

JOURNAL OF COGNITION AND CULTURE

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Journal of Cognition and Culture
Institute of Cognition and Culture
Queen's University
Belfast BT7 1NN
Northern Ireland, UK
E-mail: t.lawson@qub.ac.uk
Internet: <http://www.qub.ac.uk/icc/>
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The Moral-Conventional Distinction in Mature Moral Competence

Bryce Huebner*, James J. Lee and Marc D. Hauser

Department of Philosophy, Georgetown University,
215 New North 37th and O Streets, NW
Washington, DC 20057, USA

* Corresponding author, e-mail: huebner@wjh.harvard.edu

Abstract

Developmental psychologists have long argued that the capacity to distinguish moral and conventional transgressions develops across cultures and emerges early in life. Children reliably treat moral transgressions as more wrong, more punishable, independent of structures of authority, and universally applicable. However, previous studies have not yet examined the role of these features in mature moral cognition. Using a battery of adult-appropriate cases (including vehicular and sexual assault, reckless behavior, and violations of etiquette and social contracts) we demonstrate that these features also distinguish moral from conventional transgressions in mature moral cognition. Each hypothesized moral transgression was treated as strongly and clearly immoral. However, our data suggest that although the majority of hypothesized conventional transgressions also form an obvious cluster, social conventions seem to lie along a continuum that stretches from mere matters of personal preference (e.g., getting tattoos or wearing black shoes with a brown belt) to transgressions that are treated as matters for legitimate social sanction (e.g., violating traffic laws or not paying your taxes). We use these findings to discuss issues of universality, domain-specificity, and the importance of using a well-studied set of moral scenarios to examine clinical populations and the underlying neural architecture of moral cognition.

Keywords

Moral-Conventional distinction, moral psychology, social cognition

Most people are likely to agree that it is okay to wear your pajamas to the symphony if everyone else does. While this kind of behavior may seem odd, wearing pajamas at the symphony is not beyond the realm of plausibility. Most people are also likely to agree that after you have entered the symphony hall, it is never okay to throw a rock at the bassoonist just because his pacing sounded forced, even if everyone else is doing this. These cases appear to lie along a spectrum (which may include more ambiguous cases such as eating

the neighbor's dead dog with their permission or using someone else's toothbrush, cf., Haidt, 1993, 2001), and the seemingly transparent distinction between such cases have led psychologists and philosophers to suppose that there are at least two clear clusters of rules governing the permissibility of socially significant behavior. Some rules appear to be mere matters of convention; they are contingent, local, and facilitate social coordination through shared understandings of etiquette and legal codes. Moral rules, by contrast, appear to apply universally and to derive their normative force from principles that hold independently of the dictates of political or social authorities.

Most empirically grounded theories of our moral psychology (Haidt, 1993, 2001; Greene et al., 2001, 2004; Cushman et al., 2006; Hauser, 2006; Hauser et al., 2007; Mikhail, 2007; Waldmann and Dietrich, 2007; Moore et al., 2008) have supposed that there are distinctive features of moral transgressions that trigger uniquely moral computations. However, while it seems clear that we possess the capacity to determine whether we are operating in the moral domain, there are at least two ways in which this might occur. First, our moral judgments may rely on domain-specific moral computations that are sensitive to a set of underlying features that are shared by moral, but not conventional transgressions. Second, our moral judgments may rely exclusively on the domain-general computations that we use in making decisions in other evaluative, but non-moral domains; for example, in the symphony cases above, moral transgressions seem to feel worse than conventional transgressions, suggesting that domain-general emotional processes may play a role in mediating this distinction. Whatever the particular features or dimensions are that critically distinguish moral from conventional rules, the question of how we draw such a distinction is one of the most important in the mind sciences. More specifically, how does the brain know that it is processing information from one domain as opposed to another, and what are the features that constitute this domain?

Over the past 30 years, developmental psychologists have examined the capacity to distinguish between moral and conventional transgressions. Beginning as a critique of Kohlberg's (1969) coarse-grained distinctions between types of transgressions and stages of moral development, Turiel (1983) proposed a set of features that sharply distinguished moral from conventional transgressions. Moral transgressions are (1) more wrong, (2) more punishable, (3) independent of structures of authority and (4) universally applicable. Numerous studies have demonstrated that young children possess a robust capacity to distinguish moral from conventional violations (Turiel and Nucci, 1978; Turiel, 1979, 1983; Nucci et al., 1983; Hollos et al., 1986; Smetana and Braeges, 1990; Nucci and Turiel, 1993; Smetana, 1993; Nucci, 2001). Moreover, this capacity emerges early in life – as early as 39 months

of age (Smetana and Braeges, 1990) – and is present across a wide variety of cultures (Nucci et al., 1983; Hollos et al., 1986; Nisan, 1987). Perhaps more strikingly, similar patterns of judgment emerge early in both typically developing children and children diagnosed with Autism Spectrum Disorder (Blair, 1996). Finally, Amish teenagers appear to judge that even God cannot modify moral norms: were God to say that it was okay, it would still be wrong to hit another person (Nucci and Turiel, 1993). The ubiquity of the capacity to distinguish moral from conventional transgressions has often been taken to support the claim that morality constitutes a distinct cognitive domain (Dwyer, 1999; Nichols, 2004; Turiel, 1983) and that moral psychology relies on distinctive moral computations. However, several recent studies suggest that the moral-conventional distinction may not be stable enough to warrant such a claim.

Nichols (2002, 2004) has demonstrated that American children who were presented with etiquette transgressions that elicited strong feelings of disgust offered responses of the sort that are typical of moral transgressions. Moreover, Haidt (1993, 2001) has shown that low-SES (socioeconomic status) participants tended to perceive disgusting but harmless transgressions (e.g., masturbating with a dead chicken) as immoral, while high-SES participants saw them as matters of convention. Finally, Kelly and colleagues (Kelly et al., 2007) have shown that participants tend to judge it wrong for a modern-day captain to whip an unruly sailor; but, when told that this was a common practice 300 years ago, they judged that it was OK to whip an unruly sailor in that context. On the basis of these data, it has been suggested that domain-general emotional processes play a critical role in determining the moral status of a norm transgression, but the problems appear to run even deeper than this. Research to date on the moral-conventional distinction has relied almost exclusively on scenarios designed for young children (Kelly et al., 2007), even where participants are incarcerated adult psychopaths (Blair, 1995; Blair and Cipolotti, 2000; Kinga et al., 2005). It is possible, therefore, that responses to violations of clothing etiquette or aggression on the playground may tell us little about the role of the moral-conventional distinction in mature moral psychology.

If the aforementioned critiques and empirical findings are as forceful as they initially seem, then moral psychologists have made less progress than one might have thought in understanding the features that allow us to demarcate moral and conventional rules. Our sense is that although the distinction between moral and conventional may not be crisp and clear in every case, and although the set of features laid out by Turiel may in the end be insufficient to capture the rich texture of the normative domain, the intuitively plausible features and the distinction call for further analysis before we

abandon them. Specifically, these features require more quantitative analyses, across a broader range of social transgressions, with cases that are appropriate to mature moral cognition. In essence, though adults understand that a failure to raise one's hand in a classroom is less bad and more cross-culturally variable than pushing another child off of a swing, we are left with a question about how it is that we rapidly perceive a moral difference between microwaving the neighbor's dead dog and microwaving the neighbor's screaming child. Our goal is to broaden the range of transgressions (e.g., bodily harms, broken promises, or engaging altruistic acts), to test a large sample of adults, and to quantitatively analyze whether the four features suggested by Turiel (badness, universality, authority and punishability) carry the same kind of moral force for adults as they do for young children. More specifically, we have attempted to cast the net broadly over the space of possible moral and conventional transgressions, creating a set of scenarios that were designed to examine judgments about transgressions of etiquette, violations of traffic rules, free riding on social contracts, and physical battery in situations that are both more appropriate for adults, and more directly familiar and relevant.

Our aim was to generate experimental evidence that might provide traction on both conceptual and methodological issues concerning the validity of the moral-conventional distinction. Conceptually, our aim was to understand how sharply the distinction is drawn between moral and conventional transgressions when the variety of cases is more varied, and further, to understand the kinds of features that define this distinction. Methodologically, our aim was to create a battery of adult-appropriate cases that might then be applied to different populations, including cross-cultural samples and subjects with different clinical deficits such as Autism Spectrum Disorder and psychopathy. We see this methodological goal as an essential step in the growing field of moral psychology. In particular, using the vision sciences as an example of a mature sub-discipline within the cognitive sciences, it is clear that its maturity is based in part on the development of highly replicable test materials that can be used on different populations. In light of this goal, we have attempted to design a set of simple cases that cover a broad range of social interactions, and that will allow researchers in the field of moral psychology to elicit stable judgments about the mature distinction between moral and conventional transgressions.

Methods

Between 25 November 2008 and 19 January 2009, 1989 people logged on to the Moral Sense Test (MST) Website to participate in an experiment designed

to examine the nature of the moral-conventional distinction in mature moral cognition. Participants were asked to complete the test without interruption, to read the scenarios and associated questions carefully, and to answer the questions solely on the basis of the information provided. Previous research presenting norm transgressions of this kind have demonstrated no substantive difference between responses obtained using Web-based questionnaires and more traditional pen-and-paper questionnaires (Hauser et al., 2007). All procedures for data collection were conducted in accordance with the Institutional Review Board of Harvard University, and followed the testing procedures of other web-based research projects (Nosek et al., 2002).

Upon arriving at the MST website, participants were randomly assigned to one of three conditions, Conditions 1 and 2 each included a series of 18 vignettes describing various sorts of norm transgressions; Condition 3 was similar but included only 17 vignettes. We designed the vignettes to capture both the broad range of situations in which norm transgressions can arise, as well as the broad range of norm transgressions that might arise in a particular situation. Consequently, and based initially on our own intuitions, we designed 10 different classes of social situations (Food; Sex; Property; Dead Bodies; Driving and Cars; Elicit Speech Acts; Clothing; Gifts; Greetings; Restaurants; and Playground Violations) in which a norm transgression might occur. Within each social situation, we included at least one hypothesized conventional transgression and at least one hypothesized moral transgression, matched as closely as possible to allow us to vary presumed moral significance while maintaining as many situational variables as possible. Table 1 provides an illustration of two pairings, one for a restaurant-related transgression, and the other, a sexual transgression; the complete text of all transgressions can be found in Appendix A.

Participants responded to four questions about the transgressions described in each of the individual vignettes:

1. BADNESS: [Name]'s behavior was: (1, very bad; 4, neither good nor bad; 7, very good);
2. PUNISHABILITY How much should [name] be punished: (1, severely punished; 7, not punished at all);
3. UNIVERSALITY: If [name] lived somewhere where everyone else did this, would it be wrong for [name] to do this (Yes; No); and
4. AUTHORITY: If the government passed a law that said it was ok to do what [name] did, would that make [name's] action OK? (Yes; No).

Each question appeared on a new screen, and the text of the associated vignette always accompanied the question.

Table 1
Pairs of hypothesized moral and conventional transgressions

	Hypothesized conventional violations	Hypothesized moral violations
Food/ Restaurant	One night Michael goes to a fancy restaurant. He orders a T-bone steak and when it arrives he picks it up and eats it with his hands rather than using his silverware.	One night Joshua goes to a fancy restaurant and orders a T-bone steak. When it arrives he throws it as hard as he can into the face of a man sitting nearby.
Sex	While standing in line at the Department of Motor Vehicles, James looks at the woman in front of him, licks his lips, then grabs her bottom and aggressively kisses her on the mouth.	While standing in line at the Department of Motor Vehicles, David and his girlfriend pass the time by passionately kissing and caressing each other, heedless of the dozens of people watching them.

Results

For each set of vignettes, we calculated the mean subject rating elicited by the four target questions (badness; punishability; universality; and authority). We then performed a factor analysis of these mean ratings to determine whether the four target questions were indicators in common of a latent dimension, demonstrating a clear contrast between moral and conventional violations. In a typical factor analysis, inferential uncertainty is attributable to the random sampling of the measured objects, which are usually respondents (to tests, questionnaires, or other tasks). However, because we were interested only in the ratings for the particular vignettes presented in this study, we did not consider these vignettes to be sampled from some hypothetical population of vignettes. Thus, inferential uncertainty in this case arises only from the random sampling of raters. With this in mind, we used the bootstrap method to determine the sensitivity of the factor-analytic results to rater variability. In each replicate of the bootstrap, the raters for each set of vignettes were re-sampled with replacement and the resulting data were used to calculate the loadings of the questions on the hypothesized common factor and the scores of the vignettes. The bootstrap values were then used to determine 95% confidence intervals.

Table 2
Loadings of Questions on Moral-Conventional Factor

Question	Vignette set		
	1	2	3
“Goodness”	0.996 (0.991, 0.998)	0.974 (0.965, 0.981)	0.974 (0.965, 0.981)
Punishability	0.969 (0.964, 0.974)	0.963 (0.956, 0.970)	0.963 (0.956, 0.970)
Universality	0.961 (0.947, 0.969)	0.969 (0.956, 0.978)	0.969 (0.956, 0.978)
Authority	0.814 (0.783, 0.837)	0.918 (0.900, 0.933)	0.918 (0.900, 0.933)

Bootstrap 95% confidence intervals are given in parentheses.

Table 2 shows the factor loadings for the four target questions that were presented for each of the 53 vignettes. As these data show, the three distinct sets of vignettes that were used in Conditions 1–3 yielded qualitatively similar results. More importantly these data show that within each of the individual conditions, each one of the four questions was a strong indicator of how the vignette was rated along a continuum running from clearly moral to clearly conventional transgressions. As might have been expected *a priori*, the question targeting the badness of the violation was the best indicator of where a scenario would lie along this continuum; the worse that a transgression was judged to be, the more likely it was to be perceived as a moral transgression. However, even the question that was the weakest indicator of this latent dimension, the question concerning the authority dependence of the violation, was still highly salient given traditional factor-analytic criteria.

Table 3 shows the estimated factor scores for each of the individual vignettes and the confidence intervals for these scores. The values reported in this table, specifically the narrow 95% bootstrap confidence intervals, license the claim that these factor scores are extremely stable. Moreover, these factor scores, considered in light of our *a priori* assumptions about the likelihood that a given transgression would be classified as a moral transgression, suggest that there is a relatively clear distinction in folk-morality between moral and conventional violations. The factor scores for the hypothesized moral transgressions form a relatively tight cluster, as do the hypothesized conventional transgressions. Coupled with the data reported in Table 2, this suggests that mature moral cognition includes a capacity to distinguish cases along a spectrum running from those transgressions that are clearly moral transgressions to those that are clearly conventional transgressions.

Figure 1 plots the scenarios against the first two principal components of the mean ratings. This plot shows that the distinction between clearly moral and clearly conventional transgressions was quite pronounced for these

Table 3
Moral-Conventional Factor Scores of Vignettes

Vignette	Vignette set		
	1	2	3
1	-1.13 (-1.21, -1.04)	-0.73 (-0.81, -0.64)	-1.26 (-1.30, -1.20)
2	0.77 (0.70, 0.86)	1.18 (1.10, 1.25)	-0.44 (-0.50, -0.39)
3	-0.02 (-0.09, 0.05)	1.16 (1.10, 1.24)	-1.36 (-1.41, -1.31)
4	-1.27 (-1.31, -1.21)	1.48 (1.42, 1.53)	1.01 (0.94, 1.07)
5	0.73 (0.66, 0.79)	-0.48 (-0.55, -0.39)	1.40 (1.35, 1.44)
6	0.30 (0.22, 0.38)	0.76 (0.70, 0.84)	1.10 (1.04, 1.17)
7	1.50 (1.45, 1.55)	0.94 (0.87, 1.00)	-0.18 (-0.24, -0.13)
8	-0.11 (-0.18, -0.06)	-0.83 (-0.87, -0.78)	-0.70 (-0.75, -0.65)
9	-0.69 (-0.74, -0.63)	1.36 (1.29, 1.40)	-0.74 (-0.78, -0.69)
10	1.17 (1.10, 1.22)	0.81 (0.71, 0.89)	-0.50 (-0.55, -0.45)
11	-1.14 (-1.18, -1.10)	-0.67 (-0.72, -0.62)	1.01 (0.95, 1.07)
12	-0.99 (-1.06, -0.94)	-0.81 (-0.86, -0.73)	1.09 (0.99, 1.21)
13	1.55 (1.49, 1.64)	-1.31 (-1.37, -1.26)	0.05 (-0.03, 0.11)
14	1.40 (1.31, 1.47)	0.48 (0.36, 0.61)	0.04 (-0.02, 0.09)
15	-0.86 (-0.90, -0.81)	-1.15 (-1.26, -1.08)	-0.98 (-1.03, -0.93)
16	0.40 (0.32, 0.48)	0.08 (-0.01, 0.18)	1.61 (1.56, 1.66)
17	-0.98 (-1.06, -0.92)	-1.26 (-1.31, -1.21)	-1.15 (-1.19, -1.11)
18	-0.62 (-0.70, -0.55)	-1.00 (-1.06, -0.93)	–

The vignette numbers refer to the distinct sets of vignettes that were presented within each condition and correspond to the numbers in the left-most column of Appendix A. Bootstrap 95% confidence intervals are given in parentheses.

53 vignettes. However, it is also clear from these data that some of the transgressions fall neither into the clearly moral nor the clearly conventional cluster. Although there was a high degree of correlation between the 4 target questions even for these vignettes, these cases seem to sit somewhere between being clearly moral and clearly conventional. Furthermore, although there appears to be meaningful differentiation along the second PC, belying the good fit of the single-factor model, the parabola traced by the PC scores is actually suggestive of a curvilinear relationship between a single factor and the questions (McDonald, 1967). Therefore, the second PC is best seen, at least for the most part, as an aid to visualization.

There are three outlying vignettes that exhibit large negatives scores on the second PC and these do seem to form a meaningful cluster. Given the overall standing of these transgressions on the moral-conventional dimension (mildly conventional), these scenarios received unusually high mean ratings as regards

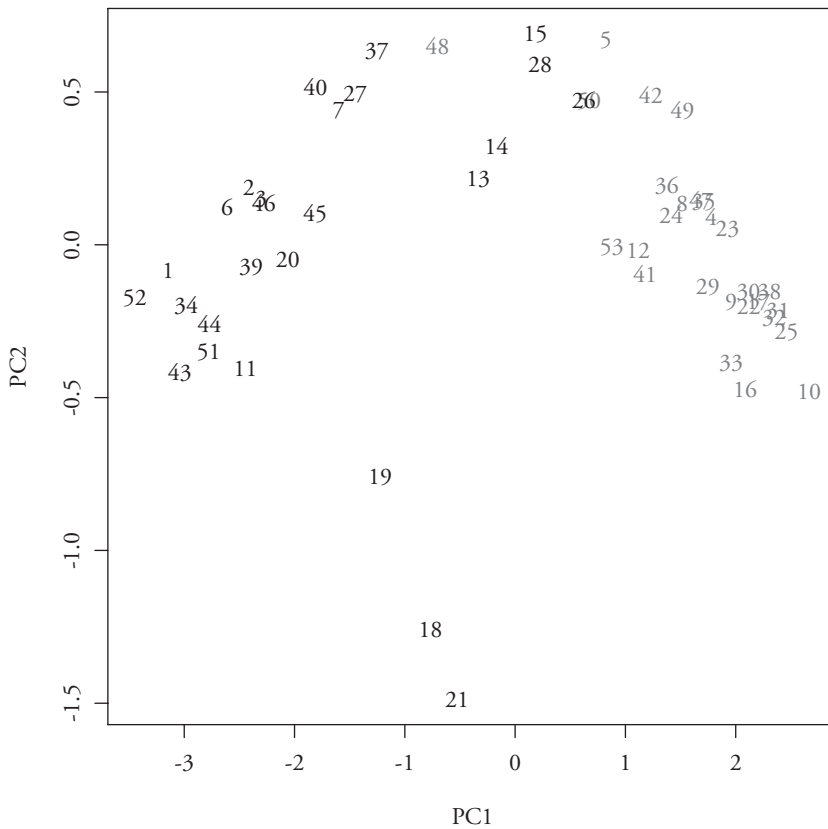


Figure 1. Principal components (PC) analysis. Hypothesized moral dilemmas are coded in light grey; hypothesized conventional transgressions are coded in dark grey. The vignette numbers refer to the number in the overall set of transgressions as reported immediately prior to each vignette in Appendix A. Note that the axis corresponding to PC2 has been expanded for the sake of clarity of presentation.

the extent to which state legalization of the actions would render them morally permissible. These three scenarios all involve violations of traffic laws which people seem to judge as relatively bad; however, the fact that such transgression are not obviously tied to physical or financial harm, makes it somewhat less surprising that they tend to cluster in this way.

Based on our own initial intuitions, we hypothesized that our moral transgressions would fall into the following 8 categories: Vehicle Assault, Physical Assault, Kid/Assault, Sexual Assault, Inducing Illness, Recklessness, Property

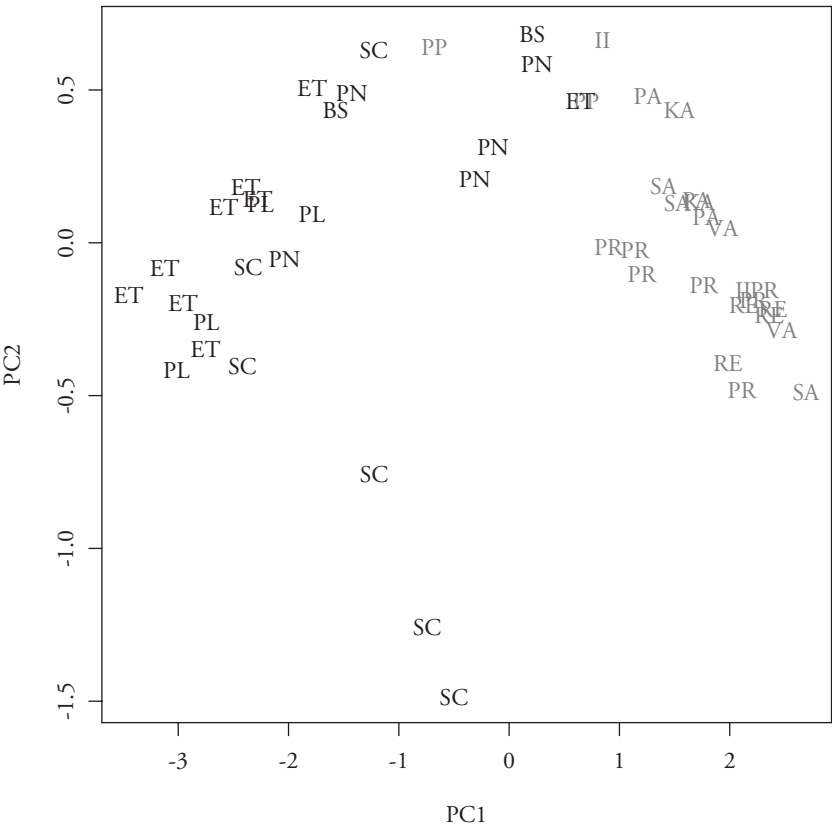


Figure 2. Principal components analysis by scenario type. Hypothesized moral dilemmas are coded in light grey; hypothesized conventional transgressions are coded in dark grey. Hypothesize Moral Categories: VA (Vehicle Assault: 23, 25); PA (Physical Assault: 4, 35, 42); SA (Sexual Assault: 8, 10, 36); KA (Kid/Assault: 47, 49); II (Inducing Illness: 5, 30); RE (Recklessness: 9, 22, 24, 31, 32, 33); PR (Property: 12, 16, 17, 29, 38, 41, 53); PP (Playground Property: 50, 48). Hypothesized Convention Categories: ET (Etiquette: 1, 2, 3, 6, 26, 34, 40, 51, 52); SC (Social Contracts: 18, 19, 21, 37, 39); PN (Public Nuisance: 13, 14, 27, 20, 28); BS (Body Sanctity: 7, 11, 15); PL (Playground Violations: 43, 44, 45, 46). Note that the axis corresponding to PC2 has been expanded for the sake of clarity of presentation.

Transgressions and Playground property transgressions. Similarly, we hypothesized that conventional transgressions would fall into the following 5 categories: Violations of Etiquette, Violations of Bodily Sanctity, Being a Public Nuisance, Violations of Social Contracts and Playground transgressions. Figure 2 presents our data sorted by transgression type as opposed to vignette number.

To assess model-data fit, we examined the residuals resulting from subtracting the matrix of model-predicted correlations among the questions from the matrix of observed correlations (McDonald, 1999). In Condition 1, the root mean square of the off-diagonal residuals was 0.030 and the absolute value of the largest off-diagonal residual was 0.058. In Condition 2, the root mean square of the off-diagonal residuals was 0.023 and the absolute value of the largest off-diagonal residual was 0.045. In Condition 3, the root mean square of the off-diagonal residuals was 0.0234 and the absolute value of the largest off-diagonal residual was 0.052. These small residuals indicate a good model-data fit, especially when they are considered in light of the magnitudes of the observed correlations.

Discussion

In recent years, a great deal of progress has been made by cognitive scientists who are interested in questions about the mechanisms responsible for mature moral judgments. However, even in light of this progress, one of the most important questions in moral psychology has been left largely unexplored: how does the mind determine that we are operating in the moral domain? As we go about our day-to-day lives, we reflexively make moral judgments as we read newspapers or books, as we listen to public radio or overhear conversations in cafes, and as we watch presidential debates and Hollywood blockbusters. Yet, many norm transgressions do not evoke such moral responses. Although philosophers (e.g., Singer, 1993) have long noted that almost any action, described in the right way, can be morally significant (e.g., even sitting at a cafe sipping espresso can be morally significant to the extent that it keeps you away from working in the soup kitchen), folk-morality rarely awaits the dictates of philosophical theory in determining whether an action ought to be treated as a moral transgression.

Our data provide a striking confirmation of the hypothesis, long defended by developmental psychologists, that folk-morality includes a robust capacity to distinguish moral from conventional transgressions. Specifically, our data confirm and extend the well-known hypothesis that violations of moral transgressions are treated as being more wrong and more punishable than conventional transgressions. Our data also confirm that moral norms tend to be treated

as more universally applicable than conventional transgressions and tend to be seen as having normative force that operates independently of existent structures of authority. In short, our data support the position, initially inspired by work in developmental psychology, that we distinguish two different domains of knowledge: the conventional and the moral. This capacity, which emerges early in life, is maintained into adulthood, and forms an important part of mature moral cognition.

Our data also demonstrate that there is a clear distinction between paradigmatically moral transgressions and paradigmatically conventional transgressions. For seven of eight types (as opposed to tokens) of hypothesized moral transgression (physical assault, vehicular assault, sexual assault, assault by a child, inducing illness, recklessly endangering the lives of others, and violating another person's property), participants treated each scenario as strongly and clearly immoral. Only in the case of one playground-based property transgression did judgments about any hypothesized moral dilemma diverge from this pattern – and we return to discuss this case below. However, our data also introduce some complications into the familiar developmental framework. Although the vast majority of our hypothesized conventional transgressions also formed an obvious cluster, every category except one (i.e., the playground transgressions) contained at least one scenario that deviated from this pattern.

There is some reason to suppose that social conventions are likely to lie along a continuum, stretching from transgressions of norms that are little more than matters of personal preference (e.g., getting tattoos or wearing black shoes with a brown belt) to norm transgression that are more likely to be matters for legitimate social sanction (e.g., violating traffic laws or not paying your taxes). The latter sorts of transgressions may be seen as more wrong, more punishable, less authority dependent, and more universal than other conventional transgressions – even though they are not yet treated as having distinctively moral force. Additionally, it is also likely to be the case that there are some sorts of conventional transgressions that become highly 'moralized' as a result of local cultural factors, and that persist in being so treated as a result of historically entrenched traditions (Haidt et al., 1997; Rozin, 1997). Thus, there are likely to be some cases in which actions seem particularly bad, and in which strong social sanctions and punishments seem appropriate, but where careful reflection reveals that such contra-normal behavior is perfectly acceptable. Historically, socially sanctioned laws against 'miscegenation' provide a clear case in which a behavior became moralized as a result of local cultural factors and historical traditions; many of the current norms governing gender and sexuality suggest the presence of similar moral-

izations in contemporary society, and Rozin's work on health versus ethical vegetarians provides a particularly well documented example in a more recent case.

Schweder et al. (1987) report data showing that participants in Bhubaneswar, Orissa, India see it as an incredibly serious transgression when a son gets a haircut and eats chicken on the day after his father has died. Such facts initially seem quite puzzling on the assumption that we possess the capacity to sort moral from conventional transgressions. However, as Nucci (2001) convincingly argues, the reason why these participants deliver this judgment is because of the beliefs that they have about the sorts of harms that can befall a soul or a spirit. In this case, a violation of a norm prohibiting eating chicken is seen as doing a great deal of harm to the father. This suggests that it will often be the case that a more careful analysis of the non-moral beliefs that are deeply entrenched in a culture may be required to shed light on the precise reasons why something that seems like it should be treated as a conventional transgression has been robustly moralized by a particular cultural group.

In line with these claims about the ways in which the boundaries of the moral and conventional domains can be modulated by local and cultural considerations, we return to the cases in our dataset that fall neither into the cluster of paradigmatically moral transgressions nor the cluster of paradigmatically conventional transgressions. To begin, consider the following five cases that seem to form an interesting third cluster insofar as none of them brings about a direct physical harm to another person, yet which all seem to be 'offenses to others' (Feinberg, 1985):

Tony was recently fired for incompetence. As revenge against his boss, he paints an offensive caricature of his boss on his own front door, making sure that it can be seen from the street.

William has been drinking all night. As he is walking home from the bar, he feels the urge to urinate. He steps into the rose garden in front of an unfamiliar house and urinates

Every time Kyle visits a new person's house, he goes into their bathroom and he uses all of the toothbrushes that he can find, never asking anyone's permission to do this.

Brian often gets bored when he goes to public lectures. Instead of listening to the lecture, he often talks loudly to his friends, making sure that everyone around him can hear what he says.

Jordan knows a lot of racist and sexist jokes. He tells them in a loud and boisterous tone of voice; typically in situations where he knows that telling them will make people feel uncomfortable.

In each of these cases, it is conceivable that people would think that there is a particular person or group of people whose rights have been violated. While there may be some sorts of cultural milieu in which toothbrushes are shared (e.g., in relatively impoverished societies with scarce resources), and while there may be some cultures in which it is expected that people will talk during a public lecture, there is likely to be a strong preference against such behaviors at least among the populations from which our sample is likely to have been drawn. Moreover, among the people who most commonly participate in web-based questionnaires, it is likely that being exposed to a person who is using public speech-acts to undermine another person, urinating in public, or using another person's toothbrush will evoke feelings of disgust, revulsion, contempt, or social anxiety. It is also clear that the benefits that are accrued in carrying out these offensive actions are strongly outweighed by the desires of those who are affected by these actions not to be treated in this way. Moreover, even if such cases are not worthy of legal sanction, strong social pressures in the form of ostracism, criticism or public shaming are likely to be provided in such cases. Note, however, that this opens up a dimension to which the familiar scale for punishability might not be sensitive – a strong punishability judgment in the case of a legal transgression may not be easily commensurable with a strong sanction for an offense to others. Such questions, however, call for further empirical investigation, and most importantly, the use of different measures to capture more subtle differences in participants' judgments, as well as tests of different populations (as we discuss below).

As we noted above, the few recent inquiries into the mature capacity to determine whether an action represents a moral or a conventional transgression have suggested that there are some cases where morally irrelevant factors can affect judgments about whether a violation belongs within the moral domain (Haidt, 1993, 2001; Haidt et al., 1997; Kelly et al., 2007; Nichols and Mallon, 2002; Rozin, 1997). For example, it has been suggested that socio-economic status affects judgments about whether some norm transgressions (e.g., cleaning your toilet with your nation's flag or masturbating with a dead chicken) are immoral or merely disgusting (Haidt, 1993). Similarly, judgments about the permissibility of whipping an unruly sailor seem to be sensitive to considerations of historical circumstance (Kelly et al., 2007). Our data suggest that there are at least some cases where offensive behaviors that are seen as having a serious negative effect on the lives of others are seen as being more like moral wrongs than are other sorts of conventional transgressions. It is possible, therefore, that the sorts of investigations that have been carried out previously have not been sensitive to this possible

range of cases and that the diverging judgments found in these previous studies are indicative of this class of offensive behaviors, which may be sensitive to social conventions even where they trend toward being seen as morally salient. Stated differently, the space of social transgressions is vast, and this space must be systematically sampled, and examined on the basis of a set of clear parameters, if we are to come to a complete understanding of how the mind determines which sorts of transgressions are conventional and which are moral.

Moving beyond these offensive behaviors, there are three additional cases that sit at the middle of the continuum (at least as ‘defined’ by our cases) stretching from paradigmatically moral transgressions to paradigmatically conventional transgressions and that also show a slight deviation from the remarkably high degree of correlation between badness, punishability, authority independence, and universality:

Brandon is driving through a rural area and he is sure that there is no one else around. Although the speed limit is posted at 55 mph, he drives at 100 mph.

Jake is driving through a rural area and he is sure that there is no one else around. When he comes upon a stop sign he decides to just drive through the intersection.

Zachary has never taken the time to take a driving test, and thus, he doesn’t have a driver’s license. However, at least once a week, Zachary still borrows and drives his friend’s cars.

While each of these transgressions was rated as falling close to the center of the continuum (though tending to be seen as slightly more conventional), participants also tended to judge that the relevant action was more authority dependent than would have been predicted given their location along that continuum. That is, changes in the legality of these actions would make it acceptable to engage in them. If the government decided that it was OK to drive 100 mph or run a stop sign when no one was around, this would then be OK; similarly, if the government decided that you didn’t need a driver’s license to drive a car, this would then be OK to do. While each of the relevant transgressions takes place in the context of violating a traffic law, we believe that the pattern of responses is likely to be indicative of a much broader, and substantially more important feature of folk-morality, which we turn to next.

None of the aforementioned cases bring about any physical harm; nor do they include any obvious potential for harm. Moreover, they are inoffensive, they do not introduce violations of equity, and they do not violate bodily

sanctity. In fact, the only sort of transgression that occurs in these three cases is the violation of the law. The fact that these transgressions lie at the center of the continuum, though trending toward being seen as conventional violations, suggests that people do not tend to see the violation of a law as such to have direct moral import. While many things that are legally wrong also tend to be seen as morally wrong, people do not seem to see mere legality as conferring moral authority. That said, people do treat violations of legal statutes as being more bad and more punishable than violations of etiquette. With this in mind, we suggest that for folk-morality, legal sanctions might bring with them a sort of normative authority that is not clearly captured by appeals to moral wrongness nor by appeals to brute matters of social convention. Unfortunately, because our dataset was not designed to examine this question, this must remain a tentative hypothesis for the time being. Further, investigations are required to understand the ways in which considerations of legality are processed by folk-morality.

Finally, there is one additional case that we had hypothesized would be treated as a moral transgression that violated this prediction, being treated instead as neither a clear moral nor conventional transgression:

During playtime, all of the children in a kindergarten class were supposed to share the toys. However, one day, Greg grabbed his favorite toy and refused to share it with anyone else.

On the basis of prior data (Smetana, 1984), we had assumed that participants would tend to see this case as a violation of fairness, and thereby to treat it as a fairly severe moral transgression. Although preschool children tend to focus exclusively on considerations of physical harm in determining whether something is a moral transgression (Smetana, 1984), and focus primarily on outcomes as opposed to the means by which they are achieved, older children appear to develop a more robust understanding of the moral domain that includes a sense of fairness and the rich interplay between means and outcomes (Nucci, 2001). Unfortunately, given that the vast majority of the research on the moral-conventional distinction has focused on the judgments that are made by children, the precise developmental trajectory of considerations of fairness remains obscure. Our data suggest that unlike young children, adults tend to see the unfairness of free-riding on a social contract to lie close to the center of the moral-conventional continuum, though responses to such cases trend toward the conventional side of the continuum. In line with this suggestion, judgments about a comparable adult situation were treated in a broadly similar way:

Charles is attending a potluck dinner where everyone is expected to bring a dish. He decides that there will already be enough food, so he just comes to the dinner empty handed.

Although the literature in experimental behavioral economics strongly suggests that all people have some sense of fairness (Henrich et al., 2005, 2006), there is also reason to believe that there will be some variation in the way that the concept ‘fair’ is implemented from culture to culture, at least in terms of what constitutes equitable distribution of resources, what counts as a punishable action or omission, and how individual societies create and uphold norms (Boyd and Richersen, 2005; Hauser, 2006). Differences in cultural history, social organization, and local ecologies may play a role in determining precisely what sorts of violations of fairness are to be treated as morally forbidden. For example, cross-cultural work on several small scale societies reveals that all societies hold some concept of a fair offer in artificial bargaining situations such as the ultimatum and dictator games, but vary in terms of the specific amount expected based on whether the culture is highly cooperative or individualistic, and these factors are highly influenced by the local ecology (Henrich et al., 2005, 2006). While this claim is speculative, and calls for further empirical inquiry, our data are consistent with the idea that the relative abundance of resources and the relative lack of cooperative behavior in contemporary western societies could lead to a conception of fairness that treats free-riding on social contracts as something that tends to be only conventionally wrong. And indeed, perhaps folk-morality is correct in this regard as free-riding on a social convention may have a different status depending on the structure of authority that happen to be in play in a given society (Fiske, 2004).

We conclude with a methodological point about the study of the moral-conventional distinction in mature moral psychology, a point that we believe also carries theoretical import. As we noted in our introduction, there has been a recent resurgence of interest in the study of moral psychology, with ‘new’ work building upon and complementing the elegant work that began with Piaget and Kohlberg, and that continues to the present in developmental psychology (Killen and Smetana, 2005). Specifically, this recent work has attempted to explore the role of emotion in moral judgment (Damasio, 1994; Haidt et al., 1997; Nichols, 2004; Valdesolo and DeSteno, 2006; Prinz, 2007; Schnall et al., 2008), to assess whether the principles that have been offered by moral philosophers are operative in folk morality (Cushman, 2008; Dwyer, 1999; Hauser et al., 2007; Mikhail, 2007, 2008; Moore et al., 2008; Waldmann and Dietrich, 2007; Huebner et al., 2009), to determine

the neural bases of morally relevant judgments (Anderson et al., 1999, 2006; Greene et al., 2001, 2004; Moll et al., 2002, 2003; Mendez et al., 2005; Koenigs et al., 2007; Sinnott-Armstrong et al., forthcoming), and to explore the relationship between moral judgment, justification and action (Cushman et al., 2006). As this research matures, we believe that it is critical to build upon the techniques that are used within those sub-disciplines of the cognitive sciences that are more mature, such as the study of vision and language. Within these domains of inquiry, a more sophisticated understanding of cognitive mechanisms has developed, at least in part, as a result of the standardization of methods and stimuli. We suggest that because these sub-disciplines possess a relatively standardized set of methods and stimuli, students of vision and language can clearly examine the similarities and differences between typically functioning participants and clinical populations, thereby contributing to a deeper understanding of the mechanisms that are integral to seeing and speaking. One goal of this paper was to generate a set of stimuli that could be used in a parallel fashion to understand the nature of cross-cultural variation, as well as to explore the neural mechanisms underlying our understanding of moral as opposed to non-moral situations.

One clear application of the stimuli presented here concerns the reported deficit for psychopaths with respect to the moral-conventional distinction (Blair, 1997; Blair and Cipolotti, 2000; Kinga et al., 2005). On the basis of such results, and the seemingly convergent evidence from other studies of healthy populations (Haidt, 1993; Nichols and Mallon, 2002), it has been suggested that emotional responses of a sort that are thought to be lacking in psychopaths provide the resources for converting conventional transgressions into moral transgressions (see also Nichols, 2004). However, recent reports suggest that psychopaths offer normal patterns of judgment in the context of moral dilemmas where, by definition, there are no clear, socially sanctioned responses (Hauser, 2008; Hauser et al., under review). Consequently, it is worth stepping back to ask whether emotional deficits are causally responsible, and sufficient, to account for the abnormal pattern of responses that psychopaths offered for the conventional-moral distinction tested in Blair's original studies. For example, recent work on patients with damage to the ventromedial prefrontal cortex (VMPC) reveal that although these individuals have emotional deficits, they generate largely normal judgments for a large class of moral dilemmas, with the exception of cases where highly aversive actions toward one individual allow for highly beneficial consequences for several other individuals. If normal emotional processes are necessary for the conventional-moral distinction, then these patients should show severe deficits, as do psychopaths, when presented with such cases. However, if such

patients show a clear capacity to distinguish moral from conventional transgressions, this would provide stronger support for the claim that emotional processes function as modulators, strengthening judgments about punishment and wrongness without fully converting a transgression from the conventional to the moral domain (see Huebner et al., 2008). Though clinical populations are often small, our analyses suggest that sample sizes of approximately 30 individuals should be sufficient to detect any differences. In cases where inferences with respect to fewer raters are necessary, we recommend the use of a Bayesian hierarchical model such as the one presented by Patz et al. (2002).

In conclusion, our results suggest that the original distinction between moral and conventional transgressions offered developed by Turiel, Nucci, Smetana and other developmental psychologists, carries forward from early in development into adult moral cognition. Not only do adults readily distinguish between moral and conventional transgressions for a wide variety of social situations, but the four key features originally identified by Turiel – badness, punishability, authority and universality – account for a substantial amount of the variation. Although the space of possible social transgressions is vast, and the parameters that define this space have yet to be fully articulated, we believe that significant progress in moral psychology will come from further developing this space, and applying a well behaved set of dilemmas to different populations, including people living in different cultures and with different cognitive deficits.

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Appendix A: Complete text of all scenarios

	Condition 1	Condition 2	Condition 3
1	23. Eric gets annoyed when he has to stop for pedestrians who are crossing the street. Today, he has decided to accelerate every time he sees someone that he might be able to hit.	12. The cemetery has been exhuming and relocating bodies. One night, John stops by the cemetery, opens up all of the exhumed caskets, and steals all of the jewelry he can find.	25. Thomas was angry about the way he was treated by local college students. So, he drove his car through a crowded area on the college campus, trying to hit people as he went along.
2	37. Charles is attending a potluck dinner where everyone is expected to bring a dish. He decides that there will already be enough food, so he just comes to the dinner empty handed.	2. Christopher has just finished eating his dinner at a fancy restaurant. Even though he has a napkin in his lap, he uses the tablecloth to wipe his face instead of using his napkin.	53. Sean is showering after working out at the gym. He walks out of the shower and sees some expensive clothes next to his gym shorts. He puts on the expensive clothes, and leaves the building
3	21. Zachary has never taken the time to take a driving test, and thus, he doesn't have a driver's license. However, at least once a week, Zachary still borrows and drives his friend's cars.	46. Every child in a kindergarten class was assigned a particular hook for their coat. One day Jesse decided he didn't like his hook, so he hung his coat on a different hook instead.	10. Joe is in his early thirties and he has a hard time meeting women his own age. Instead of dating, he engages in coercive sexual acts with an eleven-year-old girl.

Appendix A (*cont.*)

	Condition 1	Condition 2	Condition 3
4	32. Ben was at the airport waiting for his flight. When his flight was cancelled, he got upset and made a bomb threat to scare travelers and to make sure every other flight would be cancelled.	34. Jeremy is a bellhop at an elegant hotel. He is excited to see the Prime Minister of Australia walk in with a security detail, and he walks over and shouts “Hello John! What’s up?”	3. Mathew is eating dinner at a fancy restaurant. Every couple of minutes, he burps as loudly as he can, making sure that everyone else in the restaurant can hear him.
5	48. During playtime, all of the children in a kindergarten class were supposed to share the toys. However, one day, Greg grabbed his favorite toy and refused to share it with anyone else.	5. Daniel is eating dinner at a fancy restaurant. He is sick with the flu. Instead of excusing himself to the restroom, he blows his nose into his dinner companion’s wine glass without permission.	43. Jason is a six-year-old child who goes to a public elementary school. On Friday, every student was supposed to bring something for show and tell. But Jason decided not to bring anything.
6	18. Brandon is driving through a rural area and he is sure that there is no one else around. Although the speed limit is posted at 55 mph, he drives at 100 mph.	27. Alex has to take the bus to work. While he is riding the bus, he likes to put in his headphones and sing along loud enough that everyone on the bus can hear him.	39. Jeffrey is eating at a restaurant where the expected tip is 20% of his bill. When he pays for his meal he decides that tipping is stupid and he walks out without leaving a tip.
7	44. Every day, the children in a Kindergarten class are supposed to sit together on the rug for story time. One day, Juan refuses to sit on the rug and just stays at his table.	40. Nathan orders a very spicy dish at a restaurant. When he runs out of water and wants to get his waiter’s attention, he just yells across the room that he needs more water.	50. Every child in a kindergarten class brought their own lunch. One day, Ken decided to steal another child’s apple because he wanted one and he didn’t have one in his lunch box.
8	26. Brian often gets bored when he goes to public lectures. Instead of listening to the lecture, he often talks loudly to his friends, making sure that everyone around him can hear what he says.	24. Stephen stumbles upon a party where he doesn’t know anyone. He finds the wine cabinet as quickly as possible, selects a few of the most expensive bottles and leaves the party with them.	8. While standing in line at the Department of Motor Vehicles, James looks at the woman in front of him, licks his lips, then grabs her bottom and aggressively kisses her on the mouth.

Appendix A (*cont.*)

	Condition 1	Condition 2	Condition 3
9	47. Paul is a six-year-old child who goes to a public elementary school. One Friday he walked up to one of the other children in his class and hit him just for fun.	51. Richard wakes up late on Monday and he can't decide what to wear to work. After deciding that he doesn't like any of his pants, he just decides to wear his pajamas to the office.	35. Jose is walking to class when he sees a member of the varsity basketball team. Jose tried out for the team but was cut; so, he punches the basketball player in the face.
10	45. After playtime, the children were supposed to put their toys back where they had found them. Luis put his toy on a shelf nearby instead of putting it where he had found it.	7. Once a week, Andrew goes to the butcher and buys a nice cut of meat. He uses it to masturbate, and then he cleans it off thoroughly, cooks it, and eats it.	41. Sam is eating at a fancy restaurant when he remembers that he needs to buy a birthday gift. He is running low on cash, so he just leaves the restaurant without paying.
11	16. As Robert is walking home, he sees a beautiful antique Ford that is being donated to a museum. Without asking, he gets in, and drives to another town where he can hide the car.	42. Although Mark ordered his steak medium-well, he got a steak that was rare. He thinks that the waiter didn't pay attention to his order, so he trips him the next time he walks by.	20. Tyler has been driving his 1968 Chevy Nova since high school. Recently, his neighbors have complained about his noisy muffler. But Tyler doesn't care; he just keeps driving with the noisy muffler.
12	30. Cody has to take the bus to work. One day, just for fun, he buys a can of mace and while he is riding the bus he opens it, just to make everyone sick.	49. Dustin is a six-year-old child who goes to a public elementary school. One day during playtime, he went out onto the playground and shoved another child off a swing just for fun.	11. Before she passed away, Ryan's mother asked her family to eat her dead body to honor the traditions of their ancestors. One night, Ryan cooks her body and serves it for dinner.

Appendix A (*cont.*)

	Condition 1	Condition 2	Condition 3
13	1. One night Michael goes to a fancy restaurant. He orders a T-bone steak and when it arrives he picks it up and eats it with his hands rather than using his silverware.	38. Steven drained the anti-freeze from his car's radiator. Rather than disposing of the anti-freeze safely, he dumped it in a public pond, hoping to kill some local dogs that he thought were too noisy.	28. Jordan knows a lot of racist and sexist jokes. He tells them in a loud and boisterous tone of voice; typically in situations where he knows that telling them will make people feel uncomfortable.
14	6. While standing in line at the Department of Motor Vehicles, David and his girlfriend pass the time by passionately kissing and caressing each other, heedless of the dozens of people watching them.	19. Jake is driving through a rural area and he is sure that there is no one else around. When he comes upon a stop sign he decides to just drive through the intersection.	15. Every time Kyle visits a new person's house, he goes into their bathroom and he uses all of the toothbrushes that he can find, never asking anyone's permission to do this.
15	4. One night Joshua goes to a fancy restaurant and orders a T-bone steak. When it arrives he throws it as hard as he can into the face of a man sitting nearby.	33. Aaron was upset about the results of a recent national election. In order to make everyone else feel uncomfortable, Lou incited a race riot that caused the deaths of 20 people and hundreds of injuries.	22. After a night of heavy drinking with his friends, Kevin decided that it would be easier to drive home than to take a cab. Completely intoxicated, he gets into his car and drives home.
16	13. Tony was recently fired for incompetence. As revenge against his boss, he paints an offensive caricature of his boss on his own front door, making sure that it can be seen from the street.	14. William has been drinking all night. As he is walking home from the bar, he feels the urge to urinate. He steps into the rose garden in front of an unfamiliar house and urinates.	52. Patrick is riding the bus home from work. He has a very runny nose, and nobody around him has any tissues, so he takes his sock off his foot and wipes his nose with it.

Appendix A (cont.)

	Condition 1	Condition 2	Condition 3
17	9. Every few nights, Justin goes to a local petting zoo after it has closed for the day, climbs over the fence, and forces the farm animals to have oral sex with him.	17. As revenge against his girlfriend who just cheated on him, Nick collects all her furniture and clothes in the living room, sprays them with gasoline, and starts a fire that burns down the house.	31. Adam went to a movie that he thought was really boring. About half way through, he started yelling “Fire!” just for fun. As he expected this caused a stampede, and also killed several people.
18	36. Travis is meeting his friends at a party. One of his friends has brought his new girlfriend. Travis thinks that this girl is very pretty, so he starts touching her in a sexual way.	29. Tim has found a way to counterfeit tickets for a local concert venue. Although he knows that they will not get people in to concerts, he sells them at inflated prices just to make money.	—

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