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MORAL FOUNDATIONS, MORAL IDENTITY, AND MORAL BEHAVIOUR. A CROSS- CULTURAL COMPARISON.

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Abstract:

Moral foundations theory (Graham et al., 2009) suggests that moral norms can be classified into five foundations: Care, Justice, Loyalty, Authority, and Purity. While these five moral foundations have been found for people's moral judgments, it is not clear whether they would also hold for actual moral behavior. We investigated in two experiments whether foundation-related moral behavior and deception was affected by moral judgment and moral identity in a cross-cultural context comparing adults from the UK and Saudi Arabia.

In the first study, no cross-cultural differences were found between the two samples concerning moral judgment and behaviour in the care and justice foundations. Furthermore, no cultural differences were found between the two samples concerning moral behaviour in the five foundations.

In the second study, deception was not correlated significantly with the five foundations and moral sensitivity across both cultural samples. However, culture moderated the relationship between deception and moral judgment in harm and authority moral foundations.

Findings show that moral identity mediated the relationship between moral judgment and costly moral behaviour. However, deception was not affected by moral sensitivity or moral judgment at all. The different pattern of results could be attributed to the conceptualization of moral duties.

Keywords: Moral Foundations, Moral Behavior, Moral Identity, Culture, Harm, Deception.

نظرية الاسس الاخلاقية، الهوية الاخلاقية، و السلوك الاخلاقي. مقارنة عبر ثقافية

الملخص:

تشير نظرية الاسس الاخلاقية إلى أنه يمكن تصنيف المعايير الأخلاقية إلى خمسة أسس: (تجنب الأذى، العدالة، الولاء للمجموعة، احترام السلطة، والنقاء). في حين تم العثور على هذه الاسس الاخلاقية للحكم الخلقى، فإنه ليس من الواضح ما إذا كان سيُعثَر عليها سلوكياً. قمنا بالبحث في تجربتين حول ما إذا كان السلوك الاخلاقي والخداع قد تأثر بالحكم الاخلاقي والهوية الاخلاقية في سياق ثقافي مشترك يقارن بين البالغين من بريطانيا والسعودية.

في الدراسة الأولى أسفرت نتائج هذه الدراسة عن التشابه بين الثقافتين في الحكم الاخلاقي في تجنب الاذى والعدالة. بالإضافة الى انه لم يتم العثور على اختلافات ثقافية بين العينتين بخصوص السلوك الاخلاقي في الاسس الاخلاقية الخمسة على اعتبار انه توجد اختلافات ثقافية بين العينتين في الحكم الاخلاقي في الدراسات السابقة. بالإضافة إلى ذلك، لعبت الهوية الاخلاقية دور الوسيط بين الحكم الاخلاقي والتبرعات المادية في تجربة الديكتاتورالاقتصادية.

كشفت نتائج الدراسة الثانية، أنه لا توجد فروق ذات دلالة إحصائية في السلوك النزيه بين المملكة العربية السعودية بريطانيا، حيث لم يكن هناك خداع من كلا العينتين. كما ان السلوك المخادع لم يتم التنبؤ به أو ارتباطه بالأحكام الاخلاقية الخمسة في كلا الثقافتين. ومع ذلك، اثرت الثقافة على العلاقة بين السلوك المخادع والحكم الاخلاقي في اسس اخلاقية كتجنب الأذى واحترام

كلمات مفتاحية: نظرية الاسس الاخلاقية الخمسة، السلوك الاخلاقي، الهوية الاخلاقية، الحكم الاخلاقي، الخداع

Introduction:

Humans are a social species, and social relationships and interactions matter to us from the first minutes of our lives. Many of these interactions and relationships are governed by rules of what can and cannot be done within them, and those rules often acquire a moral status (Keller, 1996). Morality has been described as “interlocking sets of values, virtues, norms, practices, identities, institutions, technologies, and evolved psychological mechanism that work together to suppress or regulate selfishness and make social life possible” (Haidt & Kesebir, 2010, p. 800). This research compares moral functioning in adults from Saudi Arabia and the United Kingdom. We are particularly interested in how people’s moral judgment and their moral identity affect moral behaviour, the suppression or regulation of selfishness, in these societies. In the following, we will review these concepts before formulating the specific aims for this research.

Moral Judgment

Moral judgment is concerned with people’s conceptualizations of what is right and wrong (Shweder, Mahapatra, & Miller, 1987). Most research programmes in moral psychology have defined the content of morality in terms avoiding harming others, behaving in a caring and altruistic way, or as guaranteeing and protecting rights that are implemented in a fair and just way (see Turiel, 1983 & Haidt, 2007, for a review). However, empirical findings from cross-cultural research lead researchers to believe that merely focusing on avoiding harm and upholding rights and justice might define the moral domain too narrowly and might not adequately reflect moral considerations of people in non-western societies. Shweder et al. (1997) devised a moral taxonomy called “the big three” encompassing the three ethics of autonomy, community, and divinity (Rosin et al., 1999), which can co-exist in different cultures but with different level of emphasis.

The ethics of autonomy considers the individual as the source of moral authority. It is based on individuals’ rights to follow their needs and on fairness and justice (Haidt, Koller, & Dias, 1993). The most important moral concepts in the ethics of autonomy are equality of rights between individuals, independence, freedom of choice, and personal well-being (Jensen, 2004). Rozin et al. (1999) suggest that the ethics of autonomy is the predominant ethics in western societies, such as the USA or the UK. The ethics of community relies on loyalty, duty, honour, respect, self-control, obedience to authority, and actions consistent with one’s own social roles. Individuals are seen as having social responsibilities in families or nations, which are considered a moral duty (Miller, 2001; Shweder, 2003). According to Rozin et al. (1999) the ethics of community is common in

cultures like Japan. The ethics of divinity defines individuals as spiritual entities. The central values are based on the concepts of divine or natural law which is based on religious authorities and texts, obligation, punishments, and rewards (Arnett et al. 2001; Jensen, 1995). The ethics of divinity is most common in cultures that emphasize scriptural authority like Hindu communities (Jensen, 2011).

Several studies have examined the use of the three ethics in India, Brazil, Japan, the Philippines, and the USA (Jensen, 1995; Rozin et al., 1999; Vasquez, Keltner, Ebenbach, & Banaszynski, 2001). Haidt et al. (1993) found differences in endorsement of the type of ethics in children and adults in the United States and Brazil. University students in both countries used the ethics of autonomy more frequently than the other two ethics. Americans used autonomy more than Brazilians among the general population, while Brazilians showed arguments based on autonomy and community. Miller's (1994) research among Americans and Hindu Indians supports the assumption that Americans develop personally directed interpersonal moral code emphasizing personal freedom of choice, individual responsibility, and duple view of person motivation. On the other hand, an obligation-based interpersonal moral code develops among Hindu Indians, emphasizing wide and social compliant interpersonal duties, the importance of group sensitivity, and a single view of person motivation. For example, when presented with non-life-threatening violations, around 91% of the Indian adults, but only 46% of Americans, gave priority to the interpersonal alternatives.

Haidt and Graham (2007) expanded this "big three" approach in their moral foundation theory, according to which human morality encompasses five moral concerns or foundations (Graham et al., 2009, 2011): The harm/care foundation is related to disapproval of, avoiding, and ameliorating pain and misery in others and is based on sympathy, friendliness, and nurturance (Koleva et al., 2012). The fairness/reciprocity foundation is related to equality and justice and seeks that these principles not be violated. The ingroup/loyalty foundation is based on people's relation to important ingroups (e.g., one's family, home country), and seeks to promote the group's cohesion and well-being. The authority/respect foundation is related to status differences between people and within societies. Subordinates are supposed to follow authorities' norms and rules, but authorities also have a duty to support the well-being of subordinates. The purity/sanctity foundation is related to the emotion of disgust that is associated with avoiding biological and social contaminants (Koleva et al., 2012).

Much of the original empirical research on moral foundation theory focused on sub-group differences in the endorsement of and moral judgment in the five moral foundations. For example,

Graham et al. (2009, 2011) found that politically liberal US Americans endorsed and used the “individualizing” foundations harm/care and justice/reciprocity more strongly than that the three “binding” foundations ingroup/loyalty, authority/respect, and purity/sanctity, whereas politically conservatives endorsed and used all five foundations equally. A similar relationship between use of moral foundations and political orientation was also found among Korean adults (Kim, Kang, & Yun, 2012). Graham and colleagues (2011) examined cross-cultural differences in the use of moral foundations in a large-scale cross-cultural study, in which participants were classified either as belonging to an “Eastern” (e.g., South Asia, East Asia, South-East Asia, Middle East) or a “Western” culture (e.g., North America, Western Europe). Participants from eastern cultures scored higher in ingroup and purity foundations compared to western participants. However, as of yet, no study has focused on Middle Eastern (and specifically Saudi) participants’ conceptions and use of moral foundations. A first goal of the present research was to address this lacuna.

Gesis (2010) examined moral judgment in line with Kohlberg’s social-cognitive theory among school students in Haifa city. The findings indicated the presence of stage 1 to stage 5 among students. The findings showed that children exhibit universal moral development from stage 1 to stage 5. The assumption of stage development being invariant in sequence was well supported. Furthermore, the findings showed that gender and social economic status did not affect moral judgment.

Bin Ladin (2001) compared the moral judgment level of delinquent and non-delinquent students in Saudi Arabia using Rest’s (1973) defining issues test. The results showed that the two groups passed all moral developmental stages. Furthermore, there are differences in stage six of moral judgment among delinquent and non-delinquent students. Non-delinquent students scored higher than delinquent students on moral judgment scale.

Othman (2015) investigated sexual harassment as an indicator of moral behaviour among university students in Egypt. Furthermore, this study identified differences between male and female students on moral behaviour scale with females scoring higher than males. The results showed that there was a negative relationship between sexual harassment and moral behaviour scores.

Studying moral judgment in line with moral foundation theory in Saudi Arabia is an interesting extension to cross-cultural research, because of the strong influence of the religious values of Islam on moral functioning and social life in general (Bouhmama, 1984). In Islam, morality and religion are intertwined; it is hard for Muslims to discuss morality without mentioning

Islam (Halstead, 2007). According to Ashraf (1988), in Islam moral behaviour requires faith, and faith will not be true unless it generates moral behaviour. Morality in Islam is considered as a list of rules, duties, and responsibilities which are found in the Quran and the hadith (sayings of Prophet Muhammad; Halstead, 2007). Benevolence, piety, justice, honesty, and gratitude are among the values taught in Islam and mentioned in the Quran (Halstead, 2007).

In Islam morality consists of two components, akhlag and adab (Halstead, 2007). Akhlag can be translated as ethics or moral values. According to Alqardawi (1981), akhlag is grouped into six categories, related to the self, the family, society, the animal world, the physical environment, and god. The second component is adab, which contains two distinguished way of understanding good behaviour such as politeness, courtesy, good upbringing and good manners or morality and values (Halstead, 2007). Islamic morality can be divided into three categories: First, the obligations and duties authorized by shariah (Islamic law); second, the behaviours taught during upbringing such as the Prophet Muhammad's behaviour related to eating and sleeping; third, Islamic virtues that are similarly related to the Prophet Muhammad's behaviour, such as integrity, honesty, humility, self-control, chastity, and purity (Halstead, 2007). According to Halstead (2007), the moral domain is conceptualized wider in Islam than in western conceptualizations of morality. Thus, we expect that, compared to western participants, Saudi adults will use and endorse moral concerns from the ingroup/loyalty, authority/respect, and purity/sanctity more strongly than western participants (see Graham et al., 2011).

Studying moral judgment in line with moral foundation theory in Saudi Arabia was studied by Alqahtani (2018) and found cross-cultural differences in people's endorsement of the five moral foundations. Participants from Saudi Arabia endorsed the ingroup, authority, and purity foundations more than UK participants, whereas there was a similar endorsement of harm and fairness foundations in both samples. We can conclude that the moral domain is "wider" in Saudi Arabia as it additionally includes ingroup, authority, and purity concerns than in the UK as it mainly includes harm and fairness concerns. These results are in line with cross-cultural studies in morality such as Graham and colleagues' (2011) work, Kim et al. (2012), and Zhang and Li (2015). Graham et al. (2011) proposed that participants in eastern cultures such as South-East Asia endorse purity and ingroup foundations more than participants in western cultures such as United Kingdom. Similarly, Kim et al. (2012) assumed that Korean participants endorsed purity concerns more than American participants. Zhang and Li (2015) found that Chinese participants showed high endorsement of ingroup, authority, purity foundations and less endorsement of harm and fairness foundations. The differences in moral foundations scores between the two countries can be attributed to different

reasons. First, Saudi Arabia is considered collectivist country while the UK is considered individualist country based on Hofstede's (1980) study (see also www.geerthofstede.com). Saudi participants scored higher on all binding moral foundations and they are all related to collectivistic cultures. UK participants scored higher on the individualizing moral foundations harm and fairness and they are related to individualistic cultures. A second important factor is the role that religion plays role in individuals' morality. For example, Islam religion encourages group cohesiveness. Shah (2004) assumed that religiosity strongly influences the moral behaviour of teenagers. In this study each sample has different religion which might be the reason for the differences in authority, purity, and ingroup foundations.

Predicting Moral Behaviour

As discussed above, the key function of moral systems is to regulate or suppress selfishness (Haidt & Kesebir, 2010). Thus, encouraging moral behaviour (and limiting selfishness) lies at the heart of moral functioning. Much of the research in moral psychology (Killen & Smetana, 2006) has focused on the psychological factors and abilities that promote moral behaviour (see Bergman, 2002, for an overview of theoretical models). This research has shown that moral reasoning (or reasoning-based moral judgment) is only moderately related to moral behaviour. For example, scores on tests measuring moral reasoning and moral judgment are not usually correlated with moral behaviours such as helping others or following (moral) rules (Richards et al., 1992). On the other hand, a negative correlation between moral reasoning and delinquency has been found (Blasi, 1980; Gregg, Gibbs, & Basinger, 1994).

A handful of studies have investigated the relationship between foundation-specific moral judgment and moral behaviour. Teo and Chan-Serafin (2013) explored the relationship between unethical pro-organizational actions and moral foundations. They found that that members of an organization who are high in binding foundations (ingroup, authority, purity) and low in individualising foundations (harm, justice) were more willing to engage in unethical actions to profit their organization. Schier et al. (2016) showed that moral judgment in the fairness foundation positively related to prosocial giving in an economic game (the dictator game). Nilsson et al. (2016) examined the link between foundation-specific moral judgment and ingroup- and outgroup-focused charitable giving. They found that moral judgment in the harm and fairness foundations predicted higher donation both for self-reported and actual charitable giving. However, moral judgment in the binding foundations predicted higher donations to ingroup causes only. Overall, these studies indicate foundation-based moral judgment to be positively and reasonably related to certain moral behaviours. The current studies extend this research to a cross-cultural context by investigating

whether similar relationships exist between moral judgment in the five moral foundations and prosocial behaviour (Study 1) and dishonest behaviour (Study 2) in Saudi and UK participants.

Blasi (1999) suggested that moral behaviour might be motivated by factors other than moral judgment or reasoning and focused particularly on the role of moral identity for moral behaviour. Moral identity, or the strength of one's personal moral values, are the ideas an individual hold about his or her moral character. For example, if an individual identifies him-/herself as a fair person s/he should try to act fairly to maintain self-consistency (Aquino et al., 2009). Moral identity is considered a strong source of moral motivation as individuals try to keep consistency between their personal moral values and their moral actions (Blasi, 1980, 1993, 2004). Indeed, moral identity has been shown to be related to prosocial moral behaviour, such as volunteering (Reed, 2002). Research by Prat et al. (2003) revealed that high self-importance of moral values was a predictive factor of prosocial behaviour. Correlational studies (e.g., Aquino & Reed, 2002; & Hardy, 2006) showed that moral identity was linked to moral behaviour, such as money donations to charity and selfless help.

A third goal of the present research was to investigate the relationship between foundation-based moral judgments, moral identity, and moral behaviour in participants from the United Kingdom and Saudi Arabia. Very few studies assessed cross-cultural differences in moral identity. Jia (2016) studied Canadian and Chinese participants' moral identity and found that among Chinese, but not Canadian, participants moral identity was influential in school and community context. To our knowledge, no study has assessed moral identity in Middle Eastern participants.

This paper Studies moral foundation theory in depth as an attempt to bridge the gap in literature due to the lack of cross-cultural studies regarding endorsement of moral judgment in the five foundations in a Western-European and Middle Eastern cultures. Therefore, it attempts to test the effect of different factors on moral behaviour such as moral judgment, moral identity.

The Present Research

The present studies investigated the relationship between foundation-specific moral judgment, moral identity, and moral behaviour in adults from Saudi Arabia and the UK. Given the importance of values related to the three binding foundations (e.g., benevolence, gratitude, humility, self-control, chastity, purity) in Islam, we expected that would be no difference in Saudi participants' moral judgment across the five moral foundations. However, UK participants' moral judgment in the individualizing foundation (harm, justice) should be stronger than in the binding foundations (ingroup, authority, purity; see also Graham et al., 2011).

In both Studies 1 and 2 we investigated the relationship between foundation-specific moral judgment and costly moral behaviour, either charitable giving (Study 1) or dishonesty (Study 2).

Thus, in both cases participants have to suppress selfish impulses to act morally. We predicted that foundation-specific moral judgment would be positively related to foundation-specific costly moral behaviour. Thus, participants who showed higher moral judgment in a specific foundation should also engage in costly moral behaviour related to this foundation. As such, we might also expect cross-cultural differences in foundation-specific moral behaviour: Saudi participants should show no difference in their moral behaviour related to the different moral foundations. However, UK participants should engage in more costly moral behaviour related to the harm and justice foundation than related to the ingroup, authority, and purity foundation.

Finally, we investigated the role of moral identity for moral behaviour. While some research suggests that moral identity is directly positively related to (costly) moral behaviour, some theoretical accounts suggest that moral identity might serve as mediator: Judging an action as morally right or wrong is not enough to transform this evaluation into costly moral behaviour; a moral judgment needs to be personally important for a person (i.e., be part of the person's moral identity) to affect moral behaviour (see Bergman, 2002; Hardy & Carlo, 2011). We thus investigated whether moral identity directly or indirectly predicted moral behaviour in Saudi and UK adults.

Study 1: Predicting Costly Prosocial Behaviour in Saudi and UK Participants

Moral philosophers, like Immanuel Kant (1785), differentiated between perfect (or negative) and imperfect (or positive) moral duties or behaviours. Perfect duties (e.g., “though shalt not steal”) allow no exceptions but must be kept towards everybody. Imperfect duties, such as helping, sharing, or giving, allow some exceptions, as we cannot fulfil imperfect duties all the time, towards everybody. Study 1 investigated cross-cultural differences in the relationship between foundation-specific moral judgment, moral identity, and foundation-specific costly prosocial behaviour, an imperfect duty. Costly prosocial behaviour was measured with the dictator game (Kahneman, Knetsch, & Thaler, 1986). In this game two players are presented with real, valuable and divisible resources (e.g., a sum of money). The first player (dictator) can decide how to allocate the resources between him-/herself and the receiver who can only accept the resource allocation by the dictator. From a rational-choice perspective, giving anything to the receiver has no monetary or social advantages, and the dictator should thus not give anything (Camerer, 2003; Coleman, 1995). Yet, adult dictators give on average between 20 and 30% of the original resources with the modal offers being either nothing or half (e.g., Forsythe, Horowitz, Savin, & Sefton, 1994; Hoffman, McCabe, Shachat, & Smith, 1994). Any positive offers by the dictator are thus an indication of the dictator's preferences for prosociality (Camerer, 2003).

In the original version of the dictator game players are anonymous and no further information about their partner is provided. However, a number of studies (see Camerer, 2003, for a review) found that the framing of the dictator game situation strongly affects dictators' allocations. For example, Eckel and Grossman (1998) found that dictators were significantly more generous when told that their allocations would go to charity than to an anonymous receiver, with almost 20% of participants giving more than half to charity. Study 1 drew on these framing effects to conceptualize the dictator game in line with the different moral foundations. Participants in the role of the dictator decided whether to allocate real money either with an anonymous receiver (neutral condition) or with charities that supported values in line with the five moral foundations.

Method:

Participants

The study comprised 102 adults aged 18 years and older. The Saudi sample consisted of 50 participants ($M_{Age} = 30.10$ years, $SD = 7.84$, 21 females, 29 males). The British sample consisted of 52 participants ($M_{Age} = 24.85$ years, $SD = 8.73$, 39 females, 13 males). In the UK, participants were recruited through the University's participant pool which mainly contains students. In Saudi Arabia, participants were recruited by approaching students who were taking summer courses on campus.

Procedure

The study was approved by XXXX University's Ethics Committee. Participants were presented with a brief and had to give informed consent to take part in the study. The experiment started with the dictator game. Then participants had to fill in some demographic information (age, gender) and two questionnaires measuring their moral judgment (Moral Foundations Questionnaire) and moral identity (Good Self-Assessment Scale) in counterbalanced order. At the end, participants were presented with a debrief and were paid a show-up fee as well as the money they accrued in the dictator game.

Measures

The dictator game (DG; Kahneman et al., 1986) was used to measure costly prosocial behaviour. Using a within-subject design, participants made decisions as dictators in six DGs. A neutral DG (baseline), in which no information about the recipient was given, was always presented first. In the remaining five DGs, which were presented in counterbalanced order, receivers were described as organizations or charities that represented one of the five moral foundations. The aims and activities of each recipient organization were described on half a page (see Appendix for descriptions). In each DG, proposers were asked to distribute £10 (UK)/50 Riyals (Saudi Arabia). From the six DG decisions, one was randomly chosen as payment for the participant. The

participant kept the money they allocated to themselves, and the money given to the receiver was actually allocated a local charity in line with experimental economic practices (Hertwig & Ortmann, 2001). Proportional DG scores were calculated by dividing the amount participants gave to the receiver by 10 (UK) or 50 (Saudi Arabia).

Moral Foundations Questionnaire (MFQ; Graham et al., 2008). This 15-item questionnaire was used to measure participant's moral judgment in the five moral foundations. Items such as "Compassion for those who are suffering is the most crucial virtue" would represent the harm/care foundation. Each statement was answered on a six-point scale ranging from (1) strongly disagree to (6) strongly agree. The questionnaire was translated to Arabic by Bruneau (2010) and is available on the moralfoundations.org website. Five scores were derived: Harm ($\alpha=.47$), fairness ($\alpha=.13$), ingroup ($\alpha=.15$), authority ($\alpha=.07$), and purity ($\alpha=.62$).

The Good Self-Assessment Scale (Barriga et al., 2001) measures the centrality of moral traits to an individual's self-understanding. It consists of 16 questions which ask the participant "How important is it to you that you are ...?" Eight questions contain a moral characteristic (e.g., honest), the other eight include a non-moral, but desirable characteristic (e.g., sociable). Participants rated each item on a scale from 1 (not important to me) to 5 (extremely important to me). The questionnaire was translated to Arabic by the researcher. Two scores were derived: personal moral values ($\alpha=.72$), and personal non moral values ($\alpha=.60$). A moral identity score was derived by subtracting the non-moral values score from the moral values score. A positive moral identity score indicates that moral values are more personally important than non-moral values a negative score indicates that non-moral values are more important to a person than moral values.

Results:

Cross-cultural differences

Concerning moral judgment, a repeated-measures Analysis of Variance (ANOVA) with the within-subject variable moral judgment (harm/care, fairness/reciprocity, ingroup/loyalty, authority/respect, purity/sanctity) and the between-subject variable culture revealed the significant main effect of Moral Judgment, $F(4, 102) = 19.13, p < .01, \eta^2 = .16$. Pairwise comparisons (with Bonferroni corrections) showed that across cultures moral judgments in the harm/care and fairness/reciprocity domain did not significantly differ from each other, and neither did moral judgment in the ingroup/loyalty, authority/respect, and purity/sanctity foundations. However, harm/care moral judgments significantly different from moral judgments in the three binding foundations. Fairness/reciprocity moral judgments significantly differed from those in the authority/respect and purity/sanctity foundations (Table 1). The ANOVA also showed a significant

main effect of Culture, $F(1, 100) = 24.74, p < .01, \eta^2 = .20$, indicating that across foundations Saudi participants reported higher levels of moral judgment.

These main effects were qualified by a significant interaction of Moral Judgment x Culture, $F(4, 102) = 17.48, p < .01, \eta^2 = .15$. We conducted repeated-measures ANOVAs with moral judgment as within-subject variable separately for each culture. In the Saudi sample, there was a significant main effect of Moral Judgment, $F(4, 49) = 5.84, p < .01, \eta^2 = .11$. Level of moral judgment did not differ across the harm/care, fairness/reciprocity, authority/respect, and purity/sanctity foundations, but moral judgment was significantly lower in the ingroup/loyalty foundation (Table 1). In the UK sample, a significant main effect of Moral Judgment emerged, $F(4, 51) = 27.38, p < .01, \eta^2 = .35$. Level of moral judgment was significantly lower in the three binding foundations than in the harm/care and fairness/reciprocity foundations than, which did not differ from each other. Moral judgment in ingroup/loyalty and authority/respect did not differ from each other but was significantly higher than in the purity/sanctity foundation (Table 1).

Concerning moral behaviour, an independent-samples t-test indicated UK participants allocated a significant higher proportion than Saudi participants in the neutral condition, $t(100) = 3.50, p < .01$ (Table 1). A series of one-sample t-test (with Bonferroni-corrected alpha-level of $\alpha = .01$) indicated that Saudi participants allocated a significantly higher proportion to the five charities than in the neutral condition (all $ps < .001$). Among UK participants, a series of one-sample t-tests ($\alpha = .01$) showed that UK participants allocated significantly higher proportions to the charities in the harm/care, fairness/reciprocity, ingroup/loyalty, and authority/respect (all $ps < .001$), but not the purity/sanctity frame ($p = .89$) compared to the neutral condition.

A repeated-measures ANOVA with DG allocations in the five frames as within-subject variable and culture as between-subject variable revealed a significant main effect for DG allocations, $F(4, 100) = 64.00, p < .01, \eta^2 = .39$. Across cultures, participants allocated significantly more to the harm/care charity than to all other charities and significantly less to the purity/sanctity charity than to all other charities (all $ps < .001$). Allocations to the fairness/reciprocity, ingroup/loyalty, and authority/respect allocations did not differ (all $ps > .29$). No culture effects emerged (Table 1).

Concerning moral identity, UK participants' revealed a significantly higher level of moral identity than Saudi participants, $t(91.38) = 3.02, p = .003$ (Table 1).

Relationship between moral judgment, moral identity, and moral behaviour

Table 2 shows the correlations between the study variables. In general, DG allocations in the different frames highly positively correlated with each other and with moral identity. The

relationship between foundation-specific moral judgment and moral behaviour was more variable. Only moral judgment in the harm foundation was consistently positively correlated with DG allocations and moral identity.

We conducted a series of hierarchical regression analyses predicting DG allocations in the foundation-specific frames. At Step 1, culture was entered. Step 2 additionally included foundation-specific moral judgment and moral identity. Step 3 additionally included the mean-centred interactions between foundation-specific Moral Judgment x Culture and Moral identity x Culture. As shown in Table 3, these variables did not predict DG allocations in the fairness, ingroup, and purity foundations. In the harm foundation, moral identity marginally positively predicted DG allocations. In the authority foundation, both moral judgment and moral identity positively predicted DG allocations: The higher authority moral judgment and moral identity, the more participants allocated to an authority-framed charity. The interaction between moral identity and culture was marginally significant for the authority foundation. No other main or interaction effects of culture emerged.

Moral identity as mediating the link between moral judgment and DG allocations

We tested whether moral identity mediated the relationship between moral judgment and DG allocations. Given the cultural differences in participants' moral judgments and moral identity, culture was entered as a moderator, moderating the relationship between moral judgment and DG allocations and moral self-importance and DG allocations. An overview of the conceptual model for this analysis is shown in Figure 1. A moderated-mediation analysis was run in PROCESS (Hayes, 2013) using a bias-corrected bootstrap approach (1000 bootstraps) to calculate 95% confidence intervals (CI). If the 95% CI limits do not include zero, the effect is interpreted as being significantly different from zero.

Results showed that the effect of the mediator, moral identity, on DG allocations was positive and statistically significant ($B = .11$, $SE = .05$, $p = .03$, 95%CI [.01, .21]). Furthermore, the effect of moral judgment on DG allocations was moderated by nationality ($B = .07$, $SE = .03$, $p = .02$, 95%CI [.01, .13]): While among the Saudi sample moral judgment did not predict DG allocations ($B = .02$, $SE = .02$, $p = .49$, 95%CI [-.03, .06]), among the British sample, moral judgment positively significantly predicted DG allocations ($B = .09$, $SE = .02$, $p < .01$, 95%CI [.05, .12]). However, the effect of the mediator, moral identity, was not moderated by nationality ($B = -.05$, $SE = .06$, $p = .37$, 95%CI [-.17, .06]).

Discussion

Study 1 assessed cross-cultural differences in the relationship between moral judgment, moral identity, and prosocial moral behaviour. We conceptualized moral judgment and moral behaviour in line with moral foundation theory (Graham et al., 2009, 2011) which postulates that human morality entails concerns about avoiding harm, fair treatment, being loyal to one's ingroups, respecting authority, and maintaining purity. In line with previous cross-cultural research on moral foundation theory which compared moral judgments of people from "western" and "eastern" societies (Graham et al., 2011 & Alqahtani, 2018), we found that UK participants in our study showed higher levels of moral judgment in the individualizing moral foundations (harm/care and fairness/reciprocity) than in the binding moral foundations (ingroup/loyalty, authority/respect, purity/sanctity). Among Saudi participants, however, moral judgment in the harm/care, fairness/reciprocity, authority/respect, and purity/sanctity foundations did not differ. This indicates that Saudi participants conceptualize the moral domain as "wider" than the UK participants, including moral concern about authority and purity. Interestingly, Saudi participants' moral judgment in the ingroup/loyalty foundation was significantly lower than on the other four moral foundations. This is surprising, as Saudi society is often conceptualized as a quintessential collectivistic society with influential ingroups (Hofstede website, 2017). However, Alharbi (2018) compared UK and Saudi participants on measures of individualism/collectivism and power/distance (Triandis, 1995) and found consistent cross-cultural differences on the power/distance dimension: UK participants were more likely to describe their relationships as horizontal, that is as based on flat hierarchies and interactions between equals. Saudi adults described social relationships as vertical with clear and steep social hierarchies. Thus, what might characterize Saudi culture (compared to Western European ones) is the emphasis on social hierarchies and respect towards authorities.

Study 1 assessed moral behaviour as prosocial allocations in the dictator game, in which the recipients were framed as charitable organizations representing the five moral foundations or in a neutral way. As in previous research (e.g., Eckel & Grossman, 1998), participants from both cultures allocated more to charity than neutral recipients. Furthermore, across cultures, charities in the harm/care frame received the highest allocations, and the purity/sanctity charity the lowest ones. Thus, while Study 1 closely replicated previously found cross-cultural differences in foundation-specific moral judgment, we surprisingly found hardly any cross-cultural differences in moral behaviour. This finding is not easy to interpret, as it is often assumed that cultural contexts and cultural values strongly affect social behaviour and behaviour regularities (Caprara et al., 2011). On

the other hand, game theoretical experiments across different cultures (e.g., Henrich et al., 2004) show that macro-level differences in economic organization and market integration were strong predictors of cross-cultural differences in dictator game allocations. Thus, the economic structure of a society might be an important predictor for charitable allocations over and above people's (personal) moral judgments. Furthermore, our results are supported by Schier et al. study (2016) that showed moral judgment in the fairness foundation positively related to prosocial giving in an economic game (the dictator game).

Indeed, Study 1 shows that foundation-specific moral judgment overall did not predict allocations in the respective foundation-specific frame with the exception of the authority/respect foundation: Higher levels of moral judgments in authority/respect were positive related to allocations to a charity in the authority/respect frame. Thus, Study 1's findings are in line with theories and research that argue that moral judgments need to be personally important (i.e., be part of a person's moral identity) to affect moral behaviour (e.g., Blasi, 2004; Bergman, 2002). To our knowledge, this is the first time that the concept of moral identity has been investigated within the framework of moral foundation theory. In line with other research on moral identity and the moral self (Kohlberg, 1969; Blasi, 2005), we suggest that moral judgments derive their power and influence moral behaviour by being personalized and by being part of a person's identity. That is, judging whether something is morally right or wrong is not enough to influence a person's behaviour, but morality must be personally self-relevant to a person. Given that moral identity and some of the moral judgments differed between the British and Saudi participants, we additionally added nationality as a moderator.

In line with theories of moral identity (Blasi, 2005; Aquino & Reed, 2002; Hardy, 2006), we found that moral identity mediated the relationship between moral judgment and moral behaviour. According to Blasi (2005), moral judgments influence moral behaviour through moral identity. Furthermore, Correlational studies (e.g., Aquino & Reed, 2002; & Hardy, 2006) showed that moral identity was linked to moral behaviour, such as money donations to charity and selfless help.

Thus, while moral judgments did not directly predict moral behaviour, moral self-importance mediated the relationship between judgment and behaviour. Thus, judging an action as morally right or wrong is not enough to transform this evaluation into costly moral behaviour; a moral judgment needs to be important for a person's moral identity to affect moral behaviour (see Bergman, 2002). According to Hardy & Carlo (2011) moral identity might serve as mediator: Judging an action as morally right or wrong is not enough to transform this evaluation into costly

moral behaviour; a moral judgment needs to be personally important for a person (i.e., be part of the person's moral identity) to affect moral behaviour and in our study moral identity served as a mediator.

The results showed that this mediation effect was not moderated by nationality. Hence, the effect of personal moral values on moral behaviour was similar for British and Saudi participants. On the other hand, the effect of moral judgment on moral behaviour was moderated by nationality. Among the British sample, moral judgment positively significantly predicted DG allocations while the Saudi sample moral judgment did not predict DG allocations. Given the sparse cross-cultural research particularly on moral identity and behaviour, these findings indicate cross-cultural similarities and differences in processes underlying costly moral behaviour. While evaluating some actions as right or wrong might be predictive of moral behaviour only in western societies, a personal commitment to moral norms and values seems to be similarly predictive of moral behaviour in cultures as different as the UK and Saudi Arabia. Clearly, these results need to be replicated in future research encompassing a range of different cultures and moral behaviours.

Study 2: Predicting Costly Honest Behaviour in Saudi and UK Participants

Study 1 indicated that moral identity mediated the relationship between moral judgment and prosocial moral behaviour. But what about moral behaviours regulated by perfect duties? According to Kant (1785), perfect duties allow no exceptions but must be kept towards everybody, while imperfect duties, such as helping, sharing, or giving, allow some exceptions, as we cannot fulfil imperfect duties all the time, towards everybody. Thus, imperfect duties give a moral agent some choice as to whether to fulfil them or not. Study 2 investigated the relationship between moral judgment, moral identity, and honesty, a perfect duty, in Saudi and UK participants.

Empirical research has assessed honesty in a number of ways. According to Gerlach (2017), the four most frequently used experimental paradigms to assess (dis)honest behaviours are sender-receiver games (e.g. Gneezy, 2005), coin-flip tasks (e.g., Bucciol & Piovesan, 2011), die-roll tasks (e.g., Fischbacher & Heusi, 2008), and matrix games (e.g., Mazar, Amir, & Ariely, 2008). Study 2 used an adapted version of a matrix game to measure costly honest behaviour. Such experimental matrix games have the advantage that honest behaviour can be measured at the individual level and that degrees of dishonesty can be assessed (rather than just knowing whether a participant was dishonest or not; see Abeler et al., 2016; Gerlach, 2017, for reviews).

In matrix games, participants are usually given a set of 20 matrices, each matrix filled with numbers. Participants' task is to find two numbers per matrix that add up to a certain sum (e.g., 10) under a strict time limit. The time allocated to participants is too short for them to successfully solve

all matrices. Yet, participants are incentivised to report as many “solved” matrices as possible; for every matrix they solve, they receive a fixed amount of money (e.g., \$0.50 per solved matrix). At the end of the time limit, participants report the number of matrices they “solved” to the experimenter. Because of the incentive structure of the game, dishonest behaviour (i.e., reporting more matrices as solved than were actually solved) is encouraged.

A number of studies show that situational and psychological factors influence people’s behaviour in matrix games in non-trivial ways: People engage in more dishonest behaviour when they receive subtle cues that cheating is okay (i.e., when wearing fake sunglasses; Gino et al., 2010), but are more honest when they get subtle moral cues (i.e., the Ten Commandments; Mazar et al., 2008). Dishonest behaviour increases when performance is not monitored (Grolleau et al., 2016), and people use “moral” reasons to justify dishonesty (Gino et al., 2013). These studies thus indicate that matrix-style games are well-suited to assess adults’ dishonest behaviour.

While research with matrix games indicates that morally-relevant variables (e.g., the framing of the situation) affect dishonest behaviours in these games, few studies have assessed the relationship between (dis)honest behaviour in matrix games, foundation-based moral judgment, and moral identity (see Bazerman & Gino, 2012). Bersoff (1999) conducted experiments in which students were “accidentally” overpaid for their participation. Findings suggested that in situations that involve small acts of social violations individuals often deviate from their stated moral standards. Bay and Greenberg (2001) examined the relationship between moral judgment and deception behaviour. They asked students to volunteer in a trading experiment with conditions that allowed students to deceive about the quality of their products and with economic incentives that rewarded deception. Interestingly, they found different behaviour across genders. For female participants, deceptive behaviour increased when moral judgment scores increased. For male participants, moderate scores of moral judgment were related to low rate of deception while higher and lower scores of moral judgment were related to higher rate of deception. This indicates that other (demographic) variables can affect the relationship between moral judgment and (dis-)honest behaviour. Along these lines, Triandis (1995) suggested that being honest when dealing with strangers is more appreciated in individualist countries, while having good relationships is more important in collectivist countries. Thus, cultural orientation might affect people’s (dis-)honesty, but this question has not been investigated experimentally yet.

Experimental studies on honesty have been conducted in different societies, but few were conducted in Middle Eastern and Muslim contexts. Gächter and Schulz (2016) compared honest behaviour in a die-rolling task of adults from 23 countries, also drawing on participants from

Morocco. Moroccan participants tended to make higher claim (i.e., show more dishonest behaviour) than participants from western societies, but dishonest behaviour was strongly influenced by a country-level index based on corruption, tax evasion, and fraudulent politics. No study so far has investigated honesty experimentally in Saudi Arabia.

Based on the existing scarce research, we predicted that particularly moral judgment in the fairness domain should be positively related to honesty. Furthermore, the study by Bersoff (1999) indicated that in experimental conditions where the negative outcomes of dishonest behaviour for an actual person were emphasized, participants cheated less. Thus, moral judgment in the harm foundation might be positively related to honesty. Studies on the relationship between moral identity and immoral behaviour are rare. Following the results of Study 1 and based on theoretical assumptions of moral identity theory, we explored whether moral identity would mediate the relationship between moral judgment in the five moral foundations and dishonesty. We know of no study that assessed (dis)honesty experimentally in Saudi Arabia nor, indeed, investigated the role of moral variables. However, if Triandis's (1995) suggestion is correct, then participants from the UK should cheat less in the experimental task used in this study (i.e., an interaction between strangers) than Saudi participants. Furthermore, it is possible that moral judgments in the different foundations affect honest behaviour differently in Saudi Arabia and the UK. Since honesty is particularly important to keep good and close relationships in collectivistic countries (see Triandis, 1995), moral judgment in the binding foundations ingroup, authority, and purity might be more predictive for honest behaviour among Saudi than UK participants.

Method:

Participants

The study comprised 101 participants, all aged 18 years or older. The Saudi sample consisted of 53 participants ($M_{Age} = 23$ years, $SD = 2.82$, 12 females, 41 males) and were marginally older than the British sample who consisted of 48 participants ($M_{Age} = 21$ years, $SD = 6.68$, 37 females, 11 males), $t(99) = 1.89$, $p = .061$. Furthermore, the distribution of males and females significantly differed in the two samples, $X^2(2) = 30.92$, $p < .01$.

Procedure

The study was approved by XXX University's Ethics Committee. In the UK, participants were recruited through the University's participant pool which mainly contains students. In Saudi Arabia, participants were recruited by approaching students on campus. Those who agreed to participate were then invited to the lab.

Participants were presented with a brief of the study and were informed about the anonymity of their data as well as their right to withdraw, after which they had to sign the consent form to participate. The experiment started with the first honesty task, then participants were presented with a filler item, before being engaged with another version of the honesty task. Afterwards, participants were asked to fill in some demographic information and two questionnaires (moral judgment, moral identity) in counterbalanced order. At the end, participants were presented with a debrief and were paid a show-up fee as well as the money they gained in the honesty task. The whole study took no longer than 45 minutes.

Measures:

Demographic information. Participants were asked to report their age, gender, and nationality.

Behavioural test of honesty (Ganis, 2017). In this task, participants are presented with 8 (honesty task 1) or and 6 (honesty task 2) simple graphs. Their task was to try and reproduce these graphs without lifting their pen or retracing the same lines. Four (honesty task 1) or three (honesty task 2) of these graphs could be reproduced/drawn without lifting the pen (“doable graphs”); four/three graphs could not be drawn without lifting the pen (“non-doable graphs”). Figure xx gives an example of a doable and non-doable graph.

For honesty task 1, participants were presented with four doable and four non-doable graphs and were given a time limit of 5 minutes to reproduce as many graphs as possible without lifting the pen on a piece of paper. After the 5 minutes, participants were asked how many graphs they managed to reproduce without lifting their pen. For every graph participants reported to reproduce without lifting the pen, they were paid £0.50 or SR 4. For example, if a participant reported to have reproduced three graphs, s/he was paid £1.50 (in addition to the show-up fee). Because only four graphs in honesty task 1 were doable, if participants indicated to able to reproduce five or more graphs without lifting the pen, this was taken as an indication of dishonesty.

The procedure of honesty task 2 (presented after a filler task) was the same with the difference that participants were now presented with six graphs, three doable, three non-doable and a time-limit of 4 minutes. Participants were again paid £0.50/SR4 wor every graph they reported as doable.

Filler task: Alternative Uses Test of Creativity (version developed by Mohamed, 2014). In this test, participants were given words of common objects (e.g., shoe, button, key, tire, barrel, pencil), and they had to develop novel uses for these objects. The test was timed (maximum time 10 mins), and participants’ solutions were coded for originality, fluency, flexibility, and elaboration, in line

with the criteria developed by Mohamed (2014). Because this task was only used as a filler between the two honesty tasks, results are not analysed here.

Moral judgment: Moral Foundations Sacredness Scale (MFSS) (Graham & Haidt, 2012).

MFSS was used to determine participants' willingness to violate moral norms in exchange for money. This 20-item questionnaire measures respondents' willingness to engage in taboo trade-offs such as kicking a dog in the head (harm/care) or renouncing ones' citizenship ingroup/(loyalty) for money. These violations (situations) focus on judgment of third-party moral violations. Participants indicate how much money they would have to pay you, to be willing to do each thing. On a scale of 8 points \$0 (doing it for free), \$10, \$100, \$1000, \$10000, \$100000, a million dollars, and never for any amount of money. Five scores were derived: Harm ($\alpha=.68$), fairness ($\alpha=.43$), ingroup ($\alpha=.57$), authority ($\alpha=.68$), and purity ($\alpha=.43$). Higher scores indicate more "sacred" values on this foundation.

The Good Self-Assessment Scale (Barriga et al., 2001) was used to measure moral identity, as in Study 1. Two scores were derived: personal moral values ($\alpha=.73$), and personal non moral values ($\alpha=.62$). A moral identity score was derived by subtracting the non-moral values score from the moral values score.

Results

Cross-cultural differences

A repeated-measures Analysis of Variance (ANOVA) with the within-subject variable moral judgment (harm/care, fairness/reciprocity, ingroup/loyalty, authority/respect, purity/sanctity) and the between-subject variable culture revealed a significant main effect of Moral Judgment, $F(4, 99) = 50.55, p < .01, \eta^2 = .34$. Pairwise comparisons (with Bonferroni corrections) showed that across cultures moral judgments in the harm/care foundation differed significantly from all other foundations (all $ps < .001$), except moral judgment in the purity/sanctity foundation. Moral judgment in the fairness/reciprocity and ingroup/respect foundations did not significantly differ, but moral judgment in authority/respect was significantly lower ($p < .001$). The ANOVA also showed a significant main effect of Culture, $F(1, 99) = 43.17, p < .01, \eta^2 = .30$, indicating that across foundations Saudi participants reported higher levels of moral judgment.

These main effects were qualified by a significant Moral Judgment x Culture interaction, $F(4, 99) = 35.33, p < .01, \eta^2 = .26$. Separate repeated-measures ANOVAS for each culture indicated a significant main effect of Moral Judgment in the Saudi sample, $F(4, 52) = 7.31, p < .01, \eta^2 = .12$. Level of moral judgment was significantly higher in the ingroup/loyalty and purity/sanctity foundations than in all other foundations (Table 4). In the UK sample, a significant

main effect of Moral Judgment emerged, $F(4, 47) = 77.09, p < .01, \eta^2 = .62$. Level of moral judgment was significantly higher in the harm/care than in all other foundations. Moral judgment in the fairness/reciprocity foundation was significantly higher than in the ingroup/loyalty and authority/respect foundations, but did not differ from the purity foundation. Moral judgment in the ingroup/loyalty foundation was significantly higher than in the authority foundation, but did not differ from the purity foundation (Table 4).

UK participants exhibited higher levels of moral identity than Saudi participants, $t(85.99) = 3.76, p < .001$ (Table 4).

For each honesty task, we calculated whether participants claimed to be able to do four or less (in honesty task 1) or three or less in (honesty task 2) graphs, which would indicate honesty. In honesty task 1, 6 (11%) Saudi and 6 (13%) UK participants claimed to be able to do more than 4 graphs and thus displayed dishonest behaviour. In honesty task 2, 10 (19%) Saudi and 2 (4%) UK participants displayed dishonest behaviour. Dishonest behaviour across tasks was significantly correlated, Cramer's $V(102) = .32, p = .001$. We created an overall dishonesty variable with scores of 2 (dishonest behaviour in both tasks), 1 (dishonest behaviour in one task), and 0 (no dishonest behaviour). Mean dishonesty scores can be seen in Table 4. No cross-cultural differences in dishonesty were found, $t(93.68) = 1.30, p = .20$.

Relationship between moral judgment, moral identity, and moral behaviour

Moral judgments in the harm/care and fairness/reciprocity significantly correlated with each other, as did the moral judgments in the ingroup/loyalty, authority/respect, and purity/sanctity foundations (Table 5). Moral judgments did not significantly correlate with dishonesty, and neither did moral identity.

A linear regression analysis was conducted to examine the relationship between dishonesty and potential predictors. At Step 1, culture entered into the model. At Step 2, the mean-centred moral judgment in the five moral foundations and mean-centred moral sensitivity were additionally entered. At Step 3, the interactions between the mean-centred moral judgments in the five moral foundations and culture and the interaction between the mean-centred moral sensitivity and culture were additionally added. As can be seen in Table 6, none of the independent variables predicted dishonesty at Step 1 or at Step 2. However, at Step 3, the interactions between Moral judgment: Harm x Culture and Moral judgment: Authority x Culture significantly predicted dishonesty. These significant interactions were followed up with simple-slope analyses. Concerning the Harm x Culture interaction, Figure 2a shows that in Saudi Arabia, dishonesty significantly increased the more participants endorsed the Harm moral foundation, $\beta = .16, t(97) = 2.00, p = .05$. In the UK,

dishonesty decreased, the more participants endorsed the Harm moral foundation, $\beta = -.23$, $t(97) = -2.37$, $p = .02$. Concerning the Authority x Culture interaction, Figure 2b indicates that among those low in endorsing the authority foundation, dishonesty was higher in Saudi Arabia than the UK. Among UK participants, there was no difference in dishonesty among those low or high in the endorsement of authority, $\beta = .05$, $t(97) = .71$, $p = .48$. However, among Saudi participants, those high in the endorsement of authority were significantly less dishonest than those low in the endorsement of authority, $\beta = -.19$, $t(97) = -2.45$, $p = .02$.

Moderated mediation of dishonesty

We examined whether moral sensitivity mediated the relationship between moral judgment in five moral foundations (harm, fairness, ingroup, authority, and purity) and dishonesty. Furthermore, given the cultural differences we found in participants' moral judgments and moral sensitivity, Culture was entered as a moderator, moderating the relationship between moral judgment and dishonesty and moral sensitivity and dishonesty. An overview of the conceptual model for this analysis as well as the regression paths analysed is shown in Figure 3. A moderated-mediation analysis was run in PROCESS (Hayes, 2013) using a bias-corrected bootstrap approach (1000 bootstraps) to calculate 95% confidence intervals (CI). If the 95% CI limits do not include zero, the effect is interpreted as being significantly different from zero.

Results indicate that moral sensitivity did not mediate the relationship between moral judgment in any of the five moral domains and dishonesty. Some of the moderations reached statistical significance, but these findings were generally in line with the regression analysis reported in Table 6. Full results of the moderated mediation can be found in Table 7.

Discussion

The main goal of Study 2 was to assess the relationship between moral judgment in the five moral foundations, moral identity, and (dis)honesty in Saudi Arabia and the UK. To that end, we employed a new behavioural honesty task that was conceptually similar to matrix games (see Mazar et al., 2008). Participants were asked to reproduce 8 (in the first honesty task) or 6 figures (in the second honesty task) without lifting their pen or retracing the same lines. Four (first task) or three (second task) of these graphs could have been reproduced/ drawn without lifting the pen ("doable graphs"); four/three graphs were not do-able without lifting the pen ("non-doable graphs"). Even though dishonesty (i.e., reporting more graphs as doable than there were actual doable graphs) was financially valuable to participants, on average dishonesty was not very common. While there was a slight tendency for Saudi participants to deceive more than UK participants, this difference was not statistically significant.

According to the meta-analysis by Gerlach (2017), the vast majority of behavioural experimental research on dishonesty has been conducted in North America, Western Europe, or Israel, and no study has employed matrix games or similar honesty tasks in an Arab culture. Our results in the second study Triandis (1995) suggested that being honest when dealing with strangers might be more appreciated in individualist countries, such as UK, while having good relationships are more important in collectivist countries, such as Saudi Arabia. According to this hypothesis, we might expect UK participants to be more honest in the experimental task (an interaction between strangers) than Saudi participants, but this expectation was not supported by the data. Previous research (e.g., Gino et al., 2010, 2013; Mazar et al., 2008) and meta-analysis (e.g., Abeler et al., 2016; Gerlach, 2017) showed that (dis)honest behaviour is easily affected by situational factors, such as primes (e.g. moral v. non-moral), the investigative setting (e.g., field v. lab experiment), and the payoffs that can be gained. We did not systematically vary these factors in the current study. It might be, for example, that the payoff used was of a different value in Saudi Arabia and the UK. Future research might want to systematically modify these conditions to explore the boundary conditions of dis(honest) behaviour in a non-Western, Arab culture.

Study 2 found cultural differences in moral judgment, even though they were not as straightforward as the one reported in Study 1 and in previous researches (Alqahtani, 2018, & Graham et al., 2011). UK participants endorsed the harm/care foundation significantly more than all other foundations, followed by the fairness/reciprocity foundation and the purity/sanctity foundation. The ingroup/loyalty and authority/respect foundations were endorsed less than all other foundations among UK participants. Among the Saudi participants, the binding foundations of ingroup/loyalty and purity/sanctity were endorsed significantly more than all other foundations. It should be noted that Study 2 used a different measure to assess foundation-specific moral judgment than Study 1 and Graham et al. (2011). Thus, the differences in cross-cultural effects found across the two studies might be due to the different instruments employed. Our results are in contrast to Teo and Chan-Serafin study (2013). They found that that members of an organization who are high in binding foundations (ingroup, authority, purity) and low in individualising foundations (harm, justice) were more willing to engage in unethical actions to profit their organization.

In Study 2 deception was not predicted or correlated significantly with any of the five foundation-specific moral judgments across both cultural samples. However, culture moderated the relationship between dishonesty and moral judgment in some of the moral foundations. In the UK, moral judgment in the harm foundation correlated negatively with dishonesty: Those who strongly endorsed moral judgments in the harm foundation were more honest than those with a low

endorsement of the harm foundation. This finding is in line with those of Bersoff (1999) who showed that emphasizing the negative outcomes of cheating for another person decreases dishonesty. Interestingly, in Saudi Arabia, the opposite relationship was found: Those who highly endorsed the harm moral foundation were less honest than those with a low endorsement of harm. This result is not easily explained without knowing how participants conceptualized the experimental situation. It might be that the situational framing of the dishonesty task was different for Saudi and UK participants, and that this different frame influenced participants' behaviour. Again, replicating some of the experimental condition employed in honesty tasks in western cultures might shed some light on this question.

Culture also moderated the relationship between moral judgment in the authority foundation and (dis)honesty. While among UK participants there was no difference in dishonesty between those low and high in authority endorsement, among Saudi participants those who endorsed authority moral judgments more cheated significantly less. As discussed above, in collectivistic societies honesty is regarded more important in close personal relationships than in relationships among strangers (Triandis, 1995). Moreover, Saudi Arabia might be a more vertical society than the UK with steeper social hierarchies and higher power distance scores. Thus, deference to authority and the endorsements of such values might be more indicative for moral behaviour in Saudi than in UK culture.

According to Blasi (2005), moral judgments influence moral behaviour through moral identity. Moral judgment should be personalised and personally important in order to influence moral behaviour. While study 2 replicated the findings from Study 1 that UK participants were higher in moral sensitivity than Saudi participants, moral identity did not mediate the relationship between moral judgments and dishonesty. Thus, honest behaviour might be not central to our participants' self-concept in the current study. According to Bersoff (1999), in situations that involve small acts of social violation individuals usually deviate the moral consequences of their wanted behavioural reaction and behave in opposite way to these motivations.

General Discussion

The main goal of the current set of studies was to investigate moral functioning in Saudi and UK adults. Specifically, we focused on cross-cultural differences in the relationship between moral behaviour, moral judgment, and moral identity. Following moral foundations theory, we found that Saudi participants tended to endorse moral judgments related to the binding moral foundations more strongly than UK adults. While religiosity was not directly measured in the current studies, it is likely that the strong focus Islam places on integrity, good manners, self-control, and chastity

(Halstead, 2007), values associated with the binding foundations, underlies this cultural difference. Future research might want to focus more directly with the relationship between religious beliefs and expressions in different cultural contexts and their relationships with moral functioning. For example, McAdams, Albaugh, Farber, Daniels, Lofan, and Olson (2008) found that the moral narratives of highly religious Christian US adults emphasized respect for social hierarchies, ingroup loyalty, and self-discipline and sanctity of the self, that is moral intuitions related to the binding foundations. It would be fruitful to conduct such in-depth qualitative studies with believers of other faiths.

Studies 1 and 2 found different relationships between moral behaviour, moral judgment, and moral identity. As discussed above, giving to charity (Study 1) is an imperfect moral duty for which people have some sort of choice as to whether and towards whom they want to fulfil it. In contrast, honesty (Study 2) is a negative moral duty that we owe to everybody (see Kant, 1785). It might be that moral identity, or the personal relevance of a moral duty, might be particularly influential when people have more personal choice or “moral wiggle room” as to whether they implement a moral behaviour or not. Indeed, much of the research on the relationship between moral identity and behaviour has focused on positive moral duties or prosocial behaviours specifically. Johnston and Krettenauer (2011) found that moral self-importance (i.e., moral identity) served as mediator when predicting prosocial but not anti-social behaviour in adolescents. Whether having a moral choice is the one of the underlying factors for this effect should be studied in future research.

Although the study has reached its goals and brought to light some interesting findings regarding moral functioning in two different cultures, it naturally has limitations. First, the data were not from representative samples as participants in the present study were university students in both samples. Thus, particularly the Saudi student sample might be more educated and more secular than the general population in this society. Second, lack of prior studies on moral functioning in the Middle East made it hard to make specific predictions. More studies are needed on moral foundation theory in the Middle Eastern region. Third, some of the measures used in this study to collect data were designed in western cultures and applied in western and non-western cultures for the lack of measures designed for non-western populations. This applies particularly to the moral identity measure was not used in previous studies with Middle Eastern samples. Even though the current study successfully operationalized moral behaviour in two different cultures, other measures of moral behaviour and moral identity should be used in future research to replicate and support the existing findings. All of these measures will help in understanding the cross-cultural similarities and differences in moral behaviour and functioning.

Recommendation

Future research on dishonest behaviour should focus on different experimental settings such as task types, payment style, and culture of the sample to explore the boundary conditions of dishonest behaviour in non-Western cultures. In general, more studies encompassing different ranges of moral identity measures and moral behaviour measures worth exploring in future research.

Future research should employ different types of moral behaviours. In our study, different moral behaviours generated different results.

Throughout this paper I referred to religiosity as potential explanatory variable, which could be included in future research. Number of religiosity measures could be included in future study in addition to measures of values and moral behaviour.

To get unbiased results, future research should recruit more general sample as this study depended on students.

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