









Mean Response Accuracy (%) in Experiment 1

	Nonthreat priming		SCT priming	
	M	SD	M	SD
+	71	11	71	11
-	72	11	72	11

Experiment 2a: SCT Priming Weakens Self-Advantage in Face Recognition

Experiment 2a was a 2 (priming) x 2 (self) x 2 (valence) x 2 (gender) x 2 (face) factorial design. The independent variables were priming (nonthreat vs. SCT), self (me vs. other), valence (positive vs. negative), gender (male vs. female), and face (familiar vs. unfamiliar). The dependent variable was reaction time (ms). The procedure was identical to Experiment 1.

Method

Participants.

Forty-eight participants (24 male, 24 female) took part in Experiment 2a. They were all students at the University of California, Los Angeles. The mean age was 20.5 years (SD = 1.2). All participants gave informed consent before participating in the experiment.

Stimuli and procedure.

The stimuli were the same as in Experiment 1. The procedure was identical to Experiment 1. The only difference was that the priming phase was either nonthreat or SCT. In the nonthreat priming phase, participants were shown a face that was either the same as the target face (me) or different (other). In the SCT priming phase, participants were shown a face that was either the same as the target face (me) or different (other) and then a face that was either the same as the target face (me) or different (other) and then a face that was either the same as the target face (me) or different (other).

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Results and Discussion

Reaction times were analyzed using a 2 (priming) x 2 (self) x 2 (valence) x 2 (gender) x 2 (face) factorial ANOVA. The main effect of priming was significant,  $F(1, 46) = 10.1, p < .01, \eta^2 = .21$ . Reaction times were faster for the nonthreat priming phase (M = 558 ms, SD = 18 ms) than for the SCT priming phase (M = 598 ms, SD = 22 ms). The main effect of self was also significant,  $F(1, 46) = 10.1, p < .01, \eta^2 = .21$ . Reaction times were faster for the me condition (M = 558 ms, SD = 18 ms) than for the other condition (M = 598 ms, SD = 22 ms). The main effect of valence was also significant,  $F(1, 46) = 10.1, p < .01, \eta^2 = .21$ . Reaction times were faster for the positive valence condition (M = 558 ms, SD = 18 ms) than for the negative valence condition (M = 598 ms, SD = 22 ms). The main effect of gender was also significant,  $F(1, 46) = 10.1, p < .01, \eta^2 = .21$ . Reaction times were faster for the male condition (M = 558 ms, SD = 18 ms) than for the female condition (M = 598 ms, SD = 22 ms). The main effect of face was also significant,  $F(1, 46) = 10.1, p < .01, \eta^2 = .21$ . Reaction times were faster for the familiar face condition (M = 558 ms, SD = 18 ms) than for the unfamiliar face condition (M = 598 ms, SD = 22 ms).

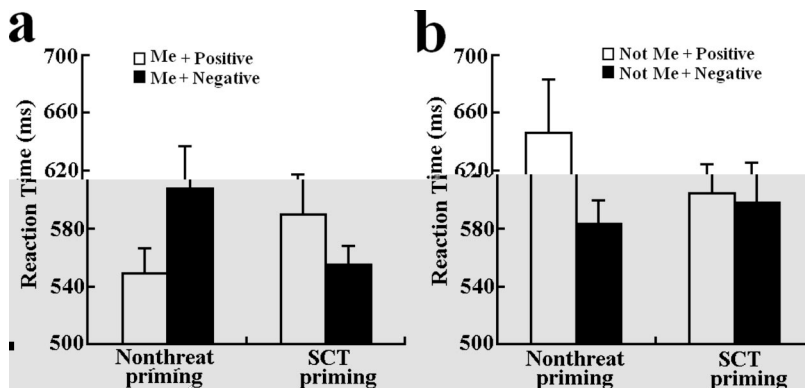


Figure 1. Reaction times (ms) for Experiment 2a. Error bars represent standard error.

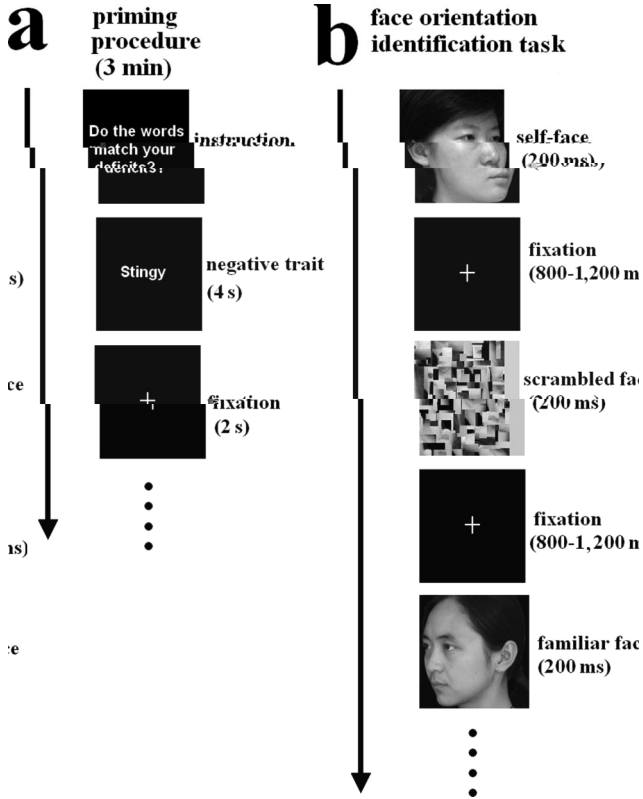


Figure 2.

Figure 2 illustrates the experimental procedure. Part (a) shows the priming procedure (3 min) which includes an instruction, a negative trait (Stingy, 4s), a fixation cross (+, 2s), and a list of words. Part (b) shows the face orientation identification task which includes a self-face (200ms), a fixation cross (+, 800-1,200 ms), a scrambled face (200 ms), a fixation cross (+, 800-1,200 ms), and a familiar face (200 ms), followed by a list of faces.

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Mean Response Accuracy (%) in Experiment 2a

	Condition 1		Condition 2	
	M	SD	M	SD
S	77	7	77	7
S	77	7	77	7

## Experiment 2b: Self-Referential Processing Is Essential for the SCT Effect

Experiment 2b was designed to test the hypothesis that self-referential processing is essential for the SCT effect. Participants were presented with a list of words and were asked to judge whether each word was related to themselves. The results showed that the SCT effect was only observed when the words were self-referential. This suggests that self-referential processing is a key component of the SCT effect.

### Method

**Participants.** A total of 40 participants were recruited for this experiment. They were all students at the University of California, Berkeley. The participants were randomly assigned to two groups: a self-referential group and a non-self-referential group. The self-referential group consisted of 20 participants, and the non-self-referential group consisted of 20 participants. The participants were all between 18 and 30 years old, with a mean age of 22.5 years. They were all right-handed and had no history of neurological or psychiatric disorders. The experiment was approved by the Institutional Review Board at the University of California, Berkeley.

The participants were presented with a list of 20 words. The words were either self-referential (e.g., "I", "me", "my") or non-self-referential (e.g., "the", "and", "of"). The words were presented in a random order. The participants were asked to judge whether each word was related to themselves. The results showed that the self-referential group had a significantly higher number of "yes" responses than the non-self-referential group.

**Stimuli and procedure.** The stimuli consisted of 20 words, 10 self-referential and 10 non-self-referential. The words were presented on a computer screen. The participants were asked to judge whether each word was related to themselves. The procedure was as follows: The words were presented in a random order. The participants were asked to judge whether each word was related to themselves. The results showed that the self-referential group had a significantly higher number of "yes" responses than the non-self-referential group.

### Results and Discussion

The results of Experiment 2b showed that the SCT effect was only observed when the words were self-referential. This suggests that self-referential processing is a key component of the SCT effect. The results also showed that the self-referential group had a significantly higher number of "yes" responses than the non-self-referential group. This suggests that self-referential processing is a key component of the SCT effect. The results of Experiment 2b are consistent with the hypothesis that self-referential processing is essential for the SCT effect.







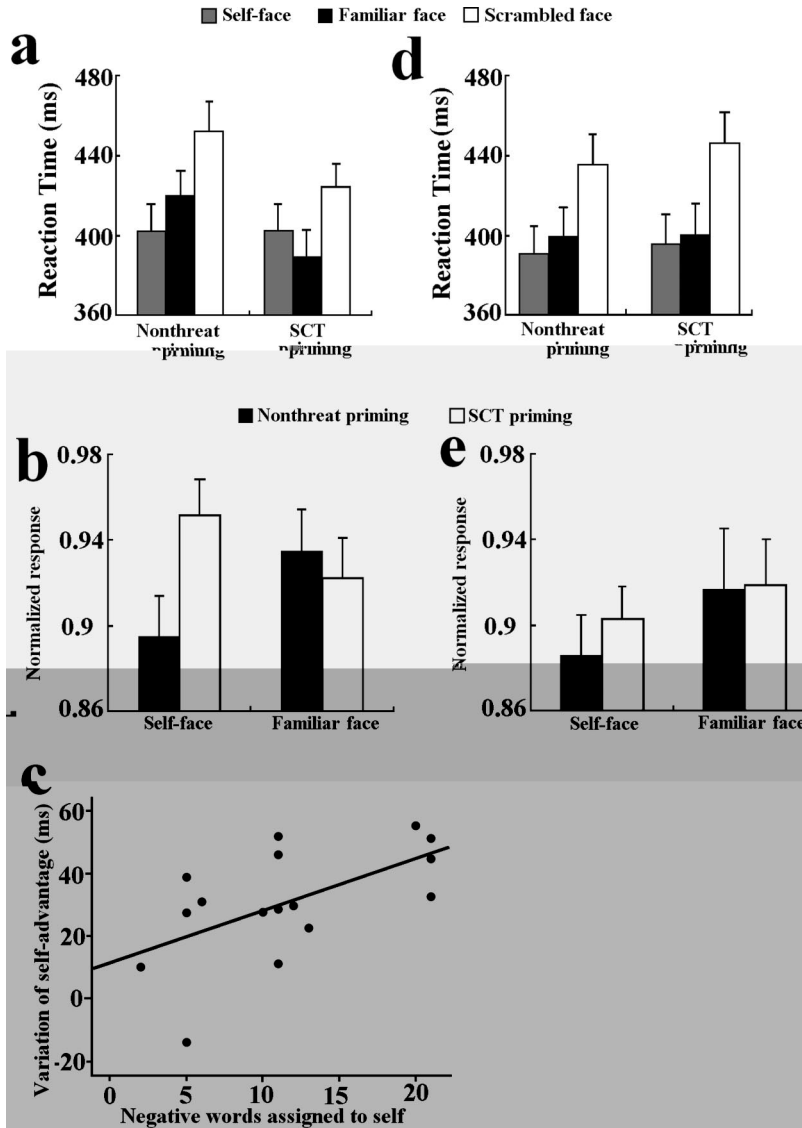


Figure 5. Reaction times (ms) for self-face, familiar face, and scrambled face conditions under nonthreat and SCT priming. Normalized responses for self-face and familiar face conditions under nonthreat and SCT priming. Scatter plot of variation of self-advantage (ms) vs. negative words assigned to self.

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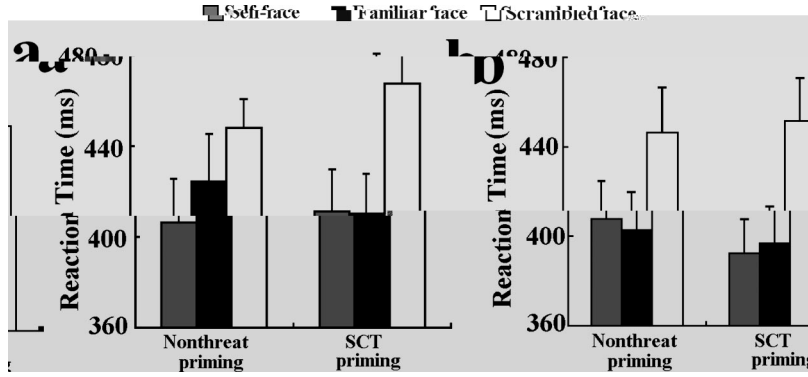


Figure 6. Reaction times (ms) for self-face, familiar face, and scrambled face under Nonthreat priming and SCT priming conditions. Error bars represent standard error.

### General Discussion

#### The IPA Theory of Self-Advantage in Face Recognition

The IPA theory of self-advantage in face recognition suggests that individuals have a perceptual bias towards their own faces, leading to faster recognition times. This bias is thought to be a result of evolutionary pressures to quickly identify and respond to one's own face, as it is crucial for social interactions and self-protection. The theory predicts that this self-advantage will be most pronounced in conditions where the self-face is the target of attention, such as in the current study's self-face condition.

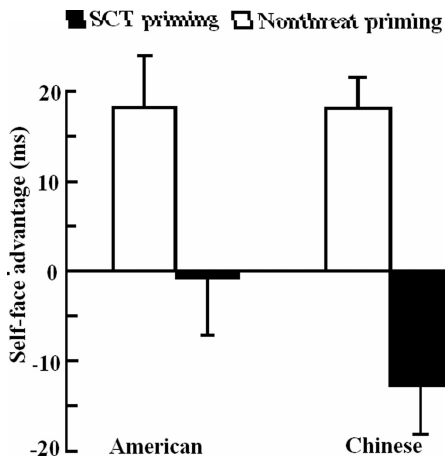


Figure 7. Self-face advantage (ms) for American and Chinese participants under SCT priming and Nonthreat priming conditions. Error bars represent standard error.

The current study's findings support the IPA theory of self-advantage in face recognition. Participants showed faster reaction times for self-faces compared to familiar and scrambled faces, particularly under SCT priming conditions. This self-advantage was observed in both American and Chinese participants, suggesting a cross-cultural phenomenon. The IPA theory posits that this self-advantage is a result of evolutionary pressures to quickly identify and respond to one's own face, as it is crucial for social interactions and self-protection. The theory predicts that this self-advantage will be most pronounced in conditions where the self-face is the target of attention, such as in the current study's self-face condition. The current study's findings are consistent with this prediction, as participants showed faster reaction times for self-faces compared to familiar and scrambled faces, particularly under SCT priming conditions. This self-advantage was observed in both American and Chinese participants, suggesting a cross-cultural phenomenon. The IPA theory posits that this self-advantage is a result of evolutionary pressures to quickly identify and respond to one's own face, as it is crucial for social interactions and self-protection. The theory predicts that this self-advantage will be most pronounced in conditions where the self-face is the target of attention, such as in the current study's self-face condition.



References

A. R. (1991). *Journal of Personality and Social Psychology*, 61, 100-110.

A. R. (1992). *Developmental Psychology*, 28, 100-110.

A. R. (1993). *Development Psychology*, 29, 100-110.

A. R. (1994). *Neurocase*, 1, 100-110.

A. R. (1995). *Journal of Personality and Social Psychology*, 69, 100-110.

A. R. (1996). *Brain Research*, 714, 100-110.

A. R. (1997). *Clinical Neurophysiology*, 108, 100-110.

A. R. (1998). *Aspects of face processing* (Ed. by A. R.), *Behavioral Processes*, 42, 100-110.

A. R. (1999). *Psychological Science*, 10, 100-110.

A. R. (2000). *American Psychologist*, 55, 100-110.

A. R. (2001). *Psychological Review*, 108, 100-110.

A. R. (2002). *Psychological Review*, 109, 100-110.

A. R. (2003). *Journal of Personality and Social Psychology*, 84, 100-110.

A. R. (2004). *Journal of Personality and Social Psychology*, 86, 100-110.

A. R. (2005). *Zeitschrift für Experimentelle Psychologie*, 48, 100-110.

S. & C. (1991). *Nature Review Neuroscience*, 9, 100-110.

S. (1992). *Journal of Personality and Social Psychology*, 63, 100-110.

S. & K. (1993). *Psychological Review*, 100, 100-110.

S. (1994). *Journal of Experimental Social Psychology*, 30, 100-110.

S. & K. (1995). *Neuropsychologia*, 33, 100-110.

S. (1996). *Neuropsychologia*, 34, 100-110.

S. & K. (1997). *The face in the mirror: The search for the origins of consciousness* (Ed. by S. & K.), *Neuropsychologia*, 35, 100-110.

S. & K. (1998). *Nature*, 391, 100-110.

S. & K. (1999). *Trends Cognitive Science*, 4, 100-110.

S. & K. (2000). *European Journal of Neuroscience*, 12, 100-110.

S. & K. (2001). *Journal of Cognitive Neuroscience*, 13, 100-110.

S. & K. (2002). *Cognition*, 83, 100-110.

S. & K. (2003). *Acta Psychologica*, 114, 100-110.

S. & K. (2004). *Social Cognition*, 22, 100-110.

S. & K. (2005). *Experimental Brain Research*, 165, 100-110.

S. & K. (2006). *Psychological Research*, 70, 100-110.

S. & K. (2007). *Journal of Psychophysiology*, 19, 100-110.

S. & K. (2008). *Biological Psychology*, 78, 100-110.

S. & K. (2009). *Modern lexicon of Chinese frequently-used word frequency* (Ed. by S. & K.), *Psychological Review*, 98, 100-110.

... & K. (1999). *Psychological Inquiry*, 14, ...

... & ... (1999). *European Journal of Neuroscience*, 21, ...

... & ... (1999). *The Journal of Psychology*, 113, ...

... & ... (1999). *Journal of Personality and Social Psychology*, 82, ...

... K. (1999). *Brain Research Cognitive Brain Research*, 19, ...

... K. (1999). *Human Brain Mapping*, 27, ...

... & ... (1999). *Schizophrenia Research*, 65, ...

... & ... (1999). *International Journal of Neuroscience*, 25, ...

... & ... (1999). *Cognition and Emotion*, 12, ...

... & ... (1999). *NeuroImage*, 24, ...

... & ... (1999). *Psychological Science*, 18, ...

... & ... (1999). *NeuroReport*, 17, ...

... K. (1999). *Brain Research Cognitive Brain Research*, 20, ...

... A. (1999). *Neuropsychologia*, 45, ...

... K. K. & ... (1999). *Journal of Experiment Psychology: Human Perception and Performance*, 25, ...

... K. (1999). *Nature Neuroscience*, 5, ...

... & K. (1999). *Trends in Cognitive Sciences*, 11, ...

... & ... (1999). *Social Cognitive and Affective Neuroscience*, 1, ...

... & ... (1999). *NeuroImage*, 34, ...

Correction to Kornblum et al. (1999)

(*Journal of Experimental Psychology: Human Perception and Performance*)

The locus of Ericksen, Simon and Stroop effects:

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