

Is Belief in Free Will a Cultural Universal?*

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Abstract

Recent experimental research has revealed surprising patterns in people's intuitions about free will and moral responsibility. One limitation of this research, however, is that it has been conducted exclusively on people from Western cultures. The present paper extends previous research by presenting a cross-cultural study examining intuitions about free will in subjects from the United States, Hong Kong, India and Colombia. The results revealed a striking degree of cross-cultural convergence. In all four cultural groups, the majority of participants said that (a) our universe is indeterministic and (b) moral responsibility is not compatible with determinism.

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The question of free will is one of the oldest and most intractable in the history of Western philosophy; philosophers are *still* arguing about how best to answer it. But recent experimental research on the topic has arrived at a surprising result. Although philosophers remain divided about how to address the question of free will, it seems that a substantial majority of ordinary people have somehow converged on a single basic view. What's more, they seem to embrace a thesis— usually called *incompatibilism*—that most philosophers are prone to reject.

Even while this research is suggestive, it suffers from an important limitation—all of the studies have been conducted on subjects in the United States. This opens up the possibility that the existing results merely reflect some idiosyncratic property of contemporary Western culture. To address this worry, we conducted a cross-cultural study of intuitions about free will. Our aim was to determine whether previous results merely pointed to some aspect of one particular culture or whether these results really were pointing to some more fundamental truth about the way people think about human freedom.

Folk intuitions on moral responsibility and determinism

In the Western philosophical tradition, the question of free will typically arises from reflection on the laws of nature. One view, stretching back to the ancient Greeks, maintains that everything follows inevitably from a description of the universe together with the laws of nature. This in itself might not seem troubling; knowledge of these laws allows us to predict and manipulate our environments. However, worries arise when one entertains the thought that humans are also a part of nature, and that these laws may govern human action as well. If this is true, then it would seem that human actions are similarly determined, and one might think that true free will would therefore be impossible.

A key question is whether such determinism would also undermine moral responsibility. In other words, can individuals be morally responsible for their actions if these actions are determined? There are two basic views in the philosophical literature. *Compatibilists* say that there is no conflict between determinism and free will. They find free will and moral responsibility to be compatible with the kind of determinism outlined above. *Incompatibilists*, on the other hand, say that free will is not compatible with determinism, suggesting that if the universe is entirely deterministic, we can never be morally responsible for our actions. Faced with the incompatibility of free will and determinism, some incompatibilists deny that individuals are truly free and morally responsible for their actions (the hard determinists) while others maintain that the human capacity to make free choices undermines the truth of determinism (the libertarians). The majority of philosophers today maintain one or another form of compatibilism (Van Inwagen, forthcoming).

Recently, researchers have begun to explore folk intuitions concerning these matters, and initial results appeared to support the view that ordinary folk are also mostly compatibilists. For example, Nahmias et al. (2006) presented participants with several different scenarios describing deterministic universes. Following each scenario, participants were asked a range of questions, including whether a certain person in that scenario acted freely and was morally blameworthy. In one scenario, a supercomputer is capable of predicting all future human behavior when provided with a complete description of the universe along with the laws of nature. In this scenario, an individual robs a bank, and participants are asked whether that person is morally blameworthy for what he did. Strikingly, most participants said that the person was indeed morally blameworthy, thereby giving a compatibilist answer. Nahmias et al. conducted a number of different experiments using a variety of different descriptions of determinism and always obtained this same basic

result (for related findings, see Viney, Waldman & Barchilon, 1982; Woolfolk, Doris & Darley, 2006).

These studies which elicited compatibilist responses have an interesting feature: they ask participants to consider *concrete* cases, often of a type guaranteed to provoke affective responses (such as killing a person or robbing a bank). There is now a wealth of studies in social psychology exploring links between affect and theoretical cognition suggesting that such concrete, affect-laden cases may introduce biases in folk judgments (e.g. Lerner, Goldberg & Tetlock, 1998; Smart & Loewenstein, 2005). It is therefore important to see whether the compatibilist intuitions hold up when participants are presented not with a case likely to trigger affect, but instead asked more directly whether moral responsibility can be possible in a deterministic universe.

Such a strategy was pursued by Nichols and Knobe (2007). They designed a study aimed at minimizing the triggering of affective biases by avoiding the use of concrete and affect-laden vignettes. They also emphasized the *causal* nature of the deterministic scenario. All of their experiments began with the following setup.

Imagine a universe (Universe A) in which everything that happens is completely caused by whatever happened before it. This is true from the very beginning of the universe, so what happened in the beginning of the universe caused what happened next, and so on right up until the present. For example one day John decided to have French Fries at lunch. Like everything else, this decision was completely caused by what happened before it. So, if everything in this universe was exactly the same up until John made his decision, then it had to happen that John would decide to have French Fries.

Now imagine a universe (Universe B) in which almost everything that happens is completely caused by whatever happened before it. The one exception is human decision making. For example, one day Mary decided to have French Fries at lunch. Since a person's decision in this universe is not completely caused by what happened before it, even if everything in the universe was exactly the same up until Mary made her decision, it did not have to happen that Mary would decide to have French Fries. She could have decided to have something different.

The key difference, then, is that in Universe A every decision is completely caused by what happened before the decision – given the past, each decision has to happen the way that it does. By contrast, in Universe B, decisions are not completely caused by the past, and each human decision does not have to happen the way that it does.

1. Which of these universes do you think is most like ours? (circle one)

Universe A Universe B

Please briefly explain your answer:

Nearly all participants chose Universe B—the indeterministic universe—as being most similar to our own. The key manipulation was in the follow-up question, where participants were asked to consider only Universe A—the deterministic universe. Some were randomly assigned to the *concrete* condition, others to the *abstract* condition. In the *concrete* condition, participants were presented with a description of a particular act in Universe A, such as the following:

In Universe A, a man named Bill has become attracted to his secretary, and he decides that the only way to be with her is to kill his wife and 3 children. He knows that it is impossible to escape from his house in the event of a fire. Before he leaves on a business trip, he sets up a device in his basement that burns down the house and kills his family.

Is Bill fully morally responsible for killing his wife and children?

YES **NO**

In line with the studies of Nahmias et al, most subjects in this scenario (72%) gave the *compatibilist* response; that is, they found Bill fully morally responsible for killing his wife and children. Another set of participants were randomly assigned to the *abstract condition*, and instead asked the following general question.

In Universe A, is it possible for a person to be fully morally responsible for their actions?

YES **NO**

Here, most participants (86%) gave the *incompatibilist* response, denying that a person could be fully morally responsible in such a universe!

At first, it seemed surprising that people would give these incompatibilist responses, and it was natural to suspect that the results were merely the product of some peculiar property of the way these particular studies happened to be designed. Yet subsequent

studies have again and again confirmed the basic finding.

For example, some may believe the response pattern results from the fact that participants were asked whether individuals could be ‘fully morally responsible.’ This leaves open the possibility that participants would be willing to attribute *free will* (but not moral responsibility) or that they would be willing to attribute moral responsibility (even if not *full* responsibility) to people in a deterministic universe. However, subsequent studies showed that similarly incompatibilist responses were given even when participants were directly asked whether people in a deterministic universe could have free will (Feltz, Cokely & Nadelhoffer, forthcoming; Roskies & Nichols, forthcoming) and when they were simply asked whether such people ‘should still be morally blamed’ (Roskies & Nichols, forthcoming). So it does not appear that the incompatibilist response is merely an artifact of the way the question is phrased.

Others have suggested that the incompatibilist response might arise because of certain infelicities in the description of the deterministic universe itself. Subjects are told that “it had to happen” that the person would act as she did, which might be taken to suggest fatalism as opposed to determinism (Nahmias, 2006; Nahmias, Coates & Kvaran, 2007). However, subsequent work has shown that participants continue to give incompatibilist responses even when all of this language is removed (Misenheimer, 2008). So, it seems that the effect cannot be chalked up to something about the specific way in which determinism is described.

Finally, some might object that the experiment is merely getting at people’s *theories* of moral responsibility and not at the way they make actual *judgments* in particular cases. Here, our reply is twofold. First, we think that the study of people’s implicit theories is important in its own right. These theories can offer us fundamental insights both into certain aspects

of human cognition and into the philosophical problems that arise in this domain. In particular, if people interpret one another (and the world around them) according to implicit theories, then exploring these theories would be valuable in arriving at a better understanding of their appraisals and judgments. Second, people's incompatibilism actually does show up in their concrete judgments; as long as one gives participants scenarios designed to avoid triggering affective responses (e.g., a story about a man cheating on his taxes), they tend to say that a person in a deterministic universe cannot be fully morally responsible (Nichols & Knobe 2007).

At this point, then, it seems clear that people really do show a surprisingly robust tendency to give incompatibilist responses.

The significance of culture

One may now be tempted to agree with those philosophers who have maintained that "it is... *in our nature* to take determinism to pose a serious problem for our notions of responsibility and freedom" (Strawson, 1986). However, given that all of the studies were conducted on American participants, questions remain as to whether this finding is really telling us anything fundamental about human nature, or whether it tells us something local about contemporary Western culture. In other words, one would want to know whether this response pattern really is representative of some *universal* tendency, and here there is room for considerable doubt.

Recent studies exploring folk intuitions on philosophically relevant cases have revealed very different response patterns between individuals of Western and non-Western backgrounds. For example, Weinberg et al. (2001) found significant differences between American, East Asian and Indian participants in their intuitions concerning key thought

experiments about the nature of knowledge, and Machery et al. (2004) found similar differences between East Asian and American subjects on thought experiments in the philosophy of language. One might suspect, then, that intuitions about free will could show a similar sort of cross-cultural variation.

Indeed, prior research has revealed that Westerners and non-Westerners differ in the way they think about ideas and concepts at the heart of the free will debate, including moral responsibility (Miller & Turnbull, 1986; Miller & Bersoff, 1992), independent agency (Kashima, Kim, Gelfand, Yamaguchi, Choi & Yuki, 1995), and the more fundamental notion of what it means to be an individual (Markus & Kitayama, 1991). For example, Markus and Kitayama (1991) argue that Westerners maintain a very peculiar notion of what it is to be an individual. In many Western cultures, there is a faith in the inherent separateness of persons, who are seen as individual loci of control, asserting themselves onto their external environments in independent fashion. This is in stark contrast to the cultures of Asia, Southern Europe, and Africa, who see individual behavior as contingent upon—and to a large extent organized and determined by—the thoughts, feelings, and actions of others. To some, this might suggest an attenuated emphasis on—or belief in—free agency in these cultures.

We see striking parallels in philosophical conceptions of individuality across cultures (Ames, 1994). On the one hand, an ‘individual’ can be seen as a single, indivisible, autonomous, and private locus of willing or efficacy. This particular conception of individuality is prevalent in the Western philosophical tradition. On the other hand, an ‘individual’ can also be seen contextually, as a locus or focal point within a web of social relations. On this relational view, an individual is nested in—and significantly determined by—larger group structures, while also (and simultaneously) affecting the dynamics of these

structures in turn. This notion, prevalent in Asian culture, is quite different from the idea of a private, individual, inscrutable “will” as a ground for action. Because of these considerations, some have gone so far as to question the very *notion* of a group / individual dichotomy in traditional Confucian culture (Ames, 1994; Rosemont, 1991).

Given these differences, it may be hasty to conclude that the incompatibilist intuition is really something inscribed in our natures. To explore the issue more thoroughly, we conducted a cross-cultural study that examined the intuitions of participants in the United States, India, Hong Kong and Colombia.

Methods

Participants: Participants were 231 undergraduate students, recruited from four distinct samples:

- (a) The ‘United States sample’ included 66 students at U.S. Universities (University of Arizona and University of Utah) (50% female).
- (b) The ‘India sample’ included 55 students at Jadavpur University in India (42% female).
- (c) The ‘Hong Kong sample’ included 40 students at Hong Kong University. (Because of a clerical error, exact gender information is not available, but the sample was drawn from a class in which 60% of the students were female.)
- (d) The ‘Colombia sample’ included 70 students at Universidad Javeriana in Bogotá, Colombia (63% female).

Procedures: All participants completed a survey in the classroom. Survey materials were taken from Nichols & Knobe (2007). Participants first read a description of a determinist universe (A)

and indeterminist universe (B) (see above for complete text). Following these descriptions, all participants received two questions. First, they were asked the *determinism* question:

1. Which of these universes do you think is most like ours? (circle one)

Universe A

Universe B

They were then asked to explain their answer. This was followed by the second question, the *compatibilism* question:

2. In Universe A, is it possible for a person to be fully morally responsible for their actions?

YES

NO

Hong Kong University and Jadavpur University are both English speaking universities, and participants at those universities therefore received the same English version as U.S. participants. For Colombian participants, all materials were translated into Spanish and backtranslated to ensure accuracy.

Results

Results for the determinism question are displayed in Figure 1. In each of the four samples, the majority of subjects responded that our universe is not deterministic. This option was chosen by 82% of subjects in the United States sample, 85% in the India sample, 65% in the Hong Kong sample, and 77% in the Colombia sample. There was no significant difference

between the responses from participants in these different cultural groups ($\chi^2 (3, N=229) = 6.098, p=.107$, two-tailed).

Results for the compatibilism question are displayed in Figure 2. In each of the four samples, the majority of subjects responded that moral responsibility is not compatible with determinism. This option was chosen by 75% of subjects in the United States sample, 72% in the India sample, 63% in the Hong Kong sample, and 68% in the Colombia sample.

There was no significant difference between the responses from participants in these different cultural groups ($\chi^2 (3, N=226) = 2.135, p=.545$, two-tailed).

Finally, although the majority of subjects favored indeterminism and incompatibilism, there was a significant effect such that those subjects who responded as determinists tended also to respond as compatibilists ($\chi^2 (1, N=225) = 28.550, p<.0001$, two-tailed). Indeed, of those subjects who responded as determinists, 61% responded as compatibilists.

Discussion

The results of the present study suggest a surprising degree of cross-cultural convergence. In all four cultures, the majority of participants responded that our own universe was indeterministic but that moral responsibility was not possible in a deterministic universe.

While the most important results of the study were those concerning the responses of the majority, we also obtained an interesting result regarding the responses of the minority. Those participants who responded as *determinists* tended also to respond as *compatibilists*. This finding contributes to an emerging literature on the implications of rejecting indeterminist free will. Some researchers have suggested that if people come to accept determinism, this will lead them to behave immorally (e.g. Smilansky, 2000). Perhaps this is so, but our results

suggest that if people are persuaded that the universe is deterministic, they will not end up concluding that human beings are never morally responsible. Instead, it seems that they will simply conclude that moral responsibility is compatible with determinism.

For present purposes, the more important finding concerns the majority response. Previous work had indicated that people affirm two distinct theses: a) that moral responsibility is *not* compatible with determinism, and b) that our own universe is *not* deterministic—at least when it comes to human decision making. However, the participants in all of these studies were Americans, and prior research has shown that people from Western cultures have peculiar beliefs concerning some of the ideas invoked in the free will debate, such as the scope of moral responsibility, the nature of personal agency, and even the notion of what it means to *be* an individual. In other words, the fact that most individuals in America hold these two theses concerning free will and moral responsibility might be just another peculiar, quirky fact about how Americans understand the world.

In the present study, we collected data from Colombia, Hong Kong, India, Utah, and Arizona in order to investigate this very question—i.e. whether these theses are embraced across a diverse range of cultural traditions. The results are surprising: in all the cultures, each thesis was affirmed by a clear majority. Most people in our cross-cultural sample apparently think that our universe is not deterministic but that if it were, people would not be morally responsible for their actions.

Of course, the participants in all of our studies were university students, and as such would have been exposed to Western influences. It will be important to examine people with less exposure to Western ideas and values, for it is possible that they might give different answers. Even so, researchers in cross-cultural psychology have routinely found differences between university students in different cultures (see, e.g., Markus & Kitayama, 1991;

Nisbett, Peng, Choi & Norenzayan, 2001). Indeed, even *within* U.S. universities, students from different cultural backgrounds show significant differences in cognition and attitudes (e.g. Nisbett, 2003; Nisbett & Cohen, 1996). So it remains striking that no cultural differences were found in our studies.

The puzzle persists: whence this widespread agreement? The problem of free will is paradigmatically *vexed*; it is both old and intractable, invoking complex notions such as determinism, causation, volition and responsibility. Philosophers have been working on the problem for millennia with little convergence, and no agreement seems in the offing. Yet a majority of these ordinary individuals in very different parts of the world, with divergent ways of understanding the world, who have probably never been instructed on the topic of causal determinism, all embrace the same two theses—indeterminism and incompatibilism.

How is it, then, that individuals everywhere seem to embrace indeterminism and incompatibilism? Whenever one finds such cross-cultural similarities in beliefs, there are two broad approaches one might take in explaining them. The first focuses on *innate endowment*, the second on *shared experience*. We will examine these in turn.

On the one hand, it is possible that the cross-cultural similarity we find here arises because certain aspects of moral cognition actually have an innate basis. For example, some researchers have suggested that people might be endowed with an innate ‘moral faculty’ that includes certain highly complex moral principles (Dwyer, 2000; Harman & Roedder, forthcoming; Hauser, Young & Cushman, 2007; Mikhail, 2007). While it may seem a stretch to suggest that an incompatibilist principle is built right into our innate moral faculty—that evolution could have endowed us with an abstract metaphysical principle like incompatibilism—it is certainly possible, and recent research has led to the development of models in which such a principle actually could have been selected for (Sommers,

forthcoming). Of course, if such a principle really had an innate basis, it would be difficult to explain the fact that a substantial minority of subjects consistently offer compatibilist responses (Feltz et al., forthcoming).

However, one should not assume that people's ordinary incompatibilism can only have an innate basis if people are endowed with innate moral principles as sophisticated and complex as those presented by incompatibilist philosophers. It might also be possible to explain the similarities using a model in which people's moral principles are actually quite simple, yet various other aspects of cognition combine with these principles to yield patterns of intuition that end up looking surprisingly complex. To take just one example, suppose that people's capacity for assigning moral responsibility relies on the principle that one can only be responsible for behaviors that have some kind of psychological origin (such as an agent's thoughts and intentions) and not for those that are caused by purely physical processes (such as an agent's being blown around by the wind). One might then suppose that there exists some complex interaction between this principle and our capacities for causal cognition, folk physics and theory-of-mind, such that people end up concluding (perhaps falsely) that any behavior that is *completely caused* by prior events must have arisen through physical processes rather than psychological ones (Misenheimer, 2008). Ultimately, then, the contingent *combination* of all of these aspects of cognition might yield certain incompatibilist intuitions. This approach does appeal to innate principles, but without assuming that people's capacities for moral judgment are especially sophisticated or highly complex.

Then again, these responses might result not from innate capacities but rather from shared experience, and here as well there are a number of ways one might proceed. For example, individuals everywhere might experience a human social world that seems

persistently and stubbornly *unpredictable*, and this experience might feed into the belief that human decision making is indeterministic. Another possibility is that the belief in indeterminist free will comes from our experience of our own internal mental lives—in particular, our experience of our own choices (Campbell, 1951; O'Connor, 1995). Some philosophers have maintained that such individual experiences make it evident that determinism is false (Reid, 1969[1788]). Other philosophers (e.g. D'Holbach, 1970[1770]; Spinoza, 1985) have suggested that we believe in free will because we fail to see how our mind *actually works*; were we to come to a correct understanding of the mind, our beliefs would be very different.

This belief in indeterminism might then lead to a belief in incompatibilism. Suppose experience affords us the idea that moral responsibility is tied to choice. If a critical feature of choice is indeterminism, this might explain why people are inclined to maintain that moral responsibility requires indeterminism. Then again, people might well acquire their beliefs about the criteria for responsibility by looking at the agents who are labeled 'responsible' and then engaging in some kind of inductive generalization to see what feature they have in common. If all these agents are all humans, and if this common feature is thought to be indeterminism, then one might expect individuals to acquire the view that indeterminism is a condition for responsibility. Either way, some feature of our experience might lead to the belief that responsibility is not compatible with determinism.

Finally, it is possible—and indeed quite likely—that the similarities we observe here arise from a complex interaction between innate endowment and experience. For example, it could be that people have an innate tendency to regard agents as responsible only when they are in some sense free, but that people rely on experience to arrive at an understanding of precisely what this freedom entails.

In our view, the data presently available is not sufficient to decide between these contrasting hypotheses. In short, there is still much work to be done. And while the problem of free will has historically been the prerogative of philosophers, the current study suggests that researchers everywhere who investigate folk psychology, folk physics, and moral cognition have contributions to make in solving this particular puzzle.

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