the same structure as the one used in Section 3.3. For the regression reported in Table 5, column 1, the dependent variable is the assessment of performance in the volunteering game and ranges from 0 to 4. For the regression in column 2, the dependent variable is the assessment of the frequency of an unprofitable outcome being reported in the honesty game and ranges from 0 to 1. All regressions include both assessed-country fixed effects and assessing-country fixed effects (not reported). Results of individual fixed-effects regressions with cluster-robust standard errors at the individual level (see Table C. 2 in Appendix C) are similar to those of the random-effects regressions. An explanation of the variables included is provided in Table A. 1 in Appendix A.

The results of analyzing the variables *Similar country*, *Correct tables*, and *Unprofitable outcome (heads)*, as well as their respective interaction terms, are comparable to those shown in Table 4 and have already been discussed in Section 3.3.<sup>20</sup>

Moreover, perception of media coverage seems relevant to participants' assessments. We measure this effect via two dummy variables that are equal to one if the participants declares to have heard or read some information in the media about the assessed country and that the information was positive (the variable *Media good*) or negative (the variable *Media bad*). Positive perceived media coverage of a country is associated with high assessments of its citizens' performance in the volunteering game, whereas negative perceived media coverage of a country is associated with low assessments of its citizens' performance in the volunteering game (although only weakly significant). Assessments of

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<sup>20</sup> With regard to an individual's characteristics, older participants (the variable *Age*) seem more "optimistic": they expect more effort and honesty; male participants (the variable *Male*) tend to expect less effort.

performance in the honesty game are affected by negative perceived media coverage but not by positive perceived media coverage.

The variable *Personal bad* indicates whether the participant has had mainly negative experiences with citizens of the assessed country. This variable is negatively associated with the participant's assessments of the performance of citizens of that country in the volunteering game. In other words, an assessor having reported a negative personal experience with a citizen of a specific country is associated with the assessor providing a negative assessment of the performance of participants from that country in the volunteering game.

The variable *Travelling* indicates how many times the participant has traveled to the assessed country. An assessor having reported frequent travel to a country is associated with the assessor providing a lower assessment of the performance of participants from that country in the honesty game, although the coefficient on this variable is rather small and weakly significant. Note, however, that this relationship fits the pattern of honesty assessments reported in Section 3.3: Individuals from countries similar to the assessor's country are assessed as being less honest, and frequent travel to a country may increase the assessor's perception of the country's similarity, thereby promoting social projection.



		(1)	(2)
Variables		Volunteering game assessment	Honesty game assessment
Variables of interest	Similar country	-0.00491 (0.0302)	-0.0178*** (0.00531)
	Correct tables × Similar country	-0.00511 (0.0123)	
	Unprofitable outcome (heads) × Similar country		0.0108 (0.00970)
	Personal bad	-0.0750** (0.0306)	-0.00546 (0.00774)
	Personal good	-0.00315 (0.0226)	0.00218 (0.00571)
	Media bad	-0.0441* (0.0242)	-0.0184*** (0.00614)
	Media good	0.0531** (0.0230)	-0.000685 (0.00585)
	Travel	-0.0108 (0.00894)	-0.00400* (0.00226)
	Acquaintance	0.00923 (0.0193)	-0.00290 (0.00488)
	Assessed-country fixed effects	Germany	0.290*** (0.0228)
The Netherlands		0.0948*** (0.0240)	0.0207*** (0.00603)
Spain		-0.154*** (0.0231)	-0.00403 (0.00582)
Italy		-0.180*** (0.0237)	-0.00627 (0.00595)
Individual controls	Correct tables	0.327*** (0.0161)	-0.0351*** (0.00445)
	Unprofitable outcome (heads)	0.0543 (0.0500)	0.0271* (0.0142)
	Age	0.00361** (0.00148)	0.00135*** (0.000416)
	Male	-0.106** (0.0440)	-0.0150 (0.0123)
	Inhabitants	0.00693 (0.00799)	-0.000594 (0.00224)
	Education	-0.00821 (0.0354)	-0.0251** (0.00993)
	Assessing-country fixed effects	Yes	Yes
Constant	1.938*** (0.121)	0.450*** (0.0337)	
Number of observations	4,060	4,060	
R-squared	0.203	0.029	
Number of participants	1,015	1,015	
$\chi^2/F$	1230.42	209.67	
$P > \chi^2/F$	0.000	0.000	

Robust standard errors are shown in parentheses

Significance levels are indicated as follows: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table 5 – Regression analysis of out-group assessments in the volunteering and honesty games.** Note: For regressions in columns 1 the dependent variable is the assessment performance in the volunteering game and ranges from 0 to 4. For regressions in columns 2, the dependent variable is the assessment of the frequency of an unprofitable outcome being reported in the honesty game and ranges from 0 to 1. All regressions include both assessed-country fixed effects (France is the benchmark) and assessing-country fixed effects (not reported). The Hausman test for random vs. fixed effects does not reject the null hypothesis stating that the difference in coefficients is not systematic.

#### **4. Discussion and conclusion**

We have examined cross-cultural perceptions of two dimensions related to trust: effort and honesty. We find that individuals' assessments of behavior (as an unobservable characteristic) of other European citizens are influenced by the nationality of those citizens (an observable characteristic). However, individuals sometimes misperceive the behavior of other European citizens. In particular, the northern/southern Europe categorization seems a (too) strong determinant of individuals' assessments. Consequently, the first main insight from our study is a partial divergence between beliefs and behavior. This issue can have important economic consequences: Trust (and mistrust) based on incorrect perceptions can cause an inefficient outcome of underinvestment in and little trade with a wrongfully distrusted country. Another implication concerns consumer behavior. Consider two products, one produced in Spain and the other produced in the Netherlands, that have identical observable characteristics. The differences in assessments found in our study suggest that individuals may have a bias in favor of the Dutch product. Indeed, many studies in marketing literature that investigate the so-called country-of-origin effect show that a product's origin serves as a signal for its quality when the quality cannot be observed (Michaelis et al., 2008; Verlegh and Steenkamp, 1999). This effect may be especially strong for experience goods and credence goods, which are characterized by considerable information asymmetries between buyer and seller (Darby and Karni, 1973; Dulleck et al., 2011; Nelson, 1970). For such a product, potential buyers may rely on available information such as the product's country of origin, which can be particularly important for products entering a foreign market (Michaelis et al., 2008). This issue has become more even prominent since a European law was introduced recently, requiring communication of the country of origin for a large set of products (European Parliament, 2014).

The second main insight from our study is the lack of in-group bias in assessments of performance in the volunteering game. Rather, the assessments follow the north/south pattern: Individuals from northern European countries have a positive self-perception, whereas individuals from southern European countries have a negative self-perception. In the honesty game, however, assessments do not follow the north/south-pattern. Instead, individuals tend to expect their compatriots to be more dishonest, on average, than people from other countries. Given that a considerable proportion of individuals are dishonest in all countries, this tendency likely reflects social projection. The projection seems hierarchical, that is, it is strongest for the in-group but still present for countries perceived as

closer to the in-group in terms of behavioral and cultural characteristics. Although social projection is more pronounced for assessments of performance in the honesty game, we also find evidence of it in the volunteering game.

To summarize, our study is one of the first cross-cultural empirical studies among European countries that is based on large, general-population samples and does not rely exclusively on survey questions but also includes incentivized behavior and assessments of behavior. We find systematic differences between assessments and the corresponding actual behavior, which may give rise to inefficiency in economic transactions. Such differences may trigger statistical discrimination in experimental games that require an exchange of resources between participants. Further investigation of the impact of (mis)perceptions on strategic interaction may be an interesting area for future experimental research.

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## Appendices

### A. Variables included in the regressions

Variable	Description
Volunteering <sub>ij</sub> game assessment	Individual <i>i</i> 's volunteering-game assessment of participants from country <i>j</i>
Honesty <sub>ij</sub> game assessment	Individual <i>i</i> 's honesty-game assessment of participants from country <i>j</i>
Similar country	Dummy variable equal to 1 if a German citizen assesses a Dutch citizen, or vice versa, or an Italian citizen assesses a Spanish citizen, or vice versa
Correct tables × Similar country	Interaction term between the individual's behavior in the volunteering-game and similar country
Unprofitable outcome (heads) × Similar country	Interaction term between honesty-game behavior and similar country
Personal bad/good	Dummy variable equal to 1 if the individual has had a bad/good personal experience with a person from the assessed country
Media bad/good	Dummy variable equal to 1 if the individual's perception of media coverage about the assessed country was bad/good
Travel	Frequency of travel (for tourism or job) to the assessed country
Acquaintance	Dummy variable equal to 1 if the individual knows a person from the assessed country
Unprofitable outcome (heads)	Dummy variable equal to 1 if the unprofitable outcome (heads) was reported in the honesty game by the participant (i.e. behavior)
Correct tables	Number of tables correctly counted in the volunteering game by the participant (i.e. behavior)
Age	Age of the individual
Male	Dummy variable equal to 1 if the individual is male
Inhabitants	Size of the town or city in which the individual resides
Education	Individual's education level
Dummies country origin	Dummy variable for the individual's country of origin
Same country	Dummy variable equal to 1 when the individual assesses a participant from his or her own country
Correct tables × Same country	Interaction term between the individual's behavior in the volunteering game and same country
Unprofitable outcome (heads) × Similar country	Interaction term between honesty-game behavior and similar country

Table A. 1. – Variables included in the regressions.

## B. Descriptive statistics

Assessment						
Variable	Mean	P50	Sd	Min	Max	N
Ass. Volunteering	2.62	2.8	0.91	0	4	5075
Ass. Honesty	0.32	0.31	0.22	0	1	5075
Behavior						
Variable	Mean	P50	Sd	Min	Max	N
Correct tables	1.94	2	1.38	0	4	1015
Unprofitable outcome (heads)	0.25	0	0.44	0	1	1015
Demographics						
Variable	Mean	P50	Sd	Min	Max	N
Age	39.66	38	15.05	14	83	1015
Education	2.18	2	0.64	1	3	1015
Inhabitants	6.10	6	2.81	1	10	1015
Male	0.50	1	0.50	0	1	1015
Experience and institutions						
Variable	Mean	P50	Sd	Min	Max	N
Acquaintance	0.38	0	0.49	0	1	4060
Media	1.97	2	0.87	1	3	4060
Media bad	0.25	0	0.43	0	1	4060
Media good	0.39	0	0.49	0	1	4060
Personal	1.71	1	0.90	1	3	5075
Personal bad	0.59	1	0.49	0	1	5075
Personal good	0.11	0	0.31	0	1	5075
Travel	2.05	2	1.21	1	5	4060
Trust Euro	3.61	4	1.79	1	7	1015
Trust Europe Union	3.57	4	1.70	1	7	1015

Behavioral aspects							
Code	Variable	Mean	P50	Sd	Min	Max	N
R1	Trust	4.39	4	1.49	1	7	5075
R2	Hospitality	4.87	5	1.41	1	7	5075
R3	Harmony	4.6	5	1.37	1	7	5075
R4	Trustworthiness	4.33	4	1.47	1	7	5075
R5	Corruption*	3.46	3	1.66	1	7	5075
R6	Moral respectability	4.72	5	1.35	1	7	5075
R7	Honesty	4.57	5	1.39	1	7	5075
R8	Interest in money	5.01	5	1.45	1	7	5075
R9	Helpfulness	4.84	5	1.36	1	7	5075
R10	Fairness	4.64	5	1.32	1	7	5075
R11	Unreliability*	4.46	4	1.6	1	7	5075
R12	Inability to deal with money*	4.11	4	1.61	1	7	5075
R13	Arrogance*	3.74	4	1.62	1	7	5075
R14	Discipline	4.56	5	1.52	1	7	5075
R15	Accuracy	4.72	5	1.37	1	7	5075
R16	Productivity	4.89	5	1.37	1	7	5075

\* These negative questions were recoded by inverting the response scale compared to the version received by participants.

Table B. 1. – Descriptive statistics for data from the assessments and questionnaires. The list of questions, along with the codes, is provided in Appendix D.

### C. Random-effect and fixed-effect regressions

		Volunteering game ass.		Honesty game ass.	
Variables		(1)	(2)	(3)	(4)
		Random-effect	Fixed-effect	Random-effect	Fixed-effect
Variables of interest	Same country	0.127*** (0.0377)	0.127*** (0.0376)	-0.0642*** (0.00455)	-0.0642*** (0.00479)
	Similar country	-5.10e-05 (0.0355)	-0.000824 (0.0356)	-0.0137*** (0.00520)	-0.0137** (0.00545)
	Correct tables × Same country	-0.0209 (0.0135)	-0.0208 (0.0135)		
	Correct tables × Similar country	-0.00767 (0.0131)	-0.00727 (0.0131)		
	Unprofitable outcome (heads) × Same country			0.0351*** (0.00905)	0.0351*** (0.0119)
	Unprofitable outcome (heads) × Similar country			0.0124 (0.0100)	0.0122 (0.0124)
Assessed-country fixed effects	Germany	0.291*** (0.0211)	0.291*** (0.0211)	0.0129*** (0.00493)	0.0129*** (0.00471)
	The Netherlands	0.145*** (0.0203)	0.145*** (0.0203)	0.0139*** (0.00493)	0.0139*** (0.00470)
	Spain	-0.143*** (0.0187)	-0.143*** (0.0187)	-0.0141*** (0.00493)	-0.0141*** (0.00457)
	Italy	-0.161*** (0.0186)	-0.161*** (0.0185)	-0.0205*** (0.00493)	-0.0205*** (0.00459)
Individual controls	Correct tables	0.331*** (0.0163)		-0.0335*** (0.00436)	
	Unprofitable outcome (heads)	0.0368 (0.0469)		0.0251* (0.0140)	
	Age	0.00421*** (0.00146)		0.00138*** (0.000406)	
	Male	-0.108** (0.0428)		-0.0158 (0.0121)	
	Inhabitants	0.00378 (0.00754)		-0.000683 (0.00219)	
	Education	-0.0263 (0.0346)		-0.0240** (0.00970)	
Assessing-country fixed effects		Yes	Yes	Yes	Yes
Constant		1.932*** (0.119)	2.579*** (0.0121)	0.446*** (0.0327)	0.331*** (0.00290)
Number of observations		5,075	5,075	5,075	5,075
R-squared		0.167	0.167	0.068	0.068
Number of participants		1,015	1,015	1,015	1,015
$\chi^2/F$		1270.85	81.85	413.51	27.07
$P > \chi^2/F$		0.000	0.000	0.000	0.000

Robust standard errors are shown in parentheses.

Significance levels are indicated as follows: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table C. 1. – Regression analysis of both in-group and out-group assessments in the volunteering and honesty games.**

Note: For regressions in columns 1 and 2, the dependent variable is the assessment of performance in the volunteering game and ranges from 0 to 4. For regressions in columns 3 and 4, the dependent variable is the assessment of the frequency of an unprofitable outcome being reported in the honesty game and ranges from 0 to 1. Columns 1 and 3 show the results of individual random-effects regressions. Columns 2 and 4 show the results of individual fixed-effects regressions; by using fixed effects we capture potential systematic differences in the way individuals answer. All regressions include both assessed-country fixed effects (France is the benchmark) and assessing-country fixed effects (not reported). Cluster-robust standard errors at the individual level are included. The Hausman test for random vs. fixed effects does not reject the null hypothesis stating that the difference in coefficients is not systematic.

		Volunteering game ass.		Honesty game ass.	
Variables		(1)	(2)	(3)	(4)
		Random-effect	Fixed-effect	Random-effect	Fixed-effect
Variables of interest	Similar country	-0.00491 (0.0302)	-0.00645 (0.0373)	-0.0178*** (0.00531)	-0.0175*** (0.00591)
	Correct tables × Similar country	-0.00511 (0.0123)	-0.00463 (0.0133)		
	Unprofitable outcome (heads) × Similar country			0.0108 (0.00970)	0.0104 (0.0127)
	Personal bad	-0.0750** (0.0306)	-0.0723** (0.0336)	-0.00546 (0.00774)	-0.00383 (0.00854)
	Personal good	-0.00315 (0.0226)	-0.0105 (0.0237)	0.00218 (0.00571)	0.00260 (0.00563)
	Media bad	-0.0441* (0.0242)	-0.0503** (0.0252)	-0.0184*** (0.00614)	-0.0151** (0.00635)
	Media good	0.0531** (0.0230)	0.0465* (0.0243)	-0.000685 (0.00585)	0.00233 (0.00629)
	Travel	-0.0108 (0.00894)	-0.00775 (0.0104)	-0.00400* (0.00226)	-0.00439* (0.00241)
	Acquaintance	0.00923 (0.0193)	0.0149 (0.0199)	-0.00290 (0.00488)	-0.00375 (0.00544)
	Assessed-country fixed effects	Germany	0.290*** (0.0228)	0.292*** (0.0254)	0.0129** (0.00575)
The Netherlands		0.0948*** (0.0240)	0.0969*** (0.0245)	0.0207*** (0.00603)	0.0212*** (0.00627)
Spain		-0.154*** (0.0231)	-0.152*** (0.0213)	-0.00403 (0.00582)	-0.00392 (0.00542)
Italy		-0.180*** (0.0237)	-0.178*** (0.0229)	-0.00627 (0.00595)	-0.00657 (0.00572)
Individual controls	Correct tables	0.327*** (0.0161)		-0.0351*** (0.00445)	
	Unprofitable outcome (heads)	0.0543 (0.0500)		0.0271* (0.0142)	
	Age	0.00361** (0.00148)		0.00135*** (0.000416)	
	Male	-0.106** (0.0440)		-0.0150 (0.0123)	
	Inhabitants	0.00693 (0.00799)		-0.000594 (0.00224)	
	Education	-0.00821 (0.0354)		-0.0251** (0.00993)	
Assessing-country fixed effects		Yes	Yes	Yes	Yes
Constant		1.938*** (0.121)	2.611*** (0.0272)	0.450*** (0.0337)	0.338*** (0.00712)
Number of observations		4,060	4,060	4,060	4,060
R-squared		0.203	0.203	0.029	0.029
Number of participants		1,015	1,015	1,015	1,015
$\chi^2/F$		1230.42	47.68	209.67	5.40
$P > \chi^2/F$		0.000	0.000	0.000	0.000

Robust standard errors are shown in parentheses.

Significance levels are indicated as follows: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

**Table C. 2. – Regression analysis of out-group assessments in the volunteering and honesty games.** Note: For regressions in columns 1 and 2, the dependent variable is the assessment of performance in the volunteering game and ranges from 0 to 4. For regressions in columns 3 and 4, the dependent variable is the assessment of the frequency of an unprofitable outcome being reported in the honesty game and ranges from 0 to 1. Columns 1 and 3 show the results of individual random-effects regressions. Columns 2 and 4 show the results of individual fixed-effects regressions; by using fixed effects we capture potential systematic differences in the way individuals answer. All regressions include both assessed-country fixed effects (France is the benchmark) and assessing-country fixed effects (not reported). Cluster-robust standard errors at the individual level are included. The Hausman test for random vs. fixed effects does not reject the null hypothesis stating that the difference in coefficients is not systematic.

## D. Instructions and questionnaires (example for German respondents)

### Outline

1. Introduction: Welcome and overall instructions
2. Survey I
3. Volunteering Game
4. Honesty Game
5. Survey II
6. Conclusion

The order of countries was randomly determined, in advance, for each of the interviewed participants. The same order was used for the entire survey process.

List 1	List 2	List 3
Germans	Germans	Germany
French	French	France
Italians	Italians	Italy
Spaniards	Spaniards	Spain
Dutch	Dutch	The Netherlands

#### D.1. Introduction: Welcome and overall instructions

Dear Sir/Madam:

Together with the University of Erlangen-Nuremberg and the University of Constance, GfK-Verein is conducting a survey about different European nations.

For all of the questions only your personal judgment is important. There are no incorrect answers. Please allow approximately 35 minutes for answering the questions. The analysis of the survey data will be used only for research purpose and is, of course, performed anonymously.

In addition to the fee that you receive for your participation, in some parts of the survey you can also earn money for yourself or for a charitable organization. How much you earn depends on your answers and the answers of the other participants in the survey.

In each part of the survey, you will be informed about how you can earn money and whether you earn it for yourself or for a charitable organization.

After completing the entire survey, you will learn when you will receive the money. If you click on "continue," we will explain the survey procedure to you.

Thank you very much for your support!

#### Next Screen

#### OVERALL ADVICE

The survey consists of three parts. In the first two parts, you will be asked to perform some minor tasks and to give your estimates of how other participants have performed these same tasks. Afterward, the third part of the survey will consist of a brief questionnaire. Based on your answers and decisions—within the tasks and estimates—you can earn money for yourself or for charitable organizations.

Before each part of the survey, we will explain the precise procedure and how you can earn money. Furthermore, you will be advised whether you are earning money for yourself or for a charitable organization.



Participants from five European countries are taking part in the survey. The selection of participants in each country follows the same criteria and provides a representative sample of the country's total population.

Participants are from the following countries:

[List 3]

[Next Screen](#)

### **D.2. Survey I**

Now, we would like to start with a few personal questions.

Are you male or female?

Male

Female

How old are you?

(Please enter)

|\_|\_| years

In which region do you live?

(Single-punch selection from a predefined list of regions within the specific country)

How many people live in your place of residence?

(Single-punch selection from predefined intervals)

What is your highest achieved educational qualification?

(Single-punch selection from a country-specific list of qualifications)

[Next Screen](#)

Thank you very much. Now, the first part of the survey starts. You will complete the first task and then assess the performance of the other participants.

### **D.3. Volunteering Game**

#### Part 1 Explanations

You will see four tables, which each consist of the symbols ★ (star) and ■ (square).

Your task is to count the number of stars (★) in each table.

You have 50 seconds for each table.

The time remaining is displayed in the upper-right corner of the screen.

For each correctly counted table, EUR 0.50 will be donated to a charitable organization of your choice. You can choose the organization from the following list. If you hover the cursor over the name of an organization, a detailed description of the organization will be displayed.

Please select the charitable organization to which the earned money should be donated.

International

Amnesty International

*Amnesty International* is a global, nongovernmental organization that fights for preservation and expansion of human rights throughout the world. This aim is accomplished by exposing human rights violations, conducting public relations activities, lobbying, and organizing letter-writing and signature campaigns.

1

Médecins Sans Frontières

*Médecins Sans Frontières* is an international emergency relief organization focused on human medicine. The purpose of the organization is to support

2

	people in emergency situations, through the allocation of medical and psychosocial supply and care (medication, drinking water, immunization, medical infrastructure, etc.). The organization provides support in war zones in areas that have suffered natural catastrophes, famine, or food shortages, and for marginalized population groups.		
<input type="checkbox"/>	UNICEF	<i>UNICEF</i> is a United Nations program that fights for children's rights throughout the world. In particular, <i>UNICEF</i> supports children and their mothers in developing countries with regard to health, family planning, hygiene, nutrition, and education. In addition, the organization supports lobbying against the use of children as soldiers and for the protection of refugees.	3
<input type="checkbox"/>	Save the Children	<i>Save the Children</i> is an international children's rights organization. The organization is represented globally by 30 national organizations in more than 120 countries. Its purposes include stable improvement the condition of indigent children based on respect of their rights. Its focus is on health and survival of threatened children, education of children (specifically, the expansion and quality of schools), and protection of children from violence and exploitation.	4
<input type="checkbox"/>	Caritas International	<i>Caritas International</i> is a global federation of Catholic organizations active in humanitarian response to emergency situations and aid to developing areas. The organization encourages social awareness, decides on current sociopolitical questions, and thereby represents the arguments and interests of those who do not have direct representation in society. In addition, the organization supports social professions and corresponding apprenticeships, as well as advanced and further education. Furthermore, the organization participates in technical discussions on the development and professionalization of social labor methods. The local branches ensure the success of the entire organization through self-help methods.	5
<input type="checkbox"/>	SOS Children's Villages International	<i>SOS Children's Villages International</i> is an international organization, active in 133 countries, that fights for the rights of indigent children. In the children's villages, parentless and abandoned children find a loving home. In the surroundings of the children's villages, destitute families receive help from capacity-building projects, educational work, and hospital wards. Thus, <i>SOS Children's Villages International</i> contributes to sustainable development of communities in poor countries. In addition, the children's villages are bases for emergency relief campaigns to support children and their relatives in catastrophe and conflict areas.	6
Germany			
<input type="checkbox"/>	Deutsches Rotes Kreuz	<i>Deutsches Rotes Kreuz</i> (the <i>German Red Cross</i> ) is the national Red Cross society in Germany. The <i>German Red Cross</i> rescues people, provides assistance in emergencies, offers solidarity to people, supports the poor and other people in need, and oversees the humanitarian law of nations in Germany and around the world. The <i>German Red Cross</i> is part of the International Federation of Red Cross and Red Crescent Societies, which helps victims of conflicts and catastrophes, as well as other indigent people, in a manner differentiation only by the extent of their misery.	7
<input type="checkbox"/>	Deutsche Krebshilfe	For more than 38 years, the <i>Deutsche Krebshilfe</i> has supported people suffering from cancer. Its aim is to fight against cancer in every type of manifestation. The organization supports projects for improved prevention, early detection, diagnosis, therapy, medical care after treatment, and psycho-social treatment including self-help. The <i>Deutsche Krebshilfe</i> organizes and supports apprenticeships and further educational activities, as well as informational events for the improvement of cancer control.	8
France			
<input type="checkbox"/>	Les Restos du Coeur	<i>Les Restos du Coeur</i> is a French initiative that distributes clothes and food to people in need during the winter months. The campaign is supported by	9

<input type="checkbox"/>	Secours Populaire Français	<p>numerous celebrities that—under the name <i>Les Enfoirés</i>—host charity concerts that have become the francophone show-event of the year.</p> <p><i>Secours Populaire Français</i> is a humanitarian organization in France with the aim of supporting deprived and penniless people. The organization focuses not only on essential items such as food and clothes but also on social and professional integration of people who live on the fringes of society. In the foreground, there is not only capacity building but also ethical help of reciprocity.</p>	10
The Netherlands			
<input type="checkbox"/>	KWF Kankerbestrijding	<p><i>KWF Kankerbestrijding</i> is a Dutch organization for cancer control, which campaigns for scientific research, information, patient support, and fundraising. Its cancer research program includes talented researchers and the promotion and analysis of international research results and plays an active part in the care and treatment of cancer patients.</p>	11
<input type="checkbox"/>	Cordaid Memisa	<p><i>Cordaid Memisa (Catholic Organisation for Relief &amp; Development Aid)</i> is one of the largest international development organizations in Africa, Asia, the Middle East, and Latin America. It provides emergency relief for people in war zones, poor societies, and developing countries. The <i>Cordaid Memisa</i> department focuses specifically on the health and welfare of people in developing countries.</p>	12
Italy			
<input type="checkbox"/>	AIRC	<p><i>AIRC</i> is an Italian society for cancer research. Its members collect research funds and distribute them to finance cancer research. A commission consisting of experts in oncology verifies the resource allocation to research and survey projects. In addition, one of the goals of the society is to inform people about the latest progress in cancer research.</p>	13
<input type="checkbox"/>	Fondazione Banco Alimentare	<p><i>Fondazione Banco Alimentare</i> is a charitable organization, similar to the various Tafelorganisationen in Germany, that attempts to ensure sufficient food supply for indigent people. Volunteers collect “spare” but qualitatively impeccable food and distribute it to the poor and needy people in Italy. <i>Fondazione Banco Alimentare</i> is supported by, among others, the European Union, the Italian grocery industry, and many other retailers.</p>	14
Spain			
<input type="checkbox"/>	Cruz Roja Española	<p>The <i>Cruz Roja Española</i> is the Spanish Red Cross Society. It is a humanitarian institution that cares primarily about national issues but is also active globally. The concept of the Red Cross is the same worldwide: self-help education for indigent and ill people as well as help for people in emergency situations (protection during crises, social work, medical support etc.). Especially during the current crisis, it supports the Spanish population with food supply and water, electricity, and rent subsidies.</p>	15
<input type="checkbox"/>	Asociación Española Contra el Cáncer (AECC)	<p><i>AECC</i> is a Spanish association for cancer control, which fights for improved treatment for people suffering from cancer. The association primarily supports patients and their relatives. In addition, it campaigns for prevention and early detection measures, as well as for cancer research in general, for example, by (co)financing projects for cancer research.</p>	16

Next Screen

The first task begins on the next page.

Please note that you will have only 50 seconds time for counting the stars in each table and typing the number of stars into the input field! The time remaining will be displayed in the upper-right corner of the screen.

As soon as you click on “continue,” you will be sent to the first table and the countdown will start. When time runs out, you will be sent to the next page automatically!

Next Screen

Part 1

Table 1 of 4

You have 50 seconds to count the stars (★) in this table. You can see the time remaining in the upper-right corner of the screen. How many stars are in the table?

(Please enter)                   |\_|\_|\_| stars

Next Screen

Your time is over for Table 1. As soon as you click on “continue,” you will be sent to the second table. You will also have 50 seconds for that table. As soon as you click on “continue,” the countdown will start. When time runs out, you will be sent to the next page automatically.

Next Screen

Part 1

Table 2 of 4

You have 50 seconds to count the stars (★) in this table. You can see the time remaining in the upper-right corner of the screen. How many stars are in the table?

(Please enter)                   |\_|\_|\_| stars

Next Screen

Your time is over for Table 2. As soon as you click on “continue,” you will be sent to the third table. You will also have 50 seconds for that table. As soon as you click on “continue,” the countdown will start. When time runs out, you will be sent to the next page automatically.

Next Screen

Part 1

Table 3 of 4

You have 50 seconds to count the stars (★) in this table. You can see the time remaining in the upper-right corner of the screen. How many stars are in the table?

(Please enter)                   |\_|\_|\_| stars

Next Screen

Your time is over for Table 3. As soon as you click on “continue,” you will be sent to the fourth, and last, table. You will also have 50 seconds for that table. As soon as you click on “continue,” the countdown will start. When time runs out, you will be sent to the next page automatically.

Next Screen

Part 1

Table 4 of 4

You have 50 seconds to count the stars (★) in this table. You can see the time remaining in the upper-right corner of the screen. How many stars are in the table?

(Please enter)                      |\_|\_|\_| stars

Next Screen

Part 1

You have counted [Number of correct tables] tables correctly.  
 This represents an earned amount of EUR [Earned money] which will be donated to [Chosen charity].  
 Now, we want to know how you found the task.  
 Please answer the following two questions regarding this part of the survey.

	Not at all simple				Very simple		
	1	2	3	4	5	6	7
How simple was the task for you?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	I did not like it at all				I liked it a lot		
	1	2	3	4	5	6	7
How did you like the task?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

This part of the survey is now complete.

Please click on “continue” to reach the next part of the survey, in which you will assess the other participants.

Next Screen

Part 1

Explanation of the assessment

Participants from the following countries performed the same tasks as you did:

[List 3]

The money earned by the other participants was also donated to charitable organizations of their choice from the list above. Please estimate how successfully the participants from the other countries counted the stars in the tables. For each of the five countries—including your own—please estimate how many tables the participants counted correctly, on average. Please make five estimates, one for each country.

By making these assessments, you can earn money yourself. The more accurate your assessment, the more you can earn. One of your assessments will be chosen randomly to determine your earnings. The closer your assessment is to the participants' actual performance, the more money you will receive.

So, try to guess the actual value. The closer your assessment is to the actual value, the more money you will earn.

If your assessment is exactly correct, you will receive EUR 1.50 (150 points). If your assessment differs by 0.1 from the actual value, 10 cents (10 points) will be deducted from the maximum achievable EUR 1.50 (150 points); if your assessment differs by 0.2, 20 cents (20 points) will be deducted; and so on. Thus, a difference of 1.0 from the actual value will cause a deduction of EUR 1.00 (100 points). If your assessment differs by 1.5 or more from the actual value, you will earn EUR 0 (0 points).

Example

*You estimate that the participants from a specified country counted, on average, 3.4 tables correctly.*

*(Hint: Because participants from the country could have counted various numbers of the tables correctly, the average may be a decimal number.)*

*The participants from is specific country actually counted, on average, 3.7 tables correctly.*

*Your assessment differs by 0.3 from the actual value. Therefore, 30 cents (30 points) will be deducted from the maximum achievable EUR 1.50 (150 points). If this assessment is the one randomly chosen from your five assessments, you will earn EUR 1.20 (120 points) in this part of the survey.*

Please click on "continue" to start the assessment.

Next Screen

How many tables did the [List 2], on average, count correctly?  
[Individuals could indicate each of their five assessments by using either a slider or an input field.]

Next Screen

This part of the survey is now complete. As soon as the survey has been completed by participants from all countries, you will receive your earnings from these assessments. As already explained, one of your assessments will be randomly chosen process and compared to the actual results of that country's participants. Your earnings will be calculated based on that comparison.

Please click on "continue" to go to the next part of the survey.

Next Screen

#### **D.4. Honesty-Game**

##### Part 2 Explanations

Please take a coin. On the next screen, your task will be to flip the coin so that it falls on the ground or on a table. Afterward, you will be asked to state which side of the coin is uppermost.  
If tails is shown, you will earn EUR 1 (100 points).  
If heads is shown, you will earn EUR 0 (0 points).  
In any case, the money you earn during this task is yours.

Next Screen

##### Part 2

Now, flip the coin, and mark the result with an X.

Tails (You earn EUR 1)  
Heads (You earn EUR 0)

Next Screen

##### Part 2 Explanation of the assessment

The coin task was also done by participants from the following countries:  
[List 3]

Please estimate the result reported by participants from each of the five countries.  
For each country, please state how the percentage of participants who reported "tails" and thus earned EUR 1 (100 points).  
By making these assessments, you can earn money yourself. The more accurate your assessment, the more you can earn. One of your assessments will be chosen randomly to determine your earnings. The closer your assessment is to the participants' actual responses, the more money you will earn.

If your assessment is exactly correct, you will receive EUR 1.50 (150 points). If your assessment differs by 1 percentage point from the actual value, 10 cents (10 points) will be deducted from the maximum achievable EUR 1.50 (150 points); if your assessment differs by 2 percentage points, 20 cents (20 points) will be deducted; and so on. If your assessment differs by 15 or more percentage points from the actual value, you will earn EUR 0 (0 points).

Example

*You estimate that 55% of the participants from a specific country reported tails.*

*Actually, 59% of the participants from that country reported tails.*

*Your assessment differs by 4 percentage points from the actual value. Therefore, 40 cents (40 points) will be deducted from the maximum achievable EUR 1.50 (150 points). If this assessment is the one randomly chosen randomly from your five assessments, you will earn EUR 1.10 (110 points) in this part of the survey.*

Please click on “continue” to start the assessment.

Next Screen

What percentage of the [List 2] reported tails and therefore received EUR 1?

[Individuals could indicate each of their five assessments by using either a slider or an input field.]

Next Screen

This part of the survey is now complete. As soon as the survey has been completed by participants from all countries, you will receive your earnings from these assessments. As already explained, one of your assessments will be randomly chosen and compared to the actual results of that country’s participants. Your earnings will be calculated based on that comparison.

The next screen will contain a short questionnaire. Please click on “continue” to go to that part of the survey.

**D.5. Survey II**

Next Screen

*(Warmth and competence questions)*

Please answer the following questions. Please specify how much you agree with each statement, using the given scale of 1 to 7 in which 1 indicates that you completely disagree and 7 indicates that you completely agree. Please answer all of the questions.

How much do you agree with each of the following statements? *(Note: The order of the statements was randomized for each participant.)*

		I do not agree at all				I fully agree		
		1	2	3	4	5	6	7
I fully trust most ...								
	[List 1]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In my opinion, most ... are particularly hospitable.								
	[List 2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In my opinion, living together in ... is more harmonious than doing so in other European countries.								
	[List 3]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In my opinion, the ... are more trustworthy than people from other European countries.								
	[List 1]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In my opinion, there is a lot of corruption in ...								

	[List 3]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In my opinion, most of the ... exhibit morally respectable behavior.								
	[List 2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In my opinion, most ... behave honestly.								
	[List 2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In my opinion, most ... are primarily interested in money.								
	[List 2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In my opinion, most ... are helpful.								
	[List 2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In my opinion, most ... behave fairly.								
	[List 2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In my opinion, most ... are unreliable.								
	[List 2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In my opinion, most ... can't deal with money.								
	[List 2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In my opinion, most ... are arrogant.								
	[List 2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In my opinion, most ... are disciplined.								
	[List 2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In my opinion, most ... are accurate.								
	[List 2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In my opinion most ... are productive.								
	[List 2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The following are two general questions about European institutions and Europe:

How much do you agree with each of the following statements?

	I do not agree at all				I agree completely		
	1	2	3	4	5	6	7
I completely trust the European Union.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I completely trust the Euro.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*(Experience questions)*

Now, we would like to ask you some questions about your experiences with citizens of other European countries.



With [List 1] I have personally had ...  
mainly good experiences.  
mainly bad experiences.  
no experiences.

Regarding the [ List 2] I have heard ...  
mainly good things in the media (TV, newspapers, Internet, etc.)  
mainly bad things in the media (TV, newspapers, Internet, etc.)  
very little in the media (TV, newspapers, Internet, etc.)

How often (for work-related or for personal purposes) have you traveled to [List 3]?  
Never  
1—2 times  
3—5 times  
6—10 times  
More than 10 times

Is at least one of your acquaintances from [List 3]?  
Yes  
No

In conclusion, we would like to ask you some personal questions.

In which country were you born?  
[List 3]  
A country not listed above

In which country was your mother born?  
[List 3]  
A country not listed above

In which country was your father born?  
[List 3]  
A country not listed above

#### Next Screen

How many people, including yourself, are permanent residents of your household?  
1 person  
2 people  
3 people  
4 people  
5 or more people

What is the total monthly net income of all members of your household?

Less than EUR 1,000  
Between EUR 1,000 and EUR 1,999  
Between EUR 2,000 and EUR 2,999  
EUR 3,000 or more  
I prefer not to answer this question.

How would you describe your current personal financial situation?

- I do not have to cut spending in any way.
- I am well off and can afford quite a bit.
- Overall, I am getting along fairly well.
- I have difficulty making ends meet.
- My income is not at all sufficient.
- I prefer not to answer this question.

Which of the following statements matches your current professional situation?

- I am ...
- employed.
- unemployed.
- retired.
- a student.
- a homemaker.
- I prefer not to answer this question.

Next Screen

#### **D.6. Conclusion**

Thank you very much for your support!

You will receive a fee for your participation in this survey.

You will receive any earnings from the tasks and assessments as soon as the survey has been completed by participants from all countries, since the results of the other participants are necessary for the calculations of earnings.

## References

- Abeler, J., Becker, A., and Falk, A. (2014). Representative evidence on lying costs. *Journal of Public Economics*, 113, 96-104.
- Abeler, J., Falk, A., Goette, L., and Huffman, D. (2011). Reference points and effort provision. *The American Economic Review*, 101(2), 470-492.
- Anderson, L., Fryer, R., and Holt, C. (2006). Discrimination: experimental evidence from psychology and economics. *Handbook on the Economics of Discrimination*, 97-118.
- Arrow, K. (1973). The theory of discrimination. *Discrimination in Labor Markets*, 3(10), 3-33.
- Arrow, K. (1998). What has economics to say about racial discrimination? *The Journal of Economic Perspectives*, 12(2) 91-100.
- Bae, K.-H., Stulz, R. M., and Tan, H. (2008). Do local analysts know more? A cross-country study of the performance of local analysts and foreign analysts. *Journal of Financial Economics*, 88(3), 581-606.
- Balabanis, G., and Diamantopoulos, A. (2004). Domestic country bias, country-of-origin effects, and consumer ethnocentrism: a multidimensional unfolding approach. *Journal of the Academy of Marketing Science*, 32(1), 80-95.
- Becker, G. S. (1971). *The Economics of Discrimination*. University of Chicago Press Economics Books.
- Bhatt, M., and Camerer, C. F. (2005). Self-referential thinking and equilibrium as states of mind in games: fMRI evidence. *Games and Economic Behavior*, 52(2), 424-459.
- Blanco, M., Engelmann, D., Koch, A. K., and Normann, H.-T. (2010). Belief elicitation in experiments: is there a hedging problem? *Experimental Economics*, 13(4), 412-438.
- Bornhorst, F., Ichino, A., Kirchkamp, O., Schlag, K. H., and Winter, E. (2010). Similarities and differences when building trust: the role of cultures. *Experimental Economics*, 13(3), 260-283.
- Bottazzi, L., Da Rin, M., and Hellmann, T. F. (2011). The importance of trust for investment: evidence from venture capital. National Bureau of Economic Research Working Paper.
- Bowles, J. (2014). Southern Europe is suspicious: the evolution of trust in the EU. *Bruegel*. Retrieved May 14, 2014, from <http://www.bruegel.org/nc/blog/detail/article/1331-southern-europe-is-suspicious-the-evolution-of-trust-in-the-eu/>.
- Buccioli, A., and Piovesan, M. (2011). Luck or cheating? A field experiment on honesty with children. *Journal of Economic Psychology*, 32(1), 73-78.
- Chen, Y., & Konstan, J. (2015). Online field experiments: a selective survey of methods. *Journal of the Economic Science Association*, 1-14.
- Chen, Y., Li, S. X., 2009. Group identity and social preferences. *American Economic Review*, 99(1), 431-457.
- Chuah, S.-H., Hoffmann, R., Jones, M., and Williams, G. (2007). Do cultures clash? Evidence from cross-national ultimatum game experiments. *Journal of Economic Behavior and Organization*, 64(1), 35-48.
- Cuddy, A. J., Fiske, S. T., Kwan, V. S., Glick, P., Demoulin, S., Leyens, J. P., et al. (2009). Stereotype content model across cultures: towards universal similarities and some differences. *British Journal of Social Psychology*, 48(1), 1-33.
- Darby, M. R., and Karni, E. (1973). Free competition and the optimal amount of fraud. *Journal of Law and Economics*, 16(1), 67-88.
- Dawes, R. M. (1989). Statistical criteria for establishing a truly false consensus effect. *Journal of Experimental Social Psychology*, 25(1), 1-17.

- Dickinson, D. L. (1999). An experimental examination of labor supply and work intensities. *Journal of Labor Economics*, 17(4), 638-670.
- Dulleck, U., Kerschbamer, R., and Sutter, M. (2011). The economics of credence goods: an experiment on the role of liability, verifiability, reputation, and competition. *The American Economic Review*, 101(2), 526-555.
- Eckel, C. C., and Grossman, P. J. (2002). Sex differences and statistical stereotyping in attitudes toward financial risk. *Evolution and Human Behavior*, 23(4), 281-295.
- Eckel, C. C., and Grossman, P. J. (2008). Forecasting risk attitudes: an experimental study using actual and forecast gamble choices. *Journal of Economic Behavior and Organization*, 68(1), 1-17.
- Engelmann, D., and Strobel, M. (2000). The false consensus effect disappears if representative information and monetary incentives are given. *Experimental Economics*, 3(3), 241-260.
- Erkal, N., Gangadharan, L., and Nikiforakis, N. (2011). Relative earnings and giving in a real-effort experiment. *The American Economic Review*, 3330-3348.
- European Parliament. (2014). MEPs push for mandatory “made-in” labelling to tighten up product safety rules. Press Release. Retrieved November 21, 2014, from [http://www.europarl.europa.eu/pdfs/news/expert/infopress/20140411IPR43453/20140411IPR43453\\_en.pdf](http://www.europarl.europa.eu/pdfs/news/expert/infopress/20140411IPR43453/20140411IPR43453_en.pdf)
- European Union. (n.d.). Glossary: European institutions. Retrieved June 5, 2014, from [http://europa.eu/legislation\\_summaries/glossary/eu\\_union\\_en.htm](http://europa.eu/legislation_summaries/glossary/eu_union_en.htm)
- Fang, H., and Moro, A. (2010). Theories of statistical discrimination and affirmative action: a survey. National Bureau of Economic Research Working Paper.
- Fershtman, C., and Gneezy, U. (2001). Discrimination in a segmented society: an experimental approach. *The Quarterly Journal of Economics*, 116(1), 351-377.
- Fischbacher, U., and Föllmi-Heusi, F. (2013). Lies in disguise—an experimental study on cheating. *Journal of the European Economic Association*, 11(3), 525-547.
- Fiske, S. T., Cuddy, A. J., Glick, P., and Xu, J. (2002). A model of (often mixed) stereotype content: competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology*, 82(6), 878.
- Fosgaard, T. R., Hansen, L. G., and Piovesan, M. (2013). Separating will from grace: an experiment on conformity and awareness in cheating. *Journal of Economic Behavior and Organization*, 93, 279-284.
- Gächter, S., and Herrmann, B. (2009). Reciprocity, culture and human cooperation: previous insights and a new cross-cultural experiment. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 364(1518), 791-806.
- Gächter, S., and Renner, E. (2010). The effects of (incentivized) belief elicitation in public goods experiments. *Experimental Economics*, 13(3), 364-377.
- Garton Ash, T. (2013). The euro survives, but where are the Europeans? *The Guardian*. Retrieved November 26, 2014, from <http://www.theguardian.com/commentisfree/2013/mar/28/euro-survives-europeans-currency-nations>
- Gill, D., and Prowse, V. (2012). A structural analysis of disappointment aversion in a real effort competition. *The American Economic Review*, 102(1), 469-503.
- Grinblatt, M., and Keloharju, M. (2001). How distance, language, and culture influence stockholdings and trades. *The Journal of Finance*, 56(3), 1053-1073.
- Guiso, L., Sapienza, P., and Zingales, L. (2009). Cultural biases in economic exchange? *The Quarterly Journal of Economics*, 124(3), 1095-1131.

- Henrich, J. (2000). Does culture matter in economic behavior? Ultimatum game bargaining among the Machiguenga of the Peruvian Amazon. *The American Economic Review*, 90(4), 973-979.
- Henrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H., et al. (2001). In search of homo economicus: behavioral experiments in 15 small-scale societies. *The American Economic Review*, 91(2), 73-78.
- Henrich, J., McElreath, R., Barr, A., Ensminger, J., Barrett, C., Bolyanatz, A., et al. (2006). Costly punishment across human societies. *Science*, 312(5781), 1767-1770.
- Herrmann, B., Thöni, C., and Gächter, S. (2008). Antisocial punishment across societies. *Science*, 319(5868), 1362-1367.
- Hewstone, M., Rubin, M., and Willis, H. (2002). Intergroup bias. *Annual Review of Psychology*, 53(1), 575-604.
- Houser, D., Vetter, S., and Winter, J. (2012). Fairness and cheating. *European Economic Review*, 56(8), 1645-1655.
- Huberman, G. (2001). Familiarity breeds investment. *Review of Financial Studies*, 14(3), 659-680.
- Huck, S., and Weizsäcker, G. (2002). Do players correctly estimate what others do?: evidence of conservatism in beliefs. *Journal of Economic Behavior and Organization*, 47(1), 71-85.
- Knack, S., and Keefer, P. (1997). Does social capital have an economic payoff? A cross-country investigation. *The Quarterly Journal of Economics*, 112(4), 1251-1288.
- Krueger, J. (1998). On the perception of social consensus. *Advances in Experimental Social Psychology*, 30, 164-240.
- Laffont, J.-J., and Martimort, D. (2009). *The theory of incentives: the principal-agent model*. Princeton University Press.
- Michaelis, M., Woisetschläger, D. M., Backhaus, C., and Ahlert, D. (2008). The effects of country of origin and corporate reputation on initial trust: an experimental evaluation of the perception of Polish consumers. *International Marketing Review*, 25(4), 404-422.
- Nelson, P. (1970). Information and consumer behavior. *The Journal of Political Economy*, 78(2), 311-329.
- OECD. (n.d.). OECD.StatExtracts. Retrieved January 27, 2014, from <http://stats.oecd.org/>
- Offerman, T., Sonnemans, J., Van de Kuilen, G., and Wakker, P. P. (2009). A truth serum for non-Bayesians: correcting proper scoring rules for risk attitudes. *The Review of Economic Studies*, 76(4), 1461-1489.
- Pachur, T., Rieskamp, J., and Hertwig, R. (2005). The social circle heuristic: fast and frugal decisions based on small samples. Paper presented in the Proceedings of the 26th Annual Conference of the Cognitive Science Society. Mahwah, NJ: Erlbaum.
- Palfrey, T. R., and Wang, S. W. (2009). On eliciting beliefs in strategic games. *Journal of Economic Behavior and Organization*, 71(2), 98-109.
- Phelps, E. S. (1972). The statistical theory of racism and sexism. *The American Economic Review*, 62(4) 659-661.
- Platow, M. J., McClintock, C. G., and Liebrand, W. B. (1990). Predicting intergroup fairness and ingroup bias in the minimal group paradigm. *European Journal of Social Psychology*, 20(3), 221-239.
- Rabe-Hesketh, S., and Everitt, B. S. (2007). *A Handbook of Statistical Analyses Using Stata, 4th ed.* Chapman and Hall/CRC.
- Robbins, J. M., and Krueger, J. I. (2005). Social projection to ingroups and outgroups: a review and meta-analysis. *Personality and Social Psychology Review*, 9(1), 32-47.

- Ross, L., Greene, D., and House, P. (1977). The “false consensus effect”: an egocentric bias in social perception and attribution processes. *Journal of Experimental Social Psychology*, 13(3), 279-301.
- Spencer, S. J., Steele, C. M., and Quinn, D. M. (1999). Stereotype threat and women’s math performance. *Journal of Experimental Social Psychology*, 35(1), 4-28.
- The Economist. (2012). Greeks say they are the hardest-working European nation: stereotypes of Europe. Retrieved November 14, 2014, from <http://www.economist.com/blogs/graphicdetail/2012/05/greeks-say-they-are-hardest-working-european-nation>
- The Economist. (2013). What Europeans think of each other: polls apart. Retrieved November 14, 2014, from <http://www.economist.com/blogs/graphicdetail/2013/05/what-europeans-think-each-other>
- Verlegh, P. W., and Steenkamp, J.-B. E. (1999). A review and meta-analysis of country-of-origin research. *Journal of Economic Psychology*, 20(5), 521-546.
- Wang, S. W. (2011). Incentive effects: The case of belief elicitation from individuals in groups. *Economics Letters*, 111(1), 30-33.

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