

Are there different moral domains? Evidence from Mongolia

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Abstract:	<p>In this paper we report a study conducted in Mongolia on the scope of morality, i.e., the extent to which people moralize different social domains. Following Turiel's moral-conventional task, we characterized moral transgressions (in contrast to conventional transgressions) in terms of two dimensions: authority independence and generality of scope. Different moral domains are then defined by grouping such moral transgressions in terms of their content (following Haidt's classification of morally relevant domains). There are four main results of the study. First, since all five Haidtian domains were moralized by the Mongolian participants, the study provides evidence in favor of pluralism about moral domains. However, the study also suggests that the domain of harm can be reduced to the fairness domain. Furthermore, although the strong claim about reduction of all moral domains to the domain of fairness seems not to hold, a significant number of participants did indicate considerations of fairness across domains. Finally, a significant amount of participants moralized conventional transgressions a la Turiel, but it did not reach a statistical significance.</p>



Are there different moral domains? Evidence from Mongolia

In a recent review, Henrich, Heine and Norenzayan (2010) argued that there is an obvious lack of cross-cultural perspective in studying human cognition, researchers far too often rely on the so-called WEIRD (Western, Educated, Industrialized, Rich, and Democratic) sample to draw wide generalizations about cognitive universals. Similarly, there is an obvious lack of cross-cultural perspective in studying moral cognition (see also Sachdeva, Singh, & Medin, 2011). Of course, with some notable exceptions¹. Thus, heeding ecological validity, theoretical claims should be tested with a culturally more diverse sample. Therefore, the aim of this paper is to address the debates about the scope of morality in the light of new evidence from Mongolia — an underrepresented cultural context.

Currently, there are several positions that disagree about the scope of morality, ranging from complete pluralists to complete monists. On the pluralist side, Haidt and his colleagues, following Shweder (e.g., Shweder, Much, Mahapatra, & Park, 1997), argued that there are at least five moral domains, comprising transgressions related to concerns about care/harm, fairness/cheating, loyalty/betrayal, authority/subversion and sanctity/degradation (Haidt & Graham, 2007; for a recent theoretical review see Graham et al, 2013; for a recent methodological review see Graham et al., 2011; see also Sinnott-Armstrong & Wheatley, 2012). The moral foundations theory (MFT), that Haidt and his colleagues advocate for, argues that five types of concerns are salient across different cultures and different socio-economic groups, except to WEIRD people, who mainly emphasize harm and fairness (see, e.g., Haidt, Koller, & Dias, 1993). For example, their study demonstrates that American liberals mainly focus on harm and fairness, while American conservatives focus on all five transgressions (see Haidt & Graham, 2007). This pluralistic position was presented as an explicit criticism of Turiel and col-

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4 leagues, who have argued that harm *and* fairness transgressions constitute two basic moral
5 domains in human moral cognition (Nucci, 2001; Smetana, 1993; Tisak, 1995; Turiel, 1983).
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7 Thus, following Haidt's research, Mongolian participants, who are from a more traditionalistic
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9 no-WEIRD society, should be concerned with five types of moral transgressions, not only with
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11 harm and fairness (as Turiel argued).
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16 However, two versions of moral monism recently emerged, which countered Haidt's plu-
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18 ralism by suggesting refined theoretical frameworks to account for the multitude of moral con-
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20 cerns. For instance, Gray and colleagues have argued that actually harmful transgressions con-
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22 stitute the basic moral domain, implying a completely monistic view of morality (Gray et al.,
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24 2012). They propose that "morality is essentially represented by a cognitive template that
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26 combines a perceived intentional agent with a perceived suffering patient" (Gray et al., 2012,
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28 p. 102), and this moral dyadic template (intentional agent and suffering patient) is "a core
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30 feature of all immoral acts" (ibid., p. 107). Consequently, there are no harmless moral trans-
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32 gressions in folk moral cognition, simply because the dyadic template compels "the mind to
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34 perceive victims even when they are objectively absent" (Gray, Schein, & Ward, 2014, p. 1).
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40 On the other hand, Sousa and colleagues have argued for a deflationary view of the mo-
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42 rality of harm, in which harmful transgressions are seen as moral transgressions only if they
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44 are seen as involving injustice — i.e., harmful transgressions are reducible to fairness trans-
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46 gressions (see Sousa, 2009; Sousa, Holbrook, & Piazza, 2009; Piazza, Sousa, & Holbrook,
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48 2013; Sousa & Piazza, 2014). In other words, not all harmful actions are moral transgressions
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50 (e.g., a dentist is causing you pain because she wants to fix your teeth), only those harmful
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52 actions that are *unjustified* (that is, involve *unjust* or *unfair* treatment) are categorized as mor-
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54 al transgressions (e.g., a dentist is causing you pain because she wants to obtain your golden
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4 tooth). Moreover, questioning Haidt's position, Sousa and colleagues have argued that more
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6 evidence is needed to show that other normative domains are moralized in terms of the moral
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8 signature, and therefore that it is still an open empirical question whether there are other mor-
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10 al domains in this specific sense. Finally, also questioning Haidt's position, Baumard and col-
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12 leagues have argued more radically that many of Haidt's domains are not clearly seen as dis-
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14 sociated from the domain of fairness, which opens the possibility that these domains are mor-
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16 alized only insofar as they involve fairness considerations (Baumard, Andre, & Sperber,
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18 2013; Baumard & Sperber, 2012; Sperber & Baumard, 2012; see also Fraser, 2012). Thus,
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20 taken together, Sousa, Baumard and their colleagues suggest an alternative fairness-based
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22 monistic view. According to both monistic positions, then, it could be suggested that even if
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24 Mongolians express a concern about a variety of transgressions (*à la* Haidt), it is quite possi-
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26 ble that these different transgression are moralized only insofar as they involve fairness (Sou-
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28 sa and Baumard) or harm (Gray and colleagues) considerations.
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34 Before proceeding to the study about the scope of moral considerations among Mongo-
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36 lian participants, we will briefly delineate a conceptual framework that will be employed in
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38 this paper. Our discussion concerns normative judgments—that is, judgments to the effect
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40 that an action is forbidden and that pursuing the action is wrong (or, equivalently, is a trans-
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42 gression). It should be noted that in the current literature, while delineating the moral domain,
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44 the term “moral” has been used in two basic senses (see Sousa & Piazza, 2014). In one sense,
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46 the emphasis is on a type of normative *content*. Indeed, the above discussed positions talk
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48 about the “moral” in this sense. In another sense, the emphasis is on a specific type of norma-
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50 tive *conviction* — that is, moral transgressions evoke a strong evaluative conviction that an
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52 action is wrong, no matter what is the normative content. Importantly, there is little agree-
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54 ment on what counts as a relevant normative content (e.g., are there five or just one norma-
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tive domain?), and how to characterize the strong normative conviction in moral judgments. Thus, for purposes of current research, we will specify the normative content *as* moral domain with normative conviction. Specifically, following Turiel tradition (e.g., 1983), we characterize the normative conviction specifying moral transgressions in contraposition to the normative conviction specifying conventional transgressions (like eating with one's fingers), in terms of two dimensions: while moral transgressions are seen as authority independent (i.e., their wrongness is not cancelable by the decision of any authority) and general in scope (i.e., their wrongness extends to different places and times), conventional transgressions are seen as authority dependent and/or local in scope (for alternative ways of characterizing the strong normative conviction that specifies moral transgressions, see Goodwin & Darley, 2008; Sripada & Stich, 2006; Skitka, Bauman, & Sargis, 2005; Tetlock, 2003). We shall call the criteria of authority independence and generality the "moral signature" (see Kelly, Stich, Haley, Eng & Fessler, 2007; Sousa, Holbrook, & Piazza, 2009).

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From this perspective, the claim that there are different moral domains is tantamount to the claim that ordinary people can have the above strong normative conviction (i.e., "moral signature") in relation to different types of normative contents (e.g., unjustified harm, unfair treatment in cooperation, and expression of disloyalty to a group, disrespect towards authority, or purity transgressions). In other words, each separate type of normative content that evokes the moral signature is to be considered a distinct moral domain. Conversely, from this perspective, there are two ways of showing that a normative domain is not a distinct moral domain. One may show that the normative domain does not evoke the moral signature, and hence is not a moral domain at all. Alternatively, one may show that although the normative domain apparently evokes the moral signature, it is another type of normative content that is doing the job, and hence that the supposed normative domain is not a distinct moral domain

(see Turiel's classical argument against Shweder; Turiel, Killen, & Helwig, 1987; see also Fraser, 2012). For example, one may show that purity transgressions evoke the moral signature only when they are public transgressions, and that the normative content that makes these transgressions evoke the moral signature is related to the fact that they are offensive, and therefore harmful. In other words, one may argue that purity transgressions *qua* moral transgressions are reducible to harmful transgressions (see Royzman, Leeman, & Baron, 2009).

Theoretical predictions

Our research design is a revised version of the moral-conventional task that was employed by Turiel and his colleagues (Nucci, 2001; Smetana, 1993; Tisak, 1995; Turiel, 1983). Specifically, current version was devised to probe the claims concerning the existence of different moral domains put forward by the aforementioned theoretical positions in the Mongolian context. According to current design, each separate type of normative content that evokes the moral signature is to be considered a distinct moral domain. However, we also took into consideration the monistic possibility, e.g., when fairness-based normative content is somehow implied in other normative domains thereby evoking the moral signature. Taken together, we put forward three kinds of predictions that stem from different theoretical positions, and test them in the Mongolian context.

First, if Mongolian participants evoke the moral signature in all five domains, this is evidence in favor of Haidt's theory of moral foundations, since theory predicts that non-WEIRD cultures are concerned with five types of moral transgressions. Second, if participants evoke the moral signature in the conventional domain, this is evidence against the moral/conventional distinction as traditionally conceived by Turiel and colleagues. Third, if participants imply some kind of fairness considerations in the harm domain, this is evidence

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4 consistent with the deflationary view of harm (as Sousa and colleagues argue). If fairness is
5 consistently implied in all domains that are moralized, this is evidence consistent with the
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7 strong claim that normative domains are moralized only insofar as they involve fairness con-
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9 siderations (as Baumard and colleagues argue). Conversely, if participants imply some kind
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11 of harm in other domains, this is evidence consistent with harm-based monism (as Gray and
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13 colleagues argue).
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17 18 19 **Methods**

20 21 **Cultural context**

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24 The study was conducted in Ulan Bator, the capital city of Mongolia. The country is
25 situated between China and Siberian parts of Russia. For the most part, Mongolians were
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27 nomadic herders, pasturing horses, sheep, yaks and other animals in the steppes. Historically,
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29 shamanism was the dominant form of religion, but since the end of the 16th century the ma-
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31 jority of Mongolians converted to Tibetan style of Buddhism. In the 20th century, Mongolia
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33 was one of the first Soviet countries that undergone rapid social changes and urbanization.
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35 Now, an independent democratic republic, Mongolia has a fast growing economic center in
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37 Ulan Bator (with over a million inhabitants, and with a population of 2,9 million in the whole
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39 country), while significant portion of population outside of bigger towns still practice nomad-
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41 ic life style in steppes. According to the last National Census in 2010, there are approximate-
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43 ly 53% of Buddhists, 3% of Shamanists, 3% Muslims (mostly among Kazakh minority), and
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45 39% non-religious.
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51 52 **Participants**

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4 Due to inability to have a proper lab environment and a recruitment system, we relied
5 on convenience sampling. Two Mongolian assistants helped to recruit 340 participants at the
6 National University of Mongolia, University of Science and Technology, and University of
7 Humanities. Participants were not paid, they were asked to fill a study questionnaire in the
8 auditoriums between the lectures, voluntarily. Participants who agreed to participate but did
9 not answer the primary study questions were excluded from the study. This way, 74 partici-
10 pants were excluded, leaving a total of 266 participants (65% female; mean age 19). Reli-
11 gious affiliation was distributed as follows: Buddhists (44%), Shamanists (12%), both Bud-
12 dhist and Shamanists (7%), non-religious (34%), other (4%).

23 24 25 **Materials and Procedure**

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28 There were six conditions in the study, each with two separate vignettes describing
29 what an agent did in a specific situation. Our main aim was to test recent theoretical claims
30 about the scope of moral domain. Thus, five conditions each involved actions corresponding
31 to one of the five Haidtian moral domains, and one condition involved actions corresponding
32 to the conventional domain, as conceived by Turiel (see Appendix for the conditions with
33 their two respective vignettes)². The first author of this paper spent one year in Mongolia do-
34 ing field research, he used his familiarity with the culture to validate the content of each vi-
35 gnettes. In addition to that, Mongolian assistants read and commented on the comprehensibil-
36 ity and cultural relevance of the stories and questions. The stories conveyed rather typical
37 characters with typical Mongolian names in recognizable settings.³

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40 Each participant was randomly assigned to one of the six conditions of the study, read-
41 ing its two separate vignettes and answering their related questions (the order of presentation
42 of the two vignettes was counterbalanced). The questions for each vignette were as follows,
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4 in fixed order. First, the participants were asked whether they consider the action of the sce-
5 nario a transgression: “in your personal opinion, is it wrong that [agent] did [*action*] in this
6 situation?” (“Yes/No”). If the answer was positive (“Yes”), the participant was presented
7 with the two moral signature probes (i.e., authority dependence and generalizability): (i)
8 “suppose that an authority that you trust and respect said that in this situation it is not wrong
9 for *agent A* to do *X*”; (ii) “suppose that *agent A* lived in a country where everyone thinks that
10 in this situation it is not wrong to do *X*”. For each moral signature probe, participants had to
11 indicate whether they agreed that the action *X* would still be wrong under such circumstances
12 (an indication of agreement in both probes constituted the “moral signature”). After the moral
13 signature probes, participants answered two explicit questions about whether the action
14 caused harm to someone (“hurt someone physically or psychologically”) or was unfair to
15 someone. Now, if the answer to the initial transgression question was negative (“No”), the
16 participant was asked to skip the moral probes and move directly to other two questions. In
17 relation to these two questions, participants were also asked to indicate who was subjected to
18 harm or injustice. In relation to the remaining questions, participants were also requested to
19 provide a brief justification for their answers. For these open questions, participants wrote
20 down their responses.
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43 Results

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46 Table 1 represents the number of participants evincing the response patterns in each of
47 the scenarios. Columns “NO” and “YES” represent the number of participants who answered
48 “no” (i.e., not wrong) or “yes” (i.e., wrong) to the transgression question. The remaining col-
49 umns represent the number of participants evincing each of the four possible response pat-
50 terns of “yes” or “no” answers to the moral signature probes (the first “YES” or “NO” is re-
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4 related to the authority dependence probe; the second “YES” or “NO” is related to the generali-
5 zability probe), with the “YES-YES” column showing the participants who evoked the moral
6 signature. A large amount of participants answered “not-wrong” in some scenarios—in par-
7 ticular, Authority (Dalai Lama) and In-group (Citizenship). Of the remaining participants,
8 who answered “wrong”, a rather high percentage evinced the moral signature in most scenar-
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19 [Insert Table 1 about here]
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21 Table 2 shows one-sample Chi-Square tests against chance on the percentage of partic-
22 ipants answering wrong (“Yes”) to the transgression probe and on the percentage of partici-
23 pants evoking the moral signature (i.e. the “Yes-Yes” response pattern). The results indicate
24 that, except for Authority (Dalai) and Ingroup (Citizenship), wrongness answers were signifi-
25 cantly above chance in all scenarios. Moreover, moral signature answers were significantly
26 above chance in all scenarios, except for the conventional ones, where they approached sig-
27 nificance. Effect sizes varied from medium to large.
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38 [Insert Table 2 about here]
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41 It has been shown in previous research that religiosity has a strong influence on peo-
42 ple’s understanding of moral issues (e.g. Graham et al., 2013). In respect to moral signature
43 responses, we compared all religious participants (66%) with non-religious participants
44 (34%), across all domains. Each participant had two moral signature responses, thus there
45 were three possible patterns of the overall moral signature responses: 0 - no signature re-
46 sponse, 1 - one signature response, 2 - two signature responses. Two samples Chi-Square test
47 showed that, overall, there was no significant difference between religious and non-religious
48 participants, $\chi^2(2, 250) = 0.592, p = 0.744$. The only potentially moderating role of religiosity
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4 was in responses to the Authority (Dalai) transgression question (more in the Discussion sec-
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10 Furthermore, Table 2 shows that moral signature answers were significantly above
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12 chance in all scenarios, except for the conventional ones. However, the latter scenarios ap-
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14 proached significance. For that, we compared moral signature responses between all five
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16 moral domains and the conventional domain. Like in the previous analyses, two moral signa-
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18 ture values were combined. Interestingly, two samples Chi-Square test showed that there was
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20 a statistically significant difference between harm and fairness domains, and the conventional
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22 domain ($\chi^2(2, 81) = 13.447, p = 0.001$ and $\chi^2(2, 90) = 6.711, p = 0.035$, respectively). But
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24 there was no significant difference between authority, in-group and purity domains, and the
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26 conventional domain ($\chi^2(2, 79) = 2.117, p = 0.347$; $\chi^2(2, 75) = 3.083, p = 0.214$; $\chi^2(2, 84) =$
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28 $2.106, p = 0.349$; respectively).
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33 Table 3 concerns only those participants who evoked the moral signature. It shows the
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35 number of participants in each scenario evincing each of the four possible response patterns
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37 to follow-up questions about the presence of harm (H) and/or unfairness (F).⁴ In the domains
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39 of harm and fairness, almost all participants indicated the presence of harm and fairness con-
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41 siderations (i.e., +H+F), and almost no participant indicated their joint absence (i.e., -H-F).
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43 According to one proposal (see Sousa & Piazza, 2014), there is a good theoretical reason to
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45 reduce harm domain to fairness domain — i.e., harmful actions can be conceptualized as
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47 moral transgression only when fairness considerations are involved. Our results do not pro-
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49 vide a direct evidence for this contention since an equally large proportion of participants in-
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51 dicated that harm *and/or* unfairness was present (+H+F). One thing is clear: these are very
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53 closely related concepts, further empirical research is needed to disentangle their relationship.
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In the remaining scenarios, responses were much more varied, departing from this clear-cut pattern to a greater or lesser extent. It is worth noticing that, in most of these remaining scenarios, a large proportion of participants still indicated that harm *and/or* fairness was present (i.e., evinced +H+F, +H-F, or -H+F). Now, to what extent do these concepts, jointly or separately, underlie other domains is still an open question. However, taken together and across scenarios, the correlation between fairness and the moral signature responses was weak but significant, whereas the correlation between harm and the moral signature was even weaker and not significant— $r_{\phi}(412) = 0.15, p = 0.003$ and $r_{\phi}(412) = 0.08, p = 0.107$, respectively. The correlation between harm and fairness was strong and significant— $r_{\phi}(412) = 0.65, p = 0.000$. A binary logistic regression using fairness and harm as predictors and the moral signature as the outcome variable revealed a main effect of fairness ($B = -1.03, Wald = 6.55, p = .010$), but neither a main effect of harm nor an interaction ($B = -.18, Wald = .14, p = .704$ and $B = .58, Wald = .78, p = .376$, respectively).⁵

[Insert Table 3 about here]

Discussion and conclusions

Before discussing how the results speak to the theoretical predictions we delineated, it is worth addressing the fact that, in relation to the Authority (Dalai Lama) and In-group (Citizenship) scenarios, approximately half of the participants answered “not wrong”. One possible explanation for the Authority (Dalai Lama) scenario is that non-religious participants (34%), in contrast to religious participants, took Dalai Lama as a less important authority figure and therefore answered that there is nothing wrong to practice shooting on his portrait because, as many responded, “it is just a portrait”. Indeed, while 61% of non-religious partic-

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ipants thought it was not wrong to use his portrait for shooting, 68% of all religious participants (of which 71% were Buddhists) thought it was wrong because, as many responded, “he should respect [Dalai Lama]”. As for the In-group (Citizenship) scenario, one possible explanation could be that our sample consists mainly of young students. Interestingly, even though in Mongolia Chinese are very often portrayed in negative terms, and marriage to a Chinese man is sometimes considered as a kind of treason, many students explained it as a “personal matter”. Nevertheless, the overwhelming majority of participants who did consider those actions to be wrong, consistently evoked the moral signature — 17 out of 22 in the Authority (Dalai Lama) and 15 out of 21 in the In-group (Citizenship) scenarios, respectively.

Moreover, although we did not provide an analysis of participants’ justifications to their “Yes” or “No” answers, we would like to point out a problem clearly indicated by these justifications in relation to generalizability probe in the context of the Authority (Flag) scenario. Contrary to our intention, some participants may have interpreted the generalizability probe in this context as if the target agent was still a Mongolian using the Mongolian flag to clean the toilet, but in another country. Thus, the high percentage of participants evoking the moral signature in this scenario has to be interpreted with caution.

Having said that, the results show that in all five Haidtian domains a significant amount of participants who responded “yes” to the transgression probe evoked the moral signature, suggesting that Mongolians are inclined to moralize all these domains, which would constitute evidence in favor of moral pluralism. Something Haidt predicted would be the case with non-WEIRD cultures.

Reductionists may counter-argue, though. First, there is the issue of whether the harm domain can be reduced to the domain of fairness, as far as morality is concerned. Our results from follow-up questions showed a strong correlation between concerns with harm and fair-

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ness. However, concerns of fairness not only correlated with the moral signature but also were an independent predictor of it, while concerns of harm neither predicted nor mediated the moral signature response pattern. This is some, but not conclusive, evidence in favor of the deflationary view of harm advocated by Sousa and colleagues, and against not only Turiel, Haidt and their colleagues, who distinguish the domains of harm and fairness, but also against monists like Gray and colleagues, who would like to reduce all morality to a fundamental concern with harm. However, more direct evidence is needed to rule out the possibility of harm-based reduction or the possibility that indeed these are two separate domains.

Second, there is the issue of whether the domains of Ingroup, Authority and Purity are reducible to the domain of fairness, namely, whether a concern with fairness is what leads participants to evoke the moral signature in these domains. One may argue that a large amount of participants did not have a concern with fairness while evoking the moral signature, which is evidence for pluralism and against the kind of monism advocated by Baumard. However, a concern with fairness was still substantial in these domains. In Purity (temple) 21 out of 28 participants, in Purity (dog) 18 out of 23 participants, in Ingroup (Betrayal) 21 out of 22 participants expressed a concern with fairness (see Table 3). In the remaining scenarios, only about half of participants expressed such a concern, but these scenarios are somewhat more problematic. Still, even though some scenarios (notably, both Authority and Ingroup (Citizenship) scenario) did not elicit fairness considerations to a significant number of participants, this does not rule out the possibility that an implicitly held concept of fairness facilitates various moral judgments. Thus, the take-home message is that Haidt was right to point out that non-WEIRD cultures are concerned with a wider array of moral transgressions (as our Mongolian sample shows), but perhaps is not completely right about the psychological processes that deliver it. The psychology of fairness, as Sousa and Baumard argue, could be,

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4 to some significant degree, at the heart of this process. Further work, with new methodology
5 and with varied sample, should shed some light on particular details of these psychological
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12 Finally, we also wanted to test whether Mongolians conceptualize certain transgres-
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14 sions as conventional *à la* Turiel. Our results indicate that participants evoked the moral sig-
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16 nature in the conventional domain much less frequently, showing that in a way Turiel is cor-
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18 rect. However, the number of participants who evoked the moral signature was still relatively
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20 high in both Conventional (hands) and Conventional (“you”). It seems that a non-negligible
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22 number of Mongolian participants think that the actions of eating noodles with bare hands
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24 and addressing professors with informal “you” are moral transgressions. What kind of norma-
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26 tive content could lead to such a response? Is it just a concern with etiquette? In relation to
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28 Conventional (“you”), because 17 out of 23 participants expressed a concern with fairness
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30 and/or harm (see Table 3), it is possible that most participants consider this type of action to
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32 be unjustifiably offensive, which, assuming the deflationary view of the morality of harm,
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34 would be consistent with fairness monism (see also Turiel’s, 1983, discussion of the second-
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36 order moral significance that conventional transgressions may acquire). However, some par-
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38 ticipants in Conventional (“you”) and most participants in Conventional (hands) did not ex-
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40 press any concern with fairness or harm. This may be explained in terms of disrespect of au-
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42 thority (i.e., addressing professors with informal “you” compromises an important hierar-
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44 chical relationship) and purity (i.e., eating noodles with bare hands is indecent and disgust-
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46 ing). In other words, what is a convention to Westerners (Turiel’s typical sample), might not
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48 be a convention to Mongolians, it can evoke a much stronger normative reaction — i.e., the
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50 moral signature (see Shweder et al., 1997, for similar observation among Orissa in India).
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18 19 20 21 22 23 **Endnotes**

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26 1. For instance, studies with children from orthodox Jewish and Amish communities
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28 by Nucci & Turiel (1993), with Brazilian adults by Haidt, Koller, & Dias (1993), Indian
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30 adults by Shweder, Much, Mahapatra, & Park (1997), or Hong Kong Chinese participants
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32 (Yau & Smetana, 2003).
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35 2. For the original material in Mongolian, contact the first author.
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39 3. As for the prototypicality of transgressions in each domain, for the sake of the ar-
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41 gument, we characterized each domain by using Haidt's and his colleagues descriptions of
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43 what content makes each domain (see, for instance, Graham, Nosek, Haidt, Iyer, Koleva, &
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45 Ditto, 2011). Of course, we acknowledge a need for separate qualitative research that would
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47 help to determine people's own prototypical examples of moral transgression.
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51 4. Total numbers do not correspond exactly to related total numbers in table 1 because
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53 of some missing values.
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5. The results here should be interpreted with caution, since the assumption of independence is not completely met, given that we consider the paired scenarios of each domain as two separate cases, when in fact they are not.

Appendix

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5	Harm (Hitting)	Munkh-Erdene is sitting on a bench and is very bored. One unfamiliar boy passes by and Munkh-Erdene punches him on his face very hard, just for fun.
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8	Harm (Insulting)	A new girl moved to a local town. Otgonbayar didn't like her dress, so he insulted the girl by calling her ugly.
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11	Fairness(Cheating)	Nergui borrowed a big sum of money from his good friend to buy a car. He bought that car and never paid back his friend.
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13	Fairness (Stealing)	While driving in the steppes, Gantulga noticed a sheep that was a bit apart from a nearby herd. The herders were in the ger, so he grabbed that sheep and drove away.
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17	Authority (Flag)	Byamba is cleaning out her closet, and finds her old Mongolian flag. She doesn't want the flag anymore, so she cuts it up into pieces and uses the rags to clean the toilet.
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20	Authority (Dalai)	Ganzorig is a skilled archer. One day he decides to practice on a painted target. He goes to a remote place in the steppes but, when he is about to start practicing, he finds out that he left his target at home. However, in his bag Ganzorig also has a picture of the Dalai Lama. The picture seems to have the right size to serve as a target, so he practices by shooting on the Dalai Lama picture.
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27	Ingroup(Citizenship)	Altantsetseg went to China to study. Over several years she learned the language, married to a Chinese man and renounced Mongolian citizenship.
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30	Ingroup (Betrayal)	Batbayar and other men from his tribe went to sell some horses near the border with Russia. Suddenly, several Russian armed men from that region appeared. Even though Batbayar had a gun as well, he got scared and ran way, leaving his fellow tribesmen to fight alone.
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36	Purity (Dog)	Erdene's dog was killed by a car in front of his house. He had heard that dog meat is delicious, so he cut up the dog's body, cooked it and ate it while he was alone.
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39	Purity (Temple)	Ganbold was walking in one small town. He had a terrible stomachache all the day and he needed to relieve himself immediately. Then he saw a small Buddhist temple. Nobody was around, so he rushed inside the temple and relieved himself there.
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44	Conventional(Hands)	It is lunch time at high school. Enkhjargal bought some tsuivan at the local canteen and ate it with her hands.
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46	Conventional ("You")	Bolormaa is studying at university. When she meets her new professor, she addresses him with informal 'you'
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Moral Domains

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Table 1

Number of participants for each response pattern.

Scenarios	Total	Transgression Probe		Moral Signature Probes			
		NO	YES	YES-YES	YES-NO	NO-YES	NO-NO
Harm(Hitting)	43	2	41	34	7	0	0
Harm(Insulting)		3	40	35	5	0	0
Fairness(Cheating)	51	0	51	40	10	0	1
Fairness(Stealing)		3	48	35	12	0	1
Authority(Flag)	42	2	40	34	6	0	0
Authority(Dalai)		20	22	17	1	0	4
Ingroup (Citizen)	42	21	21	15	5	0	1
Ingroup(Betrayal)		9	33	24	6	0	3
Purity(Dog)	47	10	37	25	9	2	1
Purity(Temple)		12	35	29	5	0	1
Convention(Hands)	41	14	27	18	9	0	0
Convention("You")		6	35	23	12	0	0

Moral Domains

Table 2

One sample Chi-Square tests against the chance

Scenarios	Wrong		Moral Signature	
	Significance (<i>p</i>)	Effect size (<i>r_φ</i>)	Significance (<i>p</i>)	Effect size (<i>r_φ</i>)
Harm (Hitting)	.000	.907	.000	.659
Harm (Insulting)	.000	.861	.000	.750
Fairness (Cheating)*	-	-	.000	.569
Fairness (Stealing)	.000	.882	.001	.458
Authority (Flag)	.000	.905	.000	.700
Authority (Dalai)	.758	.048	.011	.545
Ingroup (Citizenship)	1	0	.050	.429
Ingroup (Betrayal)	.000	.571	.009	.454
Purity (Dog)	.000	.575	.033	.351
Purity (Temple)	.001	.489	.000	.657
Conventional (Hands)	.042	.317	.083	.333
Conventional ("You")	.000	.707	.063	.314

Note. *All participants (100%) responded that cheating is wrong.

Table 3

Number of participants showing each of the four possible response patterns to harm and fairness questions.

Scenarios	Total	+H+F	+H-F	-H+F	-H-F
Harm (Hitting)	34	34	0	0	0
Harm (Insulting)	35	33	1	0	1
Fairness (Cheating)	39	38	0	0	1
Fairness (Stealing)	35	31	1	1	2
Authority (Flag)	30	9	3	4	14
Authority (Dalai)	17	9	0	0	8
Ingroup (Citizenship)	13	4	3	0	6
Ingroup (Betrayal)	22	16	0	5	1
Purity (Dog)	23	12	2	6	3
Purity (Temple)	28	18	4	3	3
Conventional (Hands)	17	2	2	0	13
Conventional ("You")	23	13	2	2	6

Note. +H+F (both harm and fairness present), +H-F (only harm present), -H+F (only fairness present), -H-F (neither harm nor fairness present).