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## Maintaining faith in agency under immutable constraints: Cognitive consequences of believing in negotiable fate

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Negotiable fate refers to the idea that one can negotiate with fate for control, and that people can exercise personal agency within the limits that fate has determined. Research on negotiable fate has found greater prevalence of related beliefs in Southeast Asia, East Asia, and Eastern Europe than in Western Europe and English-speaking countries. The present research extends previous findings by exploring the cognitive consequences of the belief in negotiable fate. It was hypothesized that this belief enables individuals to maintain faith in the potency of their personal actions and to remain optimistic in their goal pursuits despite the immutable constraints. The belief in negotiable fate was predicted to (a) facilitate sense-making of surprising outcomes; (b) increase persistence in goal pursuits despite early unfavorable outcomes; and (c) increase risky choices when individuals have confidence in their luck. Using multiple methods (e.g., crosscultural comparisons, culture priming, experimental induction of fate beliefs), we found supporting evidence for our hypotheses in three studies. Furthermore, as expected, the cognitive effects of negotiable fate are observed only in cultural contexts where the fate belief is relatively prevalent. Implications of these findings are discussed in relation to the intersubjective approach to understanding the influence of culture on cognitive processes (e.g., Chiu, Gelfand, Yamagishi, Shteynberg, & Wan, 2010), the sociocultural foundations that foster the development of a belief in negotiable fate, and an alternative perspective for understanding the nature of agency in contexts where constraints are severe. Future research avenues are also discussed.

**Keywords:** Fate belief; Implicit theories; Cognitive consequences.

Le destin négociable se réfère à l'idée que quelqu'un peut négocier avec le destin afin d'obtenir plus de contrôle et que les gens peuvent exercer une action personnelle dans les limites déterminées par le destin.

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La recherche sur le destin négociable a montré une plus grande popularité de croyances y étant reliées dans l'Asie du Sud-Est, dans l'Asie de l'Est et en Europe de l'Est qu'en Europe de l'Ouest et dans les pays anglophones. La présente recherche va au-delà des résultats antérieurs en explorant les conséquences cognitives de la croyance au destin négociable. Nous avons fait l'hypothèse que la croyance au destin négociable permet à l'individu de faire confiance au pouvoir de ses actions personnelles et de demeurer optimiste dans la poursuite de ses buts en dépit de contraintes inévitables. Nous avons prédit que la croyance au destin négociable (a) facilite l'interprétation de résultats étonnants, (b) accroît la persévérance dans l'atteinte des buts malgré les résultats défavorables du début et (c) l'accroissement de choix risqués quand les individus font confiance à leur chance. Par l'utilisation de méthodes multiples (par exemple, les comparaisons transculturelles, l'amorçage de la culture, l'induction expérimentale de croyances à l'égard du destin), nous avons obtenus des données corroborant nos hypothèses dans trois études. De plus, tel qu'attendu, les effets cognitifs du destin négociable ont été observés que dans les contextes culturels où cette croyance au destin est relativement populaire. La discussion met en relation les implications de ces résultats avec l'approche intersubjective pour la compréhension de l'influence de la culture sur les processus cognitifs (par exemple, Chiu, Gelfand, Yamagishi, Shteynberg et Wan, 2010), les fondements socioculturels qui favorisent le développement de la croyance au destin négociable et une autre perspective permettant de comprendre la nature de l'action dans les contextes où les contraintes sont importantes. Nous discutons aussi de possibilités de recherche futures.

*E*l destino negociable hace alusión a la idea que una persona puede negociar con el destino respecto del control, y que las personas tienen cierta agencia personal dentro de los límites que el destino ha predeterminado. Las investigaciones sobre el destino negociable han encontrado mayor popularidad de creencias relacionadas con el sudeste y este de Asia, y de Europa oriental, por sobre Europa occidental y los países de habla inglesa. El presente estudio es una extensión de investigaciones previas, y explora las consecuencias cognitivas de creer en el destino negociable. Se hipotetizó que la creencia en un destino negociable permite que el individuo mantenga la fe en el poder de sus acciones personales y se mantenga optimista en la lucha por alcanzar sus objetivos a pesar de limitaciones inmutables. Se predijo que la creencia en el destino negociable (a) ayudaba a encontrar sentido en caso de resultados sorprendentes; (b) incrementaba la perseverancia en la lucha por alcanzar los objetivos a pesar de resultados negativos en una primera instancia; e (c) incrementaba las elecciones arriesgadas cuando la persona confiaba en su suerte. Al utilizar métodos múltiples (por ejemplo, comparaciones transculturales, estímulos culturales, e inducción experimental de creencias sobre el destino), se encontraron evidencias que apoyan nuestra hipótesis en tres estudios. Asimismo, como era de esperar, los efectos cognitivos del destino negociable se observan únicamente en los contextos culturales donde la creencia sobre el destino es relativamente popular. Se debaten las implicaciones de estos hallazgos en relación con el enfoque intersubjetivo para entender la influencia de la cultura sobre los procesos cognitivos, (por ejemplo, Chiu, Gelfand, Yamagishi, Shteynberg, & Wan, 2010), las bases socioculturales que fomentan el desarrollo de la creencia en un destino negociable, y una perspectiva alternativa para entender la naturaleza de la agencia en contextos donde existen restricciones severas. Se mencionan también futuros caminos de investigación.

Fate beliefs have received increased attention in crosscultural research (Chan, Wan, & Sin, 2009; Chaturvedi, Chiu, & Viswanathan, 2009; Norenzayan & Lee, 2010; Tang & Wu, 2010; Young, Morris, Burrus, Krishnan, & Regmi, in press). One extensively researched constellation of fate beliefs is *fate control*, which refers to a collection of *beliefs* that support the expectations that life events are predetermined *and* that there are some ways for people to influence these outcomes. This constellation of beliefs include fatalistic determinism ("Fate determines one's successes and failures"), predictability of predetermined outcomes ("Most disasters can be predicted"), cycle of fortune and misfortune ("Good luck follows if one survives a disaster"), and possible personal control over luck ("There are certain ways to help us improve our luck and avoid being unlucky"). Individuals who

believe in negotiable fate accept that life events are predetermined *but at the same time* expect that there are some ways for people to influence important life outcomes. Fate control has been found to be one of the five belief dimensions that differentiate different national cultures (Leung & Bond, 2004).

The concept of negotiable fate, epitomized in the popular saying "If fate hands you lemons, make lemonade," captures the agentic aspect of fate control, focusing on personal efficacy in maximizing gains and minimizing losses given the circumstances and boundaries set by fate (Au et al., in press). Individuals who subscribe to this belief expect that they can negotiate with fate for control, and that they can exercise personal agency within the limits that fate has determined (Au, 2008; Chaturvedi et al., 2009; Young & Morris, 2004).

## CULTURAL VARIATIONS IN NEGOTIABLE FATE

A recent crosscultural study showed that the belief in negotiable fate is more prevalent in China than in the United States (Au et al., in press). Leung and Bond (2004) found parallel crosscultural differences in fate control. Subsequent studies show that the relative prevalence of the beliefs in fate control and negotiable fate across societies may reflect the different levels of constraints people in these societies face in their life space (Au et al., in press; Chaturvedi et al., 2009). For example, these beliefs are more widely endorsed in countries and communities that face severe physical and economic constraints (e.g., have lower life expectancy at birth, lower level of environmental sustainability, lower gross domestic product per capita) and have fewer political and civil liberties (Chaturvedi et al., 2009; Leung & Bond, 2010).

To explain this result, Au et al. (in press) contend that in a sociocultural context in which people are confronted with many immutable constraints, believing that individuals are capable of overcoming any obstacle to attain their goals is likely to be maladaptive because people in such a context often encounter demoralizing frustrations resulting from numerous constraints. In such a context, by believing that their outcomes are jointly shaped by the self and an uncontrollable external agent (e.g., fate),<sup>1</sup> individuals are better able to accept the limits of their personal agency imposed by unchangeable constraints, while maintaining faith in the potency of their personal actions (Chan et al., 2009). Consistent with this idea, research has shown that in societies where individuals face many immutable constraints, the belief in negotiable fate is associated with greater engagement in active coping (Au et al., in press) and with the likelihood of exhibiting cognitive styles that support analytical problem-solving (Chaturvedi et al., 2009). Other research has also shown that the belief in fate control is associated with higher academic achievement and economic competitiveness (Zhou, Leung, & Bond, 2009).

### SOME COGNITIVE AND BEHAVIORAL CONSEQUENCES OF NEGOTIABLE FATE

Although past research has clarified the nature of negotiable fate as an important cultural belief,

relatively little is known about its cognitive and behavioral consequences. The present research fills this gap. In an environment with many immutable constraints, individuals frequently experience expectation disconfirmations: The expected outcome does not materialize due to unforeseeable and immutable external factors. To remain optimistic in their goal pursuits despite the immutable constraints, individuals need to (a) make sense of the surprising outcomes, (b) persist in goal pursuits despite early unfavorable outcomes, and (c) make risky choices when they have confidence in their luck. To elaborate, being able to make sense of—and accept—unexpected outcomes enables individuals to move on to solving the problem (see Muller & Stahlberg, 2007). In addition, persistence on receiving unfavourable feedback engages individuals in active goal pursuits despite frustrations rather than giving up (Hong, Chiu, Dweck, Lin, & Wan, 1999). Finally, when individuals expect that their outcomes are jointly determined by internal and external forces, actively using signs of luck to maximize gains and minimize losses confers a sense of illusory control (see Valenzuela, Mellers, & Strebel, 2010; Young, Chen, & Morris, 2009). These individuals feel that if they align decision-making with their luck, they can control their outcomes. We argue that the belief in negotiable fate prepares its subscribers to make sense of surprising outcomes by attributing them to fate, to remain persistent despite initial frustrations, and to make risky choices when feeling confident in their luck. Thus, we hypothesize that people who believe in negotiable fate would be less surprised by unexpected outcomes, would be more persistent in pursuing a failing investment, and would make more risky choices when they feel that they have good luck.

### EFFECTS OF SHARED REALITY

Recent advances in culture and cognition research reveal that a belief has greater impact on cognitions if it is part of the shared reality in the culture (Chiu et al., 2010; Zou et al., 2009)—the belief is widely accepted in the culture. When a belief is well established in the culture, its psychological meanings are immediately recognized, and its cognitive and behavioral practices are readily accepted by members of the culture.

<sup>1</sup> Although this uncontrollable, external agent may be considered as God, the use of the word “fate” was selected because of its religion-neutral connotations. Individuals can agree to the perceived existence of “fate” regardless of their religion and the extent to which they are religious. Indeed, Pepitone and Saffiotti (1997) have found that individuals are more likely to attribute certain types of event to fate as compared to other events—suggesting that the belief in fate can be a common one.

Thus, we contend that the hypothesized association between negotiable fate and the three cognitive strategies described above would be particularly strong in contexts where this belief is widely accepted (e.g., Asian communities), because the psychological meaning of this belief has been firmly established in these contexts. This contention complements the ecological analysis of negotiable fate reviewed above, which states that belief in negotiable fate is more widely distributed in societies where people encounter many constraints in their goal pursuits. In such societies, the belief in negotiable fate and its attendant cognitive strategies are particularly useful for focusing people's attention on active goal pursuits.

### OVERVIEW OF STUDIES

We tested our hypotheses in three studies. In Study 1, we examine how negotiable fate helps individuals deal with unexpected outcomes. We predict that, in contexts where the belief in negotiable fate is widely shared (Asian-American culture), this belief enables individuals to recruit fate as a post-hoc explanation for unexpected outcomes. Consequently, having quickly made sense of the unexpected outcomes, people in this context would report being less surprised. Hence, instead of remaining in a state of shock and refusing to accept the unexpected outcomes, they move on to problem-solving. However, the association between negotiable fate and surprise would be weak in contexts where negotiable fate is not a prevalent belief.

Study 2 focuses on how negotiable fate enables individuals to persist upon experiencing setbacks. Perseverance upon setbacks is crucial for survival, especially in contexts where individuals face severe constraints in everyday life. The belief in negotiable fate enables individuals to maintain a sense of self-efficacy (Au et al., in press) by accepting the elements of their lives that they cannot change and focusing on those that *can* be managed through agentic actions. Past research has linked discriminative facility (engaging in agentic actions in controllable situations and attention distraction in uncontrollable ones) to persistent goal pursuits (Chiu, Hong, Mischel, & Shoda, 1995). Thus, in the current study, we hypothesized a positive relationship between the belief in negotiable fate and persistence in cultural contexts where the belief is relatively prevalent and its meanings relatively well accepted. To test this hypothesis, we employed the cultural priming paradigm (Hong, Morris, Chiu & Benet-Martinez, 2000) to

examine the contextual effects of negotiable fate. The participants were Westernized Singaporeans who are familiar with both Western and Asian cultures. Because the belief of negotiable fate is more prevalent, and its meanings more accepted, in Asian culture, we hypothesize that following contextual activation of Asian culture, the belief in negotiable fate would be associated with persistence in goal pursuits, and that this association would be attenuated following contextual activation of Western culture.

Although the belief in negotiable fate is not widely shared in American culture, this belief, like other declarative knowledge, can be rendered salient in an experiment. Furthermore, once this belief has been made salient, it will affect Americans' cognitive responses. Thus, in Study 3, to establish the causal effect of negotiable fate on decision-making, we activated this belief in some Americans. Specifically, we did so by asking European Americans to recall times in which they worked around the predetermined fate (i.e., priming negotiable fate). In the control condition, we asked European Americans to recall times in which they overcame their seemingly predetermined fate (i.e., the prevalent or default fate belief in the US). Following the belief manipulation, we examined when the belief in negotiable fate would lead European Americans to become more risk-averse or more risk-taking. Although the belief in negotiable fate accepts that life events are predetermined, it asserts that there are some ways for people to influence important life outcomes within the limits that fate has determined (Leung & Bond, 2004). For example, people can perform certain behaviors to bring good luck to the selves or discern signs of bad luck in their environment, and align decision-making with the reading of current luck; therefore, making more risky choices when they feel that they have good luck and more risk-averse choices when they feel that they have bad luck. Indeed, in societies where negotiable fate is well accepted, many cultural practices are available for individuals to "negotiate" their fate. An example is the Asian practice of *feng shui*—the practice of placement and arrangement of space to achieve harmony with the environment and bring about good fortune. Engaging in this practice is expected to bring good luck to the individuals. Once individuals feel that they have secured protection from fate, they may feel overconfident in their ability to defeat the odds and hence make more risky choices. In contrast, when individuals believing in negotiable fate feel that they have bad luck, they may feel vulnerable and tend to avoid making

risky choices. Thus, following the fate belief manipulation, we made good (bad) luck salient to some participants by asking them to list items that are associated with good (bad) luck. We hypothesize that Americans who have learned the meaning of negotiable fate would become more risk-averse when they are feeling unlucky (after listing the bad luck items) and more risk-taking when they are feeling lucky (after listing the good luck items).

## SUMMARY OF CONTRIBUTIONS

In summary, past research has identified the belief that one can control personal outcomes, even though life events are predetermined, to be a major dimension that differentiates national cultures (Leung & Bond, 2004). Moreover, in countries where this belief is widely shared, believing in negotiable fate is positively linked to active coping (Au et al., in press; Chaturvedi et al., 2009). This result counters the intuition that believing in fate is associated with passivity and withdrawal. Part of the reason for this counterintuitive result is that the belief in negotiable fate embodies the idea that one can negotiate with fate for control. Thus, subscribers to this fate belief readily accept the logical contradiction between predetermination and their ability to alter predetermined events (Leung & Bond, 2004).

The present research extends this literature by examining the possibility that in societies where the belief in negotiable fate is widely shared, it is accompanied by cognitive strategies that support active goal pursuits. This belief (a) reduces surprise at unexpected outcomes by resorting to fate as a sense-making device; (b) encourages persistence in risky investment despite initial frustration; and (c) invites risky choices after negotiating with fate for control through certain cultural practices. Thus, although believing in fate may be associated with maladaptive responses in some contexts, the belief in negotiable fate may enable individuals to make sense of unexpected outcomes, persist in the face of setbacks, and find ways to maximize gains and minimize losses. As such, the acknowledgement of fate can actually promote agentic actions, as long as it is also accompanied by the belief that personal actions can also make a difference.

Finally, existing research on negotiable fate (e.g., Chaturvedi et al., 2009) has relied on correlational results to clarify the nature of the construct. The present research supplements the extant literature by adopting a multimethod approach. The methods used in three studies reported here

include a crosscultural comparison, experimental cultural priming, and experimental induction of the belief in negotiable fate. This multimethod approach allows us to contextualize the cognitive and behavioral effects of negotiable fate and determines the causal impact of this fate belief on decision-making.

## STUDY 1

The first study tests the idea that negotiable fate allows individuals to reduce the experience of surprise resulting from expectancy disconfirmation, particularly in a culture where this belief is widely shared. As noted, the belief in negotiable fate and its psychological meanings are more prevalent in Asian than in American contexts (Au et al., in press; Leung & Bond, 2004). In addition, past research has shown that people from Asian contexts are less surprised at unexpected outcomes (Choi & Nisbett, 2000; Valenzuela et al., 2010). Therefore, we assessed the relationship between negotiable fate and surprise in Asian-American and European-American contexts. We predict that individuals who believe in negotiable fate would be less surprised at unexpected outcomes, and this association should be stronger among Asian Americans than among European Americans.

## Method

### Participants

Forty-six European American undergraduate students (32.6% female) and 38 Asian American undergraduate students (28.9% female) from a public university participated in this study in exchange for course requirement credit. Due to an oversight, age information was not collected for this study.

### Measures

The negotiable fate measure (Au, 2008; Chaturvedi et al., 2009) was used to assess the belief in negotiable fate. The measure consists of four items: "You should deal with what fate has given you to make the best of things"; "When fate does not give you the most favorable situations, you need to make the best of the situations you are given"; "Success comes from both luck and effort"; and "I should cherish every day that fate allows me." Participants indicated their extent of agreement or disagreement with each item on a seven-point scale, from 1 (strongly disagree) to 7 (strongly agree).

To distinguish between the consequence of the belief in negotiable fate and the belief in fatalism (the idea that one should submit the self to the influence of fate), we also included a four-item measure of fatalism adapted from Chaturvedi et al. (2009). The items in the scale are: (1) "Your paths in life are decided by fate, whether you want it to or not"; (2) "What happens in your life is already predetermined"; (3) "You cannot change what fate has in store for you"; and (4) "What you have and don't have is in the hands of fate." The internal reliability of the scale was .83 in the European-American sample and .86 in the Asian-American sample.

To demonstrate the differences in consequences of believing in negotiable fate compared to believing in agency (the idea that one can overcome the influence of fate with personal actions), a four-item measure was also included. The items in the scale are: (1) "You can change your destiny through your effort"; (2) "If you want to, you can determine your fate"; (3) "Through perseverance, you can mold your destiny"; and (4) "You have the power to change and create your destiny." The internal reliability of the scale was .88 in the European-American sample and .78 in the Asian-American sample.

As the dependent measure, we used Choi and Nisbett's (2000) strategy to measure the extent of surprise following expectation disconfirmation. Specifically, we had participants read three scenarios and indicate how surprised they would be at the unexpected turn of events on a scale from 1 (not at all surprised) to 7 (very surprised). Two of these scenarios were: "Imagine that you are a consummate fan of Vandt chocolates. This brand has been around for a long time and you have been eating it since your childhood. Suddenly Vandt received some negative press because in some parts of the country, worms were discovered in Vandt chocolate bars. There has been a lot of criticisms of Vandt chocolates"; and "Imagine that you are a fan of Shole Cola. This is a very famous cola drink, which has been endorsed by many famous movie stars and pop stars. You have been consuming this drink for a long time. Shole is in the news because it was discovered that some of its bottles and cans contain a harmful quantity of pesticides and other chemicals." We used the mean of the three scores to form a measure of surprise at expectancy disconfirmation ( $\alpha = .81$ ).

## Results and discussion

We adopted a significant level of .05 in all analyses reported in this article. Asian Americans believed

in negotiable fate ( $M = 4.77$ ,  $SD = 0.69$ ) to a greater extent than did European Americans ( $M = 4.19$ ,  $SD = 1.00$ ),  $F(1, 82) = 9.06$ ,  $\eta_p^2 = .101$ . This result supports our assumption that the belief in negotiable fate is more prevalent in Asian (vs. European) American context. Consistent with past findings (Choi & Nisbett, 2000), Asian Americans were less surprised at the unexpected outcomes ( $M = 4.31$ ,  $SD = 0.81$ ) than European Americans ( $M = 6.01$ ,  $SD = 0.74$ ),  $F(1, 82) = 100.96$ ,  $\eta_p^2 = .552$ .

To test our hypothesis, we regressed surprise on ethnicity, negotiable fate (mean-centered), and their interaction. The predicted interaction was significant,  $F(1, 79) = 3.90$ ,  $\eta_p^2 = .042$ . For Asian Americans, those who believed in negotiable fate were less surprised by the unexpected outcome ( $r = -.35$ ). In contrast, for European Americans, the relationship between negotiable fate and surprise was not significant ( $r = .03$ ).

This relationship between negotiable fate and surprise was unique to the belief of negotiable fate. When we replaced negotiable fate with agency and fatalism in the analysis, the interaction effects for agency,  $F(1, 79) = 0.69$ , and fatalism,  $F(1, 79) = 1.61$ , were not significant. Furthermore, the correlation between negotiable fate and fatalism was not significant in either sample ( $r = -.09$  in the Asian-American sample and  $r = .26$  in the European-American sample). Finally, the correlation between negotiable fate and agency was not significant in either sample ( $r = .32$  in the Asian-American sample and  $r = .18$  in the European-American sample).

In sum, these results indicate that Asian (vs. European) Americans, who are more likely to believe in negotiable fate, are also less surprised when expectancy is disconfirmed. More importantly, the belief in negotiable fate is associated with less surprise among Asian Americans only. These results are consistent with the assumption that the belief in negotiable fate enables Asian Americans to recruit fate as a post-hoc explanation to make sense of unexpected turns of events (and are, consequently, less surprised). The diminished surprise that accompanies the post-hoc explanation allows individuals to accept unexpected outcomes and move on with their lives.

## STUDY 2

Study 1 demonstrated that in Asian American culture, where the belief is negotiable is more prevalent, the belief in negotiable fate is associated with the experience of less surprise when learning



of an unexpected outcome. In the present study, we adopted the culture priming paradigm (Hong et al., 2000) to examine how activating cultural representations may influence the extent to which a belief in negotiable fate will be associated with perseverance in the response to initial frustration.

Although fate control beliefs are prevalent in Southeast Asian countries, endorsement of these beliefs is considerably lower among Singaporeans than people in the neighboring countries (country mean = 2.52 in Singapore versus 2.96 in Malaysia and 3.14 in Thailand, on a scale that ranges from 1 to 5; Leung & Bond, 2010), probably because, living in one of the richest countries in Asia, Singaporeans experience fewer economic constraints. In addition, previous research (Chen, Ng, & Rao, 2005) has found that Singaporean undergraduates would display the characteristic pattern of goal pursuit among Asians when Singaporean culture is primed and the characteristic pattern of goal pursuit among Americans when American culture is primed. This result indicates that Singaporean undergraduates have rich bicultural experiences and can flexibly switch between cultural frames depending on which is activated. Because the meaning of negotiable fate is more widely accepted in Asian contexts than in American ones, we hypothesized that when primed with Singaporean culture, Singaporean undergraduates would use an Asian cultural frame to respond to the current situation. Under this circumstance, the belief in negotiable fate would be associated with greater persistence. In contrast, when primed with American culture, Singaporean undergraduates would use an American cultural frame to respond to the current situation. Under this circumstance, the belief in negotiable fate and persistence would be unrelated.

## Method

### Participants

Ninety-two students from a private Singaporean university participated in this study for course requirement credit. Sixty-six percent of the participants were female and the mean age was 21.41 ( $SD = 1.59$ ).

### Procedure

Participants were told that the study was about general knowledge and decision-making. They completed the same negotiable fate measure used in Study 1 ( $\alpha = .62$ ), as well as the fatalism ( $\alpha = .79$ ) and agency ( $\alpha = .90$ ) measures. We used the same

culture priming procedure with the same participant population as in Chen et al. (2005). The participants were randomly assigned to receive the Singaporean or American culture priming manipulation. Participants in the American (Singaporean) culture priming condition were shown a collage of American (Singaporean) cultural icons and were asked to describe what they knew about American (Singaporean) culture.

Next, they responded to a scenario designed to measure the intention to persist upon learning that their previous efforts did not yield the desired outcome. Because culture priming effect is short-lived, we used a brief but focused dependent measure. Participants were asked to imagine that they were a manager in a company. A newly hired employee's performance was not at the level that the manager expected, despite the fair amount of training the manager had invested in the new employee. Participants' intention to continue to invest effort was assessed by the extent of agreement with the following statement: "You don't want to lose all the training you have invested in her, so you would rather give her more time and invest a bit more." Again, participants indicated their agreement to this statement on a scale from 1 (strongly disagree) to 7 (strongly agree).

## Results and discussion

The results supported our hypothesis. We regressed the intention to persist on cultural priming, negotiable fate (mean-centered), and their interaction. The only significant effect was the predicted interaction,  $F(1, 88) = 5.39$ ,  $\eta_p^2 = .058$ . When primed with Singaporean culture, participants who believed more strongly in negotiable fate had stronger intention to continue to invest effort ( $r = .36$ ). When primed with American culture, negotiable fate did not predict perseverance in response to negative feedback ( $r = -.12$ ).

To demonstrate that this finding is unique to the belief in negotiable fate, we repeated the analysis, replacing negotiable fate first with agency and then with fatalism. The Belief  $\times$  Culture Priming interaction was nonsignificant for the analysis with agency belief,  $F(1, 88) = 2.30$ , and nonsignificant for the analysis with fatalism belief,  $F(1, 88) = 0.86$ . Negotiable fate was not correlated with either agency ( $r = .09$ ) or fatalism ( $r = .05$ ) in this study. Agency and fatalism were negatively correlated ( $r = -.44$ ). In sum, the belief in negotiable fate was associated with persistence in the face of initial setbacks only when participants were primed with

the Singaporean culture. This suggests that negotiable fate serves the function of encouraging perseverance in a cultural context where meaning of negotiable fate is widely accepted.

### STUDY 3

Taken together, Studies 1 and 2 have shown that in a context where negotiable fate is a prevalent belief, it is accompanied by strategies that enable individuals to experience less surprise in response to unexpected events and to persist upon receiving negative feedback on their previous efforts. Study 3 seeks to extend these findings by exploring when negotiable fate may propel individuals to engage in risk-averse versus risk-taking behaviours.

Although the meaning of negotiable fate is not widely accepted in American contexts, like other declarative knowledge, its meaning can be made salient. To establish the causal impact of a belief in negotiable fate, we increased the salience of this belief and its meaning to a sample of American undergraduates by asking them to recall experiences in which they had to work with (or around) fate to attain their goals. As a comparison, we had another group of American undergraduates recall experiences in which they overcame their fate.

We reason that after having related the meaning of negotiable fate to personal experiences, this meaning would increase in salience, and American participants would then display the characteristic cognitive style of negotiable fate subscribers. That is, they would be more risk-averse if they felt that fate was against them and more risk-taking when they felt that fate was on their side. Therefore, after the negotiable fate (or overcoming fate) manipulation, we asked the participants to list items and rituals associated with good or bad luck. We hypothesized that participants who had related the meaning of negotiable fate to personal experiences would make more risky choices after they had listed good (versus bad) luck items or rituals. However, for participants primed with overcoming fate, they would try to assert the potency of their personal actions and engage in behaviours that could be seen as “tempting fate.” Accordingly, they would make more risky choices after they had listed bad (versus good) luck items or rituals.

#### Method

##### *Participants*

The participants were 88 undergraduates from a public American university, who received course

requirement credit for participating in the study. Seventy percent of the participants were female, 25% were male, and 5% did not report their gender. Due to an oversight, age information was not collected for this study.

##### *Procedure*

The experiment consisted of three portions. In groups of four or five, participants were told at the beginning that each session consists of two studies, one conducted by a graduate student in social psychology on persuasion and another by a graduate student in cognitive psychology on decision making (which served as the cover story). The participants were also told that the study would start with the persuasion part.

*Manipulation of negotiable fate versus overcoming fate.* In the ‘persuasion’ study, the experimenter (Experimenter A) told the participants that the researchers were interested in how people used personal experiences to construct persuasive messages. Participants were randomly assigned to write an essay on the theme of negotiating with fate or on the theme of overcoming fate.

In the negotiable fate condition, the participants were given the following instructions.

There are times in life when it’s undeniable that fate plays a role in determining personal outcomes; and sometimes, there are inexplicable turns in events that leave you frustrated. But just because fate doesn’t give you a smooth road to success doesn’t mean that you have to accept failure—there are things that you can do to negotiate with fate to attain the outcomes you desire. As the famous saying goes, “*when fate hands you lemons, make lemonade.*”

In the overcoming fate condition, the participants were given the following instructions.

Believing in fate is for the weak; only those who need excuses believe that something other than your personal actions is responsible for your outcomes. In truth, the only obstacles that stand between you and your dreams are self-doubts because with perseverance and determination, there is nothing that you cannot attain. As the famous saying goes, “*if there’s a will, there’s a way.*”

Participants were then asked to generate three instances (from either their personal experiences or the experiences of someone they knew) that supported the idea given to them, and to use those

instances to compose a *persuasive* message consistent with the opening paragraph. As a manipulation check, following the fate belief manipulation, we had participants indicate their extent of agreement on a seven-point scale (from 1 = *strongly disagree* to 7 = *strongly agree*) to the statement “When fate does not give you the most favorable situations, you make the best of the situations you are given.”

*Manipulation of luck.* After the participant had written the essay, the experimenter called another experimenter (Experimenter B), who was responsible for the “second study,” by phone to let him/her know that the participants were ready to start the second experiment. While waiting for Experimenter B to arrive, Experimenter A asked the participants if they would mind helping out with a pilot study for a research project conducted by a different graduate student. At this point, each experiment session was randomly assigned to one of the three experimental conditions. Participants in the good (bad) luck condition generated three items and two rituals that were associated with good (bad) luck. In the control condition, the participant generated items and rituals that are necessary for daily functioning.

### **Dependent measures**

The dependent measure consisted of a diverse set of four items used in previous research to assess risk-aversion. Three items assessed risk aversion in consumer choice (Briley, Morris, & Simonson, 2000) and one assessed risk aversion in a financial investment setting (Bazerman, 1998). In each scenario, participants were required to choose between a low-risk/risk-averse option (e.g., a product with moderate values on two attributes or a low-risk investment) and one or two less risk-averse options (e.g., products with high value on one attribute and low value on another attribute or a high-risk investment). We measured the extent of risk-seeking (versus aversion) by the number of risky choices the participant made across the four scenarios (0 to 4), although analysis performed on individual items yielded the same results for all four scenarios.

### **Results and discussion**

The negotiable fate manipulation was successful in changing the extent to which participants believed in negotiable fate,  $F(1, 88) = 4.76$ ,  $\eta_p^2 = .051$ , such that those in the negotiable fate condition believed

in negotiable fate to a greater extent than those in the overcoming fate condition.

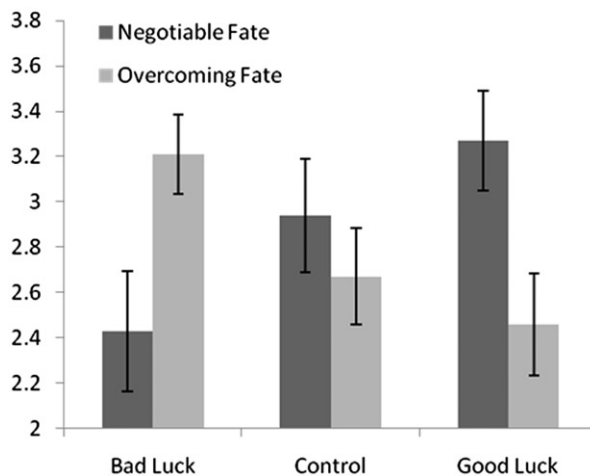
Consistent with our hypothesis, a Negotiable Fate  $\times$  Luck analysis of variance performed on risk-taking frequency revealed a significant interaction,  $F(2, 81) = 5.60$ ,  $\eta_p^2 = .12$ . As shown in Figure 1, in the negotiable fate condition, risk seeking increased linearly from the bad luck condition to the control condition and good luck condition,  $F(1, 40) = 4.55$ . In the overcoming fate condition, risk seeking frequency in the bad luck condition was significantly higher than in the good luck condition,  $F(1, 41) = 6.51$ . However, participants in the overcoming fate condition made similar amounts of risky choices in the control condition compared to the good luck condition,  $F(1, 41) = 0.50$ , as well as compared to the bad luck condition,  $F(1, 41) = 3.71$ .

Taken together, these results suggest that when the meaning of negotiable fate is salient, Americans' preferences for risky decisions depend on whether or not they believe that fate is on their side. Hence, an increased preference would be observed if they feel that fate is on their side and a decreased preference when they feel that fate is against them.

## **GENERAL DISCUSSION**

In the present research, we demonstrated that in cultures where the belief in negotiable fate is more widely accepted, there are three ways in which this belief can promote agentic action. Specifically, individuals who believe more strongly in negotiable fate are less likely to experience surprise in response to an unexpected event (Study 1), more likely to persevere upon receiving negative feedback (Study 2), and more likely to align themselves with luck to maximize gains and minimize losses (Study 3). For those who reside in a culture where this belief is not widely accepted, the belief in negotiable fate does not serve functions unless the belief is rendered salient in the immediate context.

These results show that, at least in some cultural contexts, believing in negotiable fate is accompanied by cognitive strategies that support agentic actions. The present research also highlights ways in which the acknowledgment of fate is not necessarily accompanied by resignation and withdrawal. In fact, those who recognized the power of both fate and personal actions in determining outcomes were unfazed by unexpected events, persisted despite negative feedback, and sought ways to maximize their gains and minimize their



**Figure 1.** Mean number of risky choices as a function of fate and luck manipulations.

losses. Therefore, a belief in negotiable fate can actually be conducive to agentic actions rather than passivity. The suggestion that individuals can maintain a sense of personal agency while acknowledging elements of uncontrollability sheds new light on the complex and dynamic relationship between fate and personal agency, and serves as a starting point for the examination of the concept of agency from a different angle.

Past research on cultural differences in agency and control have found that Asians tended to recall a greater number and more recent instances of secondary control (or *adjustment*; Morling, Kitayama, & Miyamoto, 2002), where they adjust themselves to their situations; whereas Americans tend to recall a greater number and more recent instances of primary control (or *influence*; Morling et al., 2002), where they seek to influence the situations to attain desirable outcomes. The results of the studies reported in this paper suggest that negotiable fate may represent a type of primary control that has not been recognized in the cultural psychology literature. Although individuals *do* accept (rather than attempt to overcome) the constraints that they face, adjustment to the situation takes on an agentic flavour rather than a helpless one. This belief allows individuals to maintain control over the aspects of their lives that they perceive as changeable.

It is important to note that the cognitive effects of negotiable fate are observed only in cultural contexts where the fate belief is widely accepted. Apparently, the agentic meaning of this fate belief must be part of the shared reality in the culture for it to have an effect on cognition. Au et al. (in press) also found that the belief in negotiable fate is associated with active coping only in societies

where the belief is widely accepted (Mainland China). Taken together, these results support the intersubjective consensus perspective on the cognitive effects of culture (Chiu et al., 2010; Zou et al., 2009). According to this perspective, a cultural value or belief would impact cognitions only when it is part of the shared reality in the culture—the value or belief is firmly established in the culture. When a value or belief becomes a part of the shared reality in the culture, it becomes a commonsensical notion in the culture—its meaning is immediately discerned and its associated practices readily accepted in the culture. For instance, the idea of negotiable fate is more easily understood and its cognitive strategies (like the ones examined in the present research) and behavioral practices (e.g., *feng shui*) more readily accepted in Asian than in American contexts.

This raises the question of what contributes to the relative prominence of the belief in negotiable fate in a culture. Au et al. (in press) contend that negotiable fate is more established in sociocultural contexts where people face many constraints in pursuing their goals than in sociocultural contexts where individuals experience relatively few constraints in their goal pursuits, because this belief acknowledges the constraints the individual has to face and hence encourages objective appraisal of the environment, but at the same time entertains the possibility of bringing about desired outcomes through agentic actions. In support of this contention, Au et al. (in press) found that country differences in the strength of the belief in negotiable fate are partly mediated by the perceived immutability of environmental constraints in the society. Several recent studies have linked cultural differences in values and beliefs to the level of environmental constraints on goal pursuits

(e.g., job immobility, Chen, Chiu, & Chan, 2009; residential immobility, Oishi, Lun, & Sherman, 2007). Au et al.'s (in press) analysis of negotiable fate adds to this analysis and draws attention to future research on the ecological foundation of the cognitive and behavioral consequences of negotiable fate.

### CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

In three studies, we have shown how the belief in negotiable fate propels individuals to engage in agentic actions in contexts where this belief is widely shared. This is the first step to understanding this belief, and numerous exciting research avenues can be explored in the future. First, future research is needed to further extend the nomological network of the construct of negotiable fate. For example, negotiable fate and fate control are related but distinct constructs. As noted in the introduction, fate control covers a broader range of fate beliefs and hence supports a greater variety of agentic actions. For example, the beliefs in cycles of good and bad luck and the predictability of luck are two fate control beliefs that the construct of negotiable fate does not capture. By focusing on the belief that one can make the best out of fate, the construct of negotiable fate predicts agentic behaviors in the face of severe constraints in goal pursuits, but may not predict other agentic behaviors covered in the broader construct of fate control (e.g., predictive control of luck).

As a first step to explore the extent of overlap between negotiable fate and fate control, in one study (Au et al., in press), we had Chinese undergraduates and European American undergraduates complete the negotiable fate measure, and the fate control subscale and the religiosity subscale in the social axiom measure (Leung & Bond, 2004). The participants also filled out a measure of the belief that the world and its institutions are fixed (Chiu, Dweck, Tong, & Fu, 1997). In both samples, the belief in negotiable fate was significantly correlated with fate control, although the size of the correlations was low ( $r = .23$  in the Chinese sample and  $.17$  in the American sample), suggesting the presence of partial overlap in the constructs of negotiable fate and fate control. In the Chinese sample, negotiable fate was uncorrelated with religiosity. However, in the American sample, the corresponding correlation was positive ( $r = .29$ ). This result suggests that the notion of negotiable fate is more

grounded in religion in the United States than in China. Importantly, consistent with our ecological perspective on fate belief, in both samples, the belief in negotiable fate was positively correlated with the belief that the world and its institutions are not malleable ( $r_{US} = .24$ ,  $r_{China} = .19$ ). That is, the belief in negotiable fate is more prevalent among individuals who believe that they live in an environment with relatively unchangeable external constraints. These initial findings are interesting. Nonetheless, future research is needed to further delineate the extent of overlap in the range of phenomena predicted by negotiable fate and fate control, and to connect negotiable fate to other individual difference measures (such as global personality traits, control beliefs) in order to deepen our understanding of the psychological meaning of these fate beliefs.

In addition, researchers may wish to explore the effect of a belief in negotiable fate in other risk-taking domains, such as examining how the belief affects the type of information used to make financial investment decisions. Would negotiable fate believers place greater emphasis on feelings or signs of luck, or more on information on past performance of a particular type of investment? Another interesting area for research is how negotiable fate is related to long-term versus short-term orientation. As a consequence of the need to maintain faith in their personal actions despite short-term frustration, it is possible that negotiable fate believers would take a relatively long-term perspective as this motivates them to persist by believing that the future will be brighter despite the current situation.

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