

## Creative Histories: Memories of Past Lives and Measures of Creativity

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Experiencing memories of past lives is anomalous in Western culture. Such experiences may signify an overinclusive cognitive style, associated with creative ability. Accordingly, are reports of past life memory (PLM) associated with creativity? Is PLM associated with measures of overinclusiveness? To investigate these issues, we conducted two studies. In study one, we recruited subjects who reported having recovered memories of previous lives, and compared them to demographically matched comparison subjects on measures of creativity and latent inhibition (LI). Relative to comparison subjects, those reporting PLM had significantly higher scores on a variety of creativity measures, but not significantly higher scores on creative achievement ( $p = .10$ ). The PLM subjects were significantly more likely to have low LI, an indicator of overinclusive cognition associated with creativity in high-IQ subjects (Carson, Peterson, & Higgins, 2003). Partly replicating Carson et al.'s findings, low LI scores in subjects with high IQ scores predicted high scores on measures of divergent thinking and creativity, but not on a measure of creative achievement. In study two, we investigated the prevalence of past life beliefs and PLM among high-creative versus low-creative students. Relative to low-creative subjects, those high on creative achievement were significantly more likely to endorse both past life beliefs and report PLM. Further, both high- (relative to low-) creative achievers and those with PLM (relative to those with no PLM) scored significantly higher on a schizotypal personality measure of overinclusive thinking.

*Keywords:* creativity, false memories, latent inhibition, reincarnation, schizotypal personality

The doctrine of reincarnation is central to several Eastern religions, including Hinduism, Buddhism, and Sikhism (Noss, 1969). Approximately 12% of Americans believe in reincar-

nation (Connor, Davidson, & Lee, 2003), comprising adherents of Wicca and New Age spirituality as well as traditional Eastern religions. However, belief in reincarnation does not necessarily imply that one can recover memories from one's previous lives. Claims of past life memories (PLM) are atypical even in cultures where belief in reincarnation is widespread. Indeed, traditional Buddhist doctrine asserts that only highly enlightened individuals, such as the Buddha, are capable of recalling episodes from their previous incarnations (Keown, 1996). Similarly, surveys show that only about 1 out of 450 people in India claims to have memories from previous lives (Barker & Pasricha, 1979) even though about 80% of the population is Hindu (Registrar General & Census Commissioner, India, 2007).

Yet PLM is a familiar theme in American culture, appearing in films (e.g., *Dead Again*:

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Doran, Maguire, & Branagh, 1991), novels (e.g., *The Reincarnationist*, Rose & Shapiro, 2007), and memoirs. Accounts of PLM, such as *The Search for Bridey Murphy* (Bernstein, 1956) and *Out on a Limb* (MacLaine, 1983), have appeared on *New York Times* nonfiction best-seller lists. Nevertheless, interpreting certain experiences as memories of one's previous lives is culturally atypical in America, and potentially suggestive of delusional psychopathology.

However, people reporting PLM, space alien abduction, and other anomalous experiences need not suffer from mental illness (McNally, 2012). For example, in one study, researchers found that college students who reported PLM during a hypnosis experiment were no more likely to show elevations on measures of psychopathology than were students who did not report PLM (Spanos, Menary, Gabora, DuBreuil, & Dewhirst, 1991). In another study, Pyun and Kim (2009) hypnotically elicited reports of PLM in Korean military police trainees who had passed tests of mental and physical fitness, and hence were psychiatrically healthy. Finally, although not directly concerning psychopathology, Meyersburg and McNally (2011) found that subjects reporting PLM, relative to comparison subjects, had higher scores on a questionnaire tapping meaning in one's life, and lower scores on a measure of death anxiety.

Magical ideation denotes belief in unconventional modes of causation inconsistent with established science (e.g., telekinesis, ESP). Despite apparently being free of mental illness, people reporting PLM score high on Eckblad and Chapman's (1983) Magical Ideation Scale (Meyersburg, Bogdan, Gallo, & McNally, 2009; Spanos, Menary, Gabora, DuBreuil, & Dewhirst, 1991), as do people reporting New Age beliefs and practices (Farias, Claridge, & Laljee, 2005), people with schizophrenia (George & Neufeld, 1987), and those at risk for psychosis (Chapman, Chapman, Kwapil, Eckblad, & Zinser, 1994).

Magical ideation also predicts the tendency to make unusual, remote associations between concepts, an "overinclusive" cognitive style associated with creativity (Mohr, Graves, Gianotti, Pizzagalli, & Brugger, 2001; Schulberg, French, Stone, & Herberle, 1988). Magical ideation is also associated with diminished latent inhibition (LI; Gray, Fernandez, Williams, Ruddle, & Snowden, 2002), the ca-

capacity to disregard stimuli previously encountered as irrelevant (Lubow & Moore, 1959). LI functions outside awareness, filtering out stimuli irrelevant to one's current goals (Carson, 2010a). If one has classified a stimulus as irrelevant to one's current goals, it becomes especially difficult subsequently to learn an association involving this stimulus. Yet in contrast to people with high LI, those with low LI do not show this dampened associative learning effect.

Low LI reflects an overinclusive thinking style (Eysenck, 1995) that enables stimuli to enter awareness that high-LI people filter out. Although low LI characterizes people with psychosis (Baruch, Hemsley, & Gray, 1988a) and those at risk for psychosis (Baruch, Hemsley, & Gray, 1988b), it also characterizes healthy, highly creative people (Carson, Peterson, & Higgins, 2003; Fink, Slamar-Halbedl, Unterwainer, & Weiss, 2012; Kéri, 2011). Carson, Peterson, and Higgins (2003) theorized that low levels of LI would increase the amount of stimuli available to awareness and thus increase the probability of combining this information in novel and creative ways.

However, creativity would be evident in only those low-LI people whose cognitive ability was sufficiently high to manage, process, and manipulate the additional stimuli flooding awareness.

The purpose of our current research is to deepen our understanding of people who report PLM. According to the sociocognitive model of PLM (Mills & Lynn, 2000), exposure to certain cultural models, such as dramatic media accounts of people recalling their past lives, and certain personality traits, such as rich imaginative ability, render some people especially likely to interpret unusual experiences, such as déjà vu, as PLM. The sociocognitive model provides a nonpsychopathological account of why people may report PLM. Consistent with this model, Spanos, Menary, Gabora, DuBreuil, and Dewhirst (1991) found that students scoring high on hypnotizability were more likely to report PLM during a hypnotic past life regression. Meyersburg, Bogdan, Gallo, and McNally (2009) found that PLM subjects recruited from the community score high on absorption, a trait associated with vivid imagination (Tellegen & Atkinson, 1974). They also found that subjects reporting PLM exhibit heightened false memory propensity on the Deese-Roediger-McDermott

paradigm (Deese, 1959; Roediger & McDermott, 1995). Peters, Horselenberg, Jelicic, and Merckelbach (2007) likewise found that PLM subjects exhibited false memory propensity on the false fame paradigm (Jacoby, Kelley, Brown, & Jasechko, 1989).

In this article, we report two studies. In the first study, we tested whether PLM subjects, relative to comparison subjects who deny having memories of previous lives, score higher on measures of creativity, including tests of fluency, originality, flexibility, and total divergent thinking, creative achievement, and personality traits associated with creative people. We also tested whether PLM subjects exhibit less LI than comparison subjects on a laboratory measure of LI. Finally, we tested whether LI predicts creativity among people with high scores on a measure of intelligence, as Carson, Peterson, and Higgins (2003) have predicted. In the second study, we tested whether PLM and belief in PLM are more common among highly creative people than among people who are not highly creative.

## STUDY ONE

### Method

#### Subjects

**PLM group.** This group comprised 40 subjects (30 female) whose mean age was 48.5 years old ( $SD = 15.2$ ; range: 21–71) and whose average level of education was a bachelor's degree (range: some high school – Ph.D.). There were 36 Caucasian, 1 African American, 1 Hispanic, and 2 bi/multiracial (1 African American/Caucasian, and 1 Caucasian/Inuit/Native American) subjects.

In addition to enrolling six subjects from our previous study (Meyersburg, Bogdan, Gallo, & McNally, 2009), we recruited 24 subjects through Craigslist (an Internet bulletin board suitable for advertising research studies, employment opportunities, and so on) and 10 subjects via word of mouth referral from other subjects. Potential subjects were informed that the study concerned personality in people reporting memories of past lives, and that people without such memories could also participate as “control” subjects.

To qualify, potential subjects had to report, during a phone screen, at least one memory that they thought originated from a previous life. Believing that one had a previous life or being told by a psychic that one had a previous life was insufficient to qualify.

The vast majority of individuals who contacted us about participating as PLM subjects qualified and participated. Three qualified but did not participate for various reasons (e.g., moving away from the Boston area), and several others did not qualify because they were uncertain whether certain experiences (e.g., a dream) were actually past memories of a previous life, and another had nothing to construe as a past memory, but a psychic had told her that she did have past lives.

**Comparison group.** This group comprised 35 subjects (26 female) whose mean age was 47.7 years old ( $SD = 15.6$ ; range: 19–78) and whose average level of education was a bachelor's degree (range: some high school – Ph.D.). There were 21 Caucasian, 2 African American, 1 Hispanic, and 1 biracial (Caucasian/Native American) participant. We tested an additional seven subjects, but excluded them before examining their data because each had a close relationship (e.g., spouse) with someone who claimed to have PLM. We learned these facts during the second session (see below) when we assessed their beliefs about reincarnation. In addition to rescreening and enrolling five comparison subjects from our previous study (Meyersburg, Bogdan, Gallo, & McNally, 2009), we recruited 30 subjects via Craigslist.

To qualify, potential subjects had to deny PLM. However, whether an individual believed in reincarnation did not affect eligibility (e.g., one control participant reported believing in past lives but thinking that she herself was a new soul with no previous incarnations). Data regarding controls' beliefs regarding past lives were collected during the second session of testing. The majority ( $n = 23$ ) did not believe in past lives. Three reported believing in past lives, and the remaining nine subjects expressed varying degrees of uncertainty, ranging from leaning toward believing to leaning toward disbelief.

All subjects in both groups used English as their primary language. The groups did not differ in age,  $t(73) = 0.21$ ,  $p = .84$ ,  $r = .02$ . Harvard University's Committee on the Use of

Human Subjects approved the protocol and consent form.

## Materials

### Creativity Measurement

**Divergent thinking tasks (DT tasks).** To assess divergent thinking (DT), we used three validated tasks adapted from Torrance (1968), including an *alternate uses* task (uses for an empty soup can), a *consequences* task (what if humans had six fingers on each hand instead of five), and an *instances* task (list white, edible foods). These tasks are widely used and are reliably correlated with other measures of creativity (Carson, Peterson, & Higgins, 2005; Prabhakaran, Green, & Gray, 2013). For each task, we told subjects to generate as many answers as possible for the given prompt. We assessed *fluency* (the number of responses produced), *originality* (the statistical infrequency of each response relative to responses of other subjects in the study), and *flexibility* (the sum of the number of different categories used and the number of changes made between categories). After calculating standard scores for each measure, we summed them to obtain each subject's total DT score.

**Creative Achievement Questionnaire (CAQ).** The CAQ is an 80-item, reliable, and valid self-report measure of creative achievement (Carson, Peterson, & Higgins, 2005). Each item pertains to one of 10 domains of creative achievement: visual arts, music, dance, architectural design, creative writing, humor, inventions, scientific discovery, theater and film, or culinary arts. Each item is weighted depending on level of achievement. For instance, in the domain of music, attesting to the item "my compositions have been critiqued in a national publication" receives more weight than attesting to the item "I play one or more musical instruments proficiently." A score of 12 or more in any domain signifies a high level of creative achievement (Carson, Peterson, & Higgins, 2003). Carson, Peterson, and Higgins (2005) reported excellent test-retest reliability ( $r = .81$ ), internal consistency reliability ( $\alpha = .96$ ), and predictive validity (e.g., artists' creativity ratings of subjects' artistic products;  $r = .59$ ).

**Creative Personality Scale (CPS).** The CPS is a 30-item, self-report measure (Gough,

1979) developed from Gough and Heilbrun's (1965) Adjectives Checklist. Subjects mark those adjectives descriptive of their personalities. Eighteen of the adjectives, such as "inventive," positively correlate with self-descriptions of people with documented histories of creative achievement, whereas the remaining 12 adjectives, such as "conventional," negatively correlate with self-descriptions of creative people (Gough, 1979).

### LI Task

The measure of LI was a computerized version of Peterson and Carson's (2000) LI task, which was based on the one used by Lubow, Ingberg-Sachs, Zalstein-Orda, and Gewirtz (1992). The LI task consisted of a preexposure phase and an exposure phase. During the preexposure phase, subjects heard a brief white noise that randomly occurred 31 times during an audio recording of a female voice repeating a series of 30 nonsense syllables five times (i.e., 150 syllable presentations). During the preexposure phase, we asked subjects to count the number of times the nonsense syllable, "bim," occurred. Bim occurred five times during the preexposure phase. The volume of the white noise was approximately two-thirds of the volume of the nonsense syllables. The purpose of this phase was to expose subjects to the white noise in a context where this noise was irrelevant to the goal at hand (i.e., counting the occurrence of "bim"), increasing the likelihood that LI would accrue to the noise.

During the exposure phase, subjects heard the identical audio recording. However, during this phase, they also viewed a series of yellow circles that appeared, one at a time, on a computer screen as the audiotape was playing. The appearance of each circle was preceded by the onset of the white noise (the target stimulus). The appearance of circles was unrelated to the occurrence of nonsense syllables on the audiotape. Once a circle appeared, it remained on the screen. We asked subjects to raise their hands when they believed that a circle was about to appear. After a subject had correctly raised his or her hand on three occasions (i.e., when the white noise sounded), the experimenter stopped the task, enabling the subject to state what stimulus predicts the occurrence of a circle. If the subject correctly stated that occurrence of the

white noise predicted the appearance of a circle, then the task was finished. If the subject's guess was incorrect, the task continued until he or she identified the rule or until all 31 circles had appeared on the computer screen.

We classified subjects as having low LI if they correctly identified the rule, and we recorded the number of circles appearing on the screen prior to subjects identifying the rule as a continuous measure of LI. Subjects received a score of 31 if they failed to identify the rule.

Following Carson, Peterson, and Higgins (2003), we ran subjects in only the preexposed condition.

### Wonderlic Personnel Test (WPT)

The WPT is a 12-min, 50-item measure of general intelligence comprising math, verbal, and reasoning questions. The WPT is used commercially for evaluating potential employees' cognitive abilities, including draft picks for the National Football League (Ubben, 2010). The WPT has high test-retest reliability (.82-.94) and excellent internal consistency (.88-.94; Wonderlic, 2002). WPT and WAIS scores strongly correlate (.75-.96; Wonderlic, 2002), enabling estimation of WAIS scores from WPT scores. WPT scores can range from 0 – 50. The WPT's normative study mean score was 21.06 ( $SD = 7.12$ ; Wonderlic, 2002). The WPT mean score for college graduates is 29 (Wonderlic, 2002). Practice questions include “When a rope is selling 20 cents per 2 feet, how many feet can you buy for 30 dollars?” and “Which of numbers in this group represents the smallest amount? a) 0.3, b) 0.08, c) 0.33?”

### Procedure

We tested each subject individually in two sessions. After giving informed consent, each subject completed a form providing demographic information. During the first session, a research assistant, who was unaware of whether the subject was in the PLM or comparison group, administered the LI task and the three DT tasks. Finally, subjects completed the CAQ and the CPS. Hence, the sequence of tasks went from the most to the least challenging, thereby minimizing fatigue during the most difficult ones.

During the second session of testing, subjects completed the WPT. Although all 35 subjects in

the comparison group completed the WPT, only 37 PLM subjects did so; the other three PLM subjects failed to attend the second session. We recorded the reincarnation beliefs of the comparison subjects at this session, and we obtained additional data regarding the reported past lives of 39 of the PLM subjects at an additional session. Subjects received an honorarium of \$15 per hour for their participation.

## Results

### PLM and DT

The PLM subjects scored higher than the comparison subjects on each of the DT subscales, exhibiting greater fluency ( $M = 41.3$ ,  $SD = 11.0$  vs.  $M = 36.3$ ,  $SD = 8.9$ ,  $t(73) = 2.19$ ,  $p = .02$ ,  $r = .25$ ), originality ( $M = 38.7$ ,  $SD = 19.6$  vs.  $M = 29.5$ ,  $SD = 11.1$ ,  $t(73) = 2.52$ ,  $p = .007$ ,  $r = .28$ ), and flexibility ( $M = 45.9$ ,  $SD = 12.8$  vs.  $M = 39.6$ ,  $SD = 10.8$ ,  $t(73) = 2.33$ ,  $p = .01$ ,  $r = .26$ ). After converting each subject's subscale scores into  $z$ -scores, we added the three standardized scores to form the composite DT total score. The PLM subjects scored higher than the comparison subjects on this measure ( $M = 0.41$ ,  $SD = 0.83$  vs.  $M = -0.02$ ,  $SD = 0.57$ ,  $t(73) = 2.61$ ,  $p = .005$ ,  $r = .29$ ).

### PLM and Creative Achievement

Relative to the comparison group ( $M = 13.3$ ,  $SD = 12.7$ ), the PLM group ( $M = 17.7$ ,  $SD = 16.6$ ) trended toward scoring higher on the CAQ ( $t(73) = 1.28$ ,  $p = .10$ ,  $r = .15$ ).

### PLM and Creative Personality

Relative to the comparison group ( $M = 6.1$ ,  $SD = 3.7$ ), the PLM group ( $M = 8.6$ ,  $SD = 3.4$ ) had significantly higher scores on the CPS ( $t(73) = 2.97$ ,  $p = .002$ ,  $r = .33$ ), indicating that the PLM group used more self-descriptive adjectives positively associated with creativity and fewer ones negatively associated with creativity than did the comparison group.

### PLM and the Composite Creativity Score (CCS)

We converted the DT total, CAQ, and CPS scores to  $z$ -scores, summed them, and then  $z$ -

scored this sum to form each subject's Composite Creativity Score (CCS) for ease of interpretation. Relative to comparison subjects ( $M = -0.23$ ,  $SD = 0.88$ , range  $-1.55 - 1.61$ ), PLM subjects ( $M = 0.41$ ,  $SD = 0.93$ , range  $-1.60 - 3.27$ ) had significantly higher overall creativity as measured by the CCS,  $t(73) = 3.05$ ,  $p = .002$ ,  $r = .34$ .

### PLM and LI

For the following reasons, we excluded the data of six PLM subjects. Two subjects had marked difficulties hearing the audiotaped stimuli, whereas another said that she heard the target syllable 46 times. It became apparent that two other subjects had failed to understand the directions after the task had started, and another failed to silence her cell phone, thereby disrupting the task.

We also excluded the data of four comparison subjects, two who had marked difficulty hearing the audiotaped stimuli, one who had to use the restroom in the middle of the task, and another who claimed that the research assistant accidentally "gave away" the purpose of the task. Thus, 34 PLM subjects and 31 comparison subjects had usable LI data.

After excluding the subjects with unusable LI data, we recalculated demographic data. The PLM and comparison groups remained indistinguishable in terms of age,  $t(63) = 0.18$ ,  $p = .85$ ,  $r = .02$ , and level of education  $t(63) = 0.32$ ,  $p = .75$ ,  $r = .04$ .

When viewed as a categorical measure, a significantly greater proportion of the PLM group (61%) relative to the comparison group (34%) exhibited low LI,  $\chi^2(1, N = 65) = 4.48$ ,  $p = .03$ . However, when viewed as a continuous measure, the mean LI score of the PLM group ( $M = 21.0$ ,  $SD = 10.5$ ) was not significantly lower than that of the comparison group ( $M = 23.2$ ,  $SD = 11.4$ ;  $t(63) = 1.00$ ,  $p = .16$  [one-tailed],  $r = .10$ ).

### PLM and Intelligence: Wonderlic Personnel Test (WPT)

The PLM group ( $M = 29.8$ ,  $SD = 4.8$ ) and the comparison group ( $M = 29.9$ ,  $SD = 6.4$ ) had nearly identical scores on the WPT,  $t(70) = 0.08$ ,  $p = .94$  (two-tailed),  $r = .01$ . Using the WPT/WAIS conversion chart (Wonderlic, 2002), we estimated the full-scale WAIS IQ

scores for the PLM subjects (range: 98 – 136) and the comparison subjects (range: 90 – 142).

To test Carson, Peterson, and Higgins' (2003) hypothesis that in people with above-average intelligence (IQ at least 120), low LI is associated with creativity, we conducted Pearson correlations (one-tailed) to test whether lower LI predicted higher creativity among subjects whose WPT scores were at least 30 (WAIS equivalent: 120). Neither the continuous,  $r(29) = -.08$ ,  $p = .33$ , nor the categorical measure of low LI,  $r_{pb}(29) = .01$ ,  $p = .96$ , predicted creative achievement on the CAQ. However, the continuous measure of LI did predict scores on the CPS,  $r(29) = -.32$ ,  $p = .04$ , DT,  $r(29) = -.38$ ,  $p = .02$ , and CPS,  $r(29) = -.38$ ,  $p = .02$ . Yet the categorical measure of LI only trended toward significance in the prediction of scores on the CPS,  $r_{pb}(29) = -.31$ ,  $p = .051$ , DT,  $r_{pb}(29) = -.26$ ,  $p = .09$ , and CPS,  $r_{pb}(29) = -.29$ ,  $p = .06$ .

### Discussion

Relative to the comparison group, the PLM group scored significantly higher on measures of DT, creative personality, and composite creativity. Although the means were in the predicted direction, the PLM group did not score significantly higher ( $p < .1$ ) than the comparison group on creative achievement. Although the PLM group did exhibit some features associated with creativity, not all of our subjects likely possessed the persistence and high motivation vital for creative achievement (Carson, 2010b).

LI reflects how well an individual filters out irrelevant stimuli. In our study, subjects exhibit robust LI when they fail to identify the previously irrelevant target stimulus that becomes relevant during the target phase as it predicts the appearance of circles on the computer screen. Conversely, subjects whose cognitive style is overinclusive are relatively ineffective at filtering out irrelevant stimuli, and their success at identifying the target stimulus exemplifies low LI. Although low LI often causes problems for people, making it hard for them to stay focused amid distraction, under some circumstances it produces benefits. In people with sufficient cognitive resources or ability to manage the onslaught of stimulation (Carson, Peterson, & Higgins, 2003), low LI can foster creative

achievement (Fink, Slamar-Halbedl, Unter-rainer, & Weiss, 2012; Kéri, 2011).

Consistent with our prediction, subjects reporting PLM more often identified the target stimulus than did comparison subjects, thereby exhibiting lower LI on our categorical measure. Yet between-groups differences did not emerge on our continuous measure of LI. Relative to comparison subjects, PLM subjects did not require significantly fewer circles to appear before they identified white noise as the target stimulus. Subjects may vary in their willingness to notify the experimenter that they have identified the target stimulus, and some may require certainty before doing so. The continuous measure will overestimate LI for such subjects.

Among subjects with above-average intelligence, low LI often predicted elevated scores on measures of creative personality, DT, and our composite measure of creativity, replicating Carson, Peterson, and Higgins' (2003) findings. But it did not predict creative achievement. In Carson, Peterson, and Higgins' (2003) research, low LI was associated with creative achievement among high-IQ undergraduates at Harvard University. Taken together, these findings suggest that elevated IQ and diminished LI reliably predict creative achievement, but only among extremely driven, highly motivated individuals (e.g., Harvard undergraduates). We suspect that our low LI PLM likely varied considerably in terms of motivation.

## STUDY TWO

In study one, we investigated whether subjects who endorsed memories of past lives would score higher on measures of creativity than those who did not report PLM. In study two, we approached the PLM/creativity question from another direction, testing whether highly creative people are more likely than less creative people to believe in PLM and to report PLM themselves.

To investigate this issue, we administered measures of creative achievement, creative personality, DT, and measures of belief in past lives and self-reported PLM to students enrolled in two sections of an adult education university course on the psychology of creativity. In addition to psychology majors, this course attracts a variety of creative individuals, such as professional artists, writers, and musicians, so we expected that our sample would provide a broad

range of scores on the creativity measures. We divided our subjects into high and low creative achievement groups based on whether their achievement scores were above or below published norms for the CAQ. We were specifically interested in creative achievement as a measure of creativity because of the recent emphasis on its importance in nearly all areas of life, including business, sports, interpersonal relationships, as well as the arts and sciences (Carson, 2010b).

Based on the results of study one, we had several hypotheses. First, we predicted that subjects in the high (vs. low) creative achievement group would be more likely to report actual memories of past lives. However, the prevalence of PLM in the general population is very low (Mills & Tucker, 2014); accordingly, we expected few subjects with PLM, but we suspected that past life beliefs (PLB) would not be as uncommon. Second, we also predicted that subjects in the high (vs. low) creative achievement group would be more likely to report PLB. Third, we predicted that those subjects who attested to PLB (and PLM) would have higher scores on creativity measures. Fourth, we predicted that subjects with high (relative to low) creative achievement would score higher on the Oxford-Liverpool Inventory of Feelings and Experiences (O-LIFE; Mason, Linney, & Claridge, 2005), a measure of overinclusive thinking associated with schizotypy (Baruch, Hemsley, & Gray, 1988b; Eysenck, 1995; Mohr, Graves, Gianotti, Pizzagalli, & Brugger, 2001) whose Unusual Experiences subscale correlates with low LI (Burch, Hemsley, & Joseph, 2004; Kéri, 2011; Shrira & Tsakanikos, 2009). Unlike in study one, we could not use the experimental measure of LI; many subjects were enrolled in the creativity course as distance education students and were unable to travel to our lab. Accordingly, we used the O-LIFE as a measure of overinclusive thinking instead of our experimental measure of LI.

## Method

### Subjects

Subjects were 106 students enrolled in two sections of a course on the psychology of creativity. Each section was taught during a separate semester at Harvard Extension School. Section A was an "on campus" course and included 10 men and 27 women (mean age = 31.3 years,

$SD = 11.2$ ); Section B was a “distance” course available both on campus and online; it included 29 men and 40 women (mean age = 31.9 years,  $SD = 11.0$ ). In addition to 64 subjects who were not professionally involved in creative work, the sample included 42 individuals in creative professions: 10 professional musicians, 14 published writers, 10 professional artists, 3 professional dancers, 3 inventors who received patents, 1 scientist, and 1 professional actor. All subjects received course credit for participating. Harvard University’s Committee on the Use of Human Subjects approved the protocol and consent form.

## Measures

**Creativity.** As in study one, creativity was measured by the CAQ (Carson, Peterson, & Higgins, 2005), the CPS (Gough, 1979), and the three DT tasks used in study one (with the exception that the *alternate uses* task requested subjects to list uses for a brick rather than an empty soup can; DT; Torrance, 1968). Subjects had three minutes to complete each DT task. The DT tasks were scored for fluency (number of responses) and originality (the statistical infrequency of each response within the sample). We standardized and summed both scores to produce a DT total score.

**PLB.** Attitudes, beliefs, and memories concerning past lives were measured by the Meyersburg Past Life Belief Scale, a 55-item questionnaire that assesses spiritual beliefs, experiences, and practices, and includes items concerning PLB and PLM, such as “I believe in reincarnation” and “I believe I have had a past life or lives,” respectively. Respondents rate each item on a five-point scale from “strongly disagree” to “strongly agree.” The questionnaire also includes four open-ended questions where respondents can describe their experiences, and it yields a measure of how strongly subjects believe that past lives are possible (PLB). In addition, subjects in Section B were asked directly to answer “Agree,” “Disagree,” or “Not Sure” to the statement “I believe that I have memories of a past life.” Answers to this question assessed PLM. Subjects in Section B who answered “Agree” to this question ( $n = 10$ ), plus subjects who reported PLM from Section A ( $n = 2$ ), were included in the PLM group for data analysis.

**Schizotypal personality.** Schizotypal personality traits were assessed with the short form of the O-LIFE (Mason, Linney, & Claridge, 2005). The O-LIFE is a validated, reliable measure that consists of 43 questions regarding schizotypal feelings, experiences, or beliefs, such as “Have you ever thought that you had special, almost magical powers?” All questions are answered “yes” or “no.” The O-LIFE yields an overall schizotypy score as well as four subscale scores with adequate alpha coefficients: Unusual Experiences ( $\alpha = .89$ ), Cognitive Disorganization ( $\alpha = .87$ ), Introverted Anhedonia ( $\alpha = .82$ ), and Impulsive Nonconformity ( $\alpha = .77$ ; Mason, Claridge, & Jackson, 1995).

## Procedure

All subjects were told that they were taking part in a “creativity and personality” study.

Subjects in Section A first completed a paper and pencil booklet including the CAQ, CPS, and O-LIFE. They then completed the DT tasks in groups comprising 12–15 subjects.

Three weeks later, they completed the Meyersburg Past Life Belief Scale.

Because the subjects in Section B were part of a distance course, they completed an online version of the CAQ, CPS, and O-LIFE, and an online timed version of the DT tasks. Three weeks later, they completed an online version of the Meyersburg Past Life Belief Scale.

## Results

Subjects as a whole scored higher than the general population on the CAQ, CPS, and O-LIFE, but still within one standard deviation of the normative means for all measures. There are no published norms for the DT tasks because of its sample-specific scoring protocol.

Twelve subjects reported PLM (women:  $n = 9$ ; 13%; men:  $n = 3$ ; 8%), but women and men did not differ on PLB;  $t(101) = 0.04$ ,  $p = .97$ ,  $r = .00$ , the CAQ,  $t(103) = 0.59$ ,  $p = .56$ ,  $r = .06$ , the CPS,  $t(103) = 0.62$ ,  $p = .54$ ,  $r = .06$ , or DT,  $t(93) = .512$ ,  $p = .61$ ,  $r = .05$ . There were no significant differences in the means of CAQ, CPS, DT, or PLB scores between subjects in Section A and Section B. A higher percentage of subjects in Section B (14%) reported PLM than in Section A (5%). Age was

not significantly correlated with PLB or with any of the creativity measures.

### Creative Achievement, PLM, and PLB

Subjects were divided into low ( $n = 52$ ,  $M = 5.8$ ,  $SD = 3.5$ ) and high ( $n = 53$ ,  $M = 30.5$ ,  $SD = 16.3$ ) creative achievement groups according to published norms, with a score of 13 or higher indicating high creative achievement (Carson, Peterson, & Higgins, 2005). High creative achievers were twice as likely as low creative achievers to report PLM ( $n = 8$ ; 15% vs.  $n = 4$ ; 7.5%, respectively). Although this difference was nonsignificant ( $X^2(1, N = 105) = 2.37$ ,  $p = .15$ ), a chi-square analysis with any cell size less than 5 can produce unreliable results. High creative achievers scored significantly higher ( $M = 12.44$ ,  $SD = 7.0$ ) on PLB than did low creative achievers ( $M = 9.67$ ,  $SD = 7.0$ ;  $t(101) = 2.03$ ,  $p = .04$ ,  $r = .20$ ).

### Other Creativity Measures, PLM, and PLB

Subjects who reported PLM had significantly higher ( $M = 9.0$ ,  $SD = 2.7$ ) CPS scores than those who did not report PLM ( $M = 6.53$ ,  $SD = 4.2$ ),  $t(102) = 2.01$ ,  $p = .04$ ,  $r = .20$ .

As in study one, a CCS was computed by summing the standardized scores on the CAQ, the CPS, and the DT tasks. Eight subjects from Section B did not complete the online DT tasks. Their scores were therefore not included in analyses involving either DT or CCS scores. Subjects who reported PLM had significantly higher total DT scores ( $M = 1.04$ ,  $SD = 2.9$ ) than those who did not report PLM ( $M = -.10$ ,  $SD = 1.7$ ),  $t(95) = 2.05$ ,  $p = .04$ ,  $r = .21$ . Subjects who reported PLM had significantly higher CCS scores ( $M = 1.14$ ,  $SD = 1.8$ ) than those who did not report PLM ( $M = -.021$ ,  $SD = 2.1$ ),  $t(95) = 2.03$ ,  $p = .05$ ,  $r = .21$ .

The correlation between PLB and CPS scores was nonsignificant ( $r(101) = .17$ ,  $p = .10$ ). However, the correlations between PLB and total DT scores ( $r(93) = .22$ ,  $p = .03$ ), and between PLB and CCS scores ( $r(93) = .22$ ,  $p = .03$ ) were significant.

### Composite Creativity, Schizotypal Personality, PLM, and PLB

Subjects who reported PLM had significantly higher ( $M = 21.3$ ,  $SD = 7.6$ ) total scores on the

O-LIFE than those who did not report PLM ( $M = 16.7$ ,  $SD = 6.8$ ),  $t(100) = 2.09$ ,  $p = .04$ ,  $r = .21$ . PLM subjects also had significantly higher ( $M = 7.4$ ,  $SD = 2.6$ ) scores on the Unusual Experiences subscale of the O-LIFE than those who did not report PLM ( $M = 5.4$ ,  $SD = 3.1$ ),  $t(100) = 2.07$ ,  $p = .04$ ,  $r = .20$ .

CCS scores were positively correlated with total scores on the O-LIFE ( $r(93) = .21$ ,  $p = .03$ ), as well as with the Unusual Experiences subscale ( $r(93) = .22$ ,  $p = .03$ ). Both total O-LIFE scores ( $r(93) = .22$ ,  $p = .03$ ) and the Unusual Experiences subscale ( $r(94) = .31$ ,  $p = .002$ ) were also significantly correlated with PLB.

## Discussion

Consistent with our hypothesis, subjects in study two who were high creative achievers were twice as likely to report PLM as those who were low creative achievers. High creative achievers also reported significantly higher PLB than did low creative achievers, suggesting their openness to believing that they may have lived previous lives. Subjects who reported PLM also scored higher on measures of creative personality, DT, and composite creativity than did subjects without such memories, confirming an association between PLM and creativity.

Previous research has demonstrated an association between creativity and schizotypal personality, and we found this, too. The correlation between schizotypal personality traits and the composite creativity measure was significant. Subjects with PLM (relative to those without PLM) also had higher scores on the schizotypal personality measure, as well as on the Unusual Experiences subscale. These findings suggest that an overinclusive cognitive style is a shared factor between PLM and creative thinking and production. The ability to evoke mental images of experiences from a past life—whether they are conceptualized as true memories breaking into conscious awareness or as products of a robust imagination—may foster novel ideas, which constitute the essence of creativity.

## Conclusions

In study one, we found that relative to a demographically matched control group, individuals reporting recovered memories of their previous lives

endorsed more personality traits associated with creative achievement, exhibited more DT, had lower levels of LI, and trended ( $p = .10$ ) toward higher levels of creative achievement. In study two, we found that, relative to less creative people, those with higher levels of creative achievement were more likely to endorse beliefs about the possibility of past lives and to report having memories of their own past lives. Our measure of overinclusive thinking in study one (reduced LI) was often predictive of creativity measures in the high IQ group comprising PLM and comparison subjects. Our measure of overinclusiveness in study two (schizotypal personality as measured by the Unusual Experiences subscale of the O-LIFE) was also predictive of both creativity and PLM. The magnitude of the correlations predictive of PLM was modest, making one wonder whether additional variables might heighten predictive power. Although predicting any low base rate phenomenon, such as PLM, is challenging, adding a measure of anomalous phenomena (e.g., déjà vu experiences) might help, as such phenomena appear to provide the foundation for PLM. Taken together, the data suggest that an overinclusive cognitive style may foster culturally atypical beliefs, such as having access to memories from one's previous lives; this cognitive style may also contribute to creativity in people with above-average levels of intelligence, especially if they also exhibit intense drive and motivation to achieve. Further, if we consider an overinclusive cognitive style as a predictor of both psychopathology and enhanced creativity (Carson, 2011), belief in and experience of past lives may be a protective factor that promotes creative rather than psychopathological outcomes. Rather than constituting an area of investigation fraught with stigma and even derision, as Mills and Tucker (2014) have observed, the study of PLM may produce valuable information about creative minds.

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