



A Comparison of American and Nepalese Children's Concepts of Freedom of Choice and Social Constraint

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Abstract

Recent work has shown that preschool-aged children and adults understand freedom of choice regardless of culture, but that adults across cultures differ in perceiving social obligations as constraints on action. To investigate the development of these cultural differences and universalities, we interviewed school-aged children (4–11) in Nepal and the United States regarding beliefs about people's freedom of choice and constraint to follow preferences, perform impossible acts, and break social obligations. Children across cultures and ages universally endorsed the choice to follow preferences but not to perform impossible acts. Age and culture effects also emerged: Young children in both cultures viewed social obligations as constraints on action, but American children did so less as they aged. These findings suggest that while basic notions of free choice are universal, recognitions of social obligations as constraints on action may be culturally learned.

Keywords: Cognitive development; Social cognition; Culture; Choice; Moral and social development

1. Introduction

Our folk psychology depends on the ability to reason about freedom of choice. The universal belief that we are “free” to act on our desires and, therefore, to “choose” our intended course of action is fundamental to our everyday social cognition (Baer, Kaufman, & Baumeister, 2008). At the same time, understanding how actions may be “unfree,” or constrained by the physical, mental, and social world, similarly informs our understanding of agency, causal attribution, and moral responsibility (Nichols & Knobe, 2007; Pizarro & Helzer, 2010; Vohs & Schooler, 2008). To what extent are these important cognitions universal, and to what extent are they transmitted through culture, and

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learned over developmental time? To investigate this question, we interviewed children of a broad range of ages (4–11) in two cultures (Nepal and the United States) about their intuitions regarding freedom of choice and situational constraint.

Recent work in developmental psychology has documented that young children have some basic understanding of freedom of choice. For example, young children understand that their own actions, and those of other agents, are freely willed (Chernyak, Kushnir, & Wellman, 2010; Kushnir, Wellman, & Chernyak, 2009; Nichols, 2004). That is, children affirm that all else being equal, both their own actions, and those of others “could have been otherwise.”

A second and importantly related cognition is that of situational constraint. To adults, “free will cannot really mean that at any point a person’s behavior is totally unpredictable (and therefore entirely unconstrained)” (p. 4, Baer et al., 2008). Past literature points to two constraints that children understand as early as the preschool period. First, infants have some notion of how the physical world may constrain the actions of agents. For example, infants infer that people’s paths are constrained by the laws of physics (i.e., one cannot pass through a solid brick wall; Gergely & Csibra, 2003). Second, infants and preschoolers understand how mental states (i.e., knowledge) may influence one’s decisions, actions, and beliefs (Onishi & Baillargeon, 2005; Wellman, 1990). Supporting the notion that preschoolers believe that the physical and mental world restricts one’s freedom of choice, Schult and Wellman (1997) found that children judge certain acts to be physically or biologically impossible, and therefore constrained (see also Kalish, 1998). Similarly, Chernyak et al. (2010) and Kushnir et al. (2009) found that preschool-aged children judge their own actions as determined by physical laws and knowledge states.

The presence of such understandings so early in development raises the possibility that they are highly intuitive, and therefore universal. Indeed, with respect to constraints, Liu, Wellman, Tardif, and Sabbagh (2008) find that ideas about mental (i.e., knowledge) constraints are seen across cultures and develop during the preschool years. Similarly, a recent study examining adult intuitions across cultures found that belief in free will is not culture-dependent (Sarkissian et al., 2010). Other work finds that personal choice is equally valued by young children across cultures (Helwig, 2006; Ryan & Deci, 2000). Even adults from collectivist, interdependent cultures—in which duty, responsibility, and role obligations (rather than freedoms) are highly stressed—feel that those duties are freely followed (Miller, 2003; Miller, Das, & Chakravarthy, 2011; Savani, Markus, Naidu, Kumar, & Berlia, 2010; Exp 5) and endogenously motivated (Miller & Bersoff, 1994).

On the other hand, adults across cultures differ in the extent to which they consider certain social acts “obligations” versus matters of personal choice. For example, Miller and colleagues (Miller & Bersoff, 1998; Miller, Bersoff, & Harwood, 1990) found that Americans were less likely than Hindu Indians to judge that there was a moral imperative to help strangers, unliked others, or those only in minor need of help. Eastern cultures also, in general, view the self—and therefore, by extension, self-caused acts—as more “interdependent” (fitting into a larger social context) than Western cultures (Markus & Kitayama, 1991). Taken together, this work suggests that while basic notions of choice

and constraint may be similarly endorsed across cultures, the recognition of social obligations as constraints on action is susceptible to cultural variability.

How and when these cultural differences emerge in development remains an intriguing empirical question. It is possible, for example, that young children in both Eastern and Western cultures begin with the sense that social obligations constrain action. Evidence for this idea comes from past work, which found no differences between British and Nepalese preschool-aged children's endorsements of social obligations (Harris, Nunez, & Brett, 2001), and even children in Western, individualistic societies understand that moral and social rules coerce one's ability to act (Chernyak et al., 2010; Kalish & Shiverick, 2004). Therefore, preschool-aged children in both cultures are likely to begin with a strong notion of social constraint. However, social constraints should be viewed as ontologically distinct from physical ones and should be more susceptible to cultural change and variability. Therefore, as children develop within their respective cultures, their beliefs about social constraints should diverge along cultural lines: Past developmental research has shown that the preschool to the early school-age years are associated with the emergence of many cultural differences in social cognition (Miller, 1984; Wang, 2004).

In this study, we investigated beliefs about freedom of choice, physical and mental constraints, and social constraints in two cultural contexts: the United States and Nepal. Nepal was chosen as a representative Eastern culture, which has been relatively understudied in prior cross-cultural work. It comprised collectivist subcultures and ethnic groups, all of which stress a strong sense of social interdependence (Cole, Walker, & Lama-Tamang, 2006). We chose a broad age (4–11 years) to investigate developmental trends in cultural differences.

We devised a questionnaire in which we asked children about their beliefs in freedom of choice and constraint. Children heard a series of vignettes, each about a character who displays a consistent behavior over time (e.g., always using a pen to draw a picture) but has a desire to engage in a new action (e.g., wants to use a pencil). Children were then asked two questions about the desired action: whether the character could choose to act (Free Choice Judgment) and whether the character is going to act (Action Prediction). Each of the items fell into the three categories: (a) simple, unconstrained actions (e.g., using a pencil instead of pen); (b) impossible (physically and mentally constrained) actions (e.g., floating in the air instead of falling after a jump, doing something you do not know how to do); and (c) socially constrained actions (e.g., causing harm to another, breaking rules). We included a broad range of social constraints—from moral acts to social and artifact conventions, capturing the range of social, moral, and obligatory understandings that are present as early as the preschool years (Killen & Smetana, 2002; Smetana, 1981; Turiel, 1983).

We predicted three main hypotheses:

1. Children across cultures and ages should universally state that simple, unconstrained actions are freely chosen, whereas impossible actions are not.
2. There should be an increasing cultural divergence with age in determining whether social obligations pose constraints on one's action—that is, whether characters can act on their desires when desires and social considerations conflict.

3. Following from our second hypothesis, there should be an increasing cultural divergence in the prediction that characters *will* act on their desires, in particular when desires and social considerations conflict.

2. Method

2.1. Participants

Forty-five Nepalese (21 females, 23 males, 1 gender data not recorded) children aged 4–11 years ($M = 8.22$; $SD = 1.85$) participated. We attempted to recruit from multiple, diverse locations. Participants from Nepal were recruited via local schools from an urban area (in Kathmandu) and rural villages (in the Annapurna Himalaya). A comparison sample of 31 American children (17 female, 14 male) aged 4–11 years ($M = 7.23$; $SD = 1.73$) were recruited from two locations in the Northeast United States: a small university town, and a mid-sized city.¹ American children were of predominantly European-American background, ranging from lower-middle to upper-middle class. Ten additional preschool-aged children (9 from Nepal: Mean age = 6.67; 1 from the United States: age = 4) participated, but they were excluded for indiscriminant responding (all “yes” or all “no” to the entire set of Free Choice Judgment Questions), indicating either lack of attention or understanding of task instructions.

2.2. Procedure

All children were interviewed in a quiet corner or separate room by a native speaker of their language. The questionnaire was first devised in English, and then translated into Nepali by the third author. The translation was then independently verified by two local Nepalis for grammatical errors and cultural acceptability. Small changes to ensure cultural acceptability were made (e.g., changing the word “fork” to “hand”; using traditional Nepalese names for characters) for select items. The Nepali questionnaire was then independently back-translated by a Nepali-American blind to the wording of the original English questionnaire. Both versions were nearly identical.

2.3. Questionnaire

The full questionnaire consisted of 27 child-appropriate items in the following general format:

“Peter draws a picture every day. He *always* uses a pen to make his picture. But today, he wants to do something different. Peter wants to make his picture with pencils.”

The complete set of 27 items fell into 9 categories (3 items per category). See Table 1 for examples. In the first category of items, the target actions were simple, unconstrained actions; they were both possible and did not violate any known laws, norms, or rules (Free Choice items). The next two sets of items comprised impossible actions. That is, the target

Table 1
Sample questionnaire items by category

Category	Example
Free Choice	“Peter draws a picture every day. He <i>always</i> uses a pen to make his picture. But today, he wants to do something different. Peter <i>wants</i> to make his picture with pencils.”
Physical Laws	“Bobby walks to the store every day. He <i>always</i> walks around the big brick wall. But today, he wants to do something different. Bobby <i>wants</i> to walk right through the big brick wall.”
Mental Constraints	“Andrew draws pictures every day. He <i>always</i> draws a picture of a dog. But today, Andrew wants to do something different. Andrew <i>wants</i> to draw a monkey. But Andrew has never seen a monkey before. He does not know what a monkey looks like.”
Social Norms	“Gary puts on his clothes every day before he goes outside. He <i>always</i> puts on a shirt and pants. But today, Gary wants to do something different. Gary <i>wants</i> to wear his sister’s dress today.”
Artifact Conventions	“It is raining in Ben’s town today. He <i>always</i> uses an umbrella when it rains. But today, Ben wants to do something different. Ben <i>wants</i> to use a bucket when it rains.”
Moral Norms	“Pat sees his friend every day. He <i>always</i> tells his friend something nice. But today, Pat wants to do something different. Pat <i>wants</i> to say something that will make his friend cry.”
Arbitrary Rules	“Dina’s mom tells her that she has to sit on the green chair during dinner. She <i>always</i> listens to her mom and sits on the green chair. But today, Dina wants to do something different. Dina <i>wants</i> to sit on the red chair.”
Justified Rules	“Polly’s parents tell her not to lift her little sister because she is too heavy for Polly and Polly might get hurt. Polly <i>always</i> listens to her parents and does not lift her little sister. But today, Polly wants to do something different. Polly <i>wants</i> to lift her little sister.”
Selfish Acts	“Timmy eats lunch with his friends. He <i>always</i> helps his friends clean the table after they are done eating. But today, Timmy wants to do something different. Timmy <i>wants</i> to go play outside and not help his friends clean the table.”

action was impossible because it violated either a Physical Law (e.g., gravity) or a Mental Constraint (e.g., knowledge). The next six categories comprised socially constrained items. For these, we included three items in which the target action violated a known convention. For these, we included Social Norms (e.g., gender-appropriate dress), Artifact Conventions (e.g., common use), and Moral Norms (e.g., avoiding harm to another). We also included actions which violated rules (either arbitrary or justified by an appropriate explanation—that is, Arbitrary and Justified Rules items, respectively). Finally, we included actions, in which a character wants to perform an action which does not violate any conventions but comprises a Selfish Act (prioritizes helping oneself over helping another). Pilot work showed that the full 27-item questionnaire was too exhausting for young children; we therefore created three 9-item questionnaire subsets with one question from each category, and randomly assigned children to receive one of the subsets.² Two orderings of the nine items (forwards and backwards) were counterbalanced across participants.

2.4. Dependent measures

After hearing each item, participants were asked to answer two questions related to the character's desired action: (a) a *Free Choice Judgment* regarding whether the character *can* act in line with his/her desire ("Can Peter make his picture with pencils today: yes or no?"); and (b) an *Action Prediction* regarding whether the character *will* act in line with that desire ("What do you think Peter will do today: make his picture with a pen or make his picture with pencils?").

3. Results

Preliminary analyses showed no gender differences or differences between Nepalese participants who were recruited from rural versus urban areas on any of the items. We therefore present data collapsed across genders and cities.

Our first hypothesis was that children of both cultures would share the universal, early-developing intuition of free choice and the complementary notion of physical and mental constraint. Thus, we expected no cultural differences in the first three categories (Free Choice, Physical Laws, and Mental Constraints). Fig. 1 shows responses to the Free Choice Judgment for each of these categories. The majority of both American (29/30; 97%) and Nepalese (41/45; 91%) children answered that people could choose to perform simple unconstrained actions (Binomial p 's < .001). However, the majority of both American and Nepalese children answered that the characters could *not* act against Physical Laws (American: 28/30 [93%], Nepalese: 34/45 [76%], Binomial p 's < .01), or against Mental Constraints (American: 20/30 [67%], Binomial $p = .10$; Nepalese: 33/45 [73%], Binomial $p < .01$).

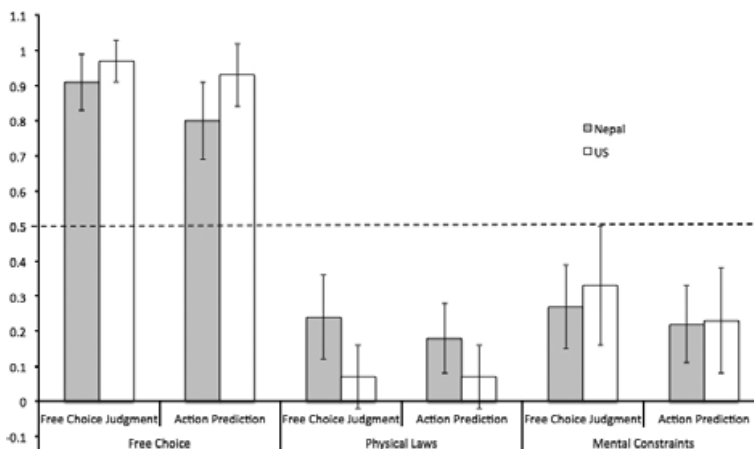


Fig. 1. Proportion of "Yes" responses to the Free Choice Judgment and Action Prediction questions for the Free Choice, Physical Laws, and Mental Constraints items (bars represent 95% confidence intervals for each mean).

To investigate whether these universal intuitions show any developmental or cultural variation, we performed three binary regression analyses (one each for Free Choice, Physical Laws, and Mental Constraints). In each regression, we used culture, age, and age \times culture interaction as predictors and Free Choice Judgment as the response. None of these predictors were significant (all p 's $> .05$). Thus, American and Nepalese children across all age groups share the intuition that simple actions are free, and impossible actions are not, lending support to the idea that the notions of freedom of choice and physical and mental constraint are early-developing and culturally universal.

The next set of analyses focused on our second hypothesis that cultural exposure would shape intuitions regarding what is considered a constraint on one's action. Preliminary analyses of each of the six individual social constraint items showed consistent results for each item, so data were collapsed across items.³ We averaged Free Choice Judgments for the socially constrained items (six total), such that each child received an average score between 0 and 1 representing his or her Free Choice Judgments in the face of social constraints. One-sampled t -tests revealed that Nepalese participants' Free Choice Judgments were significantly below chance ($M = .40$, $SD = .25$), $t(44) = -2.76$, $p < .01$, whereas American participants' ($M = .48$, $SD = .41$) did not differ from chance, $p > .15$. Thus, when considered as a whole, Nepalese children endorsed the notion of social constraint, whereas American children did not.

To investigate how these changes may emerge with age, we then ran a linear regression with culture, age, and age \times culture interaction as the predictors, and averaged Free Choice Judgment score as the response. The results of this analysis are shown in Fig. 2. There was a significant effect of culture, $B = .93$, $SE(B) = .31$, $p < .01$, age, $B = .12$, $SE(B) = .03$, $p < .01$, and a culture \times age interaction, $B = -.14$, $SE(B) = .04$, $p < .01$.

To investigate this interaction, we ran two follow-up regressions, separately for each culture. For the American children, age positively predicted average Free Choice Judgment averages, $B = .12$, $SE(B) = .04$, $p < .01$. However, age was not a significant

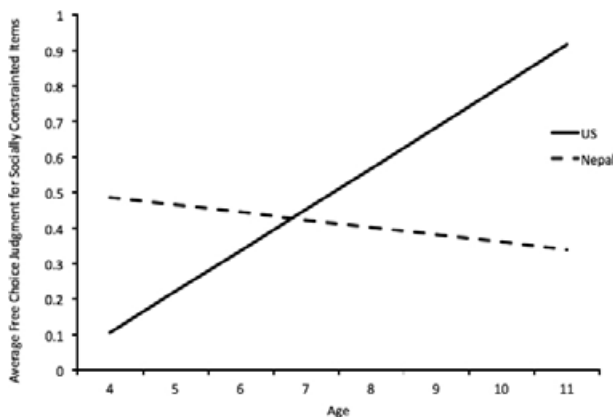


Fig. 2. Regression lines for Free Choice Judgment means (0–1) of the socially constrained items (Social Norms, Artifact Conventions, Moral Norms, Arbitrary Rules, Justified Rules, and Selfish Acts) versus Age.

predictor of Free Choice Judgment for Nepalese children ($p > .10$). The overall results thus suggest that while Nepalese children recognized that social obligations pose constraints on action across all ages, American children showed a decreased tendency to endorse obligations as constraints on actions as they aged.

The final analysis concerned hypothesized cultural differences in children's action predictions; that is, we asked whether there are age- and culture-related differences in children's predictions that people will act on desires versus social obligations. To make sure there were no wholesale cultural differences in beliefs that people act on simple (non-socially constrained) desires, we began with children's Action Prediction responses to the Free Choice, Physical Laws, and Mental Constraint items. These are shown in Fig. 1. The significant majority of both American (28/30; 93%) and Nepalese children (36/45; 80%) predicted that the characters would act on simple desires (Free Choice items; Binomial p 's $< .001$). Moreover, children of both cultures predicted that the characters would *not* act on impossible desires (Physical Laws: American: 28/30 [93%]; Nepalese: 37/45 [82%]; Mental Constraints: American: 23/30 [77%]; Nepalese: 35/45 [78%], all Binomial p 's $< .001$). Binary logistic regressions confirmed that these results were not age- or culture-dependent (age, culture, and age \times culture interactions were not significant predictors for Action Prediction scores, all p 's $> .05$). Thus, children across cultures and age groups predicted that the story characters would act on unconstrained desires but would not act on desires that violated physical laws and mental constraints.

We then investigated developmental and cultural variation in Action Predictions for the six socially constrained items. Similar to the Free Choice Judgment analysis, we created an average Action Prediction score between 0 and 1. First, one-sampled t -tests revealed that both American ($M = .35$, $SD = .36$) and Nepalese ($M = .27$, $SD = .21$) participants' Action Prediction averages were significantly below chance (American: $t(31) = -2.40$, $p < .05$; Nepalese: $t(44) = -7.37$, $p < .001$). Thus, when considered a whole, children in both cultures predicted that people would act on social obligation.

To investigate age-related cultural changes, we ran a linear regression with culture, age, and an age \times culture interaction as the predictors and the average Action Prediction score as the response (see Fig. 3). There was a marginally significant effect of culture, $B = .47$, $SE(B) = .28$, $p = .09$, a significant effect of age, $B = .09$, $SE(B) = .03$, $p < .01$, and a significant age \times culture interaction, $B = -.08$, $SE(B) = .04$, $p < .05$.

To investigate the interaction, we ran two follow-up linear regressions, separately for each culture. In each regression, we used Action Prediction score as the response and age as the predictor. For the Nepalese children, age did *not* significantly predict Action Prediction scores, $p > .10$. However, for the American children, age positively predicted Action Prediction scores, $B = .09$, $SE(B) = .03$, $p = .01$. Thus, with age, American children were increasingly likely to predict that the characters would act on their desires when those desires conflicted with social obligations. Nepalese children, across all ages, however, predicted instead that characters would act on social obligations. We thus confirmed our third hypothesis that there is cultural variation in the prediction that people act on preferences that conflict with social obligations, and that this cultural variation emerges with age.

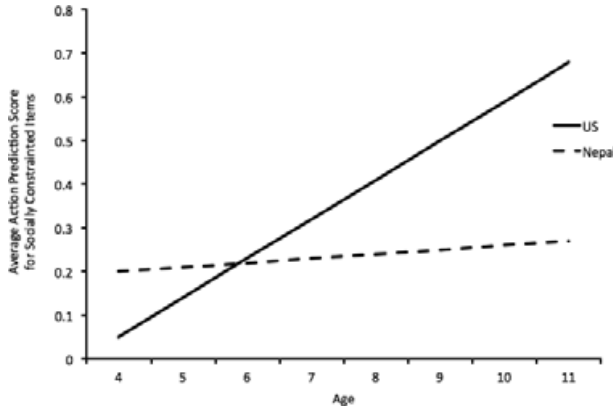


Fig. 3. Regression lines for the Action Prediction means (0-1) of the Socially Constrained items (Social Norms, Artifact Conventions, Moral Norms, Arbitrary Rules, Justified Rules, and Selfish Acts) versus Age.

4. Discussion

Our results reveal universal, early-developing intuitions about choice and constraint, as well as important developmental and cultural differences. Across ages, children in both the United States and Nepal endorsed the freedom of choice to perform simple acts (such as drinking milk instead of juice) but recognized that acts which violate physical and mental laws (gravity, object solidity, knowledge limitations) are constrained. This suggests that basic intuitions about freedom of choice and constraint are culturally universal and emerge early.

Importantly, we also found evidence for cultural differences and cultural learning in children's concepts of social constraint. With age, American children were increasingly less likely to recognize social constraints as imposing on one's ability to act on basic desires. Nepalese children, on the other hand, continued to view social obligations as constraining choice and action across all ages. These data suggest that social obligations are particularly susceptible to developmental and cultural variation. Interestingly, these results parallel age-related and culture-specific changes in other aspects of children's social cognition, such as causal attribution, self-concept, moral reasoning, and autobiographical memory (Miller, 1984; Schweder et al., 1987; Wang, 2004). It is also notable that we observed parallel results for both freedom of choice and action prediction. These results support previous work pointing to early-developing links between children's understanding of desire and action (see Liu et al., 2008; Wellman & Miller, 2006).

It is important to note that beliefs in freedom of choice may be distinguished from the degree to which choice is valued. Prior work finds that cultures do in fact differ in the extent to which they perceive and value choice in everyday contexts (Iyengar & Lepper, 1999; Savani et al., 2010). Our experiment, however, looked at explicit endorsements of whether a given action may be chosen at all, not the extent to which one perceives the action as a choice. It remains an important question whether the Nepalese and young

American children saw social obligations simply as an influence on one's decisions, or whether they viewed socially constrained actions as completely outside the arena of choice. However, prior cross-cultural work has found that adults in Eastern cultures endorse the idea that interpersonal actions are freely chosen (Miller et al., 2011)—suggesting that rather than failing to construe such actions *as* choices, children believe that social constraints *influence* action, in particular when that action involves acting on a personal desire.

The unwillingness on the part of very young children across both cultures to endorse freedom of choice (or action) in the face of moral and social constraints is consistent with previous work using a different, first-person, action-based (rather than third-person, story-based) method, in which preschool-aged children were unwilling to endorse their own free will to act against moral rules or social norms (Chernyak et al., 2010). Our results are also consistent with evidence that children have empathetic, altruistic, cooperative, and normative tendencies early in life (Hoffman, 2000; Killen & Smetana, 2002; Rakoczy, Warneken, & Tomasello, 2008; Warneken & Tomasello, 2008; Zahn-Waxler, Radke-Yarrow, & Chapman, 1992). Taken together, it appears that just as the belief that we are free to act on desires is intuitive, viewing people as constrained by social obligation is also highly intuitive, and therefore seen in children at young ages and across cultures. As children age, however, culture and worldview may increasingly serve as guides for moral and social cognition: Western children begin to conceptualize moral and social actions as unique, character-based choices, while Eastern children focus on the benefit to the greater social group (see Miller, 1994). The shift in responses with age (and the subsequent divergence of beliefs across cultures) may represent children's emerging ability to engage in deliberative moral reasoning appropriate to their cultural context.

The cross-cultural differences we found also lead to important questions about the specific mechanism through which such differences emerge. Several (non-mutually exclusive) explanations are possible. First, conceptual beliefs in choice and social constraint may be related to how the Nepali and English languages encode ideas about permission and obligation. For example, the English word “can” may denote either ability (“Can you reach that far?”) or permission (“Can (May) I have dessert after dinner?”). However, in Nepali, different meanings for “can” are consistently denoted with different words (akin to the less-frequently used distinction in English between “can I” and “may I”). It is possible that such intermixing in English language either leads to, or is reflective of, beliefs that actions which are physically possible are also permissible.

Another explanation concerns differing exposure to rules and standards through one's schooling and home environment. One salient difference between the two cultures may be in the way children spend their structured time. Many of our Nepalese participants lived in communities in which farming, cooking, and fetching water are ordinary family obligations starting from a young age. Structured time, in addition to school, is thus spent performing actions that benefit larger social units (families and communities). These lifestyles may be contrasted to the children in our American sample, whose structured time is primarily spent in preschool and elementary schools, which place greater emphasis on

individual learning. Although most children do experience social pressure to share, be polite, and be kind, the American children in the subculture we sampled rarely engage in instrumental acts for greater societal benefit as part of their daily routine. Culturally varied discussions of these experiences also serve to shape children's sense of self with respect to their social groups. For example, American schoolteachers often stress the importance of "making good choices" with respect to being good to others, while Nepalese schools often stress the importance of "being well disciplined."

Finally, children's observations of adults following and breaking social obligations in favor of personal preferences may exert a similar influence. Future research should address variety of experience such as family, educational, and political background *within* each cultural group, and how individual experience relates to variation in children's concepts of freedom of choice.

Overall, we believe that this cross-cultural developmental approach is a fruitful area for future research. Our work follows a small but strong tradition of studying conceptual learning across cultures (Liu et al., 2008; Miller, 1984). In further studying how concepts in young children differ and do not differ across cultures, we may study how cultural context provides evidence for children to learn.

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Notes

1. Age recorded in integers.
2. A small set of the oldest children were able to complete more than one subset. For these children, only their first responses were analyzed.
3. See Supplementary Materials for analyses presented separately by domain.

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