Self-construal priming does not shift self-descriptions, value endorsement, or social obligation judgment: A preregistered replication and extension of Gardner, Gabriel, & Lee (1999)

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Abstract

Humans from different cultures define the self differently, but how cultures influence self-construal—beliefs about the self—remains elusive. Do cultures mold our way of perceiving, thinking, feeling, and acting, much into a habit through cultural practices and daily routines (habit mechanism)? Or do cultures merely modify the accessibility of a certain way of perceiving, thinking, feeling, and acting, just as one's thoughts constantly change on a daily basis based on the current motive and situation (access mechanism)? A highly influential line of work in cultural priming—self-construal priming—suggests that reading different story primes (reflecting either independent or interdependent thought processes) or circling different types of pronouns in word-search primes (either independent [e.g., I, mine] or interdependent [e.g., we, ours] pronouns) can shift self-descriptions, value endorsement, and social obligation judgment (Gardner, Gabriel, & Lee, 1999).

In this preregistered replication and extension study, despite efforts to maximize priming and to identify moderators, we found that self-construal priming, either through story primes or word-search primes, did not change the relative independence or interdependence of one's self-construal in Chinese participants. Priming was also not modulated by gender, experience living aboard, rice vs. wheat farming legacy, or self-reported earnestness in answering the questions. Thus, the predominant access afforded by cultures is much less malleable than previously assumed, consistent with the habit but not access mechanism of cultural influences. To build a cumulative and reproducible cultural psychology, we call for direct replications of key findings in cultural priming and related literature.

Introduction

• Fundamental in cultural psychology is the observation that humans from different cultures define the self differently (Markus & Kitayama, 1991). People from collectivist cultures such as China and Japan define the self as more interdependent, in which the primary referent concerns the feelings, thoughts, and behaviors of close others or people from the ingroup. In contrast, people from individualist cultures such as America (US) define the self as more independent, in which the primary referent concerns one's own feelings, thoughts, and behaviors (see Figure 1).

• Both independent and interdependent values and practices are available and recognized in almost every culture

• There are two mechanism available account for the cultural differences: the *habit* mechanism of cultural influences (long-term effect) vs. the *access* mechanism of cultural influences (short-term effect)

• With the access view, one can justifiably manipulate temporal accessibility, by using different cues to make either independent or interdependent self-construal temporally more accessible (Self-construal priming). And then look at their influences on downstream processes, such as self-descriptions, value endorsement, and social obligation judgment.

• How robust is self-construal priming? The present study evaluated the robustness of self-construal priming by directly replicating and extending the work of Gardner and colleagues (1999)
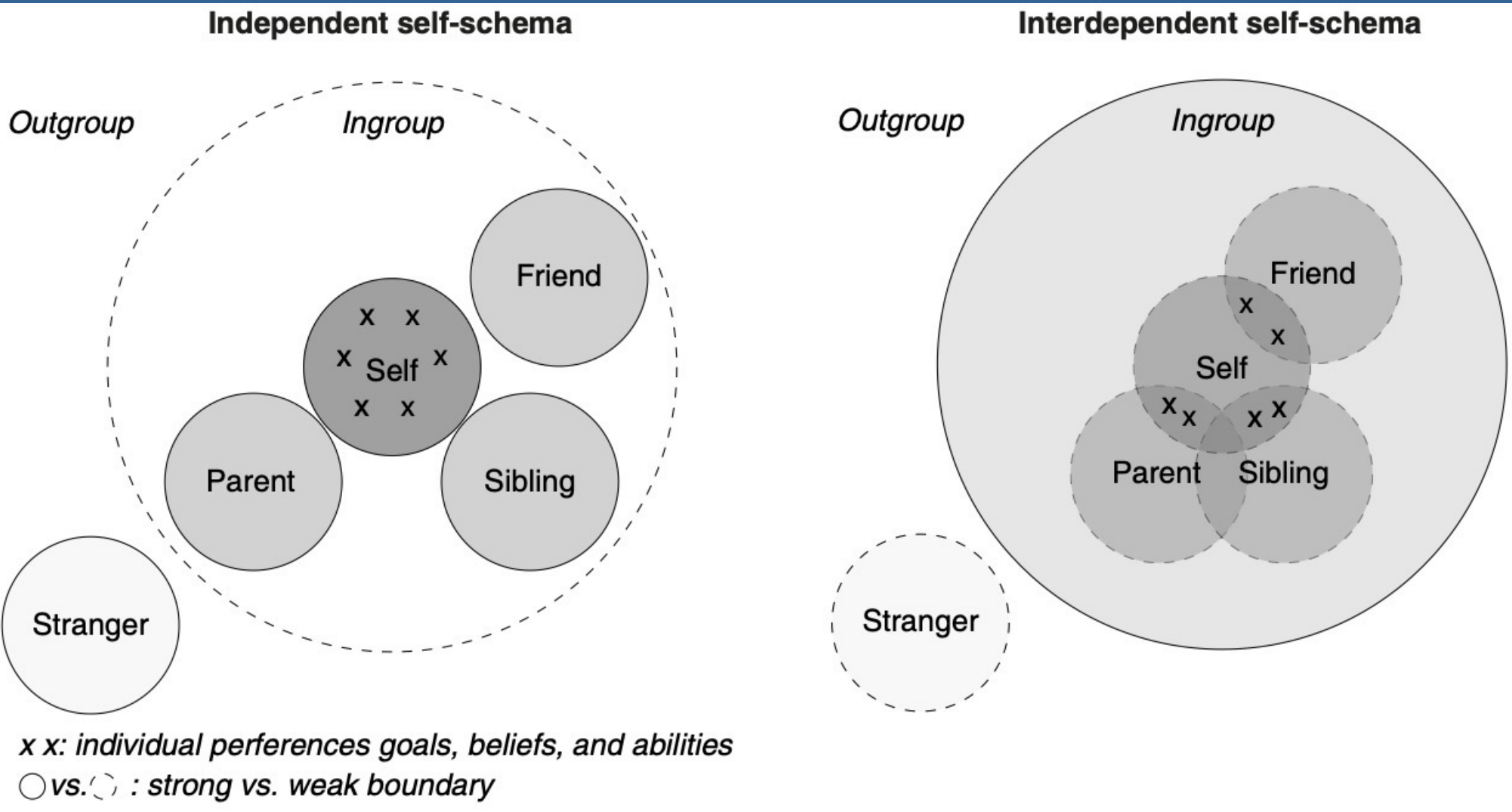
Introduction (continued)

Figure 1. A conceptualization of interdependent vs. independent self-schemas.
The interdependent self-schema (left) is characterized by marked boundaries between ingroup and outgroup, and by the self as fundamentally connected and related to close others.
The independent self-schema (right) is marked by attenuated boundaries between ingroup and outgroup, and by the self as fundamentally distinct from others.

Participants

• Participants were recruited from CUHKSZ and SIIT, both located in Shenzhen. They were compensated with either course credits or cash and equivalents. The study was approved by the local Institutional Review Board. All data (including pilot data) were collected between November 2020 and June 2021.

• The final simple size was 468. The sample size was predetermined based on the small-telescopes approach. That is, if the true effect is zero, a replication needs 2.5 times as many observations as the original study to have about 80% power to reject the effect size that would give the original study 33% power.

Procedure

• Preregistration in OSF

• Informed consent

• Collection of demographic information (demographic information was collected, including gender, age, ethnicity, the province where the participant grew up, and experience of living aboard (duration and country).

• The study was then divided into two parts, priming and test. To minimize response bias, participants were told that there were two separate experiments:

   • the first one was to test their reading ability and whether they could finish the following tests carefully (paper-and-pencil form; participants were randomly divided into story prime and pronoun prime);

   • the second one was to measure their values and self-understanding (in electronic form; including TST, SVS, and SJT).

• After the study, two questions were asked: (1) how serious they were in answering the questions to the two experiments; (2) whether they saw a connection between the two experiments.

Manipulations

Story prime: Participants read a story about a dilemma in which a general deliberated over choosing a warrior to send to the king. In the *interdependent* condition, the general considered benefits to his family ("jiā zú"), and decided on a member of his own family; in the *independent* condition, the general considered benefits to himself, and decided on a person who was the best for the job. The *control* condition told a story of the chosen warrior being a talented general.
After reading, participants were asked to answer whether they admired the general or not. To maximize potential priming effect, they were further asked to come up with five other ways that the general could do to benefit his family (*interdependent* condition), or himself (*independent* condition), or to describe five daily routines in the participant's life (*control* condition).

Pronoun prime: In the word-search task, participants read a short essay about a trip to the countryside or about a tourist attraction. In the *interdependent* condition, all the pronouns in the essay were "wǒ mén" ("we" or "us"); in the *independent* condition, the pronouns in the essay were changed to "wǒ" ("I" or "me"); in the *control* condition, the essay was about Huizhou West Lake with no pronouns. To maximize priming effect, participants were instructed to read the essay twice and carefully. The task was to circle all the pronouns in the essay or, for the control condition, the word "hú" ("lake"). The target word appeared 17 times for each condition.

Measures

• TST: Asking participants to come up with 20 self-descriptions starting with "I …" under 12 minutes (Kuhn & McPartland, 1954). Participants answered were classified as Independent responses and Interdependent responses.

• SVS: Schwartz Value Survey (Schwartz, 1992; Triandis, Mccusker, & Hui, 1990), a values inventory containing item such as 'observing social norms (to maintain face)'. Participants needed to rate them from -1 ("opposite to my value") and 0 ("not important") to 7 ("of supreme importance"). Some of the items were classified as Individualist values or Collectivist values.

• SJT: a story about a person named Li Li who refused her friend's request for directions to an art store, as she was too busy reading a thrilling book (Miller, Bersoff, & Harwood, 1990). There were three questions at the end: (1) "*desirability*": how desirable Li Li's actions were, using a 7-point scale, from 1 ("very undesirable") to 7 ("very desirable"); (2) "*obligation*": whether Li was obligated to help her friend or that her action was simply a personal choice; and (3) "*punishment*": whether Lì Lì's action should be punished or not.

Results

• No significant priming effect on TST's Independent responses, TST's Interdependent responses, SVS Individualist values, SVS Collectivist values, and all of the SJT questions.

• Bayesian analyses should support for null hypothesis (ranging from moderate to extremely support).

• Small-Telescope approach: the effect were all undetectable given the sample size in the original study

Results (continued)

Table 1. Summary of how self-construal priming affected self-descriptions, values, and social judgment

Priming method	Self-descriptions (TST)		Values (SVS)		Social judgment		
	Independent	Interdependent	Individualist	Collectivist	Desirability	Obligation	Punishment
Word-search							
Independent	83.6%	14.4%	4.72	5.33	2.82	71.8%	92.3%
Interdependent	83.4%	14.6%	4.77	5.46	2.76	65.4%	96.2%
Control	83.1%	15.4%	4.51	5.38	2.76	65.4%	92.3%
Story							
Independent	79.3%	18.6%	4.64	5.62	2.65	66.7%	92.3%
Interdependent	79.7%	18.0%	4.73	5.75	2.85	62.8%	96.2%
Control	82.0%	16.8%	4.52	5.39	2.64	73.1%	97.4%

Note. Value ratings were based on a scale of -1 and 0 to 7, averaged across five items in each category; desirability in social judgment was based on a scale of 1 to 7; others in percentages.

Discussion

• These results fail to replicate Gardner and colleagues (1999), based on three predefined criteria of successful replication in our preregistration: a priming effect that is detectably different from zero in the same direction as in the original report ("not significantly different from zero"); the detectability of the priming effects based on the small-telescopes approach ("not detectable"); Bayesian evidence in favor of the effect sizes reported in the original studies as compared with null effects ("Bayesian evidence in favor of the null effects")

• In some ways, our participants from CUHKSZ—where teaching is conducted in English—were more similar to bicultural HK Chinese, compared with our more traditional participants from SIIT. But whether participants are bicultural or monocultural, the key tenet of self-construal priming is that primes inconsistent with a person's predominant cultural worldview result in a shift of self-construal. Our results are evidence inconsistent with this prediction.

• Our results support the *habit* perspective of cultural influences but not the *access* perspective. They indicate that cultural influences appear to be pervasive and rigid, by affecting how we habitually and routinely perceive, think, feel, and act. Just as old habits die hard, cultural influences could not be easily shaken off, or nudged through temporal cues, at least not for monocultural individuals using story primes and word-search primes. Even if cultures make a particular way of perceiving, thinking, feeling, and acting more accessible to an individual than another way, the relative access afforded by cultures appears to be much more rigid and less malleable than previously assumed.