hal-00877140, version 1 - 26 Oct 2013

Lack of Material Resources Causes Harsher Moral Judgments

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Abstract

This research tested the idea that lack of material resources (e.g., low income) causes people to make harsher moral judgments because lack of material resources is associated with a lower ability to cope with the effects of others' harmful behavior. Consistent with this idea, a large cross-cultural survey (Study 1) found that both chronic (low income) and situational (inflation) lack of material resources were associated with harsher moral judgments. The effect of inflation was stronger for low-income individuals, whom inflation renders relatively more vulnerable. A follow-up experiment (Study 2) caused participants to perceive they lacked material resources by employing different anchors on the scale they used to report their income. The manipulation led to harsher judgments of harmful, but not of non-harmful, transgressions and this effect was explained by a sense of vulnerability. Alternative explanations were excluded. These results demonstrate a functional and contextually situated nature of moral psychology.

Keywords: moral judgments, material resources, income, moral transgressions, moral psychology

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hal-00877140, version 1 - 26 Oct 2013

hal-00877140, version 1 - 26 Oct 2013

How wrong is it to lie? How wrong is it to cheat on a tax report? Answers to such questions constitute moral judgments, defined as "evaluations (good vs. bad) of the actions or character of a person that are made with respect to a set of virtues held to be obligatory by a culture or subculture" (Haidt, 2001, p. 817). Moral judgments are important because they determine how individuals, communities, and legislators respond to and regulate social behavior. Yet, people frequently disagree in their moral judgments and this disagreement can be a source of conflict (Harman, 1996; Rai & Fiske, 2011), leading to disputes about legal frameworks (Sunstein, 1996), divisions along political party lines (Gutmann & Thompson, 1996), and even conflict between countries (Walzer, 2000). Understanding why people differ in their moral judgments may help to explain and perhaps even mitigate conflict.

This research provides an answer to the question of why people differ in their moral judgments by considering the amount of material resources people have at their disposal. We argue that those lacking material resources feel *more vulnerable* to others' potentially harmful behaviors because they are less able to cope with its effects. By potentially harmful behaviors we mean antisocial acts directed at another person, which can be distinguished from non-harmful transgressions of convention (referred to hereafter as harmful vs. non-harmful), such as offenses against social standards of purity, sanctity, or authority (Graham, Haidt, & Nosek, 2009). We propose that the greater vulnerability to others' harmful behavior among those lacking material resources leads to a self-protective response of harsher moral judgments of harmful transgressions. We test this idea using a large cross-cultural survey in which we examine the effects of material resource availability on moral judgments. A follow-up experiment tests the proposed psychological mechanism and excludes alternative explanations by comparing the effects of resource availability on judgments of harmful versus non-harmful transgressions.

Our research complements past work that considered how moral judgments are affected by people's life situation, such as their occupational and educational status (e.g., Kohn & Schooler, 1969; Lamont, Schmalzbauer, Waller, & Weber, 1996), but did not regard material resources as an important explanation for this phenomenon. We contribute to this literature by demonstrating that the availability of material resources shapes people's moral judgments and testing a theory for why this effect occurs. Considering the ubiquity of differences in the availability of material resources (Furnham, 1998; Johnson & Krueger, 2006), our research identifies a very broad and potentially powerful explanation for variation in moral judgments.

hal-00877140, version 1 - 26 Oct 2013

Theory and Overview

We assume that the amount of material resources people have at their disposal influences their ability to cope with the effects of others' harmful behavior. For example, in case of theft, a high-income individual will more easily replace the stolen objects than a low-income individual. If one becomes the victim of aggression, then compared to the victim with a low income, the victim with a high income will be able to afford a more effective recovery program and will encounter relatively fewer difficulties if she needs to stop working during convalescence. Consistent with this reasoning, research on the effect of money on life satisfaction (Furnham, 1998; Johnson & Krueger, 2006) suggests that "money protects people from unfortunate and unforeseen perturbations in life" (Vohs, Mead, & Goode, 2008, p. 208).

People lacking material resources are thus, on average, more vulnerable to the effects of others' harmful behaviors. If this is so, then it is possible that lack of material resources leads to harsher moral judgments of such behaviors. Harsher moral judgments in response to a lack of material resources could be adaptive, as this could potentially be one way of reducing the (relatively greater) threat of others' harmful behavior. Specifically, harsher moral judgments might deter others' harmful actions by increasing the costs associated with such

behavior. If a given behavior is judged more harshly by a group of people, the behavior is more likely to be regulated (Ullmann-Margalit, 1977) and punished (Cushman, 2008). Consequently, an increased vulnerability to others' harmful behavior due to lack of material resources may be offset by the social consequences of harsher moral judgments.

Regardless of the functional benefits that harsher moral judgments in response to a lack of material resources may confer, prior research also directly supports the notion that a greater threat of others' harmful behavior should translate into more negative evaluations of such acts. Research on fear appeals shows that people exhibit negative responses to potential threats and readily modify their behavior as a result (for a review, see Eagly & Chaiken, 1993). Similarly, research on self-protection demonstrates that people are strongly averse to potential threats and mobilize psychological and behavioral responses aimed at minimizing threats (Neuberg, Kenrick, & Schaller, 2011). This may be particularly true for threats that presented a recurrent adaptive challenge over the course of human evolutionary history (Öhman & Mineka, 2001) and others' harmful actions likely posed such a threat (Duntley, 2005). Finally, the intuitive prosecutors research (Tetlock et al., 2007) examined directly how moral judgments are influenced by contextual factors that affect the degree to which the individual perceives others' harmful behavior as threatening. This research found that a manipulation informing participants that crime is widespread led to harsher moral judgments of such behavior (Tetlock et al., 2007). Thus, prior research supports our assumption that if a certain event is relatively more threatening, this will result in more negative evaluations of the event, including harsher moral judgments in the case of others' harmful behavior.

In sum, we argue that lack of material resources makes people more vulnerable to the effects of others' harmful behavior. This, in turn, should lead to harsher moral judgments of such behavior. We test this theory in two studies. Study 1 is a survey testing whether both chronic (low income) and situational (inflation) lack of material resources are associated with

hal-00877140, version 1 - 26 Oct 2013

harsher moral judgments. Furthermore, we examine whether the effect of inflation is stronger for low-income people, whom, we argue, are rendered relatively more vulnerable by inflation (this point is developed below). Study 2 is an experiment in which we manipulated participants' perception of the income they have at their disposal and examined how this manipulation affects moral judgments. Study 2 also tests the hypothesized psychological mechanism (sense of vulnerability) as well as potential alternative explanations.

Study 1: Survey

To conduct an initial test of our theory, we used a large cross-cultural survey to examine whether chronic (low income) as well as situational (inflation[1]) lack of material resources are associated with harsher moral judgments of harmful actions. Both these factors imply a lower ability to cope with the effects of others' harmful behavior. Thus, if our theory is correct, they should be associated with harsher judgments of such behavior.

We also predicted that the effect of inflation would be stronger for low-income than for high-income people because inflation renders low-income people relatively more vulnerable to the effects of harmful actions than high-income people. For those with high income, some loss in the value of their resources generally does not have a substantial effect on their ability to cope with negative events in life, such as the effects of others' harmful behavior. For low-income people, however, who are already relatively vulnerable, an additional loss in the value of their resources can present a significant hindrance to their ability to cope with others' harmful behavior. Our prediction is also consistent with the economic analysis of the effects of inflation. Low-income people hold a relatively greater portion of their resources in assets that are adversely affected by inflation (e.g., cash) than do high-income people, who possess relatively more assets that are generally not adversely

[1] Inflation is defined as a rise in the price level of goods and services (World Bank, 2012a). Inflation thus reduces people's purchasing power, which is equivalent to having fewer resources to purchase valued goods and services. Because inflation varies from year to year (price levels can rise as well as fall), this construct captures a situational variation in the level of resources people have at their disposal.

hal-00877140, version 1 - 26 Oct 2013

affected by inflation, such as real estate (Easterly & Fischer, 2001). Thus, not only does a given level of loss in value of material resources impair the ability of low-income people to cope with others' harmful actions more, but a given level of inflation also reduces the value of material resources of low-income people disproportionally more. Our theory thus predicts that the effect of inflation (inflation making moral judgments harsher) should be stronger for low-income than for high-income people.

Method

Individual-level data (moral judgments, income, and control variables) were obtained from the World Values Survey (WVS; 2009). WVS is a global research project surveying representative samples of the populations from almost 100 countries since 1981. For the combination of variables that was of interest in this research, 85,475 responses were available. The responses came from 56 countries and spanned a 13-year period.

Moral judgments. The World Values Survey (2009) solicited respondents' moral judgments (1 = *never justifiable* to 10 = *always justifiable*) of eight harmful behaviors (e.g., "lying," "cheating on taxes"). Responses to these items were averaged and reversed so that higher values represent harsher moral judgments ($\alpha = 0.84$). For more details on scale items and validity, see the Supplemental Material available online.

Income. The same data collection measured respondents' household income, comprising all wages, salaries, pensions, and other income. Respondents' household income was ranked on a scale from 1 to 10. Because our theoretical focus was on the effect of a lack of resources, this variable was reversed, such that higher values represent fewer material resources.

Inflation. Inflation data were obtained from the World Development Indicators database published by the World Bank (2012b).

hal-00877140, version 1 - 26 Oct 2013

hal-00877140, version 1 - 26 Oct 2013

Controls. To examine the unique effects of income, we also controlled for factors likely to be correlated with income that might affect moral judgments: respondents' education, occupational status, subjective social class, religiosity, and race. These data were available in the WVS (2009) dataset. The Supplemental Material available online contains more details regarding the control variables' coding and robustness checks.

Results and Discussion

We fitted a multilevel regression model, with individuals nested within countries and years. As summarized in Table 1, both lower income and greater inflation were associated with harsher moral judgments. The interaction between the two was also significant. Consistent with the theory, for respondents whose income was 1 SD below the mean, the effect of inflation was significant, such that inflation was associated with harsher moral judgments: $b = 0.00084$, $SE = 0.00029$, $z = 2.870$, $p = .004$. However, for respondents whose income was 1 SD above the mean, inflation had no effect on moral judgments: $b = 0.00024$, $SE = 0.00028$, $z = 0.855$, $p = .392$. These results provide support for our theory.

Table 1

Study 1: The Effect of Income, Inflation, and Their Interaction on Moral Judgments.

Variable	Coef.	Std. Err.	*z*	*p*	LLCI	ULCI
Constant	-2.2422	0.09345	-24.000	< .001	-2.42537	-2.05904
Low Income	0.01175	0.00283	4.150	**< .001**	0.00621	0.0173
Inflation	0.0011	0.0003	3.630	**< .001**	0.0005	0.00169
Low Income X Inflation	0.00012	0.00002	6.650	**< .001**	0.00009	0.00016
Education	-0.00005	0.00283	-0.018	0.986	-0.00559	0.00549
Occupational Status	-0.03462	0.00242	-14.300	< .001	-0.03936	-0.02989
Subjective Social Class	0.0212	0.00646	3.280	.001	0.00854	0.03386
Religiosity	0.22117	0.01692	13.100	< .001	0.18801	0.25433
Race[a]						
Black	-0.423	0.02951	-14.300	< .001	-0.48085	-0.36516
American Indian or Alaska Native	-0.15338	0.0658	-2.330	.020	-0.28235	-0.02441
Asian	0.13433	0.03115	4.310	< .001	0.07327	0.19539
Hawaiian or Other Pacific Islander	-0.18449	0.36407	-0.507	.612	-0.89806	0.52907
More than one race	0.09598	0.02837	3.380	.001	0.04037	0.15159

Note. $N = 85{,}475$. *LLCI* = 95% confidence interval lower limit; *ULCI* = 95% confidence interval upper limit. Estimates were obtained from a multilevel linear regression analysis using maximum likelihood estimation. Unstandardized coefficients are presented. A positive coefficient indicates harsher moral judgments.

[a] Caucasians were the most represented in the sample and so were used as the reference category (Hardy, 1993).

hal-00877140, version 1 - 26 Oct 2013

Study 2: Experiment

We supplemented Study 1 with an experiment in which participants' perception that they lack (vs. do not lack) material resources was manipulated. The main goal of the experiment was to test the proposed causal effect of a lack of material resources on moral judgments. In addition, Study 2 examined the hypothesized psychological mechanism by measuring how vulnerable participants felt following the manipulation. Finally, we also sought to exclude potential alternative explanations for our findings.

One alternative explanation for our hypothesized effect is that lacking material resources makes judgments of all behaviors more negative rather than affecting judgments of harmful actions specifically. This would be consistent with the conservation of resources model, which suggests that lack of all resources, including material ones, can lead to greater levels of anxiety and stress (Hobfoll, 1989). Such adverse states can, in turn, render evaluations of others' behavior more negative (Van den Bos, 2003).

It is also possible that the threatening situation of lacking material resources leads to harsher judgments of *all transgressions* of social norms, rather than *harmful* transgressions specifically. This possibility would be consistent with research suggesting that conservatism serves a self-protective role of managing uncertainty and threat (Jost, Glaser, Kruglanski, & Sulloway, 2003). It would also be consistent with research showing that low-income people adopt a more interdependent self-construal (Stephens, Markus, & Townsend, 2007), which may cause them to respond negatively to others who deviate from socially accepted standards for behavior. Finally, terror management theory would also predict a stronger insistence on social norms in response to personal threats as a means of boosting self-esteem, which serves to buffer existential concerns (Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989).

We designed Study 2 to provide a comparative test of the hypothesized as well as the alternative explanations for the effect of a lack of material resources on moral judgments. To

this end, following the income manipulation, participants judged either harmful or non-harmful transgressions. Examining the effect of a lack of material resources on both transgression types allowed for a comparative test of the hypothesized as well as the alternative explanations because the alternative accounts lead to a different prediction than our theory with respect to the effect of a lack of material resources on judgments of non-harmful transgressions.

Specifically, our theory suggests that a lack of material resources makes people more vulnerable to the effects of others' harmful behavior, which, in turn, leads to a self-protective response of harsher moral judgments of such behavior. But, material resources offer little protection against others' non-harmful transgressions, such as offences against purity or sanctity. For instance, regardless of the amount of resources a person has, this person will be similarly vulnerable to witnessing someone's indecent behavior in public. Thus, according to our theory, there is no reason why people lacking resources should make harsher judgments of non-harmful transgressions. If our explanation is correct, lack of material resources should only affect judgments of harmful, but not non-harmful transgressions.

On the other hand, if the alternative explanation that a lack of material resources makes judgments of *all* behaviors more negative is correct, this should also be reflected in harsher judgments of non-harmful transgressions. Similarly, if the alternative explanation that a lack of material resources leads to harsher judgments of *all transgressions* (rather than just harmful transgressions) is correct, lack of material resources should also lead to harsher judgments of non-harmful transgressions. In sum, while our theory predicts an interaction between resource availability and transgression type such that lack of resources leads to harsher judgments of only harmful but not of non-harmful transgressions, alternative theoretical accounts would predict harsher judgments of both transgression types in response to a lack of resources.

hal-00877140, version 1 - 26 Oct 2013

A final goal of Study 2 was to test whether a sense of vulnerability, but not potential alternative mediators, explains the effect of a lack of material resources on moral judgments. To this end, we measured participants' mood and self-esteem to examine whether sense of vulnerability exerts an effect independent of these more general psychological states. In addition, we measured participants' sense of their status and power. As in Study 1, the goal of this was to demonstrate that the effect of a lack of material resources could not be explained by differences in participants' perceptions of their social standing. We conducted a simultaneous mediation analysis to demonstrate that sense of vulnerability, but not the alternative mediators (mood, self-esteem, sense of status, sense of power), accounts for the effect of a lack of material resources on moral judgments.

Method

Participants and design. We recruited 203 participants (M_{age} = 29.61, SD_{age} = 8.99, 64.00% male) from Amazon's Mechanical Turk, an on-line subject pool representative of the U.S. population (Buhrmester, Kwang, & Gosling, 2011), to participate in a short experiment in exchange for $0.50. Participants were randomly assigned to conditions of 2 (material resources: lacking vs. not lacking) × 2 (transgression type: harmful vs. non-harmful) between-subjects design.

Procedure and materials. After reading and agreeing to the consent form, participants were told they would provide their judgments of different social behaviors. Participants were told that before doing so, they would first report demographic information and current mood. Due to ethical considerations, we told participants they were not obligated to report demographic information if they did not feel comfortable doing so. Four participants skipped one or more of the questions, so the final sample consisted of 199 observations.

The demographic information questions asked participants about their race, religiosity, occupation, and educational attainment (see the Supplemental Material available online for

hal-00877140, version 1 - 26 Oct 2013

measures details). As in Study 1, these variables were used as controls. The demographic questions were followed by two items concerning participants' income, ostensibly to allow us to examine whether "the data differ among different income groups." In reality, the two items constituted our manipulation and a manipulation check.

Material resources manipulation. Following prior research (Nelson & Morrison, 2005), we manipulated participants' perception of the amount of material resources they have by varying anchors on the scale that participants used to indicate the approximate amount they earn in a month. In the *material-resources-lacking* condition, scale anchors were from 1 = *$0–$1,000* to 11 = *Over $500,000*. Thus, in this condition most participants reported their monthly income on the lower end of the scale. In the *material-resources-not-lacking* condition, scale anchors ranged from 1 = *$0–$50* to 11 = *Over $500*. In this condition most participants selected values at the higher end of the scale. This difference creates the impression that a person has either few or sufficient material resources (Nelson & Morrison, 2005).

Manipulation check. The subsequent question was designed to check the effectiveness of the manipulation. Participants responded to the following item, "Would you say your income is low or high?" using a scale ranging from 1 = *very low* to 7 = *very high*.

Mediators. Next, participants were told we were interested in their temporary mood so that we could control for any effects of mood on judgments of others' behavior. Participants then responded to four items (1= *definitely not* to 5 = *extremely*) measuring how vulnerable they felt: "vulnerable," "threatened," "unable to meet the challenges in life," and "incapable of coping with external shocks in life" ($\alpha = .77$). In addition, they responded to measures of alternative mediators: mood, self-esteem, and subjective sense of status and power, described in more detail in the Supplemental Material available online.

hal-00877140, version 1 - 26 Oct 2013

Dependent variables. Finally, each participant read five scenarios (in random order) describing people engaging either in harmful or non-harmful transgressions. The scenarios (adapted from Huebner, Lee, & Hauser, 2010) are shown in Table 2.[2] For each behavior, participants used four items to indicate whether the behavior was "wrong," "blameworthy," "inappropriate," and "unacceptable" (1 = *strongly disagree*, 7 = *strongly agree*; α = .92).

Table 2

Study 2: Scenarios describing harmful versus non-harmful transgressions.

Harmful	Non-harmful
One night Joshua goes to a fancy restaurant and orders a T-bone steak. When it arrives he throws it as hard as he can into the face of a man sitting nearby.	One night Joshua goes to a fancy restaurant. He orders a T-bone steak and when it arrives he picks it up and eats it with his hands rather than using his silverware.
Before she passed away, Ryan's mother asked her family to sacrifice another person once she is dead to honor the traditions of their ancestors. One night, Ryan sneaks into someone's home and kills the person who was having dinner.	Before she passed away, Ryan's mother asked her family to eat her dead body to honor the traditions of their ancestors. One night, Ryan cooks her body and serves it for dinner.
Once a week, Andrew goes to the butcher and buys a nice cut of meat. He uses it to throw it in the face of a passer-by, and then he cleans it off thoroughly, cooks it, and eats it.	Once a week, Andrew goes to the butcher and buys a nice cut of meat. He uses it to masturbate, and then he cleans it off thoroughly, cooks it, and eats it.
Jeremy is a bellhop at an elegant hotel. He is excited to see the Prime Minister of Australia walk in with a security detail, and he walks over, and hits the Prime Minister.	Jeremy is a bellhop at an elegant hotel. He is excited to see the Prime Minister of Australia walk in with a security detail, and he walks over and shouts "Hello John! What's up?"
While standing in line at the Department of Motor Vehicles, James looks at the woman in front of him, with whom he was unacquainted, licks his lips, then grabs her bottom and aggressively kisses her on the mouth.	While standing in line at the Department of Motor Vehicles, David and his girlfriend pass the time by passionately kissing and caressing each other, heedless of the dozens of people watching them.

[2] A separate group rated each behavior for transgression of social norms (1 = *definitely not*, 7 = *definitely yes*) and harmfulness. Each behavior was rated as a transgression; harmful behaviors were rated above the midpoint on harmfulness (1 = *not at all harmful*, 7 = *very harmful*) and non-harmful were rated below the midpoint (Supplemental Materials).

hal-00877140, version 1 - 26 Oct 2013

hal-00877140, version 1 - 26 Oct 2013

Results and Discussion

Manipulation check. Participants in the material-resources-lacking condition reported that their income was lower (M = 2.63, SD = 1.34) than did participants in the material-resources-not-lacking condition (M = 3.25, SD = 1.66), $t(197) = 2.91$, $p = .004$.

Moral judgments. All analyses reported below were conducted with the control variables included. We also note that all the results hold without controls.

A 2 (material resources: lacking vs. not lacking; between) × 2 (transgression type: harmful vs. non-harmful) ANCOVA found the predicted interaction between the two factors, $F(1, 185) = 8.80$, $p = .003$. An analysis of simple effects showed that lack of material resources led to harsher judgments of harmful transgressions (resources-lacking: M = 6.36, SD = 0.37; resources-not-lacking: M = 5.91, SD = 0.53), $F(1, 185) = 9.97$, $p = .002$, but not non-harmful transgressions (resources-lacking: M = 4.51, SD = 1.14; resources-not-lacking: M = 4.64, SD = 0.99), $F(1, 185) = 1.37$, $p = .244$. In fact, judgments of non-harmful transgressions were slightly (but not significantly) *less harsh* in the resources-lacking condition. The results thus support our theory and exclude alternative explanations for the effect of lack of material resources on moral judgments.

Mediation analysis. We conducted a simultaneous test of the hypothesized as well as all the potential alternative mediators of the effect of lack of resources on judgments of harmful versus non-harmful transgressions. None of the direct or indirect effects on judgments of non-harmful transgressions were significant.

The results for judgments of harmful transgressions are displayed in Figure 1. Supporting our theory, lack of material resources led to a significantly greater sense of vulnerability. Sense of vulnerability, in turn, led to harsher judgments of harmful transgressions. The indirect effect of lack of material resources on judgments of harmful transgressions through sense of vulnerability did not include zero, indicating a significant

indirect effect (Shrout & Bolger, 2002). All other indirect effects were non-significant, such that lack of material resources had no effect on any of the alternative mediators and none of the alternative mediators had an effect on judgments of harmful transgressions.

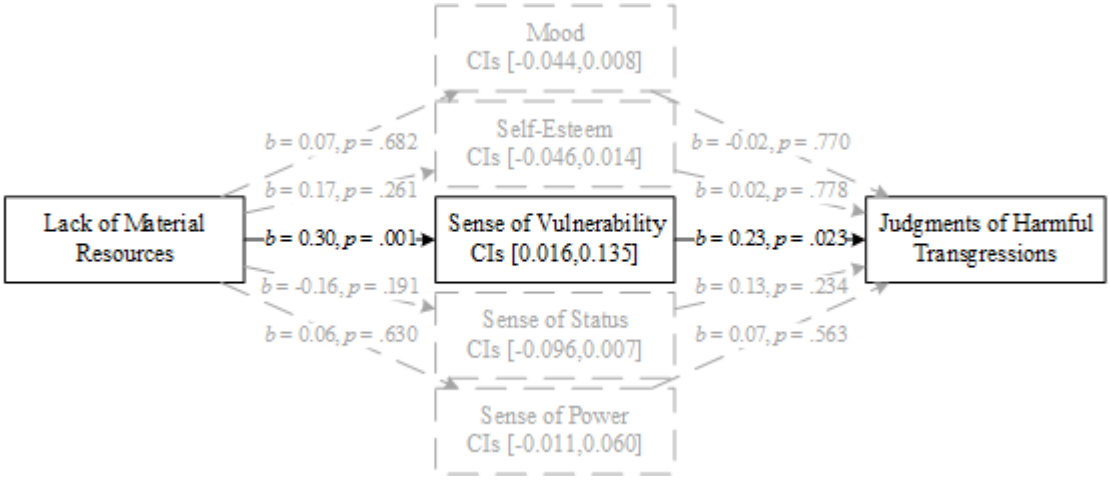

Figure 1. Study 2: Mediation analysis results. Lack of resources variable was coded zero for material-resources-not-lacking condition and one for material-resources-lacking condition. A positive coefficient indicates a greater sense of vulnerability and harsher moral judgments. Bias-corrected and accelerated 95% CIs from 10,000 bootstrap samples are reported for specific indirect effects.

General Discussion

The results of a large cross-cultural survey and an experiment support the idea that lack of material resources causes harsher moral judgments because lacking material resources makes people feel more vulnerable to the effects of others' harmful behavior. Considering the ubiquity of differences in the availability of material resources (Furnham, 1998; Johnson & Krueger, 2006), this research identifies a widespread factor explaining moral judgments. Our work has also indirect implications for the psychological and sociological study of broader phenomena such as judicial outcomes, political disagreement, and social conflict, which are affected by differences in moral judgment (Gutmann & Thompson, 1996; Sunstein, 1996; Walzer, 2000). Finally, our research complements past work that considered how people's life

hal-00877140, version 1 - 26 Oct 2013

hal-00877140, version 1 - 26 Oct 2013

situation shapes them psychologically and affects their moral judgment (e.g., Kohn & Schooler, 1969; Lamont et al., 1996), which assumed that resources do not have a causal effect on moral judgment in themselves, but instead emphasized the role of other social class differences such as differences in occupation and education.

This research has limitations that warrant discussion. As demonstrated in Study 2, variation in availability of material resources explains judgments of harmful, but not non-harmful, behaviors. Thus, our theory cannot explain reactions to more symbolic transgressions, such as those against standards of purity, sanctity, or authority. In addition, while our theory explains variation in moral judgments made with respect to specific isolated harmful behaviors, it may be limited in its ability to explain moral judgments in more complex situations, such as moral dilemmas. When people have to choose between two harmful options, aversion to harmful behaviors engendered by lack of resources might not prompt preference for either alternative.

Future research may extend our theory to explain other phenomena. It is possible that the higher moral standards resulting from lack of material resources documented in our studies also translate into more moral actions (Ajzen, 1991). Vulnerability brought about by lack of material resources might also be relevant for an explanation of other social behaviors, such as making oneself additionally vulnerable in social interactions by trusting others. Considering the pervasive importance of material resources in everyday life, a systematic theoretical approach to understanding the social psychological effects of material resource availability presents a promising and potentially powerful explanation for important social phenomena.

Authorship

Both authors were engaged in all stages of research and approved the final version of this paper.

hal-00877140, version 1 - 26 Oct 2013

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