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Eye See You:

Investigating Predictors of the Evil Eye

A thesis submitted in partial satisfaction of the
requirements for the degree Master of Arts
in Anthropology

by

Madeleine Louise Zoeller

2020

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ABSTRACT OF THE THESIS

Eye See You:

Investigating Predictors of the Evil Eye

by

Madeleine Louise Zoeller

Master of Arts in Anthropology

University of California, Los Angeles, 2020

Professor Joseph Howard Manson, Chair

The evil eye is a folk belief concept whereby an individual may, voluntarily or involuntarily, cause harm by praising or looking at an object or person. This belief is old and relatively stable, but it is not ubiquitous across cultures, or even within groups that do contain this belief. Utilizing a trans-disciplinary approach, I discuss how environment, social precepts, and the core cognitive architecture may contribute to the persistence of the evil eye belief in contemporary Poland, Portugal, France, and Spain. To test a portion of my argument, I administered a survey measuring hypothesized risk factors for evil eye belief. While I find support for a subset of my hypotheses, my principal conclusion is that the factors predicting between-group variance in the existence of the evil eye belief likely dissociate from predictors of within-group variance in psychological and behavioral endorsement of the evil eye belief.

The thesis of Madeleine Louise Zoeller is approved.

Daniel Fessler

Harold Clark Barrett

Joseph Howard Manson, Committee Chair

University of California, Los Angeles

2020

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Introduction

Peculiar and Persistent Beliefs

Why do people believe what they believe? Some beliefs, such as “The sky is blue,” are uncontroversial because they are based on direct, unambiguous experience. Other commonly held beliefs, less amenable to direct confirmation or falsification, have remained uncontroversial for centuries, but then declined in the face of new evidence or theorizing, e.g. humoral theories of medicine in Europe and the Middle East. Still other beliefs, also resistant to falsification by direct observation, are matters of disagreement between and/or within human groups. An example is belief in ghosts, defined as an immaterial essence of the self that can impact the material world after death. Even among some people with access to scientific accounts of the mechanical properties of the body that maintain life and consciousness, belief in ghosts persists. Strange beliefs that are resistant to evidence demand an explanation.

Theoretical frameworks for the inception and transmission of peculiar and persistent beliefs

The epidemiology of representations and cultural attraction

Information changes as it flows through cultural transmission pathways (Sperber & Hirschfeld, 2004), yet many culturally transmitted items remain quite relatively stable over long periods of time (Sperber & Hirschfeld, 2004). *Cultural attractor theory* accounts for this apparent paradox by positing that information consistently changes to resemble certain cross-culturally recurring forms, called cultural attractors (Claidière et al., 2014; Claidière & Sperber, 2007). Factors of attraction are typically either properties of the person (e.g. psychological features), or aspects of the social or ecological environment (e.g. environmental harshness, mode of subsistence, or group norms Claidière et al., 2014). As an example of the latter, environmental harshness has been proposed as a factor drawing religious beliefs toward the cultural attractor of belief in moralizing

gods (Botero et al., 2014). The present study examines whether certain social and psychological factors of attraction draw people toward a specific cultural attractor: belief in the Evil Eye.

Core knowledge systems

The contents of human minds are generated by interactions among domain-general computational mechanisms (e.g. Bayesian updating, Suchow et al., 2017), domain-specific computational modules (e.g. cheater detection, Cosmides, 1989), culturally transmitted beliefs and practices (Henrich et al., 2008), and individual traits and experiences. Because domain-specific computational modules have evolved to solve adaptive problems faced by the recent ancestors of all modern people (Tooby & Cosmides, 1990, 1992), we should expect them to vary little, if at all, across human groups. The collection of domain-specific computational modules comprises a species-typical core cognitive architecture (Tooby & Cosmides, 1990, 1992). This architecture sometimes generates beliefs that develop, without being taught, during childhood, and are resistant to falsification from experience (Coley & Tanner, 2012, 2015; Coley et al., 2017).

Domains of intuitive knowledge

Putative areas of the core cognitive architecture include intuitive physics, intuitive biology, and intuitive psychology. Inferences generated by intuitive knowledge systems do not align perfectly with reality, but instead offer rules, assumptions, or expectations in areas where it would be prohibitively costly or dangerous to acquire information via domain-general learning (Mercier & Sperber, 2009; Atran, 1998). Examples from intuitive biology include the beliefs that children resemble their biological parents and not their adoptive parents, and that changing an animal's outward appearance does not change its species membership (Morton & Johnson, 1991; Fox & McDaniel, 1982; Setoh et al., 2013; Springer & Keil, 1989; Leslie, 2013). Inferences from intuitive biology are typically not overridden by explicit, learned beliefs. For example, one such

representation, the person template, can coexist with, but also interfere with, explicit learned beliefs about supernatural agents (Barlev et al. 2017). Christian subjects were slower to agree that God can be in two places at once (consistent with theology, inconsistent with intuitive biology) than they were to agree that sometimes God is in their church and sometimes he is in a different church (consistent with theology and intuitive biology). According to *minimal counter-intuitiveness theory* (MCI), supernatural concepts are deemed plausible because they mostly match intuitive inferences, but they are memorable, and likely to be transmitted, because they contain one or a few template violations (Boyer & Ramble, 2001). For example, the ghost concept is successful because it “imports” all features of the human template, with a few omissions (Boyer & Ramble, 2001). People find a concept, such as ghosts, plausible by virtue of its connection to the person template but also memorable and worthy of transmission, because animate agents shrouded in mechanical ambiguity remain a source of threat and opportunity.

[The evil eye: A stable, persistent, and non-ubiquitous supernatural belief](#)

The Evil Eye is a folk belief complex, according to which a damaging curse can be transmitted, voluntarily or involuntarily, by a look of admiration, envy, or praise. The recipient of the curse may be a human, animal, or object. Human and animal victims of the evil eye may sicken or die, tools and other functional objects may break, or food may spoil. While its inception and prevalence are fiercely debated, that the evil eye belief likely existed in Mesopotamia before 2000 BCE, and was later incorporated into Jewish, Christian, Hindu, and Islamic texts (Gershman, 2015; Elliot, 2015; Thomsen, 1992; Mallowan, 1997; Kotzé, 2017; Gifford, 1957; Geller, 2004). It has either spread to (or been independently invented in) societies on every

inhabited continent (Gershman, 2015; Dundes, 1992). A study with the Standard Cross-Cultural Sample (SCCS), a collection of 186 coded ethnographies collected at times of maximum cultural independence, found the evil eye belief in 36% of the sample (Gershman, 2015). Curiously, the distribution of this belief does not imply a simple diffusion of the belief, suggesting that factors of attraction have shaped it into the persistent cultural attractor that we see today.

The evil eye belief as an attractor

The evil eye belief is an example of a particularly stable representation, a cultural attractor, with multiple factors of attraction implicated in its production and maintenance. Studying the evil eye belief offers an opportunity to understand how multiple different factors of attraction come together to produce a supernatural concept that is widespread but not ubiquitous. Previous studies suggest that its factors of attraction include species-typical aspects of core knowledge systems and social/ecological contexts. Specifically, plausibility of the evil eye belief is facilitated by visual extramission beliefs, while its emergence and maintenance are attributed to inequality in visible and vulnerable wealth. What is unclear, to date, is whether intermediate states, such as beliefs about the social world, are also factors of attraction that are implicated in the maintenance and transmission of the evil eye belief.

Factors of attraction: The evil eye belief is dependent upon implicitly held visual extramission beliefs

The evil eye belief has multiple components, one of which is extramission theory. This folk theory holds that invisible beams, waves, or particles are emitted from the eye and act upon the material world (Cottrell & Winer, 1994; Winer & Cottrell, 2002, 2004). Like the evil eye belief,

extramission theory is ancient, dating back at least to the 5th century BCE writings of Empedocles. However, given that the coherence of the evil eye belief hinges on a plausible explanatory mechanism, there is no evil eye belief without extramission theory, they cannot be separated. In the fields of medicine and psychology, this folk theory has been thoroughly debunked and supplanted with intromission theory, in which light enters the eye.

[Intuitive inferences make visual extramission plausible to the mind](#)

Despite a decisive rejection within the scientific community, extramission theory remains widespread today, even among college-educated people in North America (Cottrell & Winer, 1994; Winer & Cottrell, 2002, 2004). In addition to its popularity, Educators and Psychologists have noted that beliefs in extramission theory are remarkably resistant to explicit instruction on intromission theory (Cottrell & Winer, 1994; Winer & Cottrell, 2002, 2004). This occurrence becomes less surprising if one considers the possibility that extramission theory exists, in some capacity, as both an explicit and implicit representation.

Students may be relatively unphased by volumes of evidence against extramission theory because, even when they have acquired explicit representations of intromission theory, extramission theory persists implicitly. Guterstam et al. (2019) measured both implicit and explicit manifestations of extramission theory and found evidence for this idea. Even among subjects who explicitly, verbally endorse intromission theory, some behaved as if they perceive a force or beam, emanating from the eyes, that can move objects (Guterstam et al, 2019). In effect, one part of the mind may “believe in” extramission, while another accepts intromission theory.

This contradiction, in which subjects verbalize a belief in intromission while behaving as if extramission is real, provides concrete evidence that core knowledge systems are likely involved in extramission beliefs. These findings are exactly what we would expect if extramission theory is the product of the core cognitive architecture. A study that mirrored Barlev et al. (2017), with “experts” in visual intromission, such as visual psychologists and ophthalmologists, should find an interference effect as well.

Extramission theory as a consequence of core social cognition

It has long been recognized that the eyes are heavily involved in human social cognition (Springer & Keil, 1989; Wellman & Gelman, 1992; Dupierriex et al., 2014). Eyes are part of the face detection system, CONSPEC, which is present at birth (Morton & Johnson, 1991). Young children understand the relationship between eyes and intentionality and classify organisms as animate based on this cue (Springer & Keil, 1989; Wellman & Gelman, 1992). The eyes, and eye gaze in particular, are heavily used in communication convey information about emotion, desire, attention, and intention (Garau et al., 2001; Vertegaal et al., 2000; Mather, 1987; Jording et al., 2018; Shepard, 2010; Baron-Cohen et al., 2001; Frischen et al., 2007). Possibly, as a byproduct of this inference, people intuitively regard the eyes of others as the sources or locales of their mental states, their behavior (motivated by these mental states), and their personal essence (Starmans & Bloom, 2012). These readily available inferences, which are subjectively experienced as self-evident properties of the world in turn, would increase the plausibility of extramission theory and Evil Eye beliefs, turning them into powerful cultural attractors.

Factors of attraction: Inequality in visible and vulnerable wealth encourages the evil eye belief

Evil eye beliefs are not ubiquitous, and their presence is not randomly distributed across societies. Gershman (2015), in a study utilizing the SCCS, found that the conditions of highly visible inequality, such as a large collection of animals or bountiful crops, create the motive for destructive envy while weak institutions mean that property is not well-protected, providing the opportunity for envious destruction. According to Gershman (2015), the evil eye belief emerges when the potential for destructive envy is high. By his account, the evil eye belief appears and persists because it is a functional belief under the specific set of opportunities, problems, and constraints that arrive with the advent of agriculture.

The potential for destructive envy is high when a non-egalitarian system maintains stark differences in resources that can easily be stolen or destroyed, by chance or otherwise. The social consequences associated with the more flexible and mobile hunter-gatherer lifestyle differ vastly from those associated with the more sedentary agriculturalist and pastoralist lifestyles. The calories accrued via agriculturalism and pastoralism can support a greater number of people who, for logistical reasons, then go on to live at higher densities and establish a greater degree of economic interdependence. Modes of subsistence with inequality in highly visible and vulnerable wealth demand cooperation but produce competitive urges. This discordance manifests itself in cultural representations that reflect competing imperatives (Roberts, 1976). Namely, the competing imperatives emerge from economic factors within sedentary populations whose economic activities encourage competition but require cooperation.

Inequality in wealth inevitably comes to characterize agriculturalist and pastoralist societies. That inequality, for ostentatious or practical reasons, was often in the form of highly visible resources, such as land, crops, animals, and clothing. These resources are vulnerable in the sense that they can be destroyed by both humans and non-agentive forces, such as weather and disease. The accumulation of cues to inequality fosters desire, envy, and anger. Foster (1972) and Wolf (1955) refer to these social consequences as “institutionalized envy:” a package of ideas and practices (e.g. witchcraft, gossip, and sorcery) that further foments suspicion and discord. The shared knowledge of the emotional reactions that accompany inequality easily, and perhaps justifiably, promotes a suspicious mindset.

In building his functionalist argument, Gershman (2015) describes the evil eye belief as a mitigating factor against the socially corrosive effects of “institutionalized envy.” In contrast with witchcraft accusations, for instance, the evil eye is often described as automatic and unintentional. Post-curse treatment rituals will sometimes include the individual who is thought to have transmitted the curse. Put differently, witchcraft accusations blame the witch and conceptualize them as evil. At best, this ends with an erosion of social capital and at its worst can result in death or serious injury. In comparison, the more mechanistic version of the evil eye belief de-emphasizes intentionality and prevents the level of disruption associated with other supernatural attributions (e.g. witchcraft and sorcery).

While Gershman (2015) only mentions “institutionalized envy” in passing, its role in the evil eye literature is much more prominent. Furthermore, its exact position in the chain of causation is an

open empirical question that mirrors longstanding debates at the intersection of human behavioral ecology, economics, evolutionary psychology, and cultural evolution. Do quantitative analyses that, in effect, jump from material conditions to functionalist explanations of transmitted culture tell the whole story? Gershman's position, that *actual* risk of destructive envy is the main impetus behind the emergence, stability, persistence, and patterned diffusion of the evil eye belief feels a tad impoverished. Especially considering that humans act on their representations of reality, as much (or more so) than actual "objective" reality. The beliefs posited as an intermediary between the raw, material realities of subsistence and supernatural invocations of intangible forces must be quantified. Without this kind of analysis, scholars lose an opportunity to confront the complexities of causation. More importantly, Gershman's account does not offer information on within-group differences in endorsement of the evil eye belief. Given that his own study finds a dissociation between predictors of the evil eye belief and other supernatural concepts, invoking a general propensity for supernatural explanations is insufficient. Beyond esoteric debates, behaviors associated with the evil eye belief have serious implications for the fields of public health and economics. For example, evil eye attributions can delay (medical) treatment onset, especially considering that many post-curse "treatments" for the evil eye are less expensive than their mechanically efficacious counterparts. While changing material realities (e.g. inequality) is slow, arduous, and expensive, the beliefs and practices underpinning "institutionalized envy" may be meaningful points of intervention.

Social axioms: Operationalizing the image of limited good

As is the tradition in social science and the humanities, siloed scholars often produce redundancy. Fortunately, this can be harnessed with theoretical promiscuity. In reviewing core components of the evil eye, Dundes (1992) repeats a common assertion from scholars of the evil eye: (also see Elliott, 2015) a belief in “limited good” is a core component of the evil eye folk belief complex. “The image of limited good” is a cognitive orientation, defined as a worldview, model, or integrating principle held by a group of people (Foster, 1965, 1972). Foster’s “image of limited good”, prevalent in “peasant” (agricultural) societies, is a precept that any resource in the world exists in a finite quantity and thus one person’s gain is another person’s loss. This principle, Foster asserts, is responsible for a slew of social and economic practices within agricultural societies, including the evil eye belief (Foster, 1972, 1965). The “cognitive orientation” idea from Foster (1965), an anthropologist, is equivalent to the social axiom concept, developed by social psychologists. Social axioms are defined as generalized expectations or basic premises about the social world that people use to guide their behavior (Leung et al., 2002).

One of the most recently proposed social axioms is called the Belief in Zero-Sum Games (BZSG). BZSG is the assertion that resources are finite and therefore one person’s gain is only possible with another’s loss (Różycka-Tran et al., 2015, 2018). BZSG appears, for all intents and purposes, synonymous with Foster’s image of limited good. However, unlike Foster’s idea, BZSG has been distilled into an 8-item survey measure and tested in 43 countries (Różycka-Tran et al., 2015, 2018).

The belief in zero sum games

If the belief in zero sum games axiom is, potentially, a core component of the evil eye belief, or even a more peripheral element of “institutionalized envy,” it is worth examining its properties. Beyond discussions of the evil eye and its factors of attraction, Różycka-Tran et al. (2015, 2018) BZSG has already been linked to a broader set of “socially antagonistic” beliefs, such as societal cynicism and negative reciprocity (Różycka-Tran et al., 2015, 2018). Low GDP, low socioeconomic status, and collectivism were all independent predictors, with GDP and collectivism explaining most of the variance. Surprisingly, income disparity (Gini index) was only marginally significant, but it does moderate the relationship between trust and BZSG, such that higher inequality creates a stronger relationship between (dis)trust and BZSG (Różycka-Tran et al., 2015, 2018). While income inequality does not directly relate to BZSG in Różycka-Tran et al., (2015, 2018), it’s worth noting that the sample utilized is almost entirely composed of college students, who tend to come from the highest socioeconomic strata. A more representative sample may yet reveal a relationship between income disparity and BZSG that would be driven by a very strong belief in BZSG among lower socioeconomic individuals.

The Present study

The present study has two main goals. Firstly, to test the assertion that “the image of limited good,” operationalized with the belief in zero sum games scale (Różycka-Tran et al., 2015, 2018), is a meaningful predictor of the evil eye belief. Alongside this construct, I also examined whether *belief in a just world* is associated with the evil eye belief. These items ask participants about BZSG adjacent constructs, such as their evaluations of “justness” in several areas: chance, supernatural forces (God and nature), and humans.

This study also extends the between-group variables examined in Gershman (2015) to the within-group level. However, “objective” measurements are translated to their closest subjective equivalents. Gershman (2015) found that inequality in visible and vulnerable wealth predicted the evil eye belief in a SCCS sample. He argues that inequality produces impulses towards destructive envy, but the visibility and vulnerability of resources is what makes destructive envy an enduring concern. To examine subjective evaluations, participants were asked to evaluate (1) the level of inequality in their local environment and (2) in their nation, (3) their sense of personal, relative deprivation, (4) the efficacy of property-protection institutions (police and courts). I also measured experiences with theft, as a more “objective” measure of wealth vulnerability.

Age, gender, and number of children were also measured. I hypothesize that children are construed by the mind as a type of high-value resource or wealth. Parenthood is known to increase threat sensitivity (Fessler et al., 2014). Therefore, I infer that each additional child has

an additive effect upon a parent's sense that their "wealth" is visible and vulnerable. This seemed plausible, given the fact that children are thought of as especially susceptible to the harmful effects from an evil eye curse, and consequently, are the focus of many apotropaic measures meant to guard against the evil eye (Dundes, 1992; Elliott, 2015). Previous work has shown that visual extramission beliefs decline with between first grade and the end of college (Winer & Cottrell, 2004). However, this is inconsistent with the outcome of another study, which found that as individuals aged (1st graders through college seniors) they became more certain of their ability to feel the presence of someone's stare (Winer & Cottrell, 2004). I anticipated that the second relationship, in which belief in the ability to feel the stares of others increased with age, would be mirrored in the evil eye belief, since both beliefs involve visual extramissions causing a physical outcome in the world. Lastly, Winer & Cottrell (2004) consistently find that women are more likely to hold visual extramission beliefs. If the evil eye belief is dependent upon visual extramission beliefs, I would expect women to endorse the evil eye belief more than men.

The present study is the first step in a quantitatively driven examination of social beliefs and representations that co-occur with the evil eye belief. In principle, this line of inquiry will transcend the limitations of qualitative methods by operationalizing recurring constructs and testing predictions. Most importantly, this project foregrounds the necessity of trans-disciplinary engagement and strives for a conceptually integrated study of humans.

List of Variables and Predictions

	Variable	Predicted direction of relationship with evil eye belief
1	Perceived local wealth inequality	Positive
2	Subjective relative deprivation	Positive
3	Income in PPP dollars per household member	Negative
4	Belief in a just world	Negative
5	Belief in zero sum games	Positive
6	Confidence in institutions of property protection	Negative
7	Perceived national wealth inequality	Positive
8	Experiences with theft	Positive
9	Number of children	Positive
10	Gender (Women)	Positive

Table 1: List of Variables and Predictions

Methods

Participants

Participants, who were recruited from Amazon Mechanical Turk (MTurk), were drawn from one of four countries: Portugal, Spain, France, and Poland. These countries were chosen on the basis of data from Pew, estimating that 20% of the French, 48% of Portuguese, 33% of Spanish, and 25% of Polish people believed in the evil eye (Pew Research Center, 2015, 2016). Initially, each participant was paid \$0.75 to complete the survey, but low participation rates caused a change in payment. Participants in Spain and France were then paid \$1.20 to complete the survey, while participants in Poland and Portugal, countries with smaller populations and more severe recruitment issues, received \$1.50 to complete the survey. Despite these changes, I was unable to recruit an equal number of Amazon Mechanical Turk participants from each country. A total of 483 study participants were recruited from Amazon Mechanical Turk (MTurk). After excluding participants that failed the bot check, there were 433 participants. Unfortunately, the pattern of missing data precluded data imputations methods (see below in *Data analysis*), and I was forced to remove participants with missing data. This brought the sample to 395 (263 men, 130 women, and 2 who identify as Other, mean $\pm$ SD age = 32.9 ± 18) 161 participants were from France, 209 from Spain, 9 from Poland, and 16 from Portugal.

Procedure and Materials

All study materials, including the consent form and advertisement, were translated by Vanan Services to Spanish, French, Portuguese, and Polish and then checked by a native speaker against the English version (see Appendix 1). This survey did not randomize the presentation of items. The majority of these questions utilized a 5-pt Likert scale. The order of appearance was

participant country, the belief in zero sum games, subjective relative deprivation, perceived local inequality, evil eye belief, belief in a just world, confidence in institutions of property protection, perceived national inequality, number of children, age of each child, a bot check, education, age, gender, typical yearly income amount and currency, and the number of people supported on this income.

Items with the highest factor loadings were selected from the Belief in Zero Sum Games scale (3) (Różycka-Tran et al., 2015) and the Belief in a Just World scale (5) (Stroebe et al., 2015). Subjective relative deprivation was measured with the 4-item Personal Relative Deprivation Scale (Callan et al., 2008). Perceived national income equality was measured with 1 item from Baymul (2018). Several other questions were designed for this survey that asked participants about their evil eye beliefs, their perceptions of local levels of inequality, their experiences with and concern about theft, their children, and their perceptions of their local police and justice systems. One question was included as a robot check, in which participants were instructed to select a particular response. A full list of questions is available in Appendix 1 of the supplemental materials.

Data analysis

All data cleaning, analysis, and table construction were conducted in R version 3.6.3, Microsoft Word, and Microsoft Excel. Subjects were excluded from analyses if they failed the robot check question. To facilitate comparability across the 4 countries, the estimated annual income variable was transformed using a purchasing power parity (PPP) conversion factor. Reverse coded questions were standardized then summary variables were constructed by taking the sum of responses to the Likert scale (1-5). These variables were then treated as continuous for all analyses. I used Little's missing completely at random (MCAR) test to examine the appropriateness of data imputation and found that these data were not missing completely at random. Thus, I decided to exclude individuals with missing data.

I planned to use a multivariate regression, with evil eye belief as the outcome variable. The first model constructed suffered from heteroskedasticity (see Table 16 in Appendix 3). Non-constant variance threatens the reliability of standard errors. To ameliorate this issue, I utilized a standard method for fitting the model with Huber-Eicker-White robust (heteroskedastic-consistent) standard errors. Then I used Akaike's Information Criteria (AIC) to select the most parsimonious model, hereafter referred to as the final model (Table 3).

Results

The final model (model with the smallest AIC) did not include every variable that was present in the original multivariate regression. The final model included the following predictors: subjective relative deprivation, belief in a just world, number of children, the participant's country, experiences with theft, and confidence in institutions of property protection. In the final model, the only variables that were significant ($p < 0.05$) were: subjective relative deprivation, belief in a just world, the participant's country, and confidence in institutions of property protection. Only the results of the final model are presented here (Table 2). Appendix 2 contains a correlation matrix of all variables included in the original model. The original model can be found in Appendix 3.

Numeric Variables	Mean	Standard deviation	Number of items	Summary Variable Range	Cronbach's Alpha (Standardized)
1. Subjective relative deprivation	9.49	2.77	4	4-20	0.59
2. Confidence in institutions of property protection	12.92	3.52	4	4-20	0.84
3. Experiences with theft	10.05	2.69	3	3-15	0.44
4. Belief in zero sum games	9.58	3.25	3	3-15	0.81
5. Belief in the evil eye	14.81	7.07	10	10-50	0.93
6. Belief in a just world	14.09	3.21	5	5-25	0.40
7. Perceived Local wealth inequality	6.61	1.97	2	2-10	--
8. Age	32.91	18.07	1	--	--
9. Number of children	.72	.87	1	--	--

Table 2: Unstandardized Mean and standard deviation of all numeric variables

Notes: Variables 1-7 were measured with a 5-point Likert-like scale (Strongly disagree (1)- Strongly agree (5)). Summary variable scores (variables 1-7) are the sum of responses to each item in the scale. Reverse-keyed item appear in subjective relative deprivation and perceived local wealth inequality.

Predictor	$\beta \pm SE$	95% CI	<i>P</i>
Subjective relative deprivation	.38 $\pm$.13	[.12, .64]	.004 **
Confidence in police and courts	-0.27 $\pm$.11	[-.48, -.05]	.016 *
Experiences with theft	-0.18 $\pm$.13	[-0.43, 0.07]	.157
Polish	-5.48 $\pm$.92	[-7.28, -3.68]	4.92e ⁻⁹ ****
Portuguese	-1.01 $\pm$.40	[-3.77, 1.74]	.470
Spanish	-2.11 $\pm$.74	[-3.57, -.64]	.005**
Belief in a just world	0.77 $\pm$.11	[0.56, 0.99]	9.70e ⁻¹² ****
Number of children	0.65 $\pm$.39	[-0.11, 1.41]	.092
Multiple R-squared: 0.1963	Adjusted R-squared: 0.1796	Cohen's f^2 : 0.2442	$p = 2.58e^{-14}$
			$p < 0.05$ * $p < .01$ ** $p < .001$ *** $p < .0001$ ****

Table 3: The lowest AIC model from a multivariate regression with robust standard errors

Outcomes of Predictions

For the following hypotheses, a prediction was considered supported if the variable was included if it achieved statistical significance ($p < 0.05$) in the final model.

(H1) Did perceived local wealth inequality positively predict belief in the evil eye?

No, this variable was not included in the final model.

(H2) Did subjective relative deprivation positively predict belief in the evil eye?

Yes.

(H3) Did the income in PPP dollars per family member negatively predict belief in the evil eye?

No, this variable was not included in the final model.

(H4) Did belief in a just world negatively predict belief in the evil eye?

No. In fact, in the final model, belief in a just world was statistically significant and positively related to belief in the evil eye.

(H5) Did belief in zero sum games positively predict belief in the evil eye?

No. This variable was not included in the final model, contrary to this study's central prediction, belief in zero sum games was not significantly related to belief in the evil eye.

(H6) Did confidence in institutions of property protection negatively predict belief in the evil eye?

Yes.

(H7) Did perceived national wealth inequality predict belief in the evil eye?

No, this variable was not included in the final model.

(H8) Did experiences with theft positively predict belief in the evil eye?

No, this variable did not achieve statistical significance. However, it was included in the final model.

(H9) Did a person's number of children positively predict belief in the evil eye?

No. Although this variable was included in the final model, its association with belief in the evil eye was non-significant.

(H10) Were women more likely to believe in the evil eye than men or others?

No, this variable was not included in the final model.

Discussion

The present study is designed to address some, but not all, of the explanation outlined above. While the purported link between the “image of limited good” and the evil eye is often mentioned, no one has quantitatively evaluated the relationship between social precepts and belief in the evil eye. The primary goal of this study was to conceptually replicate the findings of Gershman (2015) at a within-country, between-individual level, such that individuals’ perceptions of social conditions, particularly belief in zero sum games, were hypothesized to predict endorsement of evil eye beliefs. If the belief in zero sum games and the evil eye belief reliably do co-occur, this would be the first step in a thorough examination of the complete causal pathway. In other words, one could then move on to examine whether or not BZSG, as a social precept which emerges directly from social/ecological conditions, is truly a foundational and necessary precondition for the inception, maintenance, and transmission of the evil eye belief.

Belief in zero sum games

I anticipated a link between the subjective evaluations of inequality, belief in zero sum games (BZSG), and the evil eye belief. A bivariate regression with the evil eye belief and BZSG did reach significance. However, this did not occur when all variables were included. The final model (the lowest AIC model from a multivariate regression with robust standard errors) did not even include BZSG. It is still unclear why this prediction did not bear fruit, but there are several

possibilities. It is possible that this finding represents a false negative. This study only utilized a subset of items in the belief in zero sum games questionnaire from Różycka-Tran et al. (2015), perhaps this impacted the result. It seems unlikely, but potentially these were not the right items to capture the limited good cognitive orientation described by scholars of the evil eye (Foster, 1965; Dundes, 1992; Elliot, 2015). It is also could be that national (or between-group) levels of the belief in zero sum games are predictive of the evil eye belief, but not individual (within-group) levels of belief. This runs contrary to what one may surmise about the relationship based on multi-national studies of the belief in zero sum games. The belief in zero sum games variable has configural isomorphism at the national and individual level (Różycka-Tran et al., 2015, 2018). For example, a country's GDP and an individual's annual income are both independently predictive of a greater belief in zero sum games (Różycka-Tran et al., 2015, 2018). At the national level, belief in zero sum games was described as a cultural ideology, but at the personal level, it was identified as a personal worldview (Różycka-Tran et al., 2015, 2018). Analogously, it could be that a cultural ideology of belief in zero sum games is predictive of belief in the evil eye, but the personal worldview of belief in zero sum games is not. As it stands, there are not enough countries in this sample to investigate this idea.

Belief in a just world

The belief in a just world (BJW) summary variable was by far the best predictor of evil eye belief out of the variables included in the final model. Upon closer inspection, it appears that certain belief in a just world items were much more strongly associated with the evil eye

summary variable than the others (see Table 4). These included 1) *belief in the justness of intervention by God* ($r = .397$) and 2) *belief in the justness of the forces of nature* ($r = .371$). The other 3 items in the belief in a just world summary variable are not addressing supernatural forces. Items 1 and 2 are likely measuring moral vitalism, the belief that supernatural vital forces (e.g. energies, spirits, souls, or powers) of good and evil can be contagious and contaminating (Bastian et al., 2019). Bastian et al. (2019), using belief in the evil eye as an example of moral vitalism, demonstrated a relationship between pathogen burden (using estimates from Cashdan, 2014) and the evil eye belief (from the SCCS). Unfortunately, the survey utilized in the present study was created before I came across Bastian et al. (2019). Importantly, the results in Bastian et al. (2019) directly contradict the outcomes in Gershman (2015), which suggested that pathogen burden (using estimates from Low, 1994) was not a meaningful predictor of the evil eye belief in the SCCS. If items 1 and 2 (see Graph 1) do not reflect moral vitalism specifically, they may be measuring a general proclivity for explanations that invoke agentive and non-agentive supernatural forces as arbiters of justice. Future work should explore the relationship between belief in the evil eye and more general measurements of religiosity and supernatural beliefs.

	1.	2.	3.	4.	5.	6.
1.	1.0					
2.	0.52	1.0				
3.	0.15	0.20	1.0			
4.	0.22	0.13	0.15	1.0		
5.	0.02	-0.03	-0.15	-0.03	1.0	
6.	0.37	0.40	0.08	-0.06	0.03	1.0

Table 4: Correlations between items in the Belief in a Just world summary variable and the evil eye belief summary variable

1. I feel people earn the rewards and punishments they receive from the forces of **nature**.
2. I feel people earn the rewards and punishments they receive from **God**.
3. I feel that people's efforts are **noticed and rewarded** by other people they encounter.
4. People get what they **deserve** because of no one but themselves.
5. I feel the rewards and punishments people receive are due to **chance**.
6. Evil eye summary variable

Participant Country

Participant country did appear in the final model. The Spanish and Polish levels of the participant country variable reached statistical significance. However, the lack of sample size equivalency across the 4 countries prevents me from making any firm conclusions at this time.

Children, age, and gender

The model did not yield significant results for the number of children, age, or gender variables.

Gender and age were not included in the final model. However, number of children was included and is trending in the predicted direction. While number of children did not reach significance, its inclusion is consistent with the idea that children are construed by the mind as a high-value and vulnerable form of wealth. Winer & Cottrell (2004) have consistently found that visual

extramission beliefs are more common in women, so I expected a similar pattern for evil eye beliefs. This was not supported. It could be that sex differences in extramission beliefs do not extend to the evil eye belief. This would be strange, considering that the evil eye belief seems to necessarily imply a belief in visual extramission. Unfortunately, the survey design did not explicitly separate extramission beliefs from the evil eye belief, so this comparison was not possible. The null result for age could, like the null result for gender, indicate a dissociation between predictors of extramission beliefs versus the evil eye belief. Alternatively, it could be that visual extramission beliefs and evil eye beliefs do indeed track each other, but the negative correlation between age and extramission beliefs described by Winer & Cottrell (2004) does not hold across the lifespan. Winer & Cottrell (2004) only studied grade school children and university students, while the participants in my sample represented a much wider age range (32.9 ± 18 years). Follow up work with a wider range of ages that measures extramission beliefs and evil eye beliefs independently will be able to clarify this issue.

Subjective relative deprivation

The subjective relative deprivation (SRD) summary variable was significant predictor of evil eye belief in the final model. If this reflects objective wealth disparity, this is unsurprising, given the importance of inequality in Gershman (2015). If objective wealth disparity does impact evil eye belief on the individual level, this makes it especially odd that the measurement of perceived local wealth inequality and national wealth inequality were not predictors of evil eye belief. If

“objective” deprivation is a real predictor, then the null result for typical annual income is puzzling. Another possibility is that the practice of social comparisons is intimately tied to “institutional envy.” Perhaps this practice enhances one’s suspicion that other people in the community also make frequent social comparisons, feel deprived and envious as a result, and then have a greater desire to commit acts of destructive envy.

Perceptions of Local and National Inequality

I envisioned that perceptions of local and national inequality would be strongly related to evil eye belief. Neither variable was included in the final model. This could reflect a dissociation between the impacts of perceived versus actual inequality. Another possibility is that historical levels of inequality are more important than present levels of inequality. In hindsight, the local inequality variable I constructed had shortcomings. Out of the two items, one affirmed that the subject frequently encountered very poor and very rich people in their day to day life. This wording could encourage participants to focus on inequality that is visible in person. If this is the case, the local inequality measurement does not account for the impact of visible wealth inequality on the internet and television on participant’s mental representations. Therefore, it is possible that the negative result for this variable is a false negative, which is the product of a suboptimal measurement tool. However, the false negative interpretation is inconsistent with the null result for perceived national inequality.

Confidence in institutions of property protection

Gershman (2015) found that weak systems of property protection were predictive of the evil eye belief. For my participants, the police and courts are the primary systems of property protection.

In line with Gershman (2015), I did find evidence that confidence in these systems negatively predicts the evil eye belief. It could be that these negative perceptions of efficacy directly correspond with objective measurements of efficacy. This follows directly from Gershman's argument that the *actual* failures of property protection systems are most relevant to evil eye beliefs. However, it could be that perceptions of (property protection system) failure are more important than actual failure. Additionally, it is unclear whether or not this perception of failure is also extended to other authority figures. It could be that societal cynicism, for instance, is equally predictive.

Experiences with theft

Gershman (2015) found that the vulnerability of wealth was predictive of the evil eye belief.

Risk of theft is a type of wealth vulnerability that, I anticipated, would be salient for individuals living in market-integrated Europe. I predicted that risk of theft would produce a sense of wealth vulnerability, which could promote the evil eye belief. I constructed a 3-item measurement to test this. However, in hindsight it seems that these 3 items measured 3 different constructs, 1) an individual's worry over theft, 2) personal experiences of theft, 3) knowledge of other community members experiencing theft. While the theft variable was not a statistically significant predictor of evil eye belief, it was present in the final model. This suggests that this variable may display the predicted relationship if it was measured differently and should certainly be included in future studies of the evil eye.

Limitations and future directions

Future work on this topic should aim to improve sample composition, enhance and/or replace some of the measurements utilized in this paper, and add additional variables in predictive models of evil eye belief. The sample utilized for the present study was male-biased. This is potentially a drawback that may have impacted theoretically relevant variables such as gender and education. However, I can't make firm conclusions at this time, as it is not clear whether the relationship between predictor and outcome variables differs by sex or what the expected effect sizes would be.

The work of Różycka-Tran et al. (2015) illustrates that isomorphism of the within-country and between-country comparisons is not a given. It may be the case that national levels of BZSG, for example, predict the presence or absence of the evil eye belief, but individual differences in BZSG within a nation are *not* predictive. Thus, later studies of the evil eye belief would benefit from nationally representative samples drawn from multiple countries that are known to vary in their national levels of belief in zero sum games. This could help with differentiating between effects of belief in zero sum games as a group norm versus belief in zero sum games as a personal worldview.

It seems that several measurements in this study may be suboptimal. While the perceived national income inequality question (Baymul, 2018) is theoretically sound, the two items that

made up the local wealth inequality variable may not have captured online exposures to stark wealth differentiation. More refined measurements may reveal the hypothesized relationship between perceived wealth inequality and the evil eye belief. Future studies would benefit from questions that tap the conceptual space alluded to in the theft items. Other types of loss, death, and damage to property and/or loved ones should be explored, in addition to the types, frequency and severity of misfortunes attributed to the evil eye. Recent work (Bastian et al., 2019) found a relationship between historical pathogen burden and evil eye belief in the SCCS. This finding is surprising, given the rejection of this hypothesis in Gershman (2015). The difference between Gershman (2015) and (Bastian et al., 2019) comes down to how historical pathogen burden was operationalized. Future work should carefully consider the theoretical implications of different pathogens for supernatural beliefs. For example, one could argue that endemic disease and sporadic epidemics may have different social consequences. Endemic cholera that follows a seasonal pattern is likely seen as less dramatic than sporadic epidemics. Similarly, diseases vary in the visual presentation of symptoms. For instance, the *buboes* of a bubonic plague patient or the skin lesions seen in leprosy are more visually dramatic than the jaundice of Yellow fever or sunken eyes of Cholera. These more dramatic and salient events could produce evil eye attributions more often, or the opposite could be true! This indicates that future work needs to emphasize both objective indices and subjective perceptions of local pathogen burden, in addition to personal experiences with illness. Following this logic, an improved measurement of the number of negative and causally ambiguous disease events in an individual's life to interpret could greatly improve predictive models of evil eye belief.

Regarding beliefs about property, incorporating a measurement that goes beyond theft to include a wider range of loss, damage, and death events may uncover a relationship between experiencing a plethora of unfortunate but mechanically opaque occurrences and a propensity to utilize the evil eye as an explanation for misfortunes. As anticipated, this study reports a negative relationship between confidence in institutions of property protection and evil eye belief. To date, it is unclear whether people who believe in the evil eye are more skeptical of authority in general, or if their lack of confidence is specific to institutions of property protection. Future studies should, drawing on the social axioms literature, examine confidence in other institutions of formal authority, such as the subject's local, regional, and national governments, as well as sources of indirect authority, such as religious or intellectual leaders. Furthermore, questions should elucidate whether subjects who perceive shortcomings of these institutions are conceptualizing them as willful or accidental. For example, an individual who believes the police are corrupt and abusive could have a different propensity for evil eye beliefs compared to individuals who believe the police are well-intentioned but inept.

Along the same vein, future studies on this topic should incorporate measures that tap their general disposition towards adjacent concepts: religious, paranormal, and supernatural explanations. The high predictive value of the belief in a just world items that reference God and natural forces and the work of Bastian et al., (2019) suggest that moral vitalism measures are potentially indispensable constructs. For example, future studies should include measures of the belief in agentive, malevolent forces such as witches or demons, non-agentive forces such as fate and karma, beliefs about visual extramission in general, and beliefs about cases of visual extramissions causing physically detectable outcomes in the world, such as the belief that one

can feel the stares of others. Future work should also attempt to incorporate methods that measure implicit beliefs, such as those utilized in (Guterstam et al., 2018). It may be that these types of techniques are necessary for disambiguating the relative roles of reflective beliefs and intuitive inferences in the development, transmission, and stabilization of the evil eye belief.

Conclusion

This study examined predictors of the evil eye belief, a supernatural concept that posits a curse can be sent, sometimes unintentionally, via an envious gaze or words of praise or admiration. Based on previous quantitative work on the topic and unexplored assertions from anthropological, historical, and folkloric treatments, several hypotheses were generated about likely predictors of the evil eye belief. The most central hypothesis, which linked belief in zero sum games and the evil eye belief, was not supported. This study attempted a partial conceptual replication of Gershman (2015), but with subjective evaluations of wealth vulnerability and inequality. In line with Gershman (2015), an individual's confidence in local institutions of property protection was negatively related to the evil eye belief. Gershman (2015) found that stratified societies held the evil eye belief more often, however, my prediction that perceptions of local and national inequality would also predict evil eye belief was not supported. This illustrates that similar predictors may impact the outcome variable differently in between-group versus within-group comparisons. While income in PPP dollars per household member was not predictive of the evil eye belief, subjective relative deprivation was. This suggests that engaging in upward comparisons could be a key behavior that maintains the evil eye belief across time. Lastly, I found that moral vitalism beliefs, as measured by the *God* and *Forces of nature* items in the Belief in a Just World scale, are likely theoretically meaningful constructs within the evil eye

folk belief complex. The present study exhibited several limitations, and there is much work left in this area, but these findings provide a modest contribution to a rich history, spanning several thousand years, of fascination with the evil eye. All indicators suggest the intrigue will persist, with the layman and scholar alike, for the foreseeable future.

Appendices

Appendix 1

Survey-English

1. Consent form
 2. What is your Mturk worker identification number?
 3. What language are you taking this survey in?
- “Please use this 5 point scale to indicate your level of agreement with the following statements.

- a. Strongly disagree
 - b. Mildly disagree
 - c. Neutral
 - d. Mildly agree
 - e. Strongly agree
4. When some people are getting poorer, it means that other people are getting richer.
 5. Life is like a game— A person wins only when others lose.
 6. Life is so devised that when somebody gains, others have to lose.
 7. I feel resentful when I see how prosperous other people seem to be
 8. When I think about what I have compared to others, I feel deprived.
 9. I feel privileged compared to other people like me
 10. When I compare what I have with others, I realize that I am quite well off.
 11. Where I live, all people have pretty much the same things, no one has much nicer things compared to other people.
 12. In my day to day life, I see people who are very wealthy and people who are very poor.
 13. The evil eye curse can cause harm to people or objects.
 14. I speak with people in my social network about possible instances of the evil eye curse.
 15. I have used books or the internet to learn more about the evil eye curse.
 16. I have used protective words, gestures, or rituals to prevent the evil eye curse.
 17. I have used words, gestures, or rituals to treat a case of the evil eye curse.
 18. I have used objects or services to prevent an evil eye curse.
 19. I have used objects or services to treat a case of the evil eye curse.
 20. I have used plants to prevent an evil eye curse.
 21. I have used plants to treat an evil eye curse.
 22. I have consulted a religious or spiritual specialist about an evil eye curse.
 23. I have had personal property stolen.
 24. I know people in my community who have had things stolen.
 25. I worry about theft in my area.
 26. I feel people earn the rewards and punishments they receive from the forces of nature.
 27. I feel people earn the rewards and punishments they receive from God.
 28. I feel that people's efforts are noticed and rewarded by other people they encounter.
 29. People get what they deserve because of no one but themselves.
 30. The police effectively protect my community.
 31. The courts effectively administer justice in my community.
 32. The police effectively prevent theft in my community.
 33. The courts effectively administer justice in cases of theft.
 34. I feel the rewards and punishments people receive are due to chance.

Figure 1: Distributional Perception Diagrams

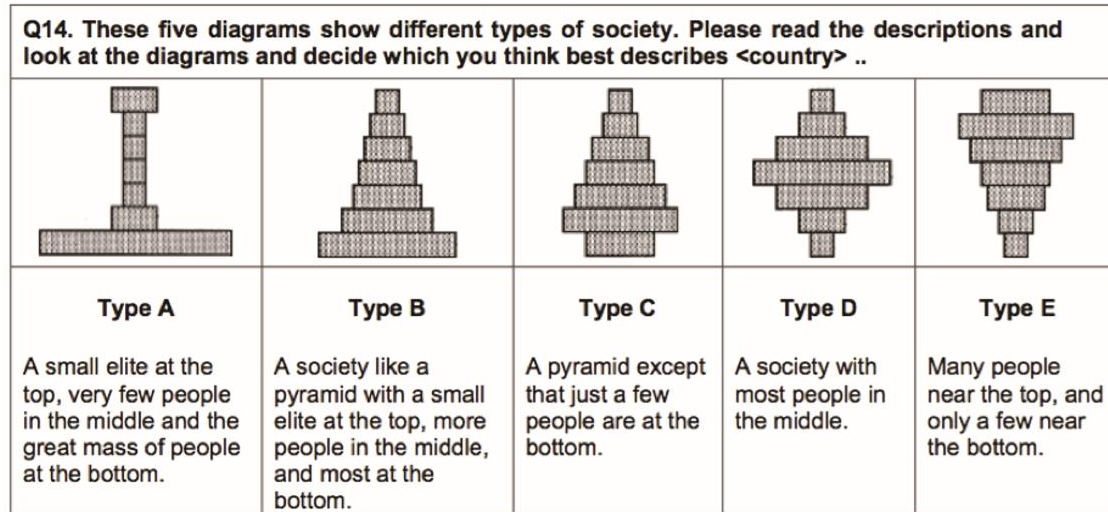


Figure 1: Baymul Inequality Visualization (English)

35. How many children do you have?

36. How old are each of your children (in descending order of age)?

37. How would you rate the health of each child, in comparison to others their age? Rate their health along this scale. Select 0 if they have died.

- a. 0 (They have died)
- b. 1(much less healthy than others)
- c. 2 (slightly less healthy than others)
- d. 3 (as healthy as others their age)
- e. 4(slightly more healthy than others)
- f. 5(much more healthy than others)

38. Everyone has hobbies, but for this question, we ask that you select “none.” This will help us remove robots from this survey.

- a. Gardening
- b. Skateboarding
- c. Fixing electronics
- d. Painting
- e. Singing
- f. Dancing
- g. None

39. How many years of education have you completed?

- a. Less than 5 years
- b. Between 5 and 8 years
- c. Between 9 and 12 years
- d. Between 12 and 14 years

- e. Between 14 and 16 years
 - f. More than 16 years
40. How old are you?
41. What is your gender?
- a. Man
 - b. Woman
 - c. Other
42. What is your typical yearly income?
- a. Amount
 - b. Currency
43. How many people are supported on this income?
44. Please enter a short series of numbers that you will use later to receive payment on Mturk.

Notes: Item 38 was formatted incorrectly on the Spanish version of this survey, so I was unable to include it in analyses.

Survey-Spanish

1. ¿Cuál es su número de identificación de trabajador Mturk?
2. ¿Qué idioma está utilizando para responder a esta encuesta?
3. Para los siguientes puntos, califique la cantidad que está de acuerdo o en desacuerdo con la declaración en la siguiente escala de
 - 1 (definitivamente en desacuerdo)
 - 2 (moderadamente en desacuerdo)
 - 3 (ligeramente en desacuerdo)
 - 4 (ni está de acuerdo ni en desacuerdo)
 - 5 (ligeramente de acuerdo)
 - 6 (moderadamente de acuerdo)
 - 7 (definitivamente de acuerdo)
4. Para los siguientes puntos, califique la cantidad que está de acuerdo o en desacuerdo con la declaración en la siguiente escala de 1 (definitivamente en desacuerdo), 2 (moderadamente en desacuerdo), 3 (ligeramente en desacuerdo), 4 (ni está de acuerdo ni en desacuerdo), 5 (ligeramente de acuerdo), 6 (moderadamente de acuerdo), 7 (definitivamente de acuerdo) Cuando algunas personas son cada vez más pobres, significa que otras personas se están haciendo más ricas.
5. La vida es como un juego: una persona gana solo cuando otros pierden.
6. En la vida, cuando alguien gana, alguien más tiene que perder.
7. Me siento resentido cuando veo lo prósperas que otras personas parecen ser.
8. Cuando pienso en lo que he comparado con los demás, me siento privado

9. Me siento privilegiado en comparación con otras personas como yo.
10. Cuando comparo lo que tengo con los demás, me doy cuenta de que estoy bastante bien.
11. Donde vivo, todas las personas tienen más o menos las mismas cosas, nadie tiene cosas mucho más bonitas en comparación con otras personas.
12. En mi día a día, veo a personas muy ricas y personas muy pobres.
13. La maldición del mal de ojo puede causar daño a personas u objetos.
14. Hablo con la gente de mi red social sobre posibles casos de la maldición del mal de ojo.
15. He usado libros o Internet para aprender más sobre la maldición del mal de ojo.
16. He usado palabras protectoras, gestos o rituales para prevenir la maldición del mal de ojo.
17. He usado palabras, gestos o rituales para tratar un caso de maldición del mal de ojo.
18. He utilizado objetos o servicios para prevenir una maldición del mal de ojo.
19. He utilizado objetos o servicios para tratar un caso de maldición del mal de ojo.
20. He utilizado plantas para prevenir una maldición de ojos malignos.
21. He utilizado plantas para tratar una maldición de ojos malignos.
22. He consultado a un especialista religioso o espiritual sobre una maldición del mal de ojo.
23. He tenido propiedad personal robada.
24. Conozco a personas en mi comunidad a las que les han robado cosas.
25. Me preocupo por el robo en mi área.
26. La policía protege efectivamente a mi comunidad.
27. Los tribunales efectivamente administran justicia en mi comunidad.
28. Efectividad para prevenir el robo
29. La policía efectivamente previene el robo en mi comunidad.
30. Los tribunales administran efectivamente la justicia en casos relacionados con el robo.
31. Siento que las personas obtienen las recompensas y los castigos que reciben de las fuerzas de la naturaleza.
32. Siento que las personas ganan las recompensas y los castigos que reciben de Dios.
33. Siento que los esfuerzos de las personas son notados y recompensados por otras personas que encuentran.
34. Las personas obtienen lo que se merecen por nadie más que por ellos mismos.
35. Siento que las recompensas y los castigos que las personas reciben se deben al azar.

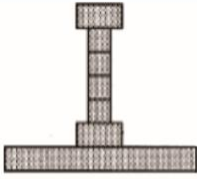
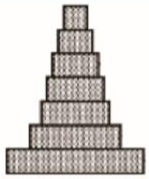
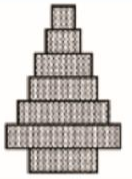
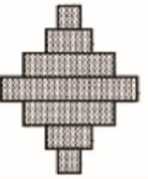
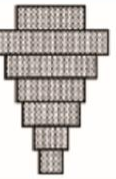
Estos cinco diagramas muestran diferentes tipos de sociedad. Lea las descripciones y mire los diagramas y decida cuál cree que describe mejor España.				
				
Tipo A Una pequeña élite en la parte superior, muy pocas personas en el medio y la gran masa de personas en la parte inferior.	Tipo B Una sociedad como una pirámide con una pequeña élite en la parte superior, más personas en el medio y la mayoría en la parte inferior.	Tipo C Una pirámide, excepto que solo unas pocas personas están en la parte inferior.	Tipo D Una sociedad con la mayoría de las personas en el medio.	Tipo E Muchas personas cerca de la cima, y solo unas pocas cerca de la parte inferior.

Figure 2: Baymul Inequality Visualization (Spanish)

Texto Asociado

Estos cinco diagramas muestran diferentes tipos de sociedades. Lea las descripciones y mire los diagramas y decida cuál cree que describe mejor el país donde vive.

Tipo A: Una pequeña élite en la parte superior, muy pocas personas en el medio y la gran masa de personas en la parte inferior.

Tipo B: Una sociedad como una pirámide con una pequeña élite en la parte superior, más personas en el medio y la mayoría en la parte inferior.

Tipo C- Una pirámide, excepto que solo unas pocas personas están en la parte inferior.

Tipo D: Una sociedad con la mayoría de las personas en el medio.

Tipo E: Muchas personas cerca de la parte superior, y solo unas pocas cerca de la parte inferior.

36. ¿Cuántos hijos tiene?

37. ¿Cuántos años tiene cada uno de sus hijos (en orden descendente de edad)?

Si tiene más de 6 hijos, solo incluya los primeros 6.

38. ¿Cómo calificaría la salud de cada niño, en comparación con otros de su edad? Califique su salud a lo largo de esta escala 1 (mucho menos saludable que otros), 2 (ligeramente menos saludable que otros), 3 (tan saludable como otros de su edad), 4 (un poco más saludable que otros), 5 (mucho más saludable que otros)). Escribe 0 si han muerto.

39. Todo el mundo tiene pasatiempos, pero para esta pregunta, le pedimos que seleccione "ninguno". Esto nos ayudará a eliminar robots de esta encuesta.

Jardinería

Montar en patineta

Fijación de la electrónica

Pintura

Cantar

Bailar

Ninguno

40. ¿Cuántos años de educación ha completado?

Menos de 5 años

Entre 5 y 8 años

Entre 9 y 12 años

Entre 12 y 14 años

Entre 14 y 16 años

Más de 16 años

41. ¿Cuántos años tiene?

42. ¿Cuál es su género?

a. Hombre

b. Mujer

c. Otro

43. ¿Cuál es su ingreso anual típico?

a. Cantidad

b. Moneda

44. ¿Cuántas personas reciben apoyo en estos ingresos?

45. Introduzca una breve serie de números que utilizará más adelante para recibir el pago en Mturk.

Survey-Polish

1. Jaki jest Twój numer identyfikacyjny pracownika Mturk?
2. W jakim języku wypełniasz tę ankietę?
3. W przypadku następujących pozycji oceń, w jakim stopniu zgadzasz się lub nie zgadzasz z oświadczeniem w następującej skali:
 - 1 (całkowicie się nie zgadzam)
 - 2 (nie zgadzam się)
 - 3 (raczej się nie zgadzam)
 - 4 (ani się zgadzam, ani się nie zgadzam)
 - 5 (raczej się zgadzam)

6 (zgadzam się)

7 (całkowicie się zgadzam)

4. Kiedy niektórzy ludzie stają się biedniejsi, oznacza to, że inni stają się bogatsi.
5. Życie jest jak gra – ktoś wygrywa tylko wtedy, gdy inni przegrywają.
6. Życie jest tak zbudowane, że gdy ktoś zyskuje, inni muszą stracić.
7. Czuję się urażony, gdy widzę, jak zamożni wydają się inni ludzie.
8. Porównując to, co mam do tego, co mają inni, czuję się ubogi.
9. Czuję się uprzywilejowany w porównaniu do innych ludzi.
10. Porównując to, co mam do tego, co mają inni, zdaję sobie sprawę, że radzę sobie bardzo dobrze.
11. Tam, gdzie mieszkam, wszyscy posiadają takie same rzeczy, nikt nie ma nic lepszego niż inni.
12. W moim codziennym życiu widzę ludzi bardzo zamożnych i ludzi bardzo biednych.
13. W przypadku następujących pozycji odpowiedz ‘tak’ lub ‘nie’.
14. Klątwa złego oka może wyrządzić krzywdę ludziom lub przedmiotom.
15. Rozmawiam z ludźmi, których znam o możliwych przypadkach klątwy złego oka.
16. Korzystałem/am z książek lub Internetu, aby dowiedzieć się więcej o klątwie złego oka.
17. Użyłem/am ochronnych słów, gestów lub rytuałów, aby zapobiec klątwie złego oka.
18. Użyłem/am słów, gestów lub rytuałów, aby pozbyć się klątwy złego oka.
19. Użyłem/am przedmiotów lub usług, aby zapobiec klątwie złego oka.
20. Użyłem/am przedmiotów lub usług, aby pozbyć się klątwy złego oka.
21. Użyłem roślin, aby zapobiec klątwie złego oka.
22. Użyłem roślin, aby pozbyć się klątwy złego oka.
23. Zasięgnąłem/zasięgnęłam porady religijnego lub duchowego specjalisty w sprawie klątwy złego oka.
24. Skradziono mi własność osobistą.
25. Znam ludzi, którzy mieli skradzione rzeczy.
26. Martwię się kradzieżą w mojej okolicy.
27. Policja skutecznie chroni moją społeczność.
28. Sądy skutecznie wymierzają sprawiedliwość w mojej społeczności.
29. Policja skutecznie zapobiega kradzieżom w mojej społeczności.
30. Sądy skutecznie zarządzają wymiarem sprawiedliwości, jeśli chodzi o sprawy dotyczące kradzieży.
31. Uważam, że nagrody i kary, które spotykają ludzi pochodzą od sił natury.
32. Uważam, że nagrody i kary, które spotykają ludzi pochodzą od Boga.
33. Uważam, że wysiłki ludzi są zauważane i nagradzane przez inne osoby, które spotykają na swojej drodze.
34. Ludzie dostają to, na co zasłużyli i zawdzięczają to tylko sobie samym.
35. Uważam, że nagrody i kary, które spotykają ludzi, wynikają z przypadku.

Pięć poniżej przedstawionych diagramów pokazuje różne rodzaje społeczeństwa. Proszę przeczytać opisy oraz przyjrzyj się diagramom, a następnie zdecyduj, który z nich najlepiej według Ciebie opisuje Polska.

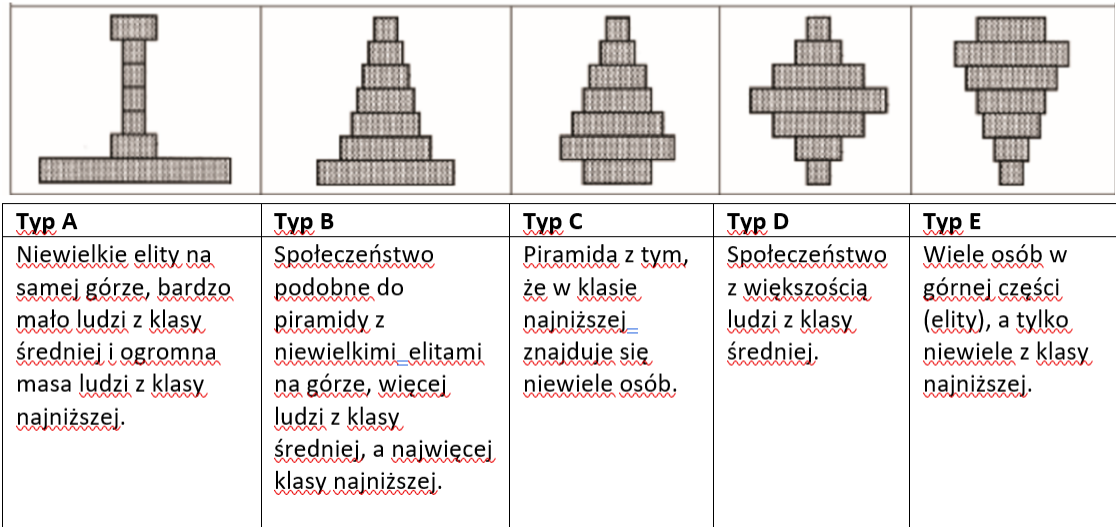


Figure 3: Baymul Inequality Visualization (Polish)

36. Ile masz dzieci?
37. Ile lat ma każde z twoich dzieci (począwszy od najstarszego do najmłodszego)?
38. Jak oceniłbyś zdrowie każdego dziecka w porównaniu z innymi osobami w jego wieku?
Oceń ich zdrowie według tej skali 1 (zdecydowanie mniej zdrowe niż inne), 2 (nieco mniej zdrowe niż inne), 3 (tak zdrowe jak inne w tym wieku), 4 (nieco bardziej zdrowe niż inne), 5 (znacznie bardziej zdrowe niż inne).
39. Wybierz 0 w przypadku, gdy dziecko nie żyje. Każde ma hobby, ale w przypadku tego pytania prosimy o wybranie „brak”. Pomoże nam to usunąć boty z tej ankiety.
Ogrodnictwo
Jazda na deskorolce
Naprawa urządzeń elektrycznych
Malowanie
Śpiewanie
Taniec
Brak
40. Ile lat edukacji ukończyłeś/aś?
Mniej niż 5 lat
Od 5 do 8 lat

Od 9 do 12 lat

Od 12 do 14 lat

Od 14 do 16 lat

Więcej niż 16 lat

41. Ile masz lat?

42. Jakiej jesteś płci?

Mężczyzna

Kobieta

Inne

43. Jaki jest Twój typowy roczny dochód?

Kwota

Waluta

44. Ile osób jest utrzymywanych za pomocą tego dochodu?

45. Wprowadź krótką serię liczb, których użyjesz później, aby otrzymać płatność na portalu Mturk.

Survey-Portuguese

1. Qual é o seu número de identificação de trabalhador MTurk?

2. Em que idioma você está respondendo a essa pesquisa?

3. Para os itens a seguir, avalie o quanto você concorda ou discorda da afirmação na seguinte escala de 1 (discordo definitivamente), 2 (discordo moderadamente), 3 (discordo ligeiramente), 4 (não concordo nem discordo), 5 (concordo ligeiramente), 6 (concordo moderadamente), 7 (concordo definitivamente)

1 (discordo definitivamente)

2 (discordo moderadamente)

3 (discordo ligeiramente)

4 (não concordo nem discordo)

5 (concordo ligeiramente)

6 (concordo moderadamente)

7 (concordo definitivamente)

Para os itens a seguir, avalie o quanto você concorda ou discorda da afirmação na seguinte escala. Quando algumas pessoas estão ficando mais pobres, isso significa que outras estão ficando mais ricas.

4. Quando algumas pessoas estão ficando mais pobres, isso significa que outras estão ficando mais ricas.
5. A vida é como um jogo— uma pessoa ganha apenas quando outros perdem.
6. A vida é planejada de tal forma para que, quando alguém vença, outros percam.
7. Fico ressentido quando vejo quão prósperas as outras pessoas parecem ser.
8. Quando penso no que tenho comparado com os outros, sinto-me desprivilegiado.
9. Sinto-me privilegiado em comparação com outras pessoas como eu.
10. Quando comparo o que tenho com os outros, vejo que tenho uma vida privilegiada.
11. Onde vivo, todas as pessoas têm praticamente as mesmas coisas, ninguém tem coisas muito melhores em comparação a outras pessoas.
12. No meu dia a dia, vejo pessoas muito ricas e pessoas muito pobres.
13. O mau-olhado pode causar danos a pessoas ou objetos.
14. Falo com pessoas da minha rede social sobre possíveis situações relacionadas ao mau-olhado.
15. Usei livros ou a internet para aprender mais sobre o mau-olhado.
16. Usei palavras, gestos ou rituais de proteção para impedir o mau-olhado.
17. Usei palavras, gestos ou rituais para tratar um caso de mau-olhado.
18. Usei objetos ou serviços para evitar o mau-olhado.
19. Usei objetos ou serviços para tratar um caso de mau-olhado.
20. Usei plantas para evitar o mau-olhado.
21. Usei plantas para tratar mau-olhado.
22. Consulte um especialista religioso ou espiritual por causa de mau-olhado.
23. Tive bens pessoais roubados.
24. Conheço pessoas da minha comunidade que tiveram bens roubados.
25. Me preocupo com roubo na minha região.
26. A polícia protege efetivamente minha comunidade.
27. Os tribunais administram efetivamente a justiça na minha comunidade.
28. Eficácia na prevenção de roubo
29. A polícia evita efetivamente o roubo na minha comunidade.
30. Os tribunais administram efetivamente a justiça nos casos de roubo.
31. Sinto que as pessoas recebem as recompensas e punições que recebem das forças da natureza.
32. Sinto que as pessoas ganham as recompensas e punições que recebem de Deus.
33. Sinto que os esforços das pessoas são notados e recompensados por outras pessoas que encontram.
34. As pessoas conseguem o que merecem por causa de ninguém além de si mesmas.
35. Sinto que as recompensas e punições que as pessoas recebem são devidas ao acaso.

Esses cinco diagramas mostram diferentes tipos de sociedade. Leia as descrições, veja os diagramas e decida qual você acha que melhor descreve Portugal.				
Tipo A Uma pequena elite no topo, muito poucas pessoas no meio e a grande massa de pessoas no fundo.	Tipo B Uma sociedade como uma pirâmide com uma pequena elite no topo, mais pessoas no meio e a maioria no fundo.	Tipo C Uma pirâmide, exceto que apenas algumas pessoas estão no fundo.	Tipo D Uma sociedade com a maioria das pessoas no meio.	Tipo E Muitas pessoas perto do topo e apenas algumas perto do fundo.

Figure 4: Baymul Inequality Visualization (Portuguese)

Texto Associado

- Esses cinco diagramas mostram diferentes tipos de sociedades. Leia as descrições, veja os diagramas e decida qual você acha que melhor descreve o país onde mora.
- Tipo A - Uma pequena elite no topo, muito poucas pessoas no meio e a grande massa de pessoas no fundo.
- Tipo B - Uma sociedade como uma pirâmide com uma pequena elite no topo, mais pessoas no meio e a maioria no fundo.
- Tipo C - Uma pirâmide, exceto que apenas algumas pessoas estão na parte inferior.
- Tipo D - Uma sociedade com a maioria das pessoas no meio.
- Tipo E - Muitas pessoas perto do topo e apenas algumas perto do fundo.

36. Quantos filhos você tem?

37. Qual a idade de cada um dos seus filhos (em ordem decrescente de idade)?

38. Como você classificaria a saúde de cada criança, em comparação com outras da sua idade? Classifique sua saúde nessa escala 1 (muito menos saudável que outros), 2 (um pouco menos saudável que outros), 3 (tão saudável quanto outros de sua idade), 4 (ligeiramente mais saudável que outros), 5 (muito mais saudável que outros)) Escreva 0 se eles morreram.

39. Todo mundo tem hobbies, mas, para esta pergunta, pedimos que você selecione “nenhum”. Isso nos ajudará a remover robôs desta pesquisa.

- Jardinagem
- Andar de skate
- Consertar eletrônicos

- d. Pintura
 - e. Canto
 - f. Dança
 - g. Nenhum
40. Quantos anos de educação você completou?
- a. Menos de 5 anos
 - b. Entre 5 e 8 anos
 - c. Entre 9 e 12 anos
 - d. Entre 12 e 14 anos
 - e. Entre 14 e 16 anos
 - f. Mais de 16 anos
41. Qual sua idade?
42. Qual seu gênero?
- a. Homem
 - b. Mulher
 - c. Outro
43. Qual é a sua renda anual típica?
- a. Valor
 - b. Moeda
44. Quantas pessoas são sustentadas por essa renda?
45. Digite uma pequena série de números que você usará posteriormente para receber o pagamento no MTurk.

Survey-French

1. Quel est votre numéro d'identification de travailleur Mturk?
2. Pour les points suivants, évaluez le montant avec quoi vous êtes d'accord ou en désaccord avec la déclaration sur l'échelle suivante de 1 (certainement en désaccord), 2 (modérément en désaccord), 3 (légèrement en désaccord), 4 (ni d'accord ni désaccord), 5 (légèrement d'accord), (modérément d'accord), 7 (certainement d'accord)
3. Lorsque certaines personnes s'appauvrissent, cela signifie que d'autres personnes s'enrichissent.
4. La vie est comme un jeu — Une personne ne gagne que lorsque les autres perdent.
5. La vie est tellement conçue que lorsque quelqu'un gagne, d'autres doivent perdre.
6. Je ressens du ressentiment quand je vois à quel point les autres semblent prospères
7. Quand je pense à ce que j'ai comparé aux autres, je me sens privé
8. Je me sens privilégié par rapport à d'autres personnes comme moi
9. Quand je compare ce que j'ai avec d'autres, je me rends compte que je suis assez bien loti.
10. Là où je vis, tous les gens ont à peu près les mêmes choses, personne n'a beaucoup plus de choses par rapport à d'autres personnes.

11. Dans ma vie quotidienne, je vois des gens qui sont très riches et des gens qui sont très pauvres.
12. Pour les éléments suivants, donnez une réponse oui ou non.
13. La malédiction des yeux maléfiques peut causer du tort aux personnes ou aux objets.
14. Je parle avec des gens de mon réseau social sur les cas possibles de la malédiction des yeux maléfiques.
15. J'ai utilisé des livres ou l'Internet pour en apprendre davantage sur la malédiction des yeux maléfiques.
16. J'ai utilisé des mots protecteurs, des gestes ou des rituels pour empêcher la malédiction des yeux maléfiques.
17. J'ai utilisé des mots, des gestes ou des rituels pour traiter un cas de malédiction des yeux maléfiques.
18. J'ai utilisé des objets ou des services pour empêcher une malédiction oculaire maléfique.
19. J'ai utilisé des objets ou des services pour traiter un cas de malédiction des yeux maléfiques.
20. J'ai utilisé des plantes pour empêcher une malédiction des yeux maléfiques.
21. J'ai utilisé des plantes pour traiter une malédiction oculaire maléfique.
22. J'ai consulté un spécialiste religieux ou spirituel au sujet d'une malédiction des yeux maléfiques.
23. J'ai eu des biens personnels volés.
24. Je connais des gens de ma communauté qui se sont fait voler des objets.
25. Je m'inquiète du vol dans ma région.
26. Je pense que les gens obtiennent les récompenses et les punitions qu'ils reçoivent des forces de la nature.
27. Je pense que les gens obtiennent les récompenses et les punitions qu'ils reçoivent du Dieu.
28. Je pense que les efforts fournis par les gens sont remarqués et récompensés par d'autres personnes qu'ils rencontrent.
29. Les gens obtiennent ce qu'ils méritent grâce à personne d'autre qu'à eux-mêmes.
30. Je pense que les récompenses et les punitions que les gens reçoivent sont dues au hasard.
31. La police protège efficacement ma communauté.
32. Les tribunaux administrent efficacement la justice dans ma communauté.
33. La police prévient efficacement le vol dans ma communauté.
34. Les tribunaux administrent la justice efficacement dans les affaires de vol.

35.

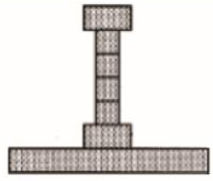
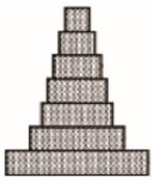
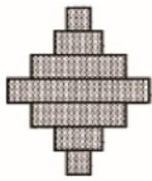
Ces cinq diagrammes représentent les différents types de sociétés. Veuillez lire les descriptions, regarder les diagrammes et décider lequel, selon vous, décrit le mieux France.				
				
Type A Une petite élite au sommet, très peu de gens au milieu et une grande masse en bas.	Type B Une société comme une pyramide avec une petite élite au sommet, plus de personnes au milieu et la plupart en bas.	Type C Une société comme une pyramide avec une petite élite au sommet, plus de personnes au milieu et la plupart en bas.	Type D Une société avec la plupart des gens au milieu.	Type E Beaucoup de gens près du sommet et seulement quelques-uns près du bas.

Figure 5: Baymul Inequality Visualization (French)

Texte associé

1. Ces cinq diagrammes représentent différents types de sociétés. Veuillez lire les descriptions, regarder les diagrammes et décider lequel, selon vous, décrit le mieux le pays où vous vivez.

2. Type A- Une petite élite au sommet, très peu de gens au milieu et une grande masse en bas.

3. Type B - Une société comme une pyramide avec une petite élite au sommet, plus de personnes au milieu et la plupart en bas.

4. Tapez C- Une pyramide, sauf que seules quelques personnes sont en bas.

5. Type D- Une société avec la plupart des gens au milieu.

6. Tapez E- Beaucoup de gens près du sommet et seulement quelques-uns près du bas.

36. Combien d'enfants avez-vous?

37. Quel âge a chacun de vos enfants (par ordre décroissant d'âge)?

38. Comment évalueriez-vous la santé de chaque enfant par rapport aux autres enfants de son âge? Évaluez leur santé selon l'échelle suivante 1 (beaucoup moins en santé que les autres), 2 (légèrement moins en santé que les autres), 3 (aussi en santé que les autres enfants de leur âge), 4 (légèrement plus en santé que les autres), 5 (beaucoup plus en

santé que les autres).

Inscrivez 0 s'ils sont décédés.

39. Tout le monde a des passe-temps, mais pour cette question, nous vous demandons de choisir «aucun». Cela nous aidera à supprimer les robots de cette enquête.
- a. Jardinage
 - b. Planche à roulettes
 - c. Fixation de l'électronique
 - d. Peinture
 - e. Chant
 - f. Danse
 - g. Aucun
40. Combien d'années d'études avez-vous terminées?
- a. Moins de 5 ans
 - b. Entre 5 et 8 ans
 - c. Entre 9 et 12 ans
 - d. Entre 12 et 14 ans
 - e. Entre 14 et 16 ans
 - f. Plus de 16 ans
41. 28. Quel âge avez-vous?
42. 29. Quel est votre sexe?
- a. L'homme
 - b. Femme
 - c. Autres
43. Quel est votre revenu annuel typique?
- a. Montant
 - b. Monnaie
44. Combien de personnes sont soutenues sur ce revenu?
45. S'il vous plaît entrer une courte série de numéros que vous utiliserez plus tard pour recevoir le paiement sur Mturk.

Appendix 2

Belief in the evil eye	Mean	Standard deviation	Cronbach's Alpha (Standardized)
1. The evil eye curse can cause harm to people or objects.	1.98	1.26	0.93
2. I speak with people in my social network about possible instances of the evil eye curse.	1.46	0.86	0.93
3. I have used books or the internet to learn more about the evil eye curse.	1.41	0.83	0.93
4. I have used protective words, gestures, or rituals to prevent the evil eye curse.	1.67	1.13	0.92
5. I have used words, gestures, or rituals to treat a case of the evil eye curse.	1.46	0.92	0.92
6. I have used objects or services to prevent an evil eye curse.	1.46	0.92	0.92
7. I have used objects or services to treat a case of the evil eye curse.	1.38	0.82	0.92
8. I have used plants to prevent an evil eye curse.	1.36	0.81	0.92
9. I have used plants to treat an evil eye curse.	1.32	0.76	0.92
10. I have consulted a religious or spiritual specialist about an evil eye curse.	1.32	0.80	0.92

Table 5: Items in the evil eye belief summary variable

Confidence in institutions of property protection	Mean	Standard deviation	Cronbach's Alpha (Standardized)
The police effectively protect my community.	3.41	1.07	0.80
The courts effectively administer justice in my community.	3.16	1.05	0.80
The police effectively prevent theft in my community.	3.25	1.08	0.78
The courts effectively administer justice in cases of theft.	3.11	1.07	0.82

Table 6: Items of the confidence in institutions of property protection variable

Subjective relative deprivation	Mean	Standard deviation	Cronbach's Alpha (Standardized)
1. I feel resentful when I see how prosperous other people seem to be	2.31	1.14	0.56
2. When I think about what I have compared to others, I feel deprived.	2.62	1.11	0.53
3. I feel privileged compared to other people like me. *	2.36	0.97	0.52
4. When I compare what I have with others, I realize that I am quite well off. *	2.20	0.93	0.44

Table 7: Subjective relative deprivation items from Callan et al. (2008)

*Reverse keyed

Experiences with theft	Mean	Standard deviation	Cronbach's Alpha (Standardized)
1. I have had personal property stolen.	2.94	1.55	0.49
2. I know people in my community who have had things stolen.	3.96	1.15	0.12
3. I worry about theft in my area.	3.15	1.23	0.39

Table 8: Experiences with theft items

Belief in a just world	Mean	Standard deviation	Cronbach's Alpha (Standardized)
1. I feel people earn the rewards and punishments they receive from the forces of nature.	2.58	1.28	0.16
2. I feel people earn the rewards and punishments they receive from God.	2.02	1.24	0.20
3. I feel that people's efforts are noticed and rewarded by other people they encounter.	3.46	1.01	0.39
4. People get what they deserve because of no one but themselves.	3.36	1.15	0.35
5. I feel the rewards and punishments people receive are due to chance.	2.67	1.19	0.54

Table 9: Belief in a Just World items

Notes: The highest loading item from each factor was selected (Nature, God, Other People, Self, and Chance) from Stroebe et al. (2015).

Belief in zero sum games	Mean	Standard deviation	Cronbach's Alpha (Standardized)
1. When some people are getting poorer, it means that other people are getting richer.	3.70	1.19	0.83
2. Life is like a game— A person wins only when others lose.	2.97	1.31	0.65
3. Life is so devised that when somebody gains, others have to lose.	2.92	1.30	0.72

Table 10: Belief in Zero Sum Games items

Notes: 3 items with the highest factor loadings were selected from Różycka-Tran et al. (2015).

Local Wealth inequality

Local wealth inequality	Mean	Standard deviation
Where I live, all people have pretty much the same things, no one has much nicer things compared to other people. *	3.16	1.19
In my day to day life, I see people who are very wealthy and people who are very poor.	3.45	1.23

Table 11: Perceived local wealth inequality items

*Reverse keyed

Appendix 3

	1	2	3	4	5	6	7	8	9	10	11	12
(1) Belief in the evil eye	1	-0.01269238	0.1705442	0.11241735	-0.1543097	-0.016516	0.31453889	0.1466543	0.1413781	-0.033996	0.06656458	0.1924
(2) Income in PPP dollars per person	-0.0127	1	-0.007672	-0.0664409	-0.0083023	0.0384589	-0.05267581	-0.1119403	0.04675015	0.02831951	0.10456052	0.0348
(3) Perceived national inequality	0.17054	-0.00767214	1	0.20338112	-0.1421245	0.072194	0.0568755	0.1347185	0.07324859	0.08490966	0.07369988	0.9781
(4) Belief in zero sum games	0.11242	-0.06644093	0.2033811	1	-0.1364915	0.0841002	0.10590938	0.2247782	-0.0554039	0.05819863	0.08952546	0.1801
(5) Confidence in institutions	-0.1543	-0.00830233	-0.142125	-0.1364915	1	-0.116957	0.05837817	-0.212087	-0.0387124	-0.0778489	-0.1388484	-0.168
(6) Experiences with theft	-0.0165	0.03845892	0.072194	0.08410023	-0.1169566	1	0.13225546	0.0400758	0.03885783	0.06127107	0.2302346	0.0354
(7) Belief in a just world	0.31454	-0.05267581	0.0568755	0.10590938	0.0583782	0.1322555	1	-0.0845833	0.07023945	-0.0841455	0.00294618	0.0333
(8) Subjective relative deprivation	0.14665	-0.11194026	0.1347185	0.22477824	-0.212087	0.0400758	-0.08458331	1	-0.0202827	0.04022522	0.14591493	0.1497
(9) Children	0.14138	0.04675015	0.0732486	-0.0554039	-0.0387124	0.0388578	0.07023945	-0.0202827	1	0.31479448	0.09339615	0.1289
(10) Age	-0.034	0.02831951	0.0849097	0.05819863	-0.0778489	0.0612711	-0.0841455	0.0402252	0.31479448	1	0.08037236	0.0793
(11) Perceived local inequality	0.06656	0.10456052	0.0736999	0.08952546	-0.1388484	0.2302346	0.00294618	0.1459149	0.09339615	0.08037236	1	0.1051
(12) Overestimation of national inequality	0.19244	0.03478436	0.9780916	0.18007221	-0.1680795	0.0354063	0.03334934	0.1496535	0.12889199	0.07927886	0.10509635	1

Table 12: Correlation matrix of Original Variables

Full variable name	Variable description	Variable name in the code
Perceived local wealth inequality	Subjects indicated their level of agreement or disagreement with 2 statements about the level of wealth inequality in their local environment. One of questions was reverse coded.	ii_sum
Subjective relative deprivation	Subjects evaluated 4 statements about their sense of deprivation. 2 of the statements were reverse coded.	srd_sum
Income in PPP dollars per household member	Incomes were converted to PPP dollars (purchasing power parity), then divided by the number of household members being supported.	inc_ppp_pp
Belief in a just world	Subjects responded to 5 items which described the just-ness of different aspects of natural and supernatural world.	bjw_sum
Belief in zero sum games	Subjects rated their agreement or disagreement with 3 items that describe an antagonistic, zero-sum approach to the social world.	bzsg_sum

Belief in the evil eye	Subjects indicated their level of agreement or disagreement with 10 statements describing a range of beliefs and activities associated with the evil eye belief.	ee_sum
Confidence in institutions of property protection	Subjects indicated their level of agreement with 4 statements describing the efficacy of their local police and courts in preventing theft and rectifying cases of property loss from theft.	cii
Perceived national wealth inequality	Subjects are asked to select which wealth distribution visualization best approximated their national wealth distribution. There were 5 options. Each option had a gini coefficient associated with it.	gini_baymul
Overestimation of national wealth inequality	This variable was constructed by taking the difference between the gini coefficient values, which were associated with each option in the perceived national wealth inequality question, and the actual gini coefficient for the subject's country in 2017.	gini_error
Experiences with theft	Subjects responded to 3 items which assessed their personal experiences with theft, the experiences of their social network, and the extent to which the subject worries about theft.	theft_sum
Language of survey	Subjects took the surveys in Polish, Portuguese, French, and Spanish. On Mturk, respondents were required to reside in Poland, Portugal, France, or Spain.	language
Number of children	Subjects indicated the number of children they have.	children
Age	Subjects indicated their age	age
Gender	Subjects could report their gender as a woman, a man, or as other.	gender
Education	The number of years of formal schooling completed.	edu

Table 13: List of Original Variables

Predictions

1. Positive predictors
 - a. **Women** will report greater belief in the evil eye than men and others.
 - b. The **belief in zero sum games** score will positively predict belief in the evil eye.
 - c. The **subjective relative deprivation** score will positively predict belief in the evil eye
 - d. The number of **children** a subject has will positively predict belief in the evil eye.
 - e. A subject's perception of their **local wealth inequality** will positively predict belief in the evil eye.
 - f. A subject's perception of **national levels of wealth inequality** will positively predict belief in the evil eye.
 - g. A subject's **overestimation of wealth inequality** at the national level will positively predict belief in the evil eye.
2. Negative predictors
 - a. A subject's **belief in a just world** score will negatively predict belief in the evil eye.
 - b. A subject's **confidence in property protecting institutions** score will negatively predict belief in the evil eye.
 - c. **Income in PPP dollars per household member** will negatively predict belief in the evil.

Table 14: Original predictions

	Estimate	Standard Error	T value	P value
Intercept	7.877e ⁰⁰	3.590e ⁰⁰	2.19392	2.886e-02 *
Belief in zero sum games	2.598e ⁻⁰²	1.081e ⁻⁰¹	0.24032	8.102e-01
Subjective relative deprivation	3.355e ⁻⁰¹	1.369e-01	2.45101	1.471e-02 *
Perceived local wealth inequality	7.530e-02	1.788e-01	0.42124	6.738e-01
Age	-2.389e-02	1.158e-02	-2.06233	3.987e-02 *
Income in PPP dollars per household member	-7.212e-06	5.604e-05	-0.12869	8.977e-01
Confidence in the police and courts	-2.256e-01	1.103e-01	-2.04470	4.159e-02 *
Experiences with theft	-2.037e-01	1.352e-01	-1.50677	1.327e-01
Polish	-4.348e+00	00 1.190e+00	-3.65469	2.946e-04 ***
Portuguese	-3.990e-01	1.582e+00	-0.25222	8.010e-01
Spanish	-1.520e+00	9.302e-01	-1.63382	1.031e-01
Perceived national wealth inequality: Option B	-2.250e+00	1.311e+00	-1.71580	8.703e-02
Perceived national wealth inequality: Option C	-2.226e+00	1.258e+00	-1.77056	7.745e-02
Perceived national wealth inequality: Option D	-2.967e+00	1.242e+00	-2.38939	1.738e-02 *
Perceived national wealth inequality: Option E	-4.557e+00	2.033e+0	-2.24199	2.555e-02 *
Belief in a just world	7.386e-01	1.139e-01	6.48522	2.832e-10 *****
Number of children	7.715e-01	3.914e-01	1.97094	4.947e-02 *
Education: More than 16 years	4.274e-01	9.776e-01	0.43723	6.622e-01
Education: 14 to 16 years	6.868e-02	1.102e+00	0.06231	9.503e-01
Education: 9 to 12 years	6.536e-01	1.676e+00	0.38994	6.968e-01
Education: 5 to 8 years	1.779e+00	1.374e+00	1.29419	1.964e-01
Education: Less than 5 years	1.519e+00	1.435e+00	1.05847	2.905e-01
Gender: Other	5.313e+00	6.693e+00	0.79383	4.278e-01
Gender: Woman	8.889e-01	7.271e-01	1.22256	2.223e-01

Multiple R-squared: 0.2276	Adjusted R-squared: 0.1797	F-statistic: 4.792 on 23 and 371 DF	p-value: 1.972e ⁻¹¹	$p < 0.05$ * $p < .01$ ** $p < .001$ *** $p < .0001$ *****
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Table 15: Model 1A Multiple Linear Regression with Robust Standard Errors

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