

Contents lists available at [ScienceDirect](#)

Journal of Adolescence

journal homepage: [www.elsevier.com/locate/jado](http://www.elsevier.com/locate/jado)

## Left behind or moving forward? Effects of possible selves and strategies to attain them among rural Chinese children

Chongzeng Bi <sup>a</sup>, Daphna Oyserman <sup>b, \*</sup><sup>a</sup> Southwest University, China<sup>b</sup> University of Southern California, United States

### ARTICLE INFO

#### Article history:

Available online xxx

#### Keywords:

Possible self

Identity

Migrant–immigrant

Stereotype

### ABSTRACT

Are possible selves and strategies to attain them universally helpful even among children with few resources? We test this question in rural China. Rural Chinese children are commonly “left behind” (LB) by parents seizing economic opportunities by migrating, hoping the family will “move forward” and their children will attain their predestined better future. Media, teachers, and peers negatively represent LB children as unruly and undisciplined, with negative fates, making LB a negative stereotype that includes the idea of destiny or fate. Indeed, making the idea of LB salient increases children’s fatalism (Study 1  $n = 144$ , Study 2  $n = 124$ ). However, having strategies to attain possible future selves predicts better in-class behavior, fewer depressive symptoms, and better exam performance even a year later and controlling for prior performance (Study 3  $n = 176$ , Study 4  $n = 145$ ). Possible selves have mixed effects, not always predicting better grades and undermining LB children’s self-control.

© 2015 Published by Elsevier Ltd on behalf of The Foundation for Professionals in Services for Adolescents.

## Left behind or moving forward? Effects of possible identities and strategies to attain them on rural Chinese children

“... the boys are lazy; they steal, rob, or kill. The girls also do not behave themselves.” “Students with bad grades basically are those whose parents leave to work in other places....” “They don’t like to study. They are too free-spirited and troublesome.” “They fight, they get into trouble, they are late or don’t come to the classes.” “Some of them steal, some rob, some stay in the cybercafé, and some date.” (Ren, 2008, p. 3, descriptions rural children and their teachers provide of “left behind” children, children whose parents migrate to find work but leave them behind in their rural communities).

Parents take desperate measures to help their children, sometimes choosing to sacrifice the comfort of being together for the hope that their children’s future will be brighter, that they will attain a better fate. In the current paper we focus on a particular group of such children, the children of internal rural-to-urban migrants in China whose parents leave to work in urban areas because of the dire economic circumstances and blocked opportunities of rural areas. Their children are officially described as “left behind” and constitute about 40% of children in many rural areas (All-China Women’s Federation [ACFW], 2013). Though timing and arrangements vary, parents typically leave their child in the care of a grandparent when their child

\* Corresponding author. Department of Psychology, University of Southern California, SGM 803, 3620 South McClintock Ave, Los Angeles, CA 90089-1061, United States. Tel.: +1 213 740 2203; fax: +1 213 746 9082.

E-mail address: [oyserman@usc.edu](mailto:oyserman@usc.edu) (D. Oyserman).

reaches school age, though there are also reports of children being left on their own, perhaps because children often live at their school during the week (ACFW, 2013). Parents do not take their children with them because rural children cannot be enrolled in schools in communities other than their registered birthplace and without schooling children will have no chance to have brighter futures than their parents. Parents send home remittances but can only rarely visit – their wage are low, they work long hours, and their urban sojourn is far from their rural home (ACFW, 2013).

As detailed in our opening quotes, rural children and teachers have negative stereotypes about “left behind” children (Ren, 2008). Chinese media plays a role, mostly portraying them negatively; a content analysis of newspaper reports from 1998 to 2010 shows that less than a third of descriptions are neutral or positive (Qian & Qi, 2011). Left behind children are described as unruly, unmonitored and unsupervised (Zhou, Sun, Liu, & Zhou, 2005). Negative associations teachers have to “left behind” children contrast sharply with the positive associations they have to children more generally (Lu, Zou, Zhang, Jiang, & Lin, 2011).

Moreover, like other life events, being “left behind” can be a reminder that one’s fate is not in one’s hands (Li, Chen, Chen, & Wu, 2015). Belief in fate or destiny is a core Confucian value, common in Asian cultures, and applied especially as an explanation of life’s misfortunes (Heiniger, Sherman, Shaw, & Costa, 2013). The Chinese saying: “life is fated and fortune predestined” draws from the Confucian Analects (1893, English translation, Legge, 2015). This is understood to mean that trying hard and persisting effortfully are ways to reveal one’s fate; one may be fated to a better outcome but must work to attain it. At the same time little can be done to change the course of one’s fate, trying reveals whether one is fated to succeed. One’s destiny plays out in what appears to be luck, chance, or accidental happenings (Reid & Ware, 1974). Fatalism remains a basic element in current Chinese life, widely seen as the reason for success or failure in important life domains such as college, employment, marriage, finance (Zhang, Zhao, Yang, & Yu, 2000), illness and health (Liang et al., 2008; Straughan & Seow, 2000).

Given the shared negative representation of “left behind” and culturally sanctioned acceptance of fate, the very idea of being “left behind” is likely to accentuate children’s endorsement of fatalism rather than a wide open view that anything is possible. At the same time, if parents transmit the idea that moving forward is possible, their children may benefit from the motivating power of imagining a possible future in which they attain successes and avoid failures by engaging in current effortful strategies. We test both of these predictions in the current paper. In Studies 1 and 2 we test the prediction that if there is a “left behind” stereotype, then when it comes to mind, children will experience the future as less rosy and less in their control and that this sense of fate’s hand will at the same time cue possible future identities and strategies to attain them. In Studies 3 and 4 we test the prediction that having positive images of the identities they might attain and negative images of the identities they might avoid becoming in the future should bolster children’s school performance. To set the stage, in the next section we consider “left behind” as both a description and a stereotype with consequences for judgment (e.g., Steele & Aronson, 1995; Wheeler & Petty, 2001) and for possible future identities (Oyserman & Fryberg, 2006; Oyserman & James, 2009, 2011).

#### *“Left behind” as stereotype*

Stereotypes are socially constructed knowledge networks (linked associations in memory) shared by those who are the targets of the stereotype and by others in the general population (Crocker, Major, & Steele, 1998; Goffman, 1963; Jones et al., 1984). Because it is a knowledge network, a stereotype, once activated by environmental cues, should influence perception and judgment whether or not one agrees with the stereotype (Steele & Aronson, 1995; Wheeler & Petty, 2001). Importantly, effects should not be limited to targets of stereotypes but should carry over to others for whom the relevant knowledge network exists (for a review, Wheeler & Petty, 2001). A large number of studies, summarized by Wheeler and Petty (2001) provide evidence supporting this assumption. For example, students perform better on trivia tasks and walk more slowly after stereotypes of professors (clever) and elderly people (slow) were subtly cued even though they themselves were neither professors nor elderly (for a review, Wheeler & Petty, 2001).

Whether activating a stereotype yields a stereotype-congruent response depends on what else comes to mind when the stereotype-relevant knowledge network is activated. This topic has been mostly investigated in the domain of racial-ethnic and gender stereotypes; an emerging literature focuses on whether a stereotype-congruent response (e.g., worse performance) occurs when gender or race-ethnicity is made salient (e.g., Aronson, Fried, & Good, 2002; Aronson et al., 1999; Elmore & Oyserman, 2012; Good, Aronson, & Inzlicht, 2003; Oyserman, Bybee, Terry, & Hart-Johnson, 2004; Oyserman, Gant, & Ager, 1995). Using a variety of different techniques, these studies have demonstrated that whether performance matches stereotype depends on whether an alternative narrative counters the stereotype. For example, stigmatizing racial-ethnic or gender identities do not undermine school performance if students believe or are led to believe that academic attainment is congruent with their race-ethnicity or gender.

The implications for “left behind” are twofold. First, if “left behind” is a stereotype that includes negative images of children who are left behind as well as images of being left alone to one’s fate, then priming “left behind” status should cue concerns about what the future holds. Second, whether the performance of “left behind” children matches the stereotype should depend on whether other images of what is possible for the self also come to mind.

#### *“Left behind” but also “moving forward”*

The buffering process previously documented for racial-ethnic and gender identities should occur for “left behind” children if they include “moving forward” in their mental representation of why they are “left behind.” “Moving forward”

could function as a counterweight to “left behind”, resulting in better test scores if children focus on schoolwork as the path to “move forward”. Indeed, the Chinese cultural context makes it likely that children will focus on schoolwork no matter what exactly their “moving forward” future self entails because Confucianism highlights the value of education (Liu & Dunne, 2009). Beyond the belief that school is the means or path, rural children are unlikely to know exactly how or in what way to attain a particular possible future as the Cultural Revolution typically truncated the schooling of adults in their lives.

Not only is the idea of “moving forward” using school as the path culturally congruent for “left behind” Chinese children, it also fits the larger literature on the motivating consequences of imagining one’s future or *possible self* and the identities that future self might have (Oyserman & James, 2009, 2011). While initially assumed to motivate action by their mere presence (Markus & Nurius, 1986), the evidence suggests a more nuanced, context sensitive view of the motivating power of possible selves and strategies to attain them (Oyserman, Destin, & Novin, 2015). That is, simply having a possible self does not necessarily mean that a person will take action to attain the possible self (Oyserman & Horowitz, 2015). However, possible selves do seem to matter in certain circumstances. For example, in four experiments, college students started studying sooner and studied more if they were induced to think about their future self and the college setting in a way that matched rather than mismatched (Oyserman et al., 2015). Motivating match occurred for students induced to think about a negative possible self and strategies to avoid it while also considering college as a failure-likely place. Motivating match also occurred for students induced to think about a positive possible self and strategies to attain it while also considering college as a success-likely place. Motivation lagged for students in the mismatch conditions, those induced to think about a negative possible self and college as a success-likely place or to think about a positive possible self and college as a failure-likely place. Across studies, effects of match rather than of kind (positive, negative) or content (academic, social) of possible selves were found.

Other studies support the idea that just imagining a possible self is insufficient to motivate action unless the future self is in some way linked to the present (e.g., Oyserman et al., 2004). An initial test of this idea was ‘balance,’ in which students who held both positive and negative images of their future self in the same content domain were less likely to be later involved in crime and delinquency (Oyserman & Markus, 1990). Besides match with context, other ways this link between present and future self can occur have been documented including linking current and possible selves through concrete and clear strategies to attain them and linking current and possible selves through agentic path or journey metaphors (Landau, Oyserman, Keefer, & Smith, 2014; Oyserman et al., 2004). In these studies, possible selves mattered if they were content relevant and linked to the present via strategies or a journey metaphor. Thus, across studies, link to present self is necessary for a possible self to influence academic outcomes, but studies differ as to whether the possible self must entail an image of academic attainment. It is possible that the way the studies were set up mattered, in the studies in which content of possible self did not matter, all students were led to focus on the school context, perhaps highlighting school as the path to attaining one’s future self.

This notion that school is the path may or may not be the case for rural Chinese children. We found only one study on Chinese children’s possible self, a representative sample of Hong Kong Chinese secondary school children (Zhu, Tse, Cheung, & Oyserman, 2014). Though this study did not examine consequences for academic outcomes, it did reveal that parental socio-emotional support was not as important as parental pragmatic support in predicting whether students believed they were likely to attain their possible selves and whether they had strategies to do so.

Zhu et al.’s (2014) study lends support to the idea that “left behind” children might be energized by their parents’ focus on the family “moving forward.” As detailed next, the descriptive, qualitative, and mostly Chinese language literature on “left behind” children also supports our predictions about “left behind” as a stereotype as well as an experience. First, “left behind” children do seem to experience a deficit in adult supervision as revealed in higher rates of physical injuries (e.g., falling from trees, Shen et al., 2009), worse physical health (Gao et al., 2010), and more loneliness (Hou & Xu, 2008; Jia & Tian, 2010). Second, parents do seem to tell their children that the family is sacrificing current happiness for the child’s future opportunities (Pan et al., 2013). Third, there is some evidence that children accept this as the reason they were “left behind” (Ye & Pan, 2011) and that this motivates them to focus on a path to move forward (Zhou et al., 2005). It may also channel children to focus on strategies to get ahead. This might be particularly important for rural children whose opportunities are otherwise limited due to low social and economic capital and less access to higher education (Liu et al., 2009). Increased salience of strategies might bolster “left behind” children’s self-control to compensate for the fact that they cannot rely on the supervision and help of their absent parents or their current caregivers who are often elderly (Ye & Pan, 2011).

Finally, the existing evidence yields a mixed picture with regard to the academic outcomes of “left behind” children, with some studies finding worse, better, or the same outcomes for “left behind” as for other children (ACWF, 2008; Biao, 2007; Chen, Huang, Rozelle, Shi, & Zhang, 2009; Duan & Zhou, 2005; Hu, 2012; Jordan & Graham, 2012; Lee & Park, 2010; Meyerhoefer & Chen, 2011). This mixed picture implies that “left behind” children may be able to perform academically as well as other children by committing to effortful strategies to attain their positive and avoid their negative possible self, believing that doing so is a way to “move forward” as their parents enjoined them to.

## Current studies

### Hypotheses

Our synthetic review of the stereotyping, possible selves, and “left behind” children literature yields two hypotheses about the consequences of “left behind” (H1, tested in Studies 1–2) and possible selves (H2, tested in Studies 3–4).

**H1.** “left behind” is a stereotyped identity that includes negative features of unruly misbehavior and poor outcomes, hence priming “left behind” reduces optimism and increases fatalism about the future in rural Chinese children. We also explore the direct effect of priming left behind and its indirect effect via increasing fatalism, on possible selves and strategies to attain them.

**H2.** School is the path to attaining possible selves for rural Chinese children; hence academic performance and well-being are predicted by having more possible selves and strategies to attain them. The alternative, which is that rural Chinese children consider multiple paths to attaining their possible selves, would imply that better academic outcomes would be attained only for children with academic possible selves and strategies to attain them.

### *Samples*

Our participants were rural Chinese eighth grade students in Hechuan, Yongchuan, and Xiushan counties located in Chongqing, an area with a population of over 30 million in Southwest China. In these areas, students live at school Monday through Friday and their activities are scheduled from 6 am lights on to 9:40 pm lights off. Students were from two public middle schools (Studies 1, 2, 4) and one private middle school (Study 3, US\$1630 annual tuition equaled about 170% of the average net annual income of rural residents in 2012). The same school was used in Studies 2 and 4, though different students completed each study.

### *Power analyses and sample size*

Sample size in each study was determined by the size of classes in the schools we worked with. However we calculated power (using the Java Applets for power and sample size provided by [Lenth, 2006-9](#)) and our sample size is adequate to find significant effects at  $p < .05$  (power of .985 and .999).

### *Analyses plan*

We used analyses of variance to test **H1** and hierarchical multiple regressions to test **H2**. Exploratory analysis examined possible gender effects (gender is sometimes relevant to academic outcomes) and possible heterogeneity of effects within the “left behind” subgroup (given the paucity of LB research) as detailed in the online [Supplemental Materials](#).

### *Possible self and strategy responses: coding and analysis*

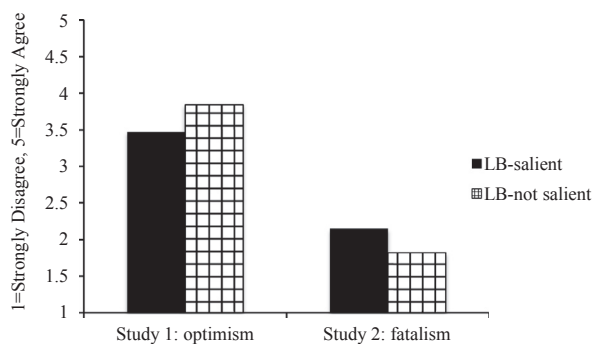
The possible self and strategies measure was translated and back translated using the standard open-ended possible self and strategies questions, which include space for writing in four expected and four feared possible selves and also space to write in strategies, if any for each possible self response ([Oyserman et al., 2004](#)). We counted and content coded responses using the coding scheme documented in the same source ([Oyserman et al., 2004](#)). All responses were double coded and inter-rater reliability was high (Study 2 91%, Study 3 96%, Study 4 89%). The most common response to the possible self and strategy probes focused on schoolwork and academics. As detailed in each study, almost all children wrote about this, rather than scoring balance between positive and negative possible selves we counted the number of possible selves and strategies in this domain because almost all children provided both an expected and a feared possible self. We also scored concreteness of strategies.

Disagreements were discussed to agreement. Descriptive information about content is reported in the online [Supplemental Materials](#). We report results for the count of possible selves and strategies, summarizing effects if we use more specific coding schemes (counting the number of expected and feared academic possible identities and strategies to attain them, and strategy concreteness scores). Since these results are always in the same direction, given space limitations, we relegate the detailed tables of these analyses to [Supplemental Materials](#).

## **Study 1**

### *Sample and procedure*

Students ( $n = 144$ , 56.9% male,  $M_{age} = 13.67$   $SD = .83$ ) filled out a brief questionnaire in their classroom, spending about eight minutes. Children were either “left behind” (LB,  $n = 109$ ) or not ( $n = 35$ ). The questionnaire was handed out in two orders so that half of students were first asked about their “left behind” status (LB-salient condition  $n = 74$ ), then asked filler questions about their schedule and about their optimism for the future and half were asked about their optimism for the future and the filler questions before being asked about their “left behind” status (LB-not salient condition  $n = 70$ ). Children in the two conditions did not differ in their responses to the filler questions ( $F < 1$ ). LB children had been without their parents on average 8.00 ( $SD = 3.95$ ) years, starting when they were 5.49 ( $SD = 3.92$ ) years old. LB children in LB-salient and LB-not salient conditions did not differ in the details of their situation: age they were first “left behind” ( $t(107) = .26$ ,  $p = .791$ ), number of years they had been “left behind” ( $t(107) = .66$ ,  $p = .513$ ), who they were living with (most lived grandparents) or



**Fig. 1.** Effect of activating “left behind” knowledge network on rural Chinese children's optimism (Study 1) and fatalism (Study 2) for the future.

what their “left behind” life brought them (some gave no answer, others wrote “nothing”, or that it was bad) ( $\chi^2 \leq 2.18$ ,  $ps > .3$ ).

The “left behind” questions were “Are you a left behind child (with one or both parents working away from home for a long time)? (yes, no).” If YES “When did your left behind life first start? (When you were \_\_\_ years old).” “How long has your left behind life lasted up to now (\_\_\_ years).” “Who are you living with now (open-ended, common responses included grandmother or grandparents)?” “What has your left behind life brought you until now?” (open-ended, common responses were “loneliness” or “nothing”).

The optimism (1 = Strongly Disagree to 5 = Strongly Agree) items were “I will pass the examination to get into an ideal high school,” “I will go to work after graduating from junior high school” (reverse coded), “I will succeed in the future”, “I will be forced into a livelihood like that of my parents” (reverse coded), and “I will enroll in a university.” Mean response formed the optimism scale score ( $\alpha = .77$ ).

## Results and discussion

We predicted that priming a “left behind” knowledge structure would reduce rural Chinese children's optimism about their future. Supporting this prediction, we found a main effect of question order  $F(1,137) = 8.99$ ,  $MSE = .36$ ,  $p = .003$ ,  $\eta^2 = .06$ ,  $d = -.61$ , 95% confidence interval  $[-.95, -.28]$ . Optimism about the future was lower among children for whom the “left behind” knowledge structure was activated ( $M = 3.47$   $SD = .56$ ) compared to children for whom it was not activated before they considered their future chances ( $M = 3.84$   $SD = .64$ ). This main effect was not moderated by actual LB status ( $F(1,137) = .01$ ,  $MSE = .36$ ,  $p = .917$ ,  $\eta^2 < .01$ ) and actual LB status did not have a separate effect on optimism  $F(1,140) = 1.23$ ,  $MSE = .37$ ,  $p = .270$ ,  $\eta^2 = .01$ . Fig. 1 presents these results graphically. In Study 2 we conceptually replicate this finding using a measure of fatalism.

## Study 2

### Sample and procedure

Students ( $n = 124$ , 54.0% male,  $M$  age = 13.90,  $SD = .71$ ) filled out a questionnaire in their classroom using the same manipulation as Study 1 (LB-salient condition  $n = 60$ , LB-not salient condition  $n = 64$ ). The dependent measures were fatalism for the future, possible selves and strategies to attain them. Students spent about 30 min on the questionnaire. LB children ( $n = 91$ , 48.4% male) had been without their parents on average 7.16 ( $SD = 3.80$  years) starting when children were 6.03 ( $SD = 3.69$ ) years of age. LB children in the two conditions did not differ in the age they were “left behind” ( $t(85) = 1.05$ ,  $p = .296$ ), the number of years they had been “left behind” ( $t(84) = 1.06$ ,  $p = .292$ ), or in the other three questions related to being left behind ( $\chi^2s < 1$ ,  $ps > .8$ ).

Rather than use a scale fatalism scale developed outside of China, we chose to use scales developed in China (Du, 2002; Yang, Yu, & Yeh, 1989) that fit Chinese cultural fatalism and revised the items to fit middle and high school students, resulting in an 8-item measure Adolescent Fatalism Questionnaire (AFQ, 1 = Strongly Disagree to 5 = Strongly Agree,  $\alpha = .72$ )<sup>1</sup>. The items were: “God arranged everything from birth; it is difficult to change”, “Rich or poor, success or failure is predestined”, “I have not realized my ideals, mainly because it is not my fate to do so”, “In life, many things cannot help but obey the arrangements of fate”, “I rarely try to change things, things are as they are because they are not destined to change”, “Even if one is quite excellent, fate is a

<sup>1</sup> Online Supplemental Materials provide theoretical rationale, factor loadings (Table S1), discriminant and convergent validity with self-confidence, self-control, and self-clarity (Table S2) in studies with Chinese high school students ( $n = 352$ ,  $n = 563$ ). Reliability was  $\alpha = .83$  and  $.79$  and principle components factor analysis yielded a single factor explaining 45.5% and 41.8% of variance in each study respectively.

**Table 1**

Study 2: LB and non-LB children's possible selves and strategies means (standard deviations) and comparative statistics.

Possible self measure	Mean (SD) by child type		Comparison of responses by child type				
	LB child	Non-LB child	F	p	$\eta^2$	d	95% C.I. of d
# Possible selves	6.25 (2.06)	6.18 (2.02)	0.28	.600	.002	.03	-.32, .39
# Strategies	6.75 (4.40)	6.82 (4.88)	0.02	.889	.000	-.01	-.37, .34
Concreteness score	7.53 (3.66)	6.67 (3.65)	1.99	.161	.016	.23	-.12, .59
# Academic possible identities	3.08 (1.54)	2.94 (1.39)	0.42	.519	.003	.09	-.26, .45
# Strategies to attain academic possible identities	3.39 (3.09)	3.42 (2.48)	0.54	.465	.004	-.01	-.36, .34

Note: LB children have parents who migrated to urban areas for work leaving their children behind in their rural place of origin. Number of possible selves and strategies are count scores without reference to content and sum across expected and feared possible self probes. Details on concreteness coding are in the [Supplemental Materials](#). Academic possible identities and strategies are counts for this content.

determining factor in life's outcomes", "There are things I have no influence over, I can only obey my fated destiny", "God's plans determine whether things succeed or not."

Possible self and strategy data collection and coding has been explained in the prior section.

### Results and discussion

As displayed in [Fig. 1](#), we found an effect of question order ( $F(1,120) = 6.47$ ,  $MSE = .41$ ,  $p = .012$ ,  $\eta^2 = .05$ ,  $d = .51$ , 95% CI [.16, .87]) on AFQ score. Children in the LB-salient condition scored higher in fatalism ( $M = 2.15$   $SD = .71$ ) than children in the LB-not salient condition ( $M = 1.82$   $SD = .56$ ). Actual LB status did not matter (main effect  $F(1,120) = .12$ ,  $MSE = .41$ ,  $p = .729$ ,  $\eta^2 = .001$ , interaction with condition  $F(1,120) = .11$ ,  $MSE = .41$ ,  $p = .742$ ,  $\eta^2 = .001$ ).

As detailed in [Table 1](#), LB status did not affect the number of possible selves or strategies children generated. The most common response to the questions about possible selves and strategies involved school and academics, all children reported at least one academic possible identity and almost all (94%) generated at least one strategy to work on positive or avoid negative academic identities, as detailed in the [Supplemental Materials](#). LB status did not influence number of academic identities or strategies children generated.

We did not find a direct effect of LB salience condition on possible selves and strategies scores but did find an effect of AFQ score in our hierarchical regression analyses implying an indirect role of LB salience. At step 1 for possible selves ( $R^2 = .09$ ,  $F(4, 119) = 2.76$ ,  $p = .031$ ), Cohen's  $f^2$  effect size = .10 (95% CI: .00, .22, 90% CI: .01, .20), higher fatalism was associated with generating fewer possible selves ( $p = .029$ , [Table S3](#) on-line [Supplemental Materials](#)). At step 1 for strategies ( $R^2 = .08$ ,  $F(4, 119) = 2.46$ ,  $p = .049$ ), higher fatalism was associated with generating fewer strategies to attain these possible selves ( $p = .048$ , [Table S4](#) on-line [Supplemental Materials](#)). Two- and three-way interactions were examined but none added significantly to variance explained. Details are presented in [Tables S3 and S4](#).

Effects of AFQ scores were weaker but in the same direction when we substituted the more specific measures of possible selves and strategies into the regression equation. Thus, at step 1, higher fatalism predicted lower concreteness score for strategies (at trend-level,  $p = .056$ , [Table S5](#) on-line [Supplemental Materials](#)), fewer academic possible identities (at trend-level  $p = .07$ , [Table S6](#) on-line [Supplemental Materials](#)). AFQ score did not have a significant impact on number of strategies to work on these academic possible identities ( $p = .15$ , [Table S7](#) on-line [Supplemental Materials](#)).

### Study 3

#### Sample and procedure

Students ( $n = 176$ ) filled out a survey in class and we obtained administrative information at the same time and again six weeks later when students completed their final examinations. Administrative data provided final examination scores and school record of problem behavior.<sup>2</sup> "Left behind" children ( $n = 75$ , 50.7% male) had been without their parents on average 5.47 ( $SD = 4.31$  years) starting when they were 8.78 ( $SD = 4.53$ ) years old. The order of questions was possible selves and strategies, gender, age, LB status, the duration of time they had been LB and the age they were when they were first "left behind". We obtained a 16-week span of problem behavior, behaviors observed by or reported to the class head teacher. The span was from 10 weeks before the survey to the time of final exams. To produce a quantified score from these records, we consulted with teachers about what the various infractions meant and created a 4-level coding scheme. Most children (65%) had no problem behavior, scored as 0, 14% had reports of minor problem behavior such as littering, eating snacks in class, or playing cards, scored as 1. Another 14% had reports of moderate problem behavior such as rough housing with other children, scored as 2. A final 6.5% had reports of what teachers viewed to be severe problem behavior such as skipping class, playing computer games instead of following the schedule of activities, smoking, vandalism, teasing, or conflict with teachers, scored

<sup>2</sup> Five students did not respond to the possible selves and strategies questions, yielding a final  $n = 171$  (60.8% male,  $M$  age = 14.75,  $SD = .74$ ) for analysis.

as 3. Given how skewed the raw scores were, we log transformed the score, resulting in a more normal distribution (skewness decreased from 2.58 to .93). Descriptive information on dependent variables is presented in Table 2. As presented in the Supplemental Materials, school-focused academic content was the most common response children gave to the question about their expected and feared possible selves. Almost all (99.4%) children had at least one academic possible identity, almost all (95%) had at least one strategy to work on that academic possible identity.

## Results and discussion

### Analyses plan

We used hierarchical multiple regression equations to examine the effects of children's possible selves and strategies on their problem behavior (Table 3) and final examination scores (Table 4). To predict problem behavior, we entered number of possible selves at step 1, number of strategies at step 2, and LB status at step 3. This allowed us to test if strategies had effects once possible selves were taken into account and if LB status had effects once possible selves and strategies were taken into account. To predict final examination score, we used the same model except that we included problem behavior score at step 1, possible selves at step 2, strategies at step 3, and LB status at step 4. The final step in both equations included the two-way interaction of LB status by possible selves, and LB status by strategies.

### Problem behavior

The first two steps and the final step (at trend level) of the hierarchical regression added significantly to variance explained. At step 1 having more possible selves was associated with a *higher* behavior problem score ( $p = .022$ ), at step 2 having more strategies was associated with a *lower* behavior problem score ( $p = .000$ ). There was significant added effect of LB status at step 3 which was modified by at trend-level increase in variance explained at step 4 when adding the interaction between LB status and possible selves. Specifically, the negative effect of possible selves was found only for “left behind” children, as reflected in a significant LB status  $\times$  possible selves interaction ( $b = -.07, \beta = .03, SE = -.20, t = -2.13, p = .035$ ) at step 4. When decomposed, this interaction shows that having more possible selves predicts a higher behavior problem score for “left behind” ( $b = .12, \beta = .35, SE = .04, t = 3.16, p = .002$ ) children but not for their non-LB ( $b = .01, \beta = .04, SE = .04, t = .34, p = .731$ ) peers. This interaction is displayed in Fig. 2.

When we substituted the more specific measures of possible selves and strategies into these regression analyses, effects of strategies remained. Thus in predicting problem behavior, we found that adding the strategies concreteness score at step 2 rather than the simple count of strategies yielded a somewhat improved increase in variance explained,  $\Delta R^2 = .09$  rather than .08 as was the case with the count measure (Table S8 on-line Supplemental Materials). Adding the number of strategies to attain academic possible identities in step to rather than simple count of all strategies yielded a somewhat smaller increase in variance explained,  $\Delta R^2 = .06$  rather than .08 as was the case with the count measure (Table S9 on-line Supplemental Materials). In these latter analyses, academic possible identities did not significantly predict behavior problems.

### Final exam scores

With regard to scores on final exams taken six weeks after the possible selves and strategies measures were obtained, variance explained significantly improved at each step in steps 1, 2, 3, and 4 of the regression equation. At step 1, children who had higher problem behavior scores scored worse on the final exam ( $p = .006$ ). At step 2, children with more possible selves had better final exam scores ( $p = .007$ ). At step 3, children with more strategies to attain their possible selves had better exam scores ( $p = .030$ ). At step 4, LB children had *better* exam scores ( $p = .002$ ). Adding interaction effects at step 5 did not significantly increase variance explained, but we did find a trend-level interaction between LB status and problem behavior. Decomposing this interaction, we find that problem behavior predicts worse final exam scores for LB children ( $b = -11.61, SE = 3.87, \beta = -.33, t = -3.00, p = .004$ ) but not for non-LB children, for whom the effect of problem behavior is not significant ( $b = -3.69, SE = 3.45, \beta = -.11, t = 1.07, p = .287$ ).

**Table 2**

Study 3: LB and non-LB children's possible selves and strategies. Behavior problems and final exam score means (standard deviations) and comparative statistics.

Measure	LB child	Non-LB child	F	p	$\eta^2$	d	95% C.I. of d
# Possible selves	4.22 (2.17)	4.12 (1.92)	0.11	.745	.001	.05	-.25, .35
# Strategies	4.19 (2.86)	4.53 (3.28)	0.51	.477	.003	-.11	-.41, .19
Concrete strategy score	4.49 (2.67)	4.46 (2.89)	0.01	.935	.001	.01	-.29, .31
# Academic possible identities	2.95 (1.47)	2.67 (1.32)	1.72	.192	.010	.20	-.10, .50
# Strategies to attain academic possible identities	3.15 (2.08)	3.16 (2.31)	0.01	.978	.000	-.01	-.31, .30
Behavior problem score	1.31 (2.90)	1.45 (2.93)	0.09	.754	.000	-.05	-.35, .25
Final Examination Score	436.46 (102.85)	393.52 (98.51)	7.75	.006	.053	.43	.12, .73

Note: Number of possible selves is a count without reference to content and sums across expected and feared possible self probes. Number of academic possible identities is a count focused on this particular identity content (academics) so is a subset of the total count. The same is true for the strategies variables. Problem behavior score involved behavior that occurred during the period from ten weeks before the possible identity questionnaire was filled out until six weeks afterwards. Final examinations took place six weeks after children filled out the possible selves questionnaire.

**Table 3**  
Study 3: Hierarchical regression analysis predicting problem behavior.

	<i>b</i>	SE	$\beta$	<i>t</i>	<i>p</i>	95% C.I. of <i>b</i>	$\Delta R^2$	$\Delta F$	<i>p</i> for $\Delta F$
<i>Step 1</i>							.03	5.38	.022
Number of possible selves	.06	.03	.18	2.32	.022	.01, .12			
<i>Step 2</i>							.08	15.75	.000
Number of possible selves	.15	.03	.41	4.37	.000	.08, .22			
Number of strategies	-.09	.02	-.37	-3.97	.000	-.13, -.04			
<i>Step 3</i>							.00	0.42	.516
Number of possible selves	.15	.03	.41	4.40	.000	.08, .22			
Number of strategies	-.09	.02	-.38	-4.00	.000	-.13, -.05			
LB status	.03	.05	.05	.65	.516	-.07, .14			
<i>Step 4</i>							.02	2.27	.107
Number of possible selves	.15	.03	.42	4.51	.000	.09, .22			
Number of strategies	-.09	.02	-.40	-4.12	.000	-.14, -.05			
LB status	.04	.05	.05	.70	.487	-.07, .14			
Number of possible selves $\times$ LB status	-.07	.03	-.20	-2.13	.035	-.14, -.01			
Number of strategies $\times$ LB status	.03	.02	.13	1.32	.189	-.02, .08			

Note. Behavior was observed for 16 weeks (10 before and 6 after the possible self questionnaire). LB = Left Behind, coded -1 (left behind), +1 (not left behind). *bs* were unstandardized,  $\beta$ s were standardized. A negative  $\beta$  means better score for LB children. Step 1 Cohen's  $f^2 = .04$  (95% CI: -.01, .10, 90% CI: .00, .09). Step 2,  $\Delta$  Cohen's  $f^2$  (attributable to adding variables at this step) = .09 (95% CI: .03, .14, 90% CI: .05, .13). Step 3  $\Delta$  Cohen's  $f^2 = 0$ . Step 4  $\Delta$  Cohen's  $f^2 = .02$  (95% CI: .00, .03, 90% CI: .01, .03).

When we substituted the more specific measures of possible selves and strategies into these regression analyses, effects are consistent, as are the amount of added variance explained. Substituting the strategies concreteness score for the simple count of strategies yielded a somewhat lower increase in variance explained,  $\Delta R^2 = .02$  rather than .03 as was the case with the count measure (Table S10 on-line Supplemental Materials). The same was true when substituting the number of strategies to attain academic possible identities rather than simple count of all strategies,  $\Delta R^2 = .02$  rather than .03 as was the case with the count measure (Table S11 on-line Supplemental Materials).

#### Study 4

##### Sample and procedure

Students ( $n = 145$ ) filled out the same questionnaire as in Study 3 and then a year later filled out the 20-item Chinese version of the Center for Epidemiological Studies Depression scale (Zhang et al., 2010).<sup>3</sup> The school provided final examination score at two time points, T1 and T2. T1 was two months after the students completed the possible selves and strategies questions and T2 was a year after the students completed the possible selves and strategies questions, at this time students also reported on their depressive symptoms. "Left behind" children ( $n = 93$ , 48.4% male) had been without their parents for 7.02 years ( $SD = 3.84$ ) starting when children were 5.96 years old ( $SD = 4.28$ ). Descriptive information on the dependent variables is provided in Table 5. As in the prior studies, the most common possible self and strategy response focus on school-work and academics, with almost all children (98.5%) providing at least one such response when asked about their expected and feared possible selves and almost all children (97%) also reporting at least one strategy to work on their academic possible identities.

##### Results and discussion

We used three hierarchical multiple regression equations to examine the effects of children's possible selves and strategies on T1 (2 months after) and T2 (ten months after) final examination scores and T2 depressive symptom scores, entering variables in the same order as in Study 3. In predicting the T2 final exam score, we first entered T1 final exam score in step 1, possible selves at step 2, strategies at step 3, LB status at step 4, and interactions at step 5.

As seen in Table 6, for T1 final examination scores, having more possible selves predicted better scores two months later ( $p = .012$ ). None of the other variables significantly improved the model. Models were not improved when the more specific strategy concreteness score (Table S12 on-line Supplemental Materials) or the more specific academic possible identities and strategies to work on these possible identities scores were substituted into the model (Table S13 on-line Supplemental Materials).

As seen in Table 7, for T2 final examination scores, prior year final examination scores predicted better subsequent year final examination scores ( $p = .000$ ), adding number of possible selves at step 2 did not improve prediction ( $p = .848$ ), but adding number of strategies to attain one's possible selves at step 3 did ( $p = .004$ ). Having more strategies to attain one's possible selves significantly improved final exam performance. None of the other variables significantly improved the model.

<sup>3</sup> Ten children did not fill in the possible selves and strategies questions, yielding a final  $n = 135$  (51.8% male,  $M$  age = 13.81  $SD = .78$ ) for analysis.



**Table 4**  
Study 3: Hierarchical regression analysis predicting final exam score.

	<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>	95% C.I. of <i>b</i>	$\Delta R^2$	$\Delta F$	<i>p</i> for $\Delta F$
<i>Step 1</i>									
Problem behavior score	−7.31	2.64	−.21	−2.77	.006	−12.52, −2.10	.04	7.67	.006
<i>Step 2</i>									
Problem behavior score	−8.46	2.62	−.24	−3.22	.002	−13.64, −3.28	.04	7.43	.007
Number of possible selves	10.51	3.86	.20	2.73	.007	2.90, 18.12			
<i>Step 3</i>									
Problem behavior score	−7.04	2.67	−.20	−2.63	.009	−12.32, −1.76	.03	4.81	.030
Number of possible selves	3.33	5.02	.06	.66	.508	−6.58, 13.25			
Number of strategies	7.07	3.22	.21	2.19	.030	.71, 13.43			
<i>Step 4</i>									
Problem behavior score	−6.60	2.61	−.19	−2.53	.012	−11.75, −1.45	.05	10.14	.002
Number of possible selves	1.97	4.91	.04	.40	.688	−7.72, 11.66			
Number of strategies	8.10	3.15	.24	2.57	.011	1.87, 14.32			
LB status	−23.39	7.34	−.23	−3.18	.002	−37.89, −8.89			
<i>Step 5</i>									
Problem behavior score	−7.95	2.69	−.23	−2.96	.004	−13.26, −2.64	.02	1.40	.244
Number of possible selves	3.97	5.03	.08	.79	.431	−5.96, 13.91			
Number of strategies	6.67	3.35	.20	1.99	.048	.06, 13.28			
LB status	−22.80	7.33	−.22	−3.11	.002	−37.27, −8.33			
Number of possible selves × LB status	−6.62	5.03	−.13	−1.32	.190	−16.56, 3.31			
Number of strategies × LB status	3.13	3.35	.09	.93	.352	−3.48, 9.74			
Problem behavior score × LB status	5.13	2.69	.15	1.91	.058	−1.18, 10.44			

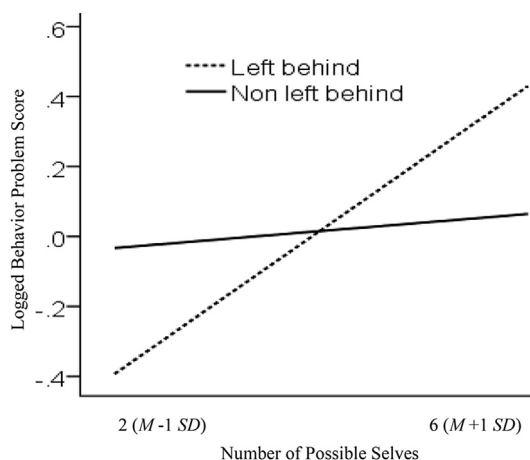
Note. The final examinations took place six weeks after the possible selves questionnaire. Behavior was observed for the 10 weeks before the final examinations. LB = Left Behind, coded −1 (left behind) or +1 (not left behind). *b*s were unstandardized,  $\beta$ s were standardized. A negative  $\beta$  means better score for LB children. Step 1 Cohen's  $f^2$  effect size = .04 (95% CI: −.01, .10, 90% CI: .00, .09). Step 2  $\Delta$  Cohen's  $f^2$  = .04 (95% CI: .01, .07, 90% CI: .01, .06). Step 3  $\Delta$  Cohen's  $f^2$  = .05 (95% CI: .03, .07, 90% CI: .04, .06). Step 4  $\Delta$  Cohen's  $f^2$  = .05 (95% CI: .03, .07, 90% CI: .04, .06). Step 5  $\Delta$  Cohen's  $f^2$  = .02 (95% CI: −.01, .03, 90% CI: .00, .02).

The same pattern was found, with the same variance explained in models using the more specific strategy concreteness score (Table S14 on-line Supplemental Materials) or the more specific academic possible identities and strategies to work on these possible identities scores were used (Table S15 on-line Supplemental Materials).

As seen in Table 8, for depressive symptoms, only number of strategies predicted lower of depressive symptoms one year later ( $p = .017$ ). None of the other variables significantly improved the model and models in which the more specific measures of possible selves and strategies were substituted into the equations did not significantly predict depressive symptoms (Tables S17 and S18 on-line Supplemental Materials).

## General discussion

Four studies using diverse methods show that possible selves and strategies to attain them matter for academic outcomes even in highly economically deprived settings and that in these settings, whether or not possible selves and strategies come to mind depends on features of the immediate situation. Rural Chinese children become less optimistic (Study 1) and more



**Fig. 2.** The effect of number of possible selves on (log-transformed) behavior problem score is moderated by “left behind” status (possible selves predict more behavior problems only for “left behind” children).

**Table 5**

Study 4: Descriptive (means, standard deviations) and comparative statistics.

	Left-behind	Non-left behind	F	p	$\eta^2$	d	95% C.I. of d
Number of possible selves	5.40 (1.94)	4.90 (1.99)	1.84	.177	.014	.25	-.11, .62
Number of strategies	6.09 (3.06)	4.93 (2.86)	4.30	.040	.031	.39	.02, .75
Concrete strategy score	7.13 (3.07)	6.09 (3.31)	3.33	.070	.023	.33	-.04, .70
Number of academic possible identities	3.32 (1.66)	2.96 (1.59)	1.53	.218	.011	.22	-.15, .58
Number of strategies to attain academic possible identities	3.84 (2.28)	2.87 (1.79)	6.39	.013	.044	.47	.08, .82
T1 Final Examinations Score	350.69 (94.45)	312.83 (98.20)	4.42	.038	.033	.39	.03, .76
T2 Final Examinations Score	432.83 (100.72)	403.64 (110.72)	2.00	.160	.017	.28	-.09, .65
CES-D	15.26 (9.47)	13.61 (6.84)	.89	.346	.008	.20	-.18, .55

Note. Number of possible selves is a count without reference to content, possible identities is a count focused on a particular identity (academics). CES-D = Center for Epidemiologic Studies Depression Scale, Chinese translation.

fatalistic (Study 2) when they are guided to consider whether they are “left behind.” Feeling more fatalistic predicts generating fewer possible selves and strategies to attain them. However “left behind” children do not have fewer possible selves and strategies than their peers, perhaps because their parents instill an idea of “moving forward” as the reason that they were left behind. Possible selves matter even in the dire circumstances of these children. Having possible selves predicts better final exam scores six weeks (Study 3) and two months (Study 4) later. Possible selves are not enough; having strategies to work toward possible selves predicts better subsequent performance on exams whether the examination occurs two months (Study 4) or ten months (Study 4) later, even controlling for prior exam scores (Study 4). Possible selves and strategies focus on schooling and academics, these are both the most common response and the response that all children share. Yet we do not find that predictions are stronger when we eliminate other possible self and strategy responses to focus only on these responses, perhaps because Chinese culture focuses on school as the path to attaining any positive possible future.

There is also some indication that having more possible selves might be a dual-edged sword for rural Chinese children who have been “left behind.” For these children, more possible selves predicted having *more* behavior problems at school six weeks later (Study 3). This negative effect was not replicated when we substituted in the number of academic possible selves in our analyses, implying that it was non-academic possible selves that undermined self-control. In contrast, strategies to attain their possible selves had fewer subsequent behavior problems (six weeks later, Study 3) and fewer subsequent depressive symptoms (ten months later, Study 4 T2). These protective effects were found only when a count of all strategies was used; when we focused only on strategies to work on academic possible identities we found no carry over effects to behavior or well-being.

While prior research has documented the effect of strategies on academic outcomes for low income and minority youth (Oyserman et al., 2004), we know of no other research that so clearly documents that without strategies, possible identities can *increase* rather than reduce risk in some contexts. The importance of strategies in our studies is congruent with prior research on possible selves that finds effects on subsequent academic performance of possible selves if these possible selves are linked to current action either via strategies (Oyserman et al., 2004) or via agentic path or journey metaphors (Landau et al., 2014) or via fit with context (Oyserman et al., 2015). In each case, possible selves require an added something to be grounded in current context. Though we also coded for content of possible selves and for concreteness of strategies, a simple

**Table 6**

Study 4: Hierarchical regression predicting T1 final exam scores.

	b	SE	$\beta$	t	p	95% C.I. of b	$\Delta R^2$	$\Delta F$	p for $\Delta F$
<i>Step 1</i>									
Number of possible selves	10.68	4.19	.22	2.55	.012	2.39, 18.97	.05	6.49	.012
<i>Step 2</i>									
Number of possible selves	4.04	6.56	.08	.62	.539	-8.94, 17.01	.01	1.73	.191
Number of strategies	5.68	4.32	.18	1.31	.191	-2.87, 14.23			
<i>Step 3</i>									
Number of possible selves	4.75	6.53	.10	.73	.468	-8.17, 17.67	.02	2.65	.106
Number of strategies	4.36	4.37	.14	1.00	.320	-4.28, 13.01			
LB status	-29.54	18.16	-.14	-1.63	.106	-65.47, 6.40			
<i>Step 4</i>									
Number of possible selves	7.55	7.86	.15	.96	.339	-8.00, 23.10	.01	.24	.784
Number of strategies	3.61	5.01	.11	.72	.473	-6.31, 13.52			
LB status	-29.70	18.91	-.14	-1.57	.119	-67.12, 7.72			
Possible selves $\times$ LB status	-8.61	14.55	-.10	-.59	.555	-37.41, 20.18			
Strategies $\times$ LB status	2.46	10.52	.04	.23	.815	-18.35, 23.27			

Note. Final exams were two months after the questionnaire. LB = Left Behind, coded -1 (left behind) or +1 (not left behind). bs were unstandardized,  $\beta$ s were standardized. A negative  $\beta$  means better score for LB children. Step 1 Cohen's  $f^2$  effect size = .05 (95% CI: -.02, .13, 90% CI: .00, .11). Step 2  $\Delta$  Cohen's  $f^2$  effect size = .01 (95% CI: -.01, .02, 90% CI: .00, .02). Step 3  $\Delta$  Cohen's  $f^2$  effect size = .02 (95% CI: -.00, .04, 90% CI: .00, .03). Step 4  $\Delta$  Cohen's  $f^2$  effect size = .01 (95% CI: .00, .02, 90% CI: .01, .02).

**Table 7**  
Study 4: Hierarchical regression predicting T2 final exam scores.

	<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>	95% C.I. of <i>b</i>	$\Delta R^2$	$\Delta F$	<i>p</i> for $\Delta F$
<i>Step 1</i>									
Time 1 Exam Scores	.97	.04	.91	22.97	.000	.88, 1.05	.82	527.62	.000
<i>Step 2</i>									
Time 1 Exam Scores	.97	.04	.91	22.39	.000	.88, 1.05	.00	.04	.848
Number of possible selves	-.43	2.26	-.01	-.19	.848	-4.92, 4.05			
<i>Step 3</i>									
Time 1 Exam Scores	.95	.04	.89	22.58	.000	.87, 1.03	.01	8.66	.004
Number of possible selves	-7.09	3.15	-.13	-2.25	.026	-13.33, -.85			
Number of strategies	6.01	2.04	.17	2.94	.004	1.96, 10.06			
<i>Step 4</i>									
Time 1 Exam Scores	.96	.04	.90	22.68	.000	.88, 1.04	.00	2.11	.149
Number of possible selves	-7.32	3.14	-.13	-2.33	.021	-13.54, -1.11			
Number of strategies	6.58	2.07	.18	3.18	.002	2.47, 10.68			
LB status	12.97	8.93	.06	1.45	.149	-4.72, 30.66			
<i>Step 5</i>									
Time 1 Exam Scores	.92	.05	.86	17.30	.000	.81, 1.02	.00	.69	.557
Number of possible selves	-5.93	3.76	-.11	-1.58	.117	-13.38, 1.51			
Number of strategies	6.58	2.37	.18	2.78	.006	1.89, 11.28			
LB status	13.43	9.31	.06	1.44	.152	-5.02, 31.88			
Time 1 Exam Scores $\times$ LB status	.12	.09	.06	1.31	.192	-.06, .29			
Possible selves $\times$ LB status	-3.62	7.01	-.04	-.52	.607	-17.52, 10.28			
Strategies $\times$ LB status	.02	4.95	.00	.00	.997	-9.79, 9.83			

Note. Final exams were a year after the questionnaire. Time 1 Exam Score = Final examinations ten months prior to the predicted final exam. LB = Left Behind, coded -1 (left behind) or +1 (not left behind). *bs* were unstandardized,  $\beta$ s were standardized. A negative  $\beta$  means better score for LB children. Step 1 Cohen's  $f^2$  effect size = 4.55 (95% CI: 3.26-6.93, 90% CI: 3.43-6.41). Step 2  $\Delta$  Cohen's  $f^2$  effect size = 0. Step 3  $\Delta$  Cohen's  $f^2$  effect size = .05 (95% CI: .00, .11, 90% CI: .01, .10). Steps 4 and 5  $\Delta$  Cohen's  $f^2$  effect size = 0.

count of the number of possible selves and strategies was sufficient, predicting outcomes. We interpret this as implying that for rural Chinese children school might be the only path to attaining one's future self so that the particulars of that future self are less critical than that one can imagine a variety of possibilities for the future and a variety of strategies to get there. There are a number of reasons we believe that this is a plausible interpretation. First, worldview in Eastern countries (e.g., Confucianism) highlights acceptance of fate along with the value of education (Liu & Dunne, 2009). This may increase the likelihood that all possible identities, no matter how articulated, involve a belief that school is the means or path. In this context, any possible identity implies school success as a means if not an end. Second, parents and grandparents (caregivers after the parents leave) in our sample are generally themselves not well educated so not able to provide specific models beyond the general cultural ethos.

Our results contribute to the literature on knowledge activation effects of stereotypes since the "left behind" stereotype and its consequences are not as well studied as other stereotypes about related social identities such as ethnicity, race, and social class (e.g., Croizet & Claire, 1998; for a review, Schmader, Johns, & Forbes, 2008). As Wheeler and Petty (2001) found for stereotyped identities including being an elder person, African American, or a professor, making "left behind" salient

**Table 8**  
Study 4: Hierarchical regression predicting depressive symptoms.

	<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>	95% CI of <i>b</i>	$\Delta R^2$	$\Delta F$	Sig. $\Delta F$
<i>Step 1</i>									
Number of possible selves	.41	.43	.09	.95	.342	-.44, 1.27	.01	.91	.342
<i>Step 2</i>									
Number of possible selves	1.56	.63	.33	2.46	.016	.30, 2.81	.05	5.89	.017
Number of strategies	-.98	.41	-.33	-2.43	.017	-1.79, -.18			
<i>Step 3</i>									
Number of possible selves	1.60	.63	.34	2.52	.013	.34, 2.85	.01	1.74	.190
Number of strategies	-1.08	.41	-.36	-2.64	.010	-1.90, -.27			
LB status	-2.31	1.75	-.12	-1.32	.190	-5.79, 1.16			
<i>Step 4</i>									
Number of possible selves	1.02	.75	.22	1.37	.175	-.46, 2.51	.02	1.12	.330
Number of strategies	-.93	.47	-.31	-2.01	.047	-1.86, -.01			
LB status	-2.34	1.84	-.12	-1.27	.206	-5.99, 1.31			
Possible selves $\times$ LB status	1.87	1.42	.22	1.32	.189	-.93, 4.68			
Strategies $\times$ LB status	-.55	1.00	-.09	-.55	.583	-2.52, 1.43			

Note LB = Left Behind, coded -1 (left behind) or +1 (not left behind). *bs* were unstandardized,  $\beta$ s were standardized. A negative  $\beta$  means better score for LB children. Step 1 Cohen's  $f^2$  effect size = .01 (95% CI: -.02, .04, 90% CI: -.01, .03). Step 2  $\Delta$  Cohen's  $f^2$  = .05 (95% CI: .01, .11, 90% CI: .01, .10). Step 3 Cohen's  $f^2$  = .01 (95% CI: -.01, .02, 90% CI: .00, .02). Step 4 Cohen's  $f^2$  = .02 (95% CI: .00, .04, 90% CI: .01, .03).

increases accessibility of relevant feelings and behavior whether or not one is “left behind”. However, we also found negative effects of “left behind” status that are specific to “left behind” children: Problem behavior is associated with having more possible selves only for “left behind” children and problem behavior is associated with worse test scores only for “left behind” children.

Taken together our results imply that while “left behind” is a stereotyped identity that primes children to be accepting of the hand of fate in their lives, this does not mean that children who actually are “left behind” disengage from school. On the contrary, they seem to redouble their efforts. Indeed, congruent with a number of published results (ACWF, 2008; Chen et al., 2009; Jordan & Graham, 2012; Lee & Park, 2010; Zhou et al., 2005) the “left behind” children in our studies fared no worse academically than their peers. In this way, our results contribute to the stereotype and stereotype threat literature that sometimes focuses on effects for the stereotyped group and other times focuses on effects of knowledge activation overall (Wheeler & Petty, 2001). By demonstrating that a knowledge structure such as “left behind” can have both general effects whether one is a member of the group or not, and at the same time, can have unique effects for the targeted group, we highlight that both knowledge activation and response to threat can occur simultaneously. Prior research with children in poverty documented that they do not differ from more moderate income children in their possible identities but are less likely to have strategies to attain them (Oyserman, Johnson, & James, 2011). By demonstrating that possible selves and strategies are not only sensitive to contextual cues but also have effects on important outcomes up to a year later, we also provide evidence for the motivational consequences of possible selves even in rural China, a collectivistic context.

While our focus was on “left behind” children in China, it is possible that our results are generalizable to the situation of children in the U.S. and elsewhere whose parents sacrifice family time for economic opportunities to create better future chances for their children. Risk of less supervision is clear but supports to help these children leverage the power of the vision their parents have for a better future should not be overlooked. The cultural parallel in the U.S. might be “John Henry-ism,” a strong behavioral predisposition to cope actively with psychosocial environmental stresses in order to attain a desired outcome (Brody et al., 2013; James, 1994). Our results may also apply to other contexts in which fatalism is a culturally consonant belief. This is important because fatalism in U.S. Latino and African American cultures has previously been associated with less engagement in preventive health behavior (e.g., Alper & Beckwith, 1993; Powe, 1995; Roberts, Roberts, & Chen, 2000; Straughan & Seow, 1998; Wallace, Pomery, Latimer, Martinez, & Salovey, 2010). However, fatalism does not necessarily imply despair or lack of control but rather the belief that things are ‘in God’s hands’ (cf. Neff & Hoppe, 1993). Acceptance of benign control coupled with possible selves and strategies may provide a culturally congruent leverage for “moving forward” whether in rural China or elsewhere.

## Author note

While writing up these studies, the first author was a visiting scholar at the University of Michigan, Institute for Social Research. Funding for these studies was provided by the School of Psychology, Southwest University (TR201201-4) China.

## Appendix A. Supplementary data

Supplementary data related to this article can be found at <http://dx.doi.org/10.1016/j.adolescence.2015.08.004>.

## References

- All-China Women's Federation. (2008). *The left behind children in China*. Retrieved May 12, 2013, from [http://jtyj.china.com.cn/2008-12/23/content\\_2644723.htm](http://jtyj.china.com.cn/2008-12/23/content_2644723.htm) (in Chinese).
- All-China Women's Federation. (2013). *Left behind and migrant children in China*. Retrieved May 12, 2013, from <http://acwf.people.com.cn/n/2013/0510/c99013-21437965.html> (in Chinese).
- Alper, J. S., & Beckwith, J. (1993). Genetic fatalism and social policy: the implications of behavior genetics research. *The Yale Journal of Biology and Medicine*, 66(6), 511–524.
- Aronson, J., Fried, C. B., & Good, C. (2002). Reducing the effects of stereotype threat on African American college students by shaping theories of intelligence. *Journal of Experimental Social Psychology*, 38(2), 113–125. <http://dx.doi.org/10.1006/jesp.2001.1491>.
- Aronson, J., Lustina, M. J., Good, C., Keough, K., Steele, C. M., & Brown, J. (1999). When white men can't do math: necessary and sufficient factors in stereotype threat. *Journal of Experimental Social Psychology*, 35(1), 29–46. <http://dx.doi.org/10.1006/jesp.1998.1371>.
- Biao, X. (2007). How far are the left-behind left behind? A preliminary study in rural China. *Population, Space and Place*, 13, 179–191. <http://dx.doi.org/10.1002/psp.437>.
- Brody, G. H., Yu, T., Chen, E., Miller, G. E., Kogan, S. M., & Beach, S. R. H. (2013). Is resilience only skin deep? Rural African Americans' socioeconomic status-related risk and competence in preadolescence and psychological adjustment and allostaticload at age 19. *Psychological Science*, 24(7), 1285–1293. <http://dx.doi.org/10.1177/0956797612471954>.
- Chen, X., Huang, Q., Rozelle, S., Shi, Y., & Zhang, L. (2009). Effect of migration on children's educational performance in rural China. *Comparative Economic Studies*, 51(3), 323–343.
- Crocker, J., Major, B., & Steele, C. (1998). Social stigma. In D. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., Vol. 2, pp. 504–553). New York: McGraw Hill.
- Croizet, J. C., & Claire, T. (1998). Extending the concept of stereotype threat to social class: the intellectual underperformance of students from low socioeconomic backgrounds. *Personality and Social Psychology Bulletin*, 24(6), 588–594. <http://dx.doi.org/10.1177/0146167298246003>.
- Du, L. (2002). *Cultural context and differences of attribution*. PhD thesis, Tianjin: Nankai University (in Chinese).
- Duan, C., & Zhou, F. (2005). A study on children left behind. *Population Research*, 29, 29–36 (in Chinese).
- Elmore, K. C., & Oyserman, D. (2012). If ‘we’ can succeed, ‘I’ can too: identity-based motivation and gender in the classroom. *Contemporary Educational Psychology*, 37(3), 176–185. <http://dx.doi.org/10.1016/j.cedpsych.2011.05.003>.

- Gao, Y., Li, L. P., Kim, J. H., Congdon, N., Lau, J., & Griffiths, S. (2010). The impact of parental migration on health status and health behaviours among left behind adolescent school children in China. *BMC Public Health*, 10, 56. <http://dx.doi.org/10.1186/1471-2458-10-56>.
- Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. Englewood Cliffs, NJ: Prentice-Hall.
- Good, C., Aronson, J., & Inzlicht, M. (2003). Improving adolescents' standardized test performance: an intervention to reduce the effects of stereotype threat. *Journal of Applied Developmental Psychology*, 24(6), 645–662. <http://dx.doi.org/10.1016/j.appdev.2003.09.002>.
- Heiniger, L. E., Sherman, K. A., Shaw, L. K. E., & Costa, D. (2013). Fatalism and health promoting behaviors in Chinese and Korean immigrants and Caucasians. *Journal of Immigrant and Minority Health*, 1–7. <http://dx.doi.org/10.1007/s10903-013-9922-5>.
- Hou, Y., & Xu, Z. (2008). The senses of loneliness and inferiority of left-behind children in rural China. *Chinese Mental Health Journal*, 22(8), 564.
- Hu, F. (2012). Migration, remittances, and children's high school attendance: the case of China. *International Journal of Education Development*, 32, 401–411. <http://dx.doi.org/10.1016/j.ijedudev.2011.08.001>.
- James, S. A. (1994). John Henryism and the health of African-Americans. *Culture, Medicine and Psychiatry*, 18(2), 163–182. <http://dx.doi.org/10.1007/BF01379448>.
- Jia, Z., & Tian, W. (2010). Loneliness of left-behind children: a cross-sectional survey in a sample of rural China. *Child: Care, Health and Development*, 36(6), 812–817. <http://dx.doi.org/10.1007/s11136-007-9250-0>.
- Jones, E. E., Farina, A., Hastorf, A. H., Markus, H., Miller, D. T., & Scott, R. A. (1984). *Social stigma: The psychology of marked relationships*. New York: Freeman.
- Jordan, L. P., & Graham, E. (2012). Resilience and well-being among children of migrant parents in South-East Asia. *Child Development*, 83(5), 1672–1688. <http://dx.doi.org/10.1111/j.1467-8624.2012.01810.x>.
- Landau, M. J., Oyserman, D., Keefer, L. A., & Smith, G. C. (2014). The college journey and academic engagement: how metaphor use enhances identity-based motivation. *Journal of Personality and Social Psychology*, 106(5), 679–698. <http://dx.doi.org/10.1037/a0036414>.
- Lee, L., & Park, A. (2010). *Parental migration and child development in China*. Working paper. Retrieved May 12, 2013, from [http://repository.upenn.edu/gansu\\_papers/24/](http://repository.upenn.edu/gansu_papers/24/).
- Legge, J. (2015). *Translation of The Analects of Confucius (1893)*. Retrieved 2015/4/10 from <http://onlinebooks.library.upenn.edu/webbin/book/lookupname?key=Legge-James-201815-1897>.
- Lenth, R. V. (2006-9). *Java Applets for Power and Sample Size [Computer software]*. Retrieved May 1, 2014, from <http://www.stat.uiowa.edu/~rlenth/Power>.
- Li, Y., Chen, P. Y., Chen, F. L., & Wu, W. C. (2015). Roles of fatalism and parental support in the relationship between bullying victimization and bystander behaviors. *School Psychology International*. <http://dx.doi.org/10.1177/0143034315569566>.
- Liang, W., Wang, J. H., Chen, M. Y., Feng, S., Lee, M., Schwartz, M. D., et al. (2008). Developing and validating a measure of Chinese cultural views of health and cancer. *Health Education & Behavior*, 35(3), 361–375. <http://dx.doi.org/10.1177/1090198106294893>.
- Liu, Y., & Dunne, M. (2009). Educational reform in China: tensions in national policy and local practice. *Comparative Education*, 45(4), 461–476. <http://dx.doi.org/10.1080/03050060903391594>.
- Liu, C., Zhang, L., Luo, R., Rozelle, S., Sharbono, B., & Shi, Y. (2009). Development challenges, tuition barriers, and high school education in China. *Asia Pacific Journal of Education*, 29(4), 503–520.
- Lu, F., Zou, J., Zhang, J., Jiang, H., & Lin, L. (2011). Primary school teachers' implicit stigma effect towards left-at-home children. *Journal of Southwest University (Natural Science Edition)*, 33(10), 172–176.
- Markus, H., & Nurius, P. (1986). Possible selves. *American Psychologist*, 41(9), 954–969.
- Meyerhoefer, C. D., & Chen, C. J. (2011). The effect of parental labor migration on children's educational progress in rural China. *Review of Economics of the Household*, 9, 379–396. <http://dx.doi.org/10.1007/s11150-010-9105-2>.
- Neff, J. A., & Hoppe, S. K. (1993). Race/ethnicity, acculturation, and psychological distress: fatalism and religiosity as cultural resources. *Journal of Community Psychology*, 21, 3–20. [http://dx.doi.org/10.1002/1520-6629\(199301\)21:1<3::AID-JCOP2290210102>3.0.CO;2-9](http://dx.doi.org/10.1002/1520-6629(199301)21:1<3::AID-JCOP2290210102>3.0.CO;2-9).
- Oyserman, D., Bybee, D., Terry, K., & Hart-Johnson, T. (2004). Possible selves as roadmaps. *Journal of Research in Personality*, 38(2), 130–149. [http://dx.doi.org/10.1016/S0092-6566\(03\)00057-6](http://dx.doi.org/10.1016/S0092-6566(03)00057-6).
- Oyserman, D., Destin, M., & Novin, S. (2015). The context sensitive future self: possible selves motivate in context, not otherwise. *Self and Identity*, 14, 173–188. <http://dx.doi.org/10.1080/15298868.2014.965733>.
- Oyserman, D., & Fryberg, S. A. (2006). The possible selves of diverse adolescents: content and function across gender, race and national origin. In J. Kerpelman, & C. Dunkel (Eds.), *Possible selves: Theory, research, and applications* (pp. 17–39). Huntington, NY: Nova.
- Oyserman, D., Gant, L., & Ager, J. (1995). A socially contextualized model of African American identity: possible selves and school persistence. *Journal of Personality and Social Psychology*, 69(6), 1216–1232. <http://dx.doi.org/10.1037/0022-3514.69.6.1216>.
- Oyserman, D., & Horowitz, E. (2015). *When is seeing it being it? Future selves motivate current action if they are included in current self-representations or used as contrasting standards* (submitted for publication).
- Oyserman, D., & James, L. (2009). Possible selves: from content to process. In K. Markman, W. M. P. Klein, & J. A. Suhr (Eds.), *The handbook of imagination and mental stimulation* (pp. 373–394). New York, NY: Psychology Press.
- Oyserman, D., & James, L. (2011). Possible identities. In S. Schwartz, K. Luyckx, & V. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 117–145). New York, NY: Springer-Verlag.
- Oyserman, D., Johnson, E., & James, L. (2011). Seeing the destination but not the path: effects of socioeconomic disadvantage on school-focused possible self content and linked behavioral strategies. *Self and Identity*, 10, 474–492. <http://dx.doi.org/10.1080/15298868.2010.487651>.
- Oyserman, D., & Markus, H. R. (1990). Possible selves and delinquency. *Journal of Personality and Social Psychology*, 59(1), 112–125. <http://dx.doi.org/10.1037/0022-3514.59.1.112>.
- Pan, L., Tian, F., Lu, F., Zhang, X. L., Liu, Y., Feng, W., et al. (2013, February). An exploration on long-distance communications between left-behind children and their parents in China. In *Proceedings of the 2013 Conference on Computer Supported Cooperative Work* (pp. 1147–1156). ACM. <http://dx.doi.org/10.1145/2441776.2441906>.
- Powe, B. D. (1995). Fatalism among elderly African Americans. Effects on colorectal cancer screening. *Cancer Nursing*, 18(5), 385–392. <http://dx.doi.org/10.1097/00002820-199510000-00008>.
- Qian, J., & Qi, X. (2011). Who defined the left behind children? *Shanghai Research on Education*, 2, 12–14 (in Chinese).
- Reid, D., & Ware, E. E. (1974). Multidimensionality of internal versus external control: addition of a third dimension and non-distinction of self versus others. *Canadian Journal of Behavioural Science*, 6, 131–142. <http://dx.doi.org/10.1037/h0081862>.
- Ren, Y. (2008). Be aware of the stigmas of the left-behind children. *Theory and Practice of Education*, 11, 3–5 (in Chinese).
- Roberts, R. E., Roberts, C. R., & Chen, I. G. (2000). Fatalism and risk of adolescent depression. *Psychiatry*, 63(3), 239–252. <http://dx.doi.org/10.1521/00332747.2000.11024917>.
- Schmader, T., Johns, M., & Forbes, C. (2008). An integrated process model of stereotype threat effects on performance. *Psychological Review*, 115(2), 336–356. <http://dx.doi.org/10.1037/0033-295X.115.2.336>.
- Shen, M., Yang, S., Han, J., Shi, J., Yang, R., Du, Y., et al. (2009). Non-fatal injury rates among the "left-behind children" of rural China. *Injury Prevention*, 15(4), 244–247. <http://dx.doi.org/10.1136/ip.2008.019869>.
- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, 69(5), 797–811. <http://dx.doi.org/10.1037/0022-3514.69.5.797>.
- Straughan, P. T., & Seow, A. (1998). Fatalism reconceptualized: a concept to predict health screening behavior. *Journal of Gender, Culture and Health*, 3(2), 85–100. <http://dx.doi.org/10.1023/A:1023278230797>.
- Straughan, P. T., & Seow, A. (2000). Attitudes as barriers in breast screening: a prospective study among Singapore women. *Social Science Medicine*, 51(11), 1695–1703. [http://dx.doi.org/10.1016/S0277-9536\(00\)00086-1](http://dx.doi.org/10.1016/S0277-9536(00)00086-1).

- Wallace, P., Pomery, E., Latimer, A., Martinez, J., & Salovey, P. (2010). A review of acculturation measures and their utility in studies promoting Latino health. *Hispanic Journal of Behavioral Sciences*, 32(1), 37–54. <http://dx.doi.org/10.1177/0739986309352341>.
- Wheeler, S. C., & Petty, R. E. (2001). The effects of stereotype activation on behavior: a review of possible mechanisms. *Psychological Bulletin*, 127(6), 797–826.
- Yang, K. S., Yu, A. B., & Yeh, M. H. (1989). Chinese individual modernity and traditionality: construct definition and measurement. In K. S. Yang, & A. B. Yu (Eds.), *Chinese psychology and behavior* (pp. 241–306). Taipei: Laureat (in Chinese).
- Ye, J., & Pan, L. (2011). Differentiated childhoods: impacts of rural labor migration on left-behind children in China. *The Journal of Peasant Studies*, 38, 355–377.
- Zhang, J., Wu, Z., Fang, G., Li, J., Han, B., & Chen, Z. (2010). Development of the Chinese age norms of CES-D in urban area. *Chinese Mental Health Journal*, 24, 139–143 (in Chinese).
- Zhang, J., Zhao, Y., Yang, D., & Yu, H. (2000). Study of Chinese attribution of success and failure. *Journal of Southwest China Normal University (Natural Science)*, 25(4), 476–480 (in Chinese).
- Zhou, Z., Sun, X., Liu, Y., & Zhou, D. (2005). Psychological development and education problems of children left in rural areas. *Journal of Beijing Normal University (Social Science)*, 1, 71–79 (in Chinese).
- Zhu, S., Tse, S., Cheung, S. H., & Oyserman, D. (2014). Will I get there? Effects of parental support on children's possible selves. *British Journal of Educational Psychology*, 84(3), 435–453. <http://dx.doi.org/10.1111/bjep.12044>.