

**The motivation and inhibition of breaking the rules:
Personal values structures predict unethicity**

Gilad Feldman

Department of Psychology

University of Illinois at Urbana Champaign

603 East Daniel St., Champaign, IL 61820

gfeldman@illinois.edu ; +1-217-819-7850

Melody M Chao

Department of Management

Hong Kong University of Science and Technology

mchao@ust.hk

Jiing-Lih Farh

Department of Management

Hong Kong University of Science and Technology

mnlfarh@ust.hk

Anat Bardi

Department of Psychology

Royal Holloway University of London

Anat.Bardi@rhul.ac.uk

This manuscript version is made available under the CC-BYNC-ND 4.0 license. The publisher's version is available on: [http://ac.els-cdn.com/S0092656615300155/1-s2.0-S0092656615300155-main.pdf?](http://ac.els-cdn.com/S0092656615300155/1-s2.0-S0092656615300155-main.pdf?_tid=9cf0aefc-937e-11e5-895d-00000aab0f6c&acdnat=1448460951_e0f56e69eadba0a509891a6896e1640c)

[_tid=9cf0aefc-937e-11e5-895d-00000aab0f6c&acdnat=1448460951_e0f56e69eadba0a509891a6896e1640c](http://ac.els-cdn.com/S0092656615300155/1-s2.0-S0092656615300155-main.pdf?_tid=9cf0aefc-937e-11e5-895d-00000aab0f6c&acdnat=1448460951_e0f56e69eadba0a509891a6896e1640c)

Acknowledgements

We would like to thank David Stillwell and Michal Kosinski for access and guidance regarding the myPersonality project data and to Ravi Iyer for access and guidance regarding the YourMorals project data.

The work described in this article was supported by a grant from the Research Grants Council of the Hong Kong Special Administrative Region, China (Project 641311) awarded to Jiing-Lih Farh.

Highlights

- Three studies (N=107,087) tested personal values as motivations for unethicity
- Personal values followed a theorized sinusoidal relationship with unethicity
- Self-enhancement values: high unethicity; Conservation values: low unethicity
- Self-transcendence values: low unethicity with prosocial/harm considerations
- Openness-to-change values: motivated unethicity, dependent on context

Abstract

We theorized and tested the relationship of personal value systems with unethical attitudes and behavior. Results from three studies using 16 diverse multi-national samples (N = 107,087) demonstrated the complexity of motivations underlying unethicality. Across contexts and cultures, for attitudes (Study 1 meta-analysis) and behaviors in the lab (Study 2) and in real-life (Study 3), we consistently found that the values theory circumplex structure predicted the inhibition and motivation of unethicality. Unethicality was positively associated with self-enhancement values and negatively associated with self-transcendence and conservation values. However, self-transcendence and conservation values were associated with the inhibition of different types of unethicality. The relationship of openness-to-change values with unethicality was generally positive but the effect size varied depending on context.

Keywords : Personal values; basic motivations; unethicality; unethical behavior; values circumplex

Word count: Abstract - 119; Manuscript - 7635

**The motivation and inhibition of breaking the rules:
Personal values structures predict unethicality**

What drives people to act unethically? What drives people to inhibit unethicality? Recent ethics scandals in business and academia have highlighted the importance of understanding the motivations underlying unethical behavior (Kish-Gephart, Harrison, & Treviño, 2010; Tenbrunsel & Smith-Crowe, 2008; Treviño, Weaver, & Reynolds, 2006; Pulfrey & Butera, 2013). A common reaction to these scandals is that such behavior is due to failing moral standards caused by lack of values, calling societies and organizations to promote values that would reduce such behavior (e.g., Zahra, Priem, & Rasheed, 2005). Yet, despite this intuition that values would serve a critical role in motivating ethical decision making and behavior, there are important theoretical gaps in the understanding of how personal values are associated with ethics and whether some values are more desirable in inhibiting unethicality than others, and under what circumstances.

The current investigation addresses these concerns by examining the motivational basis of unethicality using the theory of personal values (Schwartz, 1992) - long term desirable goals that reflect what is important to people in their lives. Values are especially relevant for morality and ethics as they guide one's identity and help shape one's self in reference to others (Hitlin & Piliavin, 2004). The values theory highlights a universally recognized and interrelated circumplex structure of inter-related values on two orthogonal bipolar dimensions - self-enhancement versus self-transcendence and openness-to-change versus conservation (explained in detail below; Schwartz, 2011). The values circumplex structure enables the understanding of

motivational tensions underlying unethical attitudes and behavior. Using this theory, we examine the underlying long-term motivations associated with unethicality and suggest that personal values and their overarching circumplex structure are meaningfully related to and predictive of unethicality. Previous literature examining the relationship between personal values and unethicality has mostly focused on the relationship between individual values categories (e.g., achievement or self-enhancement) and under specific contexts (specific cultures or domains) resulting in mixed findings and inconsistent results (discussed below). We aim to extend previous literature by theorizing how the personal values circumplex structure, which encompasses universally recognized personal values and highlights the tensions between them, can serve as a theoretical basis for understanding the motivational tensions driving and inhibiting unethicality. Although ethics are generally considered contextual and culturally bound (Cullen, Parboteeah, & Hoegl, 2004; Haidt, 2001, 2008; Sverdlik, Roccas, & Sagiv, 2012), we further aim to demonstrate that the universal structure of personal values predicts unethicality across demographics and cultures, suggesting that cultural differences in the endorsement of values can explain cultural differences in ethicality.

We conducted three studies to examine the predictive powers of the personal values structure for unethicality, offering the following contributions: First, we examine the values-unethicality link for both unethicality attitudes (Study 1) and actual unethical behavior (Study 2), with a first demonstration of the relationship in naturalistic behavior on Facebook (Study 3). Second, rather than focusing on a single value category, we examine values structures as a whole, showing a consistent theoretically driven sinusoidal relationship between values in the circumplex structure and unethicality. Finally, although ethical norms and morality are often regarded as complex notions that are dependent on personal views, culture, and context, we

demonstrate effects that extend across unethicality measures, sample characteristics, and cultures, and are therefore strikingly generalizable.

Unethicality

By *unethicality* we refer to both the intentions to engage, the attitudes towards, and the actual participation in behaviors that violate widely accepted social ethical norms (Rest & Barnett, 1986). Such behaviors may include lying (dishonesty), deceit, cheating, stealing, sabotage, and bribery as active behaviors, as well as behaviors that may appear less active such as concealment of others' misconduct and violation of laws or prevalent moral codes through inaction.

There has been growing interest in research examining determinants of unethicality with hundreds of studies in the last two decades, yet recent comprehensive reviews (O'Fallon & Butterfield, 2005; Tenbrunsel & Smith-Crowe, 2008; Trevino et al., 2006) and meta-analyses (Kish-Gephart et al., 2010; Pan & Sparks, 2012) have revealed several important conceptual and empirical gaps in the literature. Kish-Gephart et al. (2010) reviewed 30 years of behavioral ethics and highlighted several important directions, calling for an overarching organizing theory that would help gain a better understanding of the underlying motivations that drive or inhibit unethical behavior and calling for studies with diverse methodology across samples. Trevino et al. (2006) recognized an over-emphasis of cognitive aspects over motivational drives in behavioral ethics research and have called for further research that would combine theory development with methodological rigor into this relatively neglected area of study.

Personal Values

To address calls in the ethics literature we examine the role of basic motivations – personal values. Personal values are abstract long-term motivational goals reflecting desirable

guiding principles and beliefs of what the person considers important in life (e.g., status, fairness; Schwartz, 1992). Values are considered central to the self, stable, enduring, universal, and transsituational (Rokeach, 1973; Schwartz & Bilsky, 1987, 1990). The most widely used theory of personal values (Schwartz, 1992) groups personal values into ten categories of universal meaning that show consistent structure of relationships along two bi-polar dimensions on a two-dimensional circular model – self enhancement (power, achievement, and sometimes hedonism) versus self-transcendence (benevolence, universalism) and openness to change (self-direction, stimulation, and sometimes hedonism) versus conservation (tradition, security, conformity). The relationship between different values follows a universally consistent circumplex pattern where values that share a motivation, and are therefore more likely to be closer in level of importance, appear closer on the circumplex (see Figure 1). Values appearing opposite to each other on the circumplex reflect tension between two opposing motivations. This theoretical conceptualization of values regards values as a system rather than as disconnected singular values (Schwartz, 1992, 1996) and has found consistent empirical support across over 75 countries around the world (Schwartz, 2011).

Personal values are transsituational and relatively stable motivational constructs and therefore differ from specific and more contextual goals (Maio, 2010). Values are considered inherently desirable representations of social cognitions that are generally accessible and quite easily articulated or discussed (for a discussion of the differences between personal values, attitudes, goals, needs, and traits, see Maio, 2010; Roccas, Sagiv, Schwartz & Knafo, 2002). The importance of one's values to the self suggests that values should be reflected in behavior and choices made in life (Lewin, 1951). Although values are abstract concepts, there is ample evidence that personal values play a significant role in people's attitudes, decision making

processes, and everyday life behaviors. This suggests that people who endorse certain values have stronger motivations to act on these values and thus tend to pursue behaviors that express these values (Bardi & Schwartz, 2003; Hitlin & Piliavin, 2004; Roccas & Sagiv, 2010).

Personal values and unethicality

Values are especially important in the cases of morality and ethics and their related behaviors as they are an internalization of social outlook which guides one's identity and shapes one's self in reference to others (Hitlin & Piliavin, 2004). Values form the basis for what constitutes legitimate behavior leading to the formation of moral perceptions and attitudes that may drive decisions to act or constrain action. Values are often ideals which people use to morally justify their actions to the self or articulate their moral beliefs, identity, and reasoning to their surroundings (Hitlin, 2011). Moreover, values and moral principles are both abstract guides of desirable and positive long term goals that transcend specific circumstances (Sverdlik, Roccas, & Sagiv, 2012).

Until recently, studies examining the relationship between specific values and unethicality have shown very mixed findings and limited support (see supplementary materials for a summary of studies). For example, the link between achievement values and unethicality has been shown as both positive (Pulfrey & Butera, 2013; Watson, Berkley, & Papamarcos, 2008) and negative (Glover, Bumpus, Logan, & Ciesla, 1997), with some studies finding conservation values to be negatively related to unethicality (Watson & Berkley, 2009), some showing mixed findings (Steenhaut & van Kenhove, 2006, one of four categories), while others do not find an effect at all (Fritzsche & Oz, 2007; Pulfrey & Butera, 2013). These mixed results may be attributed in part to the conceptualization of values (only 5 out of 17 studies employ the Schwartz personal values theory), the specific context or sample investigated, or methodological

issues (e.g., single item scenario measures, etc.). Importantly, few studies thus far have addressed the values circumplex structure as a whole and empirically tested their relationship across social contexts.

The circumplex structure of personal values and the inherent conflict between values at the opposite ends of a dimension means that the promotion of certain value-expressive behaviors in a certain direction comes at the expense of value-expressive behaviors in the other direction (Bardi & Schwartz, 2003; Frimer & Walker, 2009; Schwartz, 1996). For example, in line with the values theory, it has been argued that the promotion of capitalist values emphasizing self-interest, a desire for personal financial success and competition between people, comes at the expense of more universalistic values that cultivate interpersonal relationships and helping behavior (Grant & Patil, 2012; Kasser, Cohn, Kanner, & Ryan, 2007). Therefore, the tension between conflicting interpretations of value-related behaviors is an integral part of the values circumplex structure (Tetlock, 1986). An action that reflects one value may violate values that are positioned on the opposing side of the bi-polar dimensions, meaning that any value-motivated behavior entails a trade-off between competing values. Therefore, the positive and negative association with the different values would depend on their location in the values structure circumplex (Schwartz, 2010). As discussed below, unethicality and related behaviors may serve as an example for such inherent conflict between different personal values.

Present investigation and hypotheses

To develop hypotheses regarding the relationship between values and unethicality, we begin by presenting an overview of each bipolar value dimensions and their underlying values components. We then proceed to integrate the literature into a value system based model of unethicality.

Self-enhancement values emphasize the promotion of self over others. They include the personal values of power, achievement, and sometimes hedonism¹. Power values express the importance and pursuit of control or dominance over resources and others, while achievement values highlight the pursuit of personal success according to social standards in a competitive environment (Schwartz, 2010). Self-enhancement values express the wish to promote selfish interests, even at the expense of others, thereby suggesting that a person endorsing achievement and power will be more likely to act with little consideration of society's ethical or moral codes. The behavioural ethics literature has shown that the concepts of power and wealth and the pursuit of achievement goals result in higher unethicality (e.g., Pulfrey & Butera, 2013; see supplementary materials Table 2 for list of studies), and based on these findings we theorize that self-enhancement values would predict higher unethicality². On the other side of the values circumplex and in contrast to self-enhancement values is self-transcendence. Self-transcendence promotes the interests of others with the personal values of universalism and benevolence. These values express the motivations for empathy, justice, and fairness towards others (Grant, 2007, 2008) and therefore tend to have a negative relationship with unethicality that involves harm to others (Schwartz, 2007; Sverdlik, Roccas, & Sagiv, 2012). Previous findings have shown

¹ *Hedonism* is sometimes grouped with *self-enhancement* and sometimes with *openness to change* depending on theoretical implications. To make theorizing clear, we focus only on *power* and *achievement* in self-enhancement.

² We note that there are important differences between possessing power and valuing power, as for example, a person can be a member of a relatively low social class (low power) yet still value power (high power values) and a person from higher social class (high power) can value universalism more than power (low power values; see Piurko, Schwartz, & Davidov, 2011 as an example of an in-depth discussion on the effects of this distinction for political voting). Similarly, studies examining the effects of achievement goals on unethicality have mainly focused on short-term goals and tend to compare different types of achievement goals (e.g., mastery versus performance, see Van Yperen, Hamstra & van der Klauw, 2011), rather than to examine the centrality of achievement values in one's life and the importance one puts on achievement as compared to other values in the values circumplex (Grant & Shin, 2011; with Pulfrey & Butera, 2013, being an exception).

benevolent ideals as important factors in the morality of people and organizations (e.g., Kish-Gephart, Harrison, & Treviño, 2010).

Orthogonal to self enhancement versus self transcendence on the values circumplex is the contrast between openness to change and conservation values. Conservation values, which include tradition, security, and conformity values, express the motivation for self-discipline, guiding the person to overcome one's immediate desires in order to either conform to society, rules, norms, and traditions or to avoid danger. Conservation values motivate self-control, and self-control has been shown to reduce unethical behavior (e.g., Gino, Schweitzer, Mead, & Ariely, 2001). Furthermore, conservation values may inhibit antisocial behavior by increasing attention to the prevalent norms and the possible penalties for norm violation, as well as increasing motivation to belong to social circles thereby motivating the adherence to their set norms (Schwartz, 2007, 2010). In contrast to conservation values, openness-to-change values express openness in thought and action and include stimulation and self-direction values aimed to promote the interests of the individual (Schwartz, 1992). Of all the value dimensions this is the least straight-forward in its relationship with unethicality, though there are studies suggesting that people who pursue such motivations may be inclined to act in a more unethical manner (e.g., Gino & Ariely, 2012)³. Theoretically, there should not be an inherent motivation to behave unethically in openness to change values, although the aspect of having a free spirit embedded in openness to change values may lead to lowered adherence to rules in general. This may be particularly the case when the person does not agree with the rule, as openness to change values

³ Importantly, these studies have mostly looked at self-direction and stimulation as traits rather than long-term motivational goals, hence they do not clearly reflect motivations but can be seen as a mixture of recurrent patterns of behavior, thought, and affect (for a discussion of the differences between values and traits see Parks-Leduc, Feldman, & Bardi, 2014 and Roccas et al., 2002).

include the element of independent thinking. Therefore, the relationship of openness to change values to unethicality may be context-dependent; People who value openness to change may behave unethically when the expected ethical behavior limits their freedom to engage in a desired action and they do not agree with the rule. However, in all other cases they are not prone to behave unethically.

Based on the conceptual links between unethicality and the different value dimensions, we regard self-enhancement as having the strongest and clearest theoretical link to unethicality, with the opposing self-transcendence serving more as a motivation to prevent harm to others than a drive towards action. Conservation values also hold a similar theoretical link to unethicality in serving as driving a self-regulation motivation, overcoming one self to follow norms. Openness to change values are less clear in how they might motivate unethicality and they might motivate unethicality only under certain circumstances. We therefore expect that self enhancement values would have a strong positive relationship with unethicality, while self-transcendence and conservation values would show a negative relationship with unethicality. Figure 2 summarizes our theoretical model.

The values theory (Schwartz, 1992) highlights the importance of examining complete value systems over the analysis of isolated values when examining attitudes and behavior. The key to this is in the idea that “values do not function in isolation from one another but as systems” (Schwartz, 1996, p.6). According to Schwartz (1992; 1996), any variable that should be positively related to one value should have a coherent pattern of relationships with the entire value system. Specifically, it should also be negatively related to the values that stem from a conflicting motivation, and its correlations with the ten values should change monotonously as one moves around the circle, such that the most positive correlation should be with the value that

is postulated to motivate the other variable, and the correlations should become less and less positive as one moves around the circle until they become negative with the conflicting motivation. This creates a pattern of correlations that forms a sinus shape and is termed *sinusoidal relations*. Indeed, Schwartz (1996) demonstrated such patterns of empirical correlations. We expect to find such a sinusoidal pattern of correlations also between the system of values and unethicality, such that self-enhancement values would show the strongest positive relationship, with a decline through openness to change values and a negative relationship with the self-transcendence and conservation values.

The relationship between value structures and unethicality offers a unique challenge in cross-cultural settings. Though issues of morality and ethics may be argued to be culturally and perhaps even contextually bound (Haidt, 2001, 2008; Sverdlik, Roccas, & Sagiv, 2012), we propose that the basic links between values and unethicality are consistent across cultures because the basic conflicts and congruities among values are universal. Hence, although self-enhancement values and unethical conduct may be more prevalent in some cultures (e.g., North American, see, e.g., Schwartz, 2004) and in some contexts (e.g., business, see, e.g., Knafo & Sagiv, 2004), the links between values and unethicality would be consistent across cultures. This is because self-enhancement values tend to motivate unethical conduct due to their emphasis on promoting the self at the expenses of others. Similarly, self-transcendence values tend to motivate people to reject unethical attitudes and conduct due to their emphasis on overcoming selfishness and considering the well-being of others (benevolence) as well as promoting fairness and justice (universalism). Finally, conservation values motivate people to avoid unethical conduct due to their emphasis on following rules and avoiding danger. Taken together, we aim to provide evidence that the values-unethicality link extends beyond cultural boundaries.

We subjected the above hypotheses to vigorous tests. In Study 1, we examined how personal value systems are related to unethical attitudes by conducting a meta-analysis of 12 samples using multiple measures of personal values and unethical attitudes. Study 2 extended to testing the relationship between personal values and actual behavior. Finally, in Study 3 we broadened our investigation to examine naturalistic behavior in a large cross-cultural sample of Facebook users.

Study 1: Meta-analysis - Values and unethical attitudes

As mentioned above, previous research produced inconsistent findings of values relations to unethicality. A meta-analysis is particularly useful in such cases to enable providing an overall pattern of findings that extends beyond study design, measures, contexts and cultures. Hence, to examine the relationship between personal values and unethicality attitudes we performed a meta-analysis on 12 different samples from all over the world using diverse values and unethicality measures (N = 105,928).

Table 1 details all samples included in the data collection, with the sample size, country, and the measures used. Of the 12 samples, 10 samples (N = 2,870) were specifically collected for the purpose of this investigation and measured personal values and unethicality attitudes using established scales. The two other samples (N = 103,058) were large archived datasets – the European Social Survey (ESS, round 5, 2010) and the World Values Survey (WVS, 2008) that both included measures of values and self-reported items relating to attitudes of unethicality.

Measures

Personal values. Table 2 summarizes the measures used for assessing personal values with further details provided in the supplementary materials.

Unethicality Attitudes. The different studies in the meta-analysis included different measures of unethicality attitudes. We adapted the Business Ethics Scale developed by Farh, Burton, and Hegarty (1999) to measure individual orientations for business ethics. We chose this scale due to its former successful application in cross cultural samples that included Chinese, Hong Kong, Taiwanese, and American participants. The scale includes 26 one-sentence statements describing behaviors relevant to five categories of business ethics: (a) usurpation of company resources (e.g., "Use company resources for your own purpose"), (b) corporate gamesmanship (e.g., "Claim credit for peer's work"), (c) cheating customers (e.g., "Substitute a cheaper part than the contract calls for if it will work just as well"), (d) concealment of misconduct (e.g., "Not report co-workers' violation of the law"), and (e) offering kickback (e.g., "Offer a potential customer a paid holiday weekend"). We asked participants to evaluate each statement as either personally acceptable or unacceptable behavior on a 5-point Likert scale (1 = *totally unacceptable*; 5 = *totally acceptable*). Since all statements refer to unethical behavior, a high score on the scale indicates that the participant judged the unethical behavior to be acceptable, thus suggesting a higher level of unethicality, whereas a low score indicates a low level of unethicality. This scale was used in samples 1 to 6 and 9.

The ESS dataset included three items describing unethical behavior – "making exaggerated or false insurance claims", "buying stolen goods," and "committing traffic offences." For each of those items, participants were asked to indicate their perception of whether that behavior is wrong (1 = *not wrong at all*; 4 = *seriously wrong*, reverse coded).

The WVS dataset included four items describing unethical behavior – "claiming government benefits to which you are not entitled", "avoiding a fare on public transport", "cheating on taxes if you have a chance", and "someone accepting a bribe in the course of their

duties." For each of those behaviors, participants were asked to rate whether the behavior is justifiable or not (1 = *never justifiable*; 10 = *always justifiable*). For both the ESS and the WVS, the unethicality score was the average of the unethicality items.

Unethical decision making. To measure orientation towards unethical behavior, we administered the Unethical Decision Making Scale (Detert, Treviño, & Sweitzer, 2008) that measures likeliness to engage in unethical behavior. Rather than looking at the acceptability of unethical behaviors, this scale includes short scenarios, each one presenting a situation in which one has an interest to behave unethically. We asked participants to indicate on a seven-point scale (0 = *not at all likely*; 6 = *highly likely*) the likeliness that they will engage in eight unethical behaviors such as stealing office supplies, cheating in an exam, copying licensed software, and resubmitting an old project.

Meta-analysis procedure

We ran a meta-analysis of all 12 samples together (N = 105,928) to measure the overall effects the relationship between the personal values and cheating. The procedure used was based on the Hunter and Schmidt (2004) meta-analytic method, with corrections for unreliability and sampling error (SPSS syntax adjusted from Field & Gillett, 2010). We computed the effect size of the four high-order personal values (self enhancement, self transcendence, etc.) followed by each of 10 underlying types of personal values (power, achievement, etc.).

Meta-analysis results and discussion

Table 3 displays the results of the meta-analysis. Overall, all four high-order values dimensions show a generalizable effect size (80% credibility interval does not include zero) with self-enhancement showing the strongest positive relationship ($\rho = .31$, CI [.27, .35]), a weaker effect for openness to change ($\rho = .20$, CI [.16, .25]), and self-transcendence and conservation

showing the strongest negative relationship ($\rho = -.25$, CI [-.29, -.21] and $\rho = -.26$, CI [-.31, -.22], respectively).

Looking at the underlying values categories, nine of the ten personal values categories demonstrate generalizable effect sizes, with power showing the strongest positive relationship with unethicality ($\rho = .24$, CI [.19, .30]) and conformity showing the strongest negative relationship ($\rho = -.22$, CI [-.30, -.14]). The supplementary materials include further analyses of a moderated meta-analysis with sample type as a moderator.

Figure 3 plots the effect sizes between personal values and unethicality on a graph with values listed on the horizontal axis in order. As expected, the plot pattern shows the sinusoidal patterns predicted by our theorizing. We calculated shape-consistencies based on a method devised specifically for testing sinusoidal patterns of the Schwartz (1992) personal values theory by Boer and Fischer (2013). They defined shape-consistency as the extent to which an observed value correlations patterns map onto a sinusoidal shape emphasizing either the self-enhancement versus self-transcendence dimensions (SET-shape) or the conservation versus openness-to-change dimensions (OC-shape) (effect sizes: 0.4 - weak consistency, 0.6 - moderate consistency, 0.8 - strong consistency). See Figure 4 for the shape consistency equation and Table 4 for the shape consistency calculations and summary of the results.

We first tested the two sinusoidal shapes by Boer and Fischer (2013). The meta-analysis correlations with unethical behavior showed a SET-shape of -0.62 indicating a moderate sinusoidal shape where self-enhancement shows highest unethicality and self-transcendence lowest unethicality and an OC-shape of -0.14 indicating no shape consistency with the conservation versus openness-to-change dimensions. These first suggests that the overall pattern does follow the expected sinusoidal pattern predicted by values theory and that the tension

between self-enhancement and self-transcendence values is more prominent than the tension between openness-to-change and conservation values. We then proceeded to test our theorized sinusoidal pattern in which self-enhancement would show strong positive correlations and both self-transcendence and conservation would show strong negative correlations. The sinusoidal shape consistency was 0.88 indicating very strong consistency⁴.

In summary, a meta-analysis of 12 correlational studies collected from different populations from various parts of the world using a variety of scales and methods generally confirms the predictive power of personal values on unethicality. Self-enhancement values have a positive relationship with unethicality attitudes while self-transcendence and conservation values have a negative relationship with unethicality attitudes.

The relationship between personal values and unethical attitudes was found to be generalizable and quite strong, especially considering that personal values are regarded as high-level abstract notions not often reflected upon in everyday life (see Maio, 2010). Keeping in mind that the meta-analytic effect size is a weighted mean of different samples, the emergence of the sinusoidal pattern of the relationship between personal values and unethicality from the analysis is striking and provides a strong support for the contribution of values theory to the understanding of the basic motivations behind unethicality.

The relationship was stable across sample types, especially so for self-enhancement which was mainly driven by power values, self-transcendence which was mainly driven by universalism, and conservation which was mainly driven by conformity values. The relationship

⁴ Examining the sinusoidal patterns for the large versus the small samples (see supplementary materials), the shape consistency for the small samples was even higher and closer to our hypothesized relationships, indicating a very high fit =.96.

was weaker for the openness to change values dimension, mainly because of the weak effect of self-direction.

We tested for and found no cultural moderators. The consistency of the basic findings across diverse populations and locations suggests that the relationship is universal. This is not a trivial finding considering that morality and ethicality have long been considered to be culturally bound (Haidt, 2001, 2008).

Study 2 - Cheating on Amazon Mechanical Turk

Study 1 established the link between personal values and unethicality attitudes. Though these findings are indicative of actual behaviors, we sought to further verify our findings looking at the personal values circumplex and actual unethical behavior. Study 2 was constructed for that purpose.

Prior to running this study, we ran two small scale pretests on undergraduate samples in Hong Kong using the Gino, Ayal, and Ariely (2009) unethical behavior task ($N_1 = 40$, $N_2 = 32$). The findings reported below are consistent with the findings from both pretests (see supplementary materials for more details regarding the pretests and their results).

The unethical behavior measured in the pretests and the study involved the violation of ethical norms by lying in return for monetary gain. This type of unethical behavior is a clear violation of norms, but it does not entail any directly identifiable harm to others. Conservation values inhibit unethicality related to violation of norms and self-transcendence values inhibit unethicality that involves harm to others, and therefore we expected a stronger effect for conservation values than for self-transcendence values in the inhibition of these unethical behaviors. In this study, the cheating context offered no benefits for those valuing self-direction,

and we therefore did not expect that openness-to-change values would be related to this behavior.

Method

Participants. We recruited participants online using Amazon Mechanical Turk (MTurk) in exchange for US\$0.10. MTurk is the world's biggest online labor market that connects employers (requesters) with workers and provides full and part-time employment for hundreds of thousands of people around the world, mainly from the US and India. Indian workers were previously found to be more sensitive to monetary incentives (Litman, Robinson, & Rosenzweig, 2014), more likely to use MTurk as a main source of income (Mason & Suri, 2012), and more likely to misreport their real location (Shapiro, Chandler & Muller, 2013). A pretest we ran on MTurk using the task below showed only Indian participants as misreporting their location in return for monetary gain. We therefore limited the workers in this study to Indian workers. The sample included 135 Indian workers (47 females; $M_{\text{age}} = 30.90$, $SD_{\text{age}} = 8.89$; see supplementary materials for details about the pretest and a power analysis). Participants were asked about their MTurk work history, completed a personal values scale, and were then presented with an opportunity to lie about their country of residence in return for an additional MTurk bonus (US\$0.02). The low payout and bonus were deliberately chosen as previous literature suggests that most people only cheat a little and tend to do so most when they can justify their behavior in terms of deservingness (Mazar, Amir, & Ariely, 2008). Participants completed a funneling section to probe for possible suspicion regarding the unethical behavior measure.

Measures. *Personal values.* The 21 items version of the Portrait Value Questionnaire (PVQ-21, see Study 1) was used as a measure of personal values.

Unethical behavior. The survey was introduced as being sponsored by a grant from the European Union (EU) research council. The unethical behavior measure question explained that since the grant is supported by the EU the researchers were obligated under EU regulations to pay an additional 20% to EU residents, offered to participants as an MTurk bonus (0.02US\$). An explanation was added regarding survey anonymity and the inability to determine location due to MTurk's global market, proceeded to list the names of all EU countries, and asked participants to indicate whether he/she resided in any of the listed countries. We used the built-in Qualtrics location tracker to verify that the participants were indeed not located at an EU listed country. Cheating behavior was measured as whether the participants indicated they were residing in an EU member country. A funneling section at the end of the survey probed for possible suspicion regarding the cover story.

Results and discussion

Table 5 provides the descriptive statistics and zero-order correlations of all variables. Cheating behavior positively correlated with self-enhancement ($r = .20, p = .021$) and negatively correlated with conservation ($r = -.20, p = .018$). Cheating behavior was analyzed using a logistic regression and revealed a similar pattern (self enhancement: $b = 1.27, Wald = 5.07, p = .024, OR = 3.57$; conservation: $b = -1.16, Wald = 4.64, p = .031, OR = .32$), yet also showed a significant negative effect for openness to change ($b = -.91, Wald = 3.85, p = .05, OR = .40$).

Findings reported generally show that the value circumplex is associated with actual individual-level unethical behavior. Patterns reported in Study 1 for self-enhancement and conservation values extend to actual unethical behavior on a task in an online labor market which resembles a workplace. The correlations were weaker than the effects for unethicality attitudes in Study 1. This is not surprising as it has been well-established that it is difficult for broad

concepts to predict narrow context-specific concepts such as a one-time behavior (Epstein, 1979).

As expected, self-transcendence values did not show an effect as these values are especially relevant in preventing harm from coming to others. The unethical measure in this study (and the matrices task in the pretests) did not involve harm towards anyone specific and possibly involved a sense of deservingness for participation compensation which accounts for the insignificant effect for self-transcendence values.

Openness to change showed a negative relationship with unethical behavior. We previously reasoned that there is no inherent motivation in these values to be unethical but that the free spirited aspect of these values may lead people to sometimes ignore rules. In this task, however, there was no motivation for those with high openness-to-change to cheat. On the contrary, as part of these values is the motivation to engage in challenges and cheating would defeat the purpose of the challenge to prove to themselves that they are perform well on academic surveys and on MTurk overall.

Study 3 - Naturalistic behavior on Facebook

Studies 1 and 2 showed that values are predictive of unethical attitudes and actual unethical behavior. We sought to extend these findings to a naturalistic context, going beyond monetary gains in experimental settings to examine everyday behaviors.

Unethical behaviors violate widely accepted social moral norms. These behaviors are challenging for researchers to observe and code (Hofmann, Wisneski, Brandt, & Skitka, 2014; Piff et al., 2012). In this study, we adopted an indirect linguistic approach to detect dishonesty. The use of language to tap into people's psyche dates back to Freud (1901) who analyzed patients' slips of the tongue and Lacan (1968) who argued that the unconscious manifests itself

in language use. A growing body of literature has since demonstrated that the language that people naturally use in their daily lives can reveal hidden aspects of their personalities, cognitions, and behaviors (Pennebaker, Mehl, & Niederhoffer, 2003). The linguistic approach is especially useful in the case of dishonesty and deception which – though prevalent – is frowned upon when detected and therefore leads those acting dishonestly to try to hide it from others (Hancock, 2007; Markowitz & Hancock, 2014; Toma, Hancock, & Ellison, 2008).

To examine dishonesty in a naturalistic setting we observed behavior on a large social network - Facebook. In recent years, researchers have begun to make use of social network data to gain a better understanding of people's personality characteristics and behavior (Buffardi & Campbell, 2008; Hagger-Johnson, Egan, & Stillwell, 2011; Wang, Kosinski, Stillwell, & Rust, 2012; Weisbuch, Ivcevic, & Ambady, 2009). Facebook status updates are generally personal updates that participants share with their online social network (others approved as "friends") or the general public, and therefore provides an environment where real-life naturalistic behavior can be observed in interactions between people. In this case, the dishonesty we refer to is not necessarily blunt deception in order to exploit or do harm, but rather a distortion of the truth to construe a more socially desirable appearance (Whitty, 2002; Whitty & Gavin, 2001). We therefore adopt Buller and Burgoon's (1996) conceptualization and define dishonesty as the likelihood of "a message knowingly transmitted by a sender to foster a false belief or conclusion by the receiver" (p. 205).

We expected that the effects of values in this study would be weaker due to the crudeness of the measures and the naturalistic, uncontrolled setting. Therefore, we considered this a very conservative test to our theorizing. If this study replicates the hypothesized effects of values, this

would be an important corroborating evidence for the link between personal values and unethical behavior.

Method

Participants and procedure

We recruited participants using the myPersonality Facebook application (Kosinski, Stillwell, & Graepel, 2013). Participants voluntarily chose to use this application and had given their consent and the authorization required for the application to access their online Facebook profiles, including demographic data and the user's status updates (more information about the myPersonality Facebook Application is available on the website: <http://mypersonality.org/wiki/>). We limited our analyses to users who used the English version of Facebook (American or British locale), had more than 50 Facebook status updates indicative of these users as active on Facebook, and who completed the personal values measure. This resulted in a sample of 1,024 participants (603 female, $M_{\text{age}} = 26.18$, $M_{\text{network-size}} = 183.74$). Participants wrote an average of 268.45 status updates ($SD = 254.03$) and 4596.71 words ($SD = 4783.81$; 17.15 words per status).

Measures

Personal values. The measures for personal values used were the Schwartz Values Survey (Schwartz, 1992, see Study 1).

Dishonesty. We analyzed the linguistic style in people's writings on their Facebook statuses to assess their likelihood for having posted deceptive content. More specifically, we adopted Newman and colleagues' approach where they examined 2300 words and 70 linguistic dimensions with the Linguistic Inquiry and Word Count (LIWC) text analysis computer-based program and concluded that dishonest people tended to use fewer first person pronouns (e.g., I, me), fewer third person pronouns (e.g., she, their), fewer exclusive words (e.g., but, exclude),

more motion verbs (e.g., arrive, go), and more negative emotions (e.g., worried, fearful; Newman, Pennebaker, Berry, & Richards, 2003). These LIWC dimensions indicating the likelihood for lying and dishonesty have been supported by several follow-up studies (Bond & Lee, 2005; Hancock, Curry, Goorha, & Woodworth, 2008; see meta-analysis by Hauch, Blandón-Gitlin, Masip, & Sporer, 2012). The logic for these specific dimensions was that people who are dishonest tend to dissociate themselves from the lie thereby not referring to themselves, are likely to feel discomfort by the lie and therefore express more negative feelings, as well as tell more complex stories to hide the lie therefore using less cognitively demanding language characterized by a lower frequency of exclusive words.

Newman et al. (2003) created prediction equations using these four LIWC dimensions and found that the equations achieved up to 67% lie detection accuracy, which was significantly higher than the 52% accuracy achieved by human judges. We chose Newman et al.'s (2003) final equation that averaged findings from all their five studies with the most representative dishonesty detection accuracy. The four LIWC dimensions, their sample keywords, and betas coefficients in each of the two equations are presented in Table 6. To calculate the index for the likelihood for dishonesty, we first analyzed participants' Facebook status updates with LIWC to get the amount of usage for each of the four LIWC dimensions (Tausczik & Pennebaker, 2010; usage percentage reported in Table 6). Then we inputted these means into the Newman et al. (2003) equation to form an index representing likelihood for dishonesty for each participant.

Results and discussion

The descriptive statistics and zero-order correlations of all variables are provided in Table 7. Self-enhancement positively correlated with likelihood for dishonesty ($r = .10, p = .002$), while self-transcendence showed a negative correlation ($r = -.07, p = .021$). On the other bi-polar

dimensions, openness to change positively correlated with likelihood for dishonesty ($r = .08, p = .007$), while conservation showed a negative association ($r = -.09, p = .004$). A stepwise regression controlling for age and gender showed that the strongest predictor among the personal values for likelihood for dishonesty was self-enhancement ($\beta = .05, \Delta R^2 = .01, p = .006$)⁵.

Study 3 extended findings from Studies 1 and 2 to a naturalistic setting observing people's everyday life behaviors to show that value structures can be used to predict the likelihood for dishonesty on Facebook – a behavior deviant from what is morally acceptable in online interactions. The results regarding self-enhancement and conservation replicated from Studies 1 and 2 showing those who tend to value self-enhancement and those who tend to not value conservation are more likely to engage in dishonesty online. Furthermore, those who value self-transcendence tended to show fewer unethical patterns of communication on Facebook, and those who value openness to change were more likely to show deceptive behavior on Facebook. This differs from results in Study 2 that showed no significant effect of openness to change values and a general pattern in the opposite direction. As we discussed earlier, these findings can be explained by the motivations behind the unethical measure. In this study, those who value openness to change may have a strong motivation to engage in deception in a way that may make them appear more unique (self-direction) or as leading more exciting lives in line with their values (stimulation). Dishonesty on Facebook may be perceived as involving more harm to others than a minor lie towards unidentifiable researchers in Study 2 and can therefore explain why self-transcendence values showed a significant effect and inhibited such behavior.

⁵ In Study 3 all personal values were expected to show an effect with the dependent variable and all correlations were significant. Based on the Schwartz (2009) "Proper Use of the Schwartz Value Survey" guidelines, we employed a step-wise regression, as the inclusion of all values together in the regression may yield "inaccurate and uninterpretable" results.

General Discussion

Our aim was to gain insights into the basic motivations underlying unethical attitudes and behaviors. By using the personal values theory (Schwartz, 1992), we were able to show consistent and meaningful relations between the entire value system and unethicality. Our findings were consistent across 12 samples of relations of values to unethical attitudes in different cultures and using different measures (Study 1), and two samples linking values to actual unethical behaviors (Studies 2 and 3: workplace behavior on MTurk, and naturalistic behavior on Facebook). Table 8 summarizes the findings of all studies.

A clear overall picture emerged regarding the underlying motivations of unethicality: Across all studies, self-enhancement values tend to be the strongest motivators of unethicality, whereas conservation values are the strongest motivators against unethicality. The findings regarding self-transcendence and openness to change were more nuanced, yet still consistent for when there was a significant effect and in line with our expectations. As can be seen in Table 8, there were stronger inhibiting effects of unethicality for self-transcendence when harm was directed at others. Links from openness to change to unethicality were generally positive, yet more complex as we explicate below. This overall picture of basic motivations of unethicality was found across cultures and methods thereby establishing the robustness of this phenomenon.

A meta-analysis of 12 samples showed a clear relationship between personal values and unethicality attitudes. The main analysis showed generalizable effects for all types of values, with self-direction being the only exception. We further showed that, despite very diverse samples used in the meta-analysis, the effect sizes follow the sinusoidal pattern predicted in our hypotheses showing strong support for the values system as predicting unethicality.

We further examined whether the relationship between personal values and unethical attitudes would be extended to actual unethical behavior. Findings from the behavioral studies showed self-enhancement and conservation as having the strongest links to actual unethical behavior. Results for self-transcendence and openness to change were not as consistent. We discussed possible explanations regarding the samples used and possible differences between the value dimensions in driving intentions into actions.

Taken together, these studies establish the importance of personal values as underlying motivations related to unethicality, both in attitudes and in actual behavior. The heterogeneity of the samples used also provides strong support for the generalizability and possibly the cross-cultural applicability of these findings. Despite possible cultural differences in morality and value-expressive attitudes and behaviors, these findings suggest that the values-unethicality link does extend – at least partially - across cultures. That the sinusoidal relationship of aggregated effect sizes across many different samples follows the pattern predicted by the values structure further shows strong support for the significance and usefulness of the values theory circumplex.

Future research

Our investigation offers several directions for future research beyond the scope of this investigation. The findings regarding openness-to-change and self-transcendence values seem to be affected by certain factors that may either weaken the relationship to unethicality or even reverse it. Self-transcendence values inhibit harm to others, and when unethical behavior harms others self-transcendence was found to inhibit unethical behavior. Yet, the underlying values of benevolence and universalism emphasize care about certain groups of people over concerns for the unethicality of the act. Benevolence values promote care for close others and might thereby not inhibit unethical behavior if this would help others (such as stealing in order to support a

poor family or sick friend) and universalism values aim to promote a global care agenda which may lead to not inhibit unethical action against those who are perceived as causing global harm (such as action against companies that have environmental impact). Future research can examine how the different values inhibit harm towards different groups of people. Quite possibly, self-transcendence motivations would not provide the self-regulation needed to suppress unethical intentions in case unethical action benefits others (see also Grant & Berg, 2011; Morrison, 2006). Future research on such situations could contribute to answering recent calls in the literature to try and understand when and why pro-social motivations may lead to acts of harm and unethical behavior (Grant & Berg, 2011).

A potential complexity with regard to values as motivational underpinnings of unethicality lies with openness to change values. We reasoned above that these too could sometimes have opposite motivational forces with regard to unethicality. Specifically, we reasoned that although there is no inherent motivation to be unethical in these values, the free-spirited nature of openness to change values may generally lead to lowered adherence to rules, which could enable unethicality, especially if the person does not agree with the rule. On the other hand, when the cheating is in a challenging task the challenge loses its meaning once the person cheats, and so in these cases openness to change values are likely to motivate avoidance of cheating. These more complex relations to values should be examined in future research.

Theoretical implications

The findings from the current set of studies have various implications for theoretical understanding of morality and more broadly, social/personality psychology. Until now, the emphasis in the psychological literature in linking values with unethicality has been on self-enhancement values (e.g., Pulfrey & Butera, 2013). Indeed, we have also found that these values

have the strongest and most consistent links with unethicality. Yet by examining the full circumplex of values, we have been able to draw attention to other important values underlying unethicality or lack of it – we have shown the important role of conservation and self-transcendence values in inhibiting unethicality, and we have shown that in some contexts, even openness to change values can play a role in motivating or inhibiting unethicality. These new emphases broaden the view of motivations underlying unethicality.

An important theoretical contribution lies in the finding that across cultures, values have an overall similar link with unethicality. This suggests that beyond the well-known cultural relativism of morality, there are also universal links with basic motivations: across cultures self-enhancement values motivate unethicality, and conservation and self-transcendence values motivate avoiding unethicality.

Finally, the current set of studies suggests that different values may motivate or inhibit unethicality in different contexts: it seems that self-transcendence values are the main inhibitors of unethicality when there is a clear victim to the unethical behavior. In contrast, when the unethical conduct does not directly harm any person but generally violates rules and norms conservation values are the ones inhibiting unethicality. It seems that openness to change values may sometimes motivate unethicality (e.g., when the person does not agree with the rule) and sometimes inhibit unethicality (e.g., when unethical conduct takes away the challenge in pursuing a goal). This pattern of initial findings opens up possibilities for pinpointing interactions with contexts of unethicality, which can advance the sophistication of understanding of morality and social behavior and therefore merit further research.

Conclusion

This research demonstrated that personal values are an important factor in understanding unethicality and that there is a consistent and meaningful relationship between value systems and unethical attitudes and behavior. We demonstrated that this relationship follows the values theory sinusoidal pattern over unethicality and extends across contexts, general life ethical dilemmas, and to actual behavior, even in naturalistic everyday life. This research opens up many possibilities both for further research questions and for applications and we hope that it will stimulate such future work.

References

- Bardi, A., & Schwartz, S. H. (2003). Values and behavior: Strength and structure of relations. *Personality and Social Psychology Bulletin, 29*(10), 1207-1220.
- Boer, D., & Fischer, R. (2013). How and when do personal values guide our attitudes and sociality? explaining cross-cultural variability in attitude–value linkages. *Psychological Bulletin, 139*(5), 1113-1147. doi:10.1037/a0031347
- Bond, G. D., & Lee, A. Y. (2005). Language of lies in prison: Linguistic classification of prisoners' truthful and deceptive natural language. *Applied Cognitive Psychology, 19*(3), 313-329.
- Buffardi, L. E., & Campbell, W. K. (2008). Narcissism and social networking web sites. *Personality and Social Psychology Bulletin, 34*(10), 1303-1314.
- Buller, D. B., & Burgoon, J. K. (1996). Interpersonal deception theory. *Communication Theory, 6*(3), 203-242.
- Cullen, J. B., Parboteeah, K. P., & Hoegl, M. (2004). Cross-national differences in managers' willingness to justify ethically suspect behaviors: A test of institutional anomie theory. *Academy of Management Journal, 47*(3), 411-421.
- Detert, J. R., Treviño, L. K., & Sweitzer, V. L. (2008). Moral disengagement in ethical decision making: A study of antecedents and outcomes. *Journal of Applied Psychology, 93*(2), 374-391.
- Epstein, S. (1979). The stability of behavior: I. on predicting most of the people much of the time. *Journal of Personality and Social Psychology, 37*(7), 1097.
- ESS Round 5. (2010). *European social survey round 5 data* (2nd ed.). Norway: Norwegian Social Science Data Services.

- Farh, J. L., Burton, B. K., & Hegarty, H. (1999). Differences in perceptions of ethicality: U.S. and Asian business students. *Annual National Meeting of Academy of Management*, Chicago. (August)
- Field, A. P., & Gillett, R. (2010). How to do a meta-analysis. *British Journal of Mathematical and Statistical Psychology*, 63(3), 665-694.
- Freud, S. (1901). The psychopathology of everyday life. SE.
- Frimer, J. A., & Walker, L. J. (2009). Reconciling the self and morality: An empirical model of moral centrality development. *Developmental Psychology*, 45(6), 1669.
- Fritzsche, D., & Oz, E. (2007). Personal values' influence on the ethical dimension of decision making. *Journal of Business Ethics*, 75(4), 335-343.
- Gino, F., & Ariely, D. (2012). The dark side of creativity: Original thinkers can be more dishonest. *Journal of Personality and Social Psychology*, 102(3), 445-459.
- Gino, F., Ayal, S., & Ariely, D. (2009). Contagion and differentiation in unethical behavior: the effect of one bad apple on the barrel. *Psychological Science*, 20(3), 393-398.
- Gino, F., Schweitzer, M. E., Mead, N. L., & Ariely, D. (2011). Unable to resist temptation: How self-control depletion promotes unethical behavior. *Organizational Behavior and Human Decision Processes*, 115(2), 191-203.
- Glover, S., Bumpus, M., Logan, J., & Ciesla, J. (1997). Re-examining the influence of individual values on ethical decision making. In M. Fleckenstein, M. Maury, L. Pincus & P. Primeaux (Eds.), (pp. 109-119) Springer Netherlands. doi:10.1007/978-94-009-1475-9_10
- Grant, A. M. (2007). Relational job design and the motivation to make a prosocial difference. *Academy of Management Review*, 32(2), 393-417.

- Grant, A. M. (2008). The significance of task significance: Job performance effects, relational mechanisms, and boundary conditions. *Journal of Applied Psychology, 93*(1), 108.
- Grant, A. M., & Berg, J. M. (2011). Prosocial motivation at work: When, why, and how making a difference makes a difference. In K. Cameron, & G. Spreitzer (Eds.), *Oxford handbook of positive organizational scholarship* (pp. 28-44)
- Grant, A. M., & Patil, S. V. (2012). Challenging the norm of self-interest: Minority influence and transitions to helping norms in work units. *Academy of Management Review, 37*(4), 547-568.
- Grant, A., & Shin, J. (2011). Work motivation: Directing, energizing, and maintaining effort (and research). *Oxford handbook of motivation* (). Oxford: Oxford University Press.
- Hagger-Johnson, G., Egan, V., & Stillwell, D. (2011). Are social networking profiles reliable indicators of sensational interests? *Journal of Research in Personality, 45*(1), 71-76.
- Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. *Psychological Review, 108*(4), 814-834. doi:10.1037/0033-295X.108.4.814
- Haidt, J. (2008). Morality. *Perspectives on Psychological Science, 3*(1), 65-72.
doi:10.1111/j.1745-6916.2008.00063.x
- Hancock, J. T. (2007). Digital deception. *Oxford Handbook of Internet Psychology, , 289-301.*
- Hancock, J. T., Curry, L. E., Goorha, S., & Woodworth, M. (2007). On lying and being lied to: A linguistic analysis of deception in computer-mediated communication. *Discourse Processes, 45*(1), 1-23.
- Hauch, V., Masip, J., Blandón-Gitlin, I., & Sporer, S. L. (2012). Linguistic cues to deception assessed by computer programs: A meta-analysis. Paper presented at the *Proceedings of the Workshop on Computational Approaches to Deception Detection, 1-4.*

- Hitlin, S. (2011). Values, personal identity, and the moral self. *Handbook of identity theory and research* (pp. 515-529) Springer.
- Hitlin, S., & Piliavin, J. A. (2004). Values: Reviving a dormant concept. *Annual Review of Sociology*, , 359-393.
- Hofmann, W., Wisneski, D. C., Brandt, M. J., & Skitka, L. J. (2014). Morality in everyday life. *Science*, 345(6202), 1340-1343. doi:10.1126/science.1251560
- Hunter, J. E., & Schmidt, F. L. (2004). *Methods of meta-analysis: Correcting error and bias in research findings* SAGE Publications, Incorporated.
- Kasser, T., Cohn, S., Kanner, A. D., & Ryan, R. M. (2007). Some costs of American corporate capitalism: A psychological exploration of value and goal conflicts. *Psychological Inquiry*, 18(1), 1-22.
- Kish-Gephart, J. J., Harrison, D. A., & Treviño, L. K. (2010). Bad apples, bad cases, and bad barrels: Meta-analytic evidence about sources of unethical decisions at work. *Journal of Applied Psychology*, 95(1), 1.
- Knafo, A., & Sagiv, L. (2004). Values and work environment: Mapping 32 occupations. *European Journal of Psychology of Education*, 19(3), 255-273.
- Kosinski, M., Stillwell, D., & Graepel, T. (2013). Private traits and attributes are predictable from digital records of human behavior. *Proceedings of the National Academy of Sciences*, 110(15), 5802-5805.
- Lacan, J., & Wilden, A. T. (1968). *The language of the self: The function of language in psychoanalysis*. Johns Hopkins University Press.
- Lewin, K. (1951). *Field theories in social science*. Harper and Row, New York.

- Lindeman, M., & Verkasalo, M. (2005). Measuring values with the short Schwartz's value survey. *Journal of Personality Assessment*, 85(2), 170-178.
- Litman, L., Robinson, J., & Rosenzweig, C. (2014). The relationship between motivation, monetary compensation, and data quality among US-and India-based workers on mechanical turk. *Behavior Research Methods*, , 1-10.
- Maio, G. R. (2010). Mental representations of social values. *Advances in Experimental Social Psychology*, 42, 1-43.
- Markowitz, D. M., & Hancock, J. T. (2014). Linguistic traces of a scientific fraud: The case of diderik stapel.
- Mason, W., & Suri, S. (2012). Conducting behavioral research on Amazon's mechanical turk. *Behavior Research Methods*, 44(1), 1-23.
- Mazar, N., Amir, O., & Ariely, D. (2008). The dishonesty of honest people: A theory of self-concept maintenance. *Journal of Marketing Research*, 45(6), 633-644.
doi:10.1509/jmkr.45.6.633
- Morrison, E. W. (2006). Doing the job well: An investigation of pro-social rule breaking. *Journal of Management*, 32(1), 5-28.
- Newman, M. L., Pennebaker, J. W., Berry, D. S., & Richards, J. M. (2003). Lying words: Predicting deception from linguistic styles. *Personality and Social Psychology Bulletin*, 29(5), 665-675.
- Pan, Y., & Sparks, J. R. (2012). Predictors, consequence, and measurement of ethical judgments: Review and meta-analysis. *Journal of Business Research*, 65(1), 84-91.

- Parks-Leduc, L., Feldman, G., & Bardi, A. (2014). Personality traits and personal values: A meta-analysis. *Personality and Social Psychology Review*, doi:10.1177/1088868314538548
- Pennebaker, J. W., Mehl, M. R., & Niederhoffer, K. G. (2003). Psychological aspects of natural language use: Our words, our selves. *Annual Review of Psychology*, *54*(1), 547-577.
- Piff, P. K., Stancato, D. M., Côté, S., Mendoza-Denton, R., & Keltner, D. (2012). Higher social class predicts increased unethical behavior. *Proceedings of the National Academy of Sciences*, *109*(11), 4086-4091.
- Piurko, Y., Schwartz, S. H., & Davidov, E. (2011). Basic personal values and the meaning of Left-Right political orientations in 20 countries. *Political Psychology*, *32*(4), 537-561.
- Pulfrey, C., & Butera, F. (2013). Why neoliberal values of self-enhancement lead to cheating in higher education: A motivational account. *Psychological Science*, *24*(11), 2153-2162. doi:10.1177/0956797613487221
- Rest, J. R., & Barnett, R. (1986). *Moral development: Advances in research and theory* Praeger New York.
- Roccas, S., & Sagiv, L. (2010). Personal values and behavior: Taking the cultural context into account. *Social and Personality Psychology Compass*, *4*(1), 30-41.
- Roccas, S., Sagiv, L., Schwartz, S. H., & Knafo, A. (2002). The big five personality factors and personal values. *Personality and Social Psychology Bulletin*, *28*(6), 789-801.
- Rokeach, M. (1973). The nature of human values.
- Schwartz, S. H. (1994). Are there universal aspects in the structure and contents of human values? *Journal of Social Issues*, *50*(4), 19-45.

- Schwartz, S. H. (2009). Draft Users Manual: Proper use of the Schwarz Value Survey, Version 14 January 2009, Compiled by Romie F.Littrell. *Auckland, New Zealand: Centre for Cross Cultural Comparisons,*
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology, 25*(1), 1-65.
- Schwartz, S. H. (1996). Value priorities and behavior: Applying a theory of integrated value systems. Paper presented at the *Psychology of Values: The Ontario Symposium, 8*(1996) 53-75.
- Schwartz, S. H. (2011). Studying values: Personal adventure, future directions. *Journal of Cross-Cultural Psychology, 42*(2), 307-319.
- Schwartz, S. H., & Bilsky, W. (1987). Toward a universal psychological structure of human values. *Journal of Personality and Social Psychology, 53*(3), 550.
- Schwartz, S. H., & Bilsky, W. (1990). Toward a theory of the universal content and structure of values: Extensions and cross-cultural replications. *Journal of Personality and Social Psychology, 58*(5), 878.
- Schwartz, S. H., Melech, G., Lehmann, A., Burgess, S., Harris, M., & Owens, V. (2001). Extending the cross-cultural validity of the theory of basic human values with a different method of measurement. *Journal of Cross-Cultural Psychology, 32*(5), 519-542.
- Schwartz, S. H. (2007). Universalism values and the inclusiveness of our moral universe. *Journal of Cross - Cultural Psychology, 38*(6), 711.

- Schwartz, S. H. (2010). Basic values: How they motivate and inhibit prosocial behavior. In M. Mikulincer P. R. Shaver (Ed.), (pp. 221-241). Washington, DC, US: American Psychological Association. doi:10.1037/12061-012
- Shapiro, D. N., Chandler, J., & Mueller, P. A. (2013). Using mechanical turk to study clinical populations. *Clinical Psychological Science, 1*(2), 213-220.
- Steenhaut, S., & Van Kenhove, P. (2006). An empirical investigation of the relationships among a consumer's personal values, ethical ideology and ethical beliefs. *Journal of Business Ethics, 64*(2), 137-155.
- Sverdlik, N., Roccas, S., & Sagiv, L. (2012). Morality across cultures: A values perspective. In M. Mikulincer P. R. Shaver (Ed.), (pp. 219-235). Washington, DC, US: American Psychological Association. doi:10.1037/13091-012
- Tausczik, Y. R., & Pennebaker, J. W. (2010). The psychological meaning of words: LIWC and computerized text analysis methods. *Journal of Language and Social Psychology, 29*(1), 24-54.
- Tenbrunsel, A. E., & Smith-Crowe, K. (2008). Ethical decision making: Where We've been and where We're going. *The Academy of Management Annals, 2*(1), 545-607.
- Tetlock, P. E. (1986). A value pluralism model of ideological reasoning. *Journal of Personality and Social Psychology, 50*(4), 819.
- Toma, C. L., Hancock, J. T., & Ellison, N. B. (2008). Separating fact from fiction: An examination of deceptive self-presentation in online dating profiles. *Personality and Social Psychology Bulletin, 34*(8), 1023-1036.
- Treviño, L. K., Weaver, G. R., & Reynolds, S. J. (2006). Behavioral ethics in organizations: A review. *Journal of Management, 32*(6), 951-990.

- Van Yperen, N. W., Hamstra, M. R., & Van der Klauw, M. (2011). To win, or not to lose, at any cost: The impact of achievement goals on cheating. *British Journal of Management*, 22(s1), S5-S15.
- Wang, N., Kosinski, M., Stillwell, D., & Rust, J. (2012). Can well-being be measured using Facebook status updates? validation of Facebook's gross national happiness index. *Social Indicators Research*, 1-9.
- Watson, G. W., Berkley, R. A., & Papamarcos, S. D. (2009). Ambiguous allure: The value? Pragmatics model of ethical decision making. *Business and Society Review*, 114(1), 1-29. doi:10.1111/j.1467-8594.2009.00333.x
- Weisbuch, M., Ivcevic, Z., & Ambady, N. (2009). On being liked on the web and in the "real world": Consistency in first impressions across personal webpages and spontaneous behavior. *Journal of Experimental Social Psychology*, 45(3), 573-576.
- Whitty, M. T. (2002). Liar, liar! an examination of how open, supportive and honest people are in chat rooms. *Computers in Human Behavior*, 18(4), 343-352.
- Whitty, M., & Gavin, J. (2001). Age/sex/location: Uncovering the social cues in the development of online relationships. *CyberPsychology & Behavior*, 4(5), 623-630.
- World Values Survey Association. (2008). World values survey. *Ann Arbor: University of Michigan*.
- Zahra, S. A., Priem, R. L., & Rasheed, A. A. (2005). The antecedents and consequences of top management fraud. *Journal of Management*, 31(6), 803-828.

Tables

Table 1
Meta analysis list of collected studies

#	Sample population	N	Values Measure	Unethicality Measure	Country
1	Students	204	SVS	Unethicality attitudes	China – Guangzhou
2	Students	216	SVS	Unethicality attitudes	China – Shanghai
3	Students	250	SVS	Unethicality attitudes	Hong Kong
4	Students	262	SVS	Unethicality attitudes	Taiwan
5	Students	196	SVS	Unethicality attitudes	Singapore
6	Students	196	SVS	Unethicality attitudes	China - Shanghai
7	Students	315	SSVS	Unethical decision making (JAP, 2008)	Hong Kong
8	Students	603	PVQ-21	Unethical decision making (JAP, 2008)	Hong Kong
9	Yourmorals.org	476	SVS	Unethicality attitudes	International
10	MTurk	158	PVQ	Unethical decision making (JAP, 2008)	International
11	European Social Survey	50781	ESS	Unethicality attitudes (3 items)	Europe (32 countries)
12	World Values Survey	52277	SSVS	Unethicality attitudes (4 items)	International (40 countries)

Table 2
Measures of personal values used in the meta-analysis

Measure name	Citation	Items	Scale	Samples #
Schwartz Value Survey (SVS)	Schwartz, 1992, 1994	57	9-point	1-6, 9
Short SVS (SSVS)	Lindeman & Verkasalo, 2005	10	9-point	7, 12
Portrait Value Questionnaire (PVQ)	Schwartz et al., 2001	40	6-point	10
Short PVQ (PVQ-21)	European Social Survey	21	6-point	8, 11

Note. Further details regarding the scales are provided in the supplementary materials. Items were mean centered and averaged to create the ten theorized types of value and the four high order values dimensions (as recommended by Schwartz, 2009 and Parks-Leduc, Feldman, & Bardi, 2014)

Table 3

Main meta-analysis results

Values Categories	k	N	Mean r	ρ	SD_r	SD_{ρ}	LCV	HCV	% Var
Power (SE)	12	105928	.16	.24	.02	.04	.19	.30	12.20
Achievement (SE)	12	105928	.10	.13	.02	.02	.11	.16	36.18
Hedonism	12	105928	.13	.18	.05	.07	.09	.28	3.76
Stimulation (OC)	12	105928	.16	.21	.03	.04	.16	.26	11.43
Self Direction (OC)	12	105928	.03	.04	.03	.04	-.01	.10	14.45
Universalism (ST)	12	105928	-.14	-.20	.02	.04	-.25	-.15	13.36
Benevolence (ST)	12	105928	-.11	-.15	.02	.02	-.18	-.12	29.02
Conformity (CO)	12	105928	-.15	-.22	.04	.06	-.30	-.14	5.71
Tradition (CO)	12	105928	-.12	-.20	.04	.08	-.29	-.10	5.26
Security (CO)	12	105928	-.10	-.14	.02	.03	-.18	-.10	17.43
Values Dimensions	k	N	Mean r	ρ	SD_r	SD_{ρ}	LCV	HCV	% Var
Self-Enhancement	12	105928	.21	.31	.04	.03	.27	.35	18.18
Self-Transcendence	12	105928	-.16	-.25	.02	.03	-.29	-.21	20.65
Openness to Change	12	105928	.13	.20	.03	.03	.16	.25	16.76
Conservation	12	105928	-.18	-.26	.04	.03	-.31	-.22	14.87

Note: k = number of studies; N = total number of individuals across all studies; Mean r = the average of the uncorrected correlations; ρ = the estimated true score correlation; SD_r = standard deviation of mean r; SD _{ρ} = the standard deviation of the corrected correlations; LCV = Low Credibility Value – this is the lower limit of the 80% credibility interval; HCV = High Credibility Value – this is the upper limit of the 80% credibility interval; % Var = the percentage of variance that was accounted for by statistical artifacts (sampling error and unreliability of measures). (SE)=self enhancement dimension; (OC) = openness to change dimension; (ST) = self transcendence dimension; (CO) = conservation dimension. Bolded scores have an 80% credibility interval that does not include 0.

Table 4

Sinusoidal shape consistency values

Values Categories	SET-shape	OC-shape	Theorized-shape
Power (SE)	-0.95	0.59	0.95
Achievement (SE)	-0.95	0	0.95
Hedonism	-0.59	-0.59	0.59
Stimulation (OC)	0	-0.95	0
Self Direction (OC)	0.59	-0.05	0
Universalism (ST)	0.95	-0.59	-0.95
Benevolence (ST)	0.95	0	-0.95
Conformity (CO)	0	0.95	-0.95
Tradition (CO)	0.59	0.59	-0.59
Security (CO)	-0.59	0.95	-0.59
Meta correlations consistency	-.62	-.14	0.88
Consistency summary	Moderate	None	Very strong

Note. SET-shape (self-transcendence versus self-enhancement) and OC-shape (openness-to-change versus conservation) values were adapted from Boer and Fischer (2013).

Theorized-shape is based on theorizing of correlation with unethical behavior in the introduction.

Consistency effect size guide: 0.4 - weak; 0.6 - moderate; 0.8 - strong.

Table 5

Study 2 - Descriptive statistics and correlations table

	M	SD	1	2	3	4	5	6
1 - Cheating	.13	.33	-					
2 - Self-enhancement	-.21	.46	.20*	(.81)				
3 - Self-transcendence	.17	.42	.10	-.48***	(.89)			
4 - Openness to change	.11	.47	-.14	-.25**	-.20*	(.88)		
5 - Conservation	0	.40	-.20*	-.53***	-.16	-.32***	(.87)	
6 - Age	30.90	8.88	-.06	-.22	.15	-.02	.14	-
7 - Gender	-	-	-.09	-.27	.17	.01	.16	.12

Note: N = 135. Values on the diagonal in parentheses are alpha coefficients. Correlations for personal values dimensions are based on ipsitized scores (Schwartz, 2009). Gender was dummy coded as male = 1 and female = 0. * $p < .05$; ** $p < .01$; *** $p < .001$ (1-tailed)

Table 6

Study 3 - Word analysis LIWC categories & keywords

LIWC dimensions	Sample LIWC keywords	Honesty Equation β s	Percentage use in this study
1st person pronouns	I, me, mine	0.260	4.22%
3rd person pronouns	She, her, him, they, their	0.250	0.93%
Exclusive words	But, without, exclude	0.419	1.94%
Motion verbs	Arrive, go	-0.259	1.55%
Negative emotion	Worried, fearful, nervous, hate, annoy, crying, sad	-0.217	2.04%

Table 7

Study 3 – Means, standards deviations and correlations

	Mean	SD	1	2	3	4	5
1. Dishonesty	0	1	-				
2. Self Enhancement	-.75	.91	.10**	(.92)			
3. Self-Transcendence	.39	.85	-.07*	-.39***	(.95)		
4. Openness to change	.24	.93	.08**	.17***	-.11***	(.92)	
5. Conservation	-.62	.77	-.09**	-.30***	-.19***	-.64***	(.93)
Age	26.18	12.12	.05	-.12***	.04	-.05	.04
Gender	.59	.49	-.17***	-.10**	.09**	-.11***	.05 Υ

Note: N = 1024. Values on the diagonal in parentheses are alpha coefficients.

Correlations for personal values dimensions are based on iptized scores (Schwarz, 2009). Gender was dummy coded as male = 0 and female = 1. $\Upsilon p < .1$; * $p < .05$; ** $p < .01$; *** $p < .001$ (1-tailed)

Table 8

Summary of findings

#	N	Sample characteristics	Unethicality type	SE	ST	OC	CO
Study 1	105,928	8 student samples 1 Yourmorals.org 1 MTurk European Social Survey World Values Survey	Unethicality attitudes	.31	-.25	.20	-.26
Study 2	72	Students	Cheating	.38	-.01	-.10	-.20
Study 2	135	MTurk	Cheating	.20	.10	-.14	-.20
Study 3	1,024	Internationals on Facebook	Dishonesty	.10	-.07	.08	-.09

Note: Bolded values are significant effects. SE: Self-enhancement; ST: Self-transcendence; OC: Openness to Change; CO: Conservation

Figures

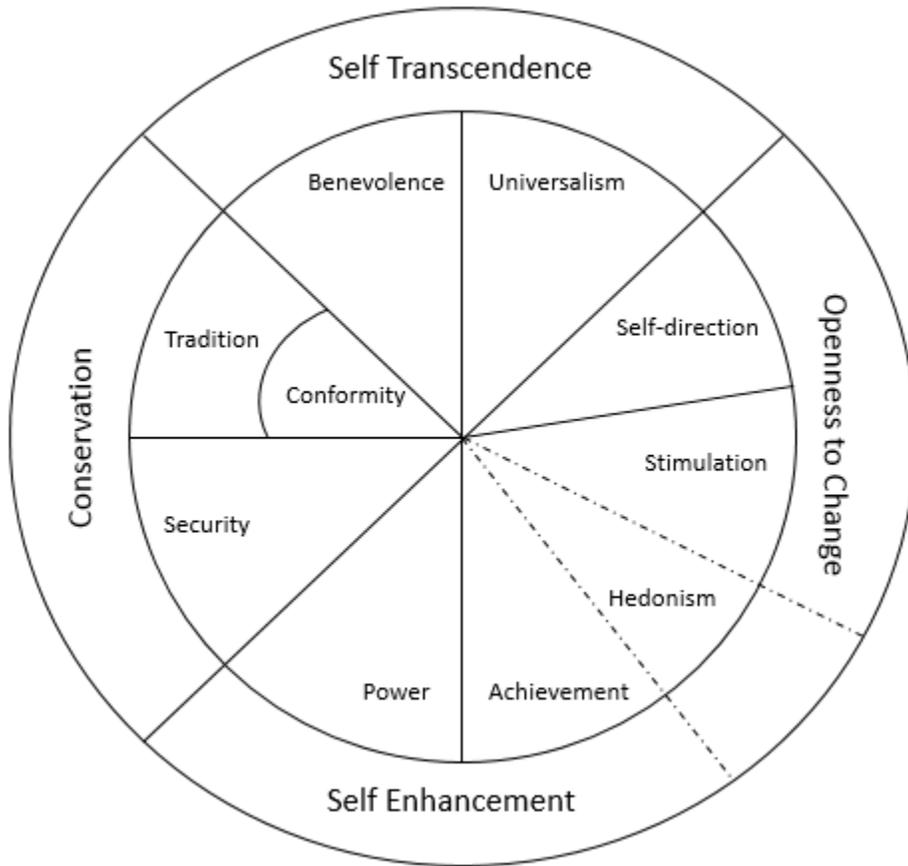


Figure 1. The theoretical structure of personal values.

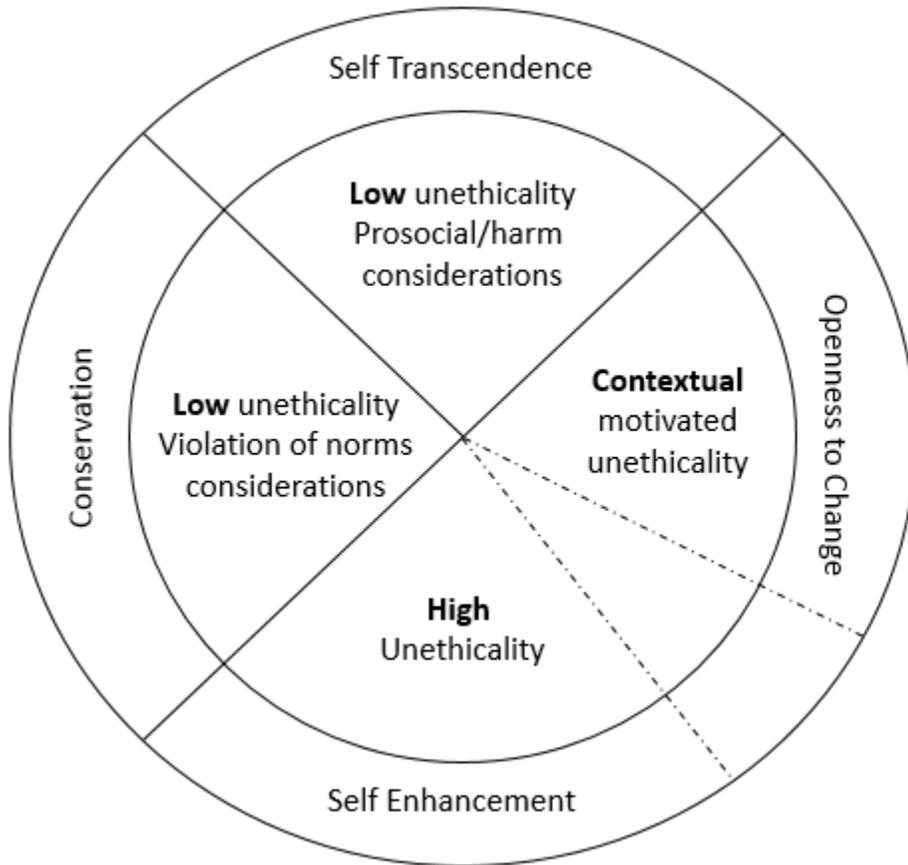


Figure 2. Personal values high-order dimensions mapping according to types and levels of unethicality

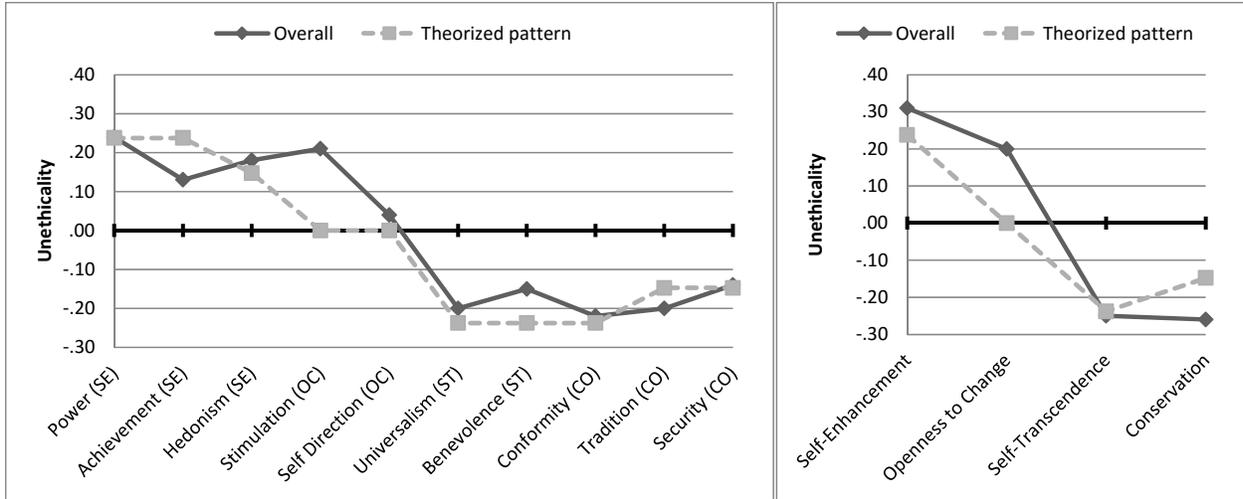


Figure 3. Study 1 - Plot for personal values and unethicality expected pattern and effect sizes

$$r(xy) = \frac{\sum x(i)y(i) - nxy}{(n - 1)sd(x)sd(y)}$$

Figure 4. The shape consistency equation (Boer & Fischer, 2013); x is the meta-analysis effects vector (see ρ values in Table 3), y is the expected sinusoidal pattern vector (see Table 4), and n is the number of effects (=10 values).