ABSTRACT

Title of Document: THE RELATIONSHIP BETWEEN POSITIVE AND NEGATIVE FEATURES OF STEREOTYPES

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An experiment was conducted to directly test the cognitive link between positive and negative features of stereotypes. Participants were primed with either male or female faces and with positive or negative trait adjectives that were either stereotypic of women or gender-neutral. Response latencies to word/non-word judgments in a lexical decision task were compared. It was predicted that participants for whom the category *male* was accessible would demonstrate facilitated responses to congruently valenced prime-target pairs regardless of the prime's stereotypy. For those whom the category *female* was made salient, however, it was predicted that affective priming effects would be less pronounced when the prime word was also stereotypic of women. Results found inconsistent affective priming effects and no significant interaction between gender primes and stimuli characteristics.

THE RELATIONSHIP BETWEEN POSITIVE AND NEGATIVE FEATURES OF STEREOTYPES

By

Scott Peter Roberts

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Dedication

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Acknowledgements

First and foremost, I'd like to thank my committee for their support and guidance through the trials and tribulation of conducting priming research.

I would also like to thank the several undergraduate research assistants, especially Sarah Johnson, without whom this project would not have been possible.

To all the family, friends, and loved ones who have been there throughout the ups and down, and will continue to be, you have my deepest heartfelt appreciation. I simply could not have done it without you.

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Chapter 1: The Positive and Negative Features of Stereotypes

Research over the past thirty years has established that activating (i.e. priming) a mental concept increases the accessibility of related concepts. A seminal demonstration of semantic priming effects by Meyer, Schvaneveldt, and Ruddy (1975) found that participants were faster to respond to a target word when it was preceded by a prime related in meaning. Similarly, Fazio, Sanbonmatsu, Powell, and Kardes (1986) provided empirical evidence that priming participants with valenced words facilitate judgments on congruently valenced targets. Consistent with modern theories of memory, the underlying assumption is that knowledge is cognitively linked by semantic and evaluative associations.

Applied to stereotyping, there is ample evidence that activating a stereotyped social category increases the accessibility of its stereotypic attributes (e.g., Dovidio, Evans, & Tyler, 1986; Devine, 1989). We might ask, then, whether the individual attributes are linked to each other as stereotypic traits of the given group. However, when we consider that social groups are often ascribed both positive and negative characteristics, the question remains as to whether priming one stereotypic trait would facilitate or inhibit recognition of an incongruently-valenced stereotypic trait. The present study was designed to contrast semantic and affective priming predictions and provide evidence that positive and negative stereotypic attributes are in fact linked by their association with the stereotyped social category.

The Automatic Activation of Stereotypes

Dovidio et al. (1986), in their influential demonstration of stereotype activation, found that the presentation of category labels (e.g., *Black*) facilitated judgments on associated trait adjectives. Caucasian participants were presented with paired target words and ask to indicate, as rapidly as possible, whether the second word in the pair could ever be used to describe a person. As predicted, participants were faster to respond "yes" to stereotypic adjectives when the appropriate racial group (*White* or *Black*) was presented as the first word in the pair. Further, the effect was observed for both positive (e.g., *Black-Athletic*) and negative (e.g., *Black-Lazy*) stereotypic traits of both racial groups (Dovidio et al., 1986).

Additional evidence that the stereotype activation process is automatic came from Devine (1989), who found that subliminally priming the stereotype of African Americans had an effect on evaluations of a fictional person. In the first part of her experiment, participants were told that briefly presented stimuli would flash somewhere on the screen. The task required that participants indicate which side the stimulus appeared on for each trial. The stimuli were in fact words, presented for 80 ms and masked by scrambled letters. Participants were generally unable to identify the words, presumably because they were presented parafoveally (Devine, 1989). Some of the words were intended to serve as stereotype primes. They included both category labels (e.g., *black* and *negroes*) and stereotypic attributes (e.g., *lazy* and *afro*) of African Americans. To manipulate the degree of activation, half of the participants saw stereotype primes in 80% of the trials, while the other half in only 20% of trials.

In an ostensibly unrelated task, participants then read a paragraph describing a racially uncategorized protagonist, Donald, behaving in ambiguously aggressive ways (taken from Srull & Wyer, 1979). Although neither *aggressive* nor a synonym of it had been presented previously, participants heavily primed with the stereotype of African Americans (80% of the trials) rated the actor as more aggressive than those for whom the stereotype was not as salient (20% of the trials). However, there were no differences in ratings of stereotype-irrelevant attributes such as *boring* or *narrow-minded*. Thus, activating a stereotype made other stereotypic characteristics more accessible, even when activation was beyond conscious control (Devine, 1989). Similar facilitation effects have been demonstrated by priming various nationalities (e.g., Diehl & Jonas, 1991), as well as gender (e.g., Banaji & Hardin, 1996; Blair & Banaji, 1996) and age categories (e.g., Kawakami, Young, & Dovidio, 2002)

If in fact activation is an automatic process, we would expect that the increased accessibility of stereotype content is independent of the degree to which the stereotype is endorsed. This is precisely what Dovidio et al. (1986) and Devine (1989) found[1]; scores on the Modern Racism Scale (McConahay, Hardee, & Batts, 1981) did not moderate the effect of the primes on reaction times or evaluations. Of course, such explicit measures of prejudice are only valid if participants are aware of their attitudes (Nisbet & Wilson, 1977) and willing to reveal them (Sigall & Page, 1971; Fazio, Jackson, Dunton, & Williams, 1995). Nonetheless, the primary implication is that activating information relevant to a stereotype may automatically increases the accessibility of other stereotypic traits.

[1] It is worth noting that, in a partial replication of Devine's (1989) study, Lepore and Brown (1997) found that only high-prejudice participants rated Donald more negatively if the stereotype of *African American* was primed without using strongly valenced words (e.g., *nigger* and *welfare*).

Affective Priming and Implicit Attitude Measures

As mentioned earlier, priming a concept also increases the accessibility of congruently valenced content. Fazio et al. (1986) instructed participants to rapidly evaluate valenced target words (e.g., delightful and disgusting) as either good or bad by means of a key press. Targets were preceded by a valenced or neutral prime (200 ms) and a brief delay (100 ms). To ensure that participants were attending to the primes they were instructed to recite each prime aloud after evaluating the target word. As predicted, participants' evaluations of the targets were faster when a congruently valenced concept had just been primed (Fazio et al., 1986).

Affective priming effects have been widely replicated with evaluative decision tasks (see Klauer & Musch, 2003 for a review), and with pronunciation (Bargh, Chaiken, Raymond, & Hymes, 1996) and lexical decision tasks (Wentura, 2000) as well. Further, the effect is not contingent on instructions to attend to the prime (Bargh, Chaiken, Govender, & Pratto, 1992), and has been observed with exposure times as short as 4 ms (Murphy & Zajonc, 1993). However, still others have found facilitation effects for incongruent prime-target pairs, suggesting that contrast effects may also take place (e.g., Glaser & Banaji, 1999).

Given that individuals evaluate stimuli even when they are presented beyond conscious awareness, and that these automatic evaluations influence subsequent reaction times on decision tasks, researchers have attempted to use similar paradigms as implicit attitude measures. Numerous studies have primed racial categories and used response latencies to valenced target words (e.g., Fazio et al., 1995; Greenwald, McGhee, & Schwartz, 1998) and evaluative ratings of neutral stimuli (Payne, Cheng, Govorun, & Stewart, 2005) as unobtrusive measures of prejudice towards social groups. The underlying assumption is that participants who hold negative evaluations of the target group will be respond more rapidly to negatively valenced words. While the external validity of implicit stereotype measures is debatable (Karpinski & Hilton, 2001), there is at least some partial support for the stance that differences in reaction times measures correspond to explicit and behavioral measures of prejudice (e.g., Gaertner & McLaughlin, 1983; Locke, MacLeod, & Walker, 1994; Wittenbrink, Judd, and Park, 1997; Castelli, Macrae, Zohmaister, & Arcuri, 2004; Lambert, Payne, Ramsey, & Shaffer, 2005).

Are the Positive and Negative Features of Stereotypes Linked?

Taken together, the stereotype activation literature would suggest that, in the context of the relevant group, priming one stereotype should facilitate the recognition of another. For example, we would expect that priming *moody* (a trait stereotypically associated with women) would accelerate recognition of *weak* (another stereotypic trait) in the context of the category *female*. When we consider that social categories are commonly stereotyped with both positive and negative attributes, it follows that those attributes are cognitively linked to each other. Thus, priming *moody* should also facilitate recognition of a positive stereotypic trait word such as *nurturing*.

However, the prediction that stereotypic prime words would equally facilitate congruently and incongruently valenced stereotypic target words may be in conflict with the valence hypothesis. That is, given the robustness of affective priming effects, we might also predict that a negative stereotypic attribute would prime another negative stereotypic attribute more so than a positive one. Though Dovidio et al. (1986) found evidence that both positive and negative words associated with the stereotypes of Caucasians and African Americans were facilitated by respective racial primes, to my knowledge there has been no direct test of the relationship between positive and negative attributes of stereotypes to date.

The present study aims to provide empirical evidence that positive and negative stereotypic attributes are cognitively linked. By presenting pictures of either male or female faces prior to trials on a lexical decision task, the salience of a gender category can be manipulated. Critical trials would be those in which targets are trait adjectives generally stereotypic of women. Consistent with affective priming effects, it is hypothesized that regardless of prime stereotypy, congruently valenced prime-target pairs will be responded to more rapidly than incongruent pairs for those whom the category *male* has been primed. For those whom the category *female* was made salient, however, it was predicted that affective priming effects would be less pronounced when the prime word was also stereotypic of women. That is, a stereotypic trait prime should facilitate recognition of stereotypic targets as word whether the two are congruently or incongruently valenced.

Chapter 2: Methodology

Participants and Design Overview

Eighty four undergraduates (59 men and 25 women) enrolled in an introductory psychology course at the University of Maryland participated in the study for additional course credit. The experiment employed a 2 (gender prime: male or female) x 2 (word prime valence) x 2 (word prime stereotypy) x 2 (stereotypic target valence) mixed design. Gender was primed as a between subjects manipulation by presenting pictures of either male or female faces prior to each trial of the lexical decision task. Prime valence and stereotypy, as well as target valence, were manipulated within subjects and completely crossed with each other. The dependent measure was reaction time, measured with a key press, to targets in a word/non-word lexical decision task.

Stimulus Materials

The experiment was run on a PC computer using E-Prime (PST) to control stimulus exposure and record response latencies. Onscreen instructions explained the experimental task and instructed participants to press either the “A” or “L” key to indicate whether the target string was a word or non-word. To control for any effect of response mapping, keys assignments were counter-balanced across gender-prime conditions as well as across participant gender.

Gender primes. Photographs were taken of college student volunteers standing against a white background. Each photo was cropped to include only the head and converted to a 160x200 pixel grayscale image. Photos were presented (250 ms) to a separate group of students who were asked to rate them on a seven point scale ranging from very unattractive (1) to very attractive (7). Eight photos of men and eight of women that were seen as equivalent in attractiveness were selected to serve as gender primes (see Appendix C).

Stereotypic and gender-neutral trait adjectives. In order to identify trait adjectives that were considered stereotypic of women by the student body, a separate group of introductory psychology students completed a questionnaire as part of a mass-testing packet. The questionnaire asked participants to rate 75 personality traits on the extent to which each is typical of men versus women. Responses were made on a seven-point scale labeled from very typical of women (1) to very typical of men (7). Students rated each trait twice: once to indicate what they thought most Americans believe (a measure of perceived existing stereotypes) and again to indicate what they themselves believed (a measure of personal endorsement). Trait valence was measured by having a separate group of participants rate the same 75 adjectives on a scale ranging from very negative (1) to very positive (7).

Twelve trait adjectives, six evaluatively positive and six evaluatively negative, were selected as stereotypic of women based on the mean ratings of perceived stereotypicality and valence. Twenty adjectives, ten positive and ten negative, that were rated as equally typical of men and women were selected as gender-neutral traits (see Appendix D).

Procedure

Participants arrived individually, were greeted by either a male or female experimenter and seated facing the computer screen. The lexical decision task procedure was explained by the experimenter and again by onscreen instructions. Participants were instructed to respond as quickly and as accurately as possible to the target string. To avoid reactivity to experimenter demand, participants were told only that the purpose of the study was to better understand how certain words are stored in memory. No mention of valence, gender, or stereotypes was made. Further, they were informed to ignore any distracters (such as pictures, words, or both pictures and words) that might flash on the screen during a trial and respond only to the target.

Practice blocks I & II. In order to train participants on the task, each first completed two blocks of twenty practice trials. Each trial in the first practice block consisted of a 160x200 pixel visual mask (100 ms), an asterisk presented as a focal point (500 ms), and then a target string which remained on the screen until a response key was pressed. Each target consisted of either a simple (four-letter) word or a non-word (see Appendix A). Throughout the experiment non-word targets were designed to be pronounceable (e.g., *nuck* and *shinking*) to prevent participants from adopting an alternative response strategy in which non-words are detected simply by their orthographic features.

Target strings were presented in Arial Black font, written in black on a light-gray background in all capitals and measuring approximately half an inch in height. Targets were flanked by four pound signs (####TARGET####) to ensure that any preceding word prime of any length would be fully masked by the target.

Participants received feedback immediately following each trial via a screen display of “Correct” or “Incorrect” (1500 ms). In the event any response latency exceeded 1000 ms, a prompt reading “Remember, try to be as FAST as you possibly can" was presented (3000 ms). Each trial was separated by a 3000 ms inter-trial-interval (ITI) during which a blank, dark-gray screen was presented.

The second practice block familiarized participants with the presentation of picture and word primes. A 160x200 pixel oval (see Figure 1) was presented for 20 ms, forward and backward masked by an identically-sized black and white rectangle of high-contrast noise (50 ms each), and immediately followed by the focal point (500ms). Such innocuous image primes have been used in similar affective priming paradigms for baseline conditions (e.g., Leeuwen & Macrae, 2004).

Immediately following the focal point, a simple (four-letter) word briefly appeared (50 ms) and was completely masked by the target string. Targets were either words or pronounceable non-words of various lengths (see Appendix A). Again responses were followed by immediate feedback, the additional speed prompt following latencies exceeding 900 ms, and finally a 3000 ms ITI.

Valence prime blocks. The third and fourth blocks of trials (labeled as the first and second "Reaction Time Test Blocks") were run to examine affective priming predictions. Participants were again told that they would see an image and a word prior to each target and were reminded to respond only to the target, and as quickly and as accurately as possible.

Using valenced primes and targets, general affective priming predictions were tested. A list of negatively, positively, and neutrally valenced words was generated after pretesting the normative valence of 75 words with a separate group of participants (see Appendix B). Prime-target pairs were counter-balanced as a 3 (primes: positively, negatively, or neutrally valenced words) X 3 (targets: positively or negatively valenced words or non-words) block of thirty-six randomly ordered pairings. Valenced words were randomly assigned to pairs so that any particular word might appear as a prime or as a target. No word or non-word appeared more than once within a block of trials.

The 160x200 pixel grayscale oval (20 ms) was forward and backward masked (50 ms each) and immediately followed by the focal point (500 ms), the word prime (50 ms), and the target (see Figure 1). Trials were separated by a 3000 ms ITI during which no performance feedback was provided. A second block of thirty-six trials was run using the same valenced words as stimuli, again randomly paired and ordered for each participant by the computer. Non-words were randomly sampled such that half of those used in the second block had appeared in the first block and half were unfamiliar. Doing so ensured that participants could not rely exclusively on familiarity to distinguish word from non-word targets.

Gender prime blocks. In the two critical sets of twenty-four trials (labeled as the third and fourth "Reaction Time Test Blocks") participants were given the identical instructions to disregard other stimuli and respond as quickly and as accurately as possible to the target word. Each participant was randomly assigned to receive either male or female gender primes, and images were randomly selected for each trial from the set of eight faces of that gender. Words primes were either valenced trait adjectives (stereotypic or gender-neutral) or neutral non-trait words (see Appendix D). Targets consisted of valenced trait adjectives (stereotypic or gender-neutral) and a new set of pronounceable non-words. Trait adjectives were randomly assigned for each participant to appear as either primes or targets, with no word or non-word appearing more than once within a block of trials. The order of prime-target pairs was counterbalanced so that critical trials (those with stereotypic target words) were interspersed throughout the sequence. Trials followed the same presentation procedure as the previous blocks, with gender primes presented (20 ms) and fully masked (50 ms forward and backward) prior to the focal point (500 ms), word prime (50 ms), and target string (see Figure 2). Again, each trial was followed by a 3000 ms ITI during which no performance feedback was provided. A second block of twenty-four trials was run with the order of pairings reversed from the previous block. Adjectives were again randomly assigned to be primes or targets and non-words were again selected so that half were familiar and half were novel.

Chapter 3: Results

Data from six participants was excluded for having given incorrect word/non-word responses on more than 10% of the 136 trials (not including practice blocks). The remaining 78 participants had a relatively standard average error rate of 3.2%. Prior to conducting any analysis, those trials on which an incorrect response was given were excluded from the data set.

<u>*Affective Priming*</u>

It was first predicted that following a valenced prime, participants would be relatively faster to recognize congruently (rather than incongruently) valenced targets as words. Latencies from the two valence prime blocks were transformed into natural logs to correct for the positive skew of reaction time data. Further, the logs were standardized by converting each participant's data into Z-scores based on the mean and standard deviation of their latencies for those two blocks of trials (Fazio, 1990). Responses more than three standard deviations above or below a participant's mean were excluded as outliers.

Mean reaction times (see Figure 3) were subjected to a 2 (prime valence) x 2 (target valence) Repeated Measures ANOVA (see Appendix E). There was no main effect for target valence, $F(1, 37) = 3.45$, NS. Contrary to the predicted main effect for prime-target congruence, participants were generally faster to respond to incongruent pairs, $F(1, 37) = 5.12$, $p < .05$. However, the effect of prime congruence interacted with target valence such that congruence appeared to facilitate responding with positive pairs yet inhibit responding with negative pairs, $F(1, 37)$ 10.24, $p < .05$.

Stereotype Activation

Response latencies were again converted to their natural logs and standardized for each participant, with extreme outliers (above or below three standard deviations) were excluded as outliers. Combining the two gender prime blocks, mean reaction times to stereotypic target words were subjected to a 2 (gender prime) x 2 (prime word valence) x 2 (prime word stereotypy) x 2 (stereotypic target word valence) repeated measures ANOVA (see Figure 4 and Appendix F).

Inconsistent with results from the valence priming blocks, participants were faster overall responding to congruent rather than incongruent prime-target pairs, $F(1, 16) = 5.37$, $p < .05$. There was no apparent interaction between target valence and prime congruence, $F(1,16) = .352$, NS. A main effect was also found for prime stereotypy such that trials in which both the prime and target were stereotypic of women were responded to more quickly than trials in which the prime was a gender neutral trait adjective, $F(1, 16) = 5.71$, $p < .05$.

Given that all the target words in the analysis were stereotypic traits of women, a main effect for gender primes was predicted, as well as an interaction between gender prime and word prime stereotypy. Neither effects were found, $F(1, 16) = .052$ and .997 respectively, NS. More central to the present study, it was predicted that affective facilitation effects would be moderated by the gender prime and the stereotypy of the word prime. That is, when presented with male gender primes, the congruence of prime-target pairs should be a significant factor regardless of whether the word prime was also a stereotypic attribute of women. However, for those presented with female gender primes, affective priming effects should be less pronounced when the word prime is also stereotypic of women. The three-way interaction was not significant, $F(1, 16) = .108$, NS.

Chapter 4: Discussion

The relative facilitation of incongruently, rather than congruently, valenced word primes in the first set of reaction time tests is not entirely inconsistent with the existing literature. As mentioned earlier, Glazier and Banaji (1999) observed reversal effects when using stimuli with extreme normative valences, such as those used in the present study. The authors theorized that such a contrast effect reflects an automatic attempt to correct for the biasing effect of the prime. However, many of the studies finding congruency effects, including Fazio et al.'s (1986) original demonstration, have used equally extreme stimuli. Further, the present study found that the effect of congruence on reaction time was moderated by stimulus valence (see Figure 3) in the valence priming blocks. No such moderating effect was found in the gender prime blocks, and there was a main effect supporting the facilitative effect of congruent prime-target pairs (see Figure 4). In short, results regarding affective priming predictions are as best inconclusive and not uniformly consistent with either assimilation (e.g., Fazio et al., 1986) or contrast (e.g., Glazier & Banaji, 1999) predictions.

The predicted interaction between the activated gender category and a word prime's valence and stereotypy was also unsupported by the present results. Given that there was no main effect of the gender prime on recognition of target words (all of which were stereotypic of women), it is reasonable to question the extent to which the pictures successfully activated the gender concept. Further, without consistent affective priming effects it is difficult to interpret the observed main effect for prime stereotypy or the absence of the predicted interaction between prime congruence, stereotypy, and the gender primes.

In conclusion, more research is needed on the procedural parameters that produce affective priming or reversal effects. Consistent results in one direction or the other are necessary in order to test the hypothesis that the positive and negative features of stereotypes are cognitively linked to each other through the gender category concept with the present procedure.

Appendix A

Stimuli used in the two practice blocks.

Practice Block 1

Words	Non-words
BAIT	POAT
THAT	HADE
CLAM	EXET
ROOF	NISE
BIRD	FASE
LATE	TROP
FAST	HOAD
HELP	NUCK
DEAR	BAMB
ONLY	TINK

Practice Block 2

Primes		Words	Non-words
ROAD	FORM	AIRPORT	FISPER
HOME	BAND	RADAR	HOOPER
KITE	WIRE	AUGUST	SLARP
SAND	GAME	MONOPOLY	OPERTLY
MOON	CANE	MOUNTAIN	STEWAN
DESK	LAMP	PENNY	BAZER
FIRE	PUNT	TRACTOR	PLERTY
KEYS	TANK	PURCHASE	SHELLON
MASK	NOTE	GUITAR	ANDRITE
JUMP	BANK	THROUGH	MANUARY

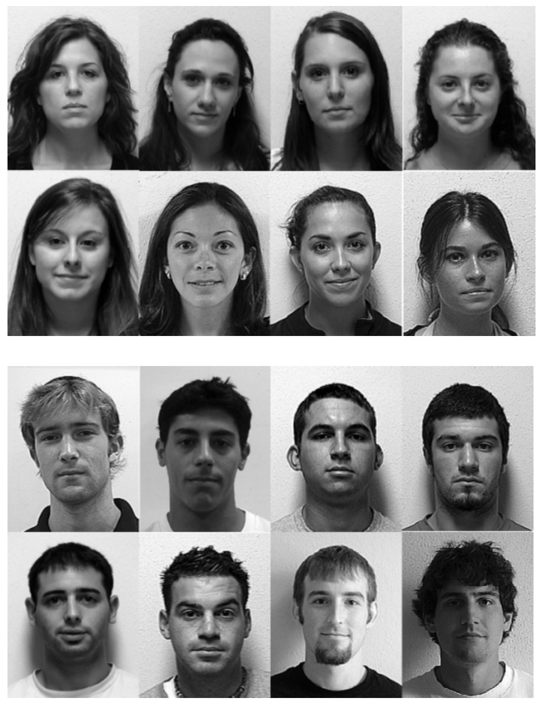
Appendix B

Stimuli used in the two valence prime blocks.

Positive	Neutral	Negative	Non-words
FREEDOM	AVERAGE	FUNERAL	DANTS
WEDDING	NEUTRAL	DIVORCE	SNEATER
HEAVEN	LADDER	CANCER	SHUFFING
FRIEND	HANDLE	MURDER	COMMOR
SUNSET	WAGON	LONELY	STEND
SMILE	WRIST	DEVIL	FLIT
MUSIC	TOTAL	VOMIT	NARCH
PARTY	FLUID	TUMOR	SPOOT
PUPPY	MAPLE	STINK	MAPE
BEACH	SCAN	GRIEF	CRINK
HAPPY	PAVE	AWFUL	SHINKING
KISS	GEAR	FAIL	BRAMA
LOVE		BOMB	GLACK
JOKE		HELL	FRUSTROTE
PLAY		PAIN	HEANED
CALM		SICK	IRRANGE
HOLIDAY		BLEED	CATE
FLOWER		ASSAULT	HORT
CANDY		DISASTER	POARD
LAUGH		DEATH	PANER
PEACE		TERROR	SACKET
			LORGISM
			WACHEL
			ORACTION
			PLAXED
			CHAVED

Appendix C

Stimuli used as gender primes.



Appendix D

Stimuli used in the two gender prime blocks.

Gender-neutral traits		Stereotypic traits	
Positive	Negative	Positive	Negative
HONEST	IRRITATING	NURTURING	GOSSIPY
CLEVER	SHALLOW	AFFECTIONATE	BITCHY
COOPERATIVE	INCOMPETENT	CARING	WEAK
GENEROUS	SELFISH	LOVING	WHINY
HAPPY	VAIN	SYMPATHETIC	MOODY
HELPFUL	ANTISOCIAL	NEAT	INSECURE
INTELLIGENT	GROUCHY		
OPTIMISTIC	BOSSY		
TALENTED	FOOLISH		
RELAXED	CLUMSY		

Neutral words	Non-words	
PAPER	BLUMSY	PALOUS
PLASTIC	HULLIBLE	TROPLESS
COLLECT	DEBENDENT	ROODY
PLACEMENT	GROLL	MASTIC
RANDOMIZE	ARTISTID	ENDERANT
FOLDER	FACKLE	INTERSIVE
NUMBER	STOOTY	LAPE
TRANSLATE	PLANISH	NUTING
WHEEL	CLOMISH	WUSTER
TRANSFER		
SLOPE		
INCH		

Appendix E

Partial Repeated Measures ANOVA table for the valence prime blocks

Source	SS	df	MS	F
Target Valence	1.226	1	1.226	3.45
Error (Valence)	*13.151*	*37*	*.355*	
Prime Congruence	2.417	1	2.417	5.12*****
Error (Congruence)	*17.480*	*37*	*.472*	
Target Valence *x* Prime Congruence	10.235	1	10.235	28.00*****
Error (Valence x Congruence)	*13.523*	*37*	*.365*	

***** $p < .05$

Appendix F

Partial Mixed ANOVA table for the gender prime blocks

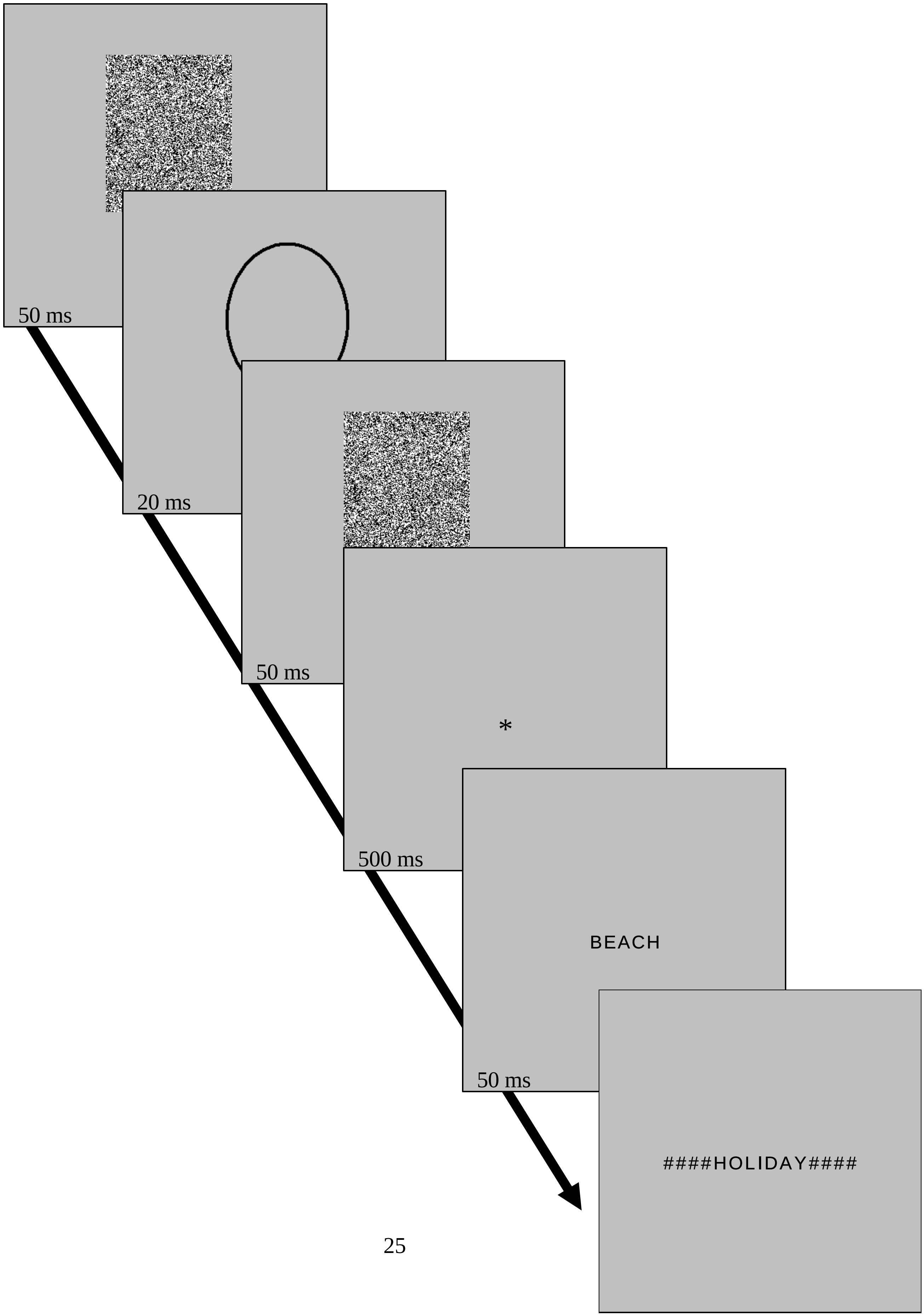
Source	SS	df	MS	F
Prime Congruence	5.369	1	5.369	8.68*****
Error (Congruence)	*9.897*	*16*	*.619*	
Target Valence x Prime Congruence	.648	1	.648	.352
Error (Valence x Congruence)	11.296	16	.706	
Prime Stereotypy	4.747	1	4.747	5.710*****
Error (Stereotypy)	*13.303*	*16*	*.831*	
Gender Prime**	.039	1	.039	.052
*Error (Gender Prime)***	*12.101*	*16*	*.756*	
Prime Stereotypy x Gender Prime	.000	1	.000	.997
Error (Stereotypy x Gender Prime)	*13.303*	*16*	*.831*	
Prime Congruence x Prime Stereotypy x Gender Prime	2.757	1	2.757	.108
Error (Congruence x Stereotypy x Gender Prime)	*15.168*	*16*	*.949*	

***** $p < .05$
** Gender prime was manipulated between subjects

Appendix G

Prior to the present study, a series of other procedures were used and failed to produce affective priming or reversal effects. The following presentation sequences were tested:

1) oval (300 ms), mask (100 ms), word prime (300 ms), mask (100 ms), target
2) oval (150 ms), mask (100 ms), word prime (150 ms), mask (100 ms), target
3) oval (150 ms), mask (100 ms), word prime (150 ms), flanked target
4) oval (50 ms), mask (50 ms), word prime (50 ms), flanked target
5) oval and word prime (50 ms), mask, flanked target (larger font)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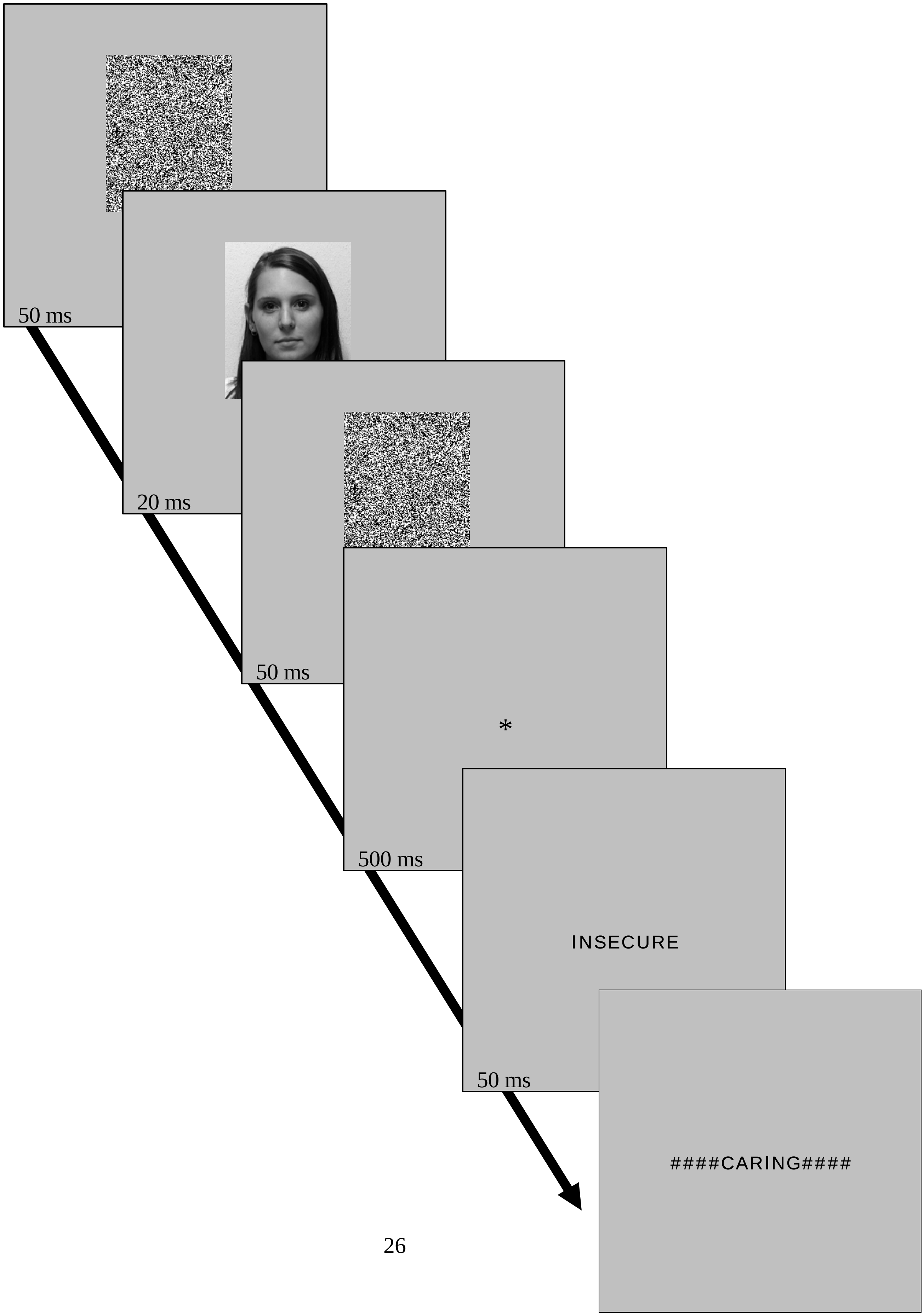
20 ms
50 ms
*
500 ms
BEACH
50 ms
####HOLIDAY####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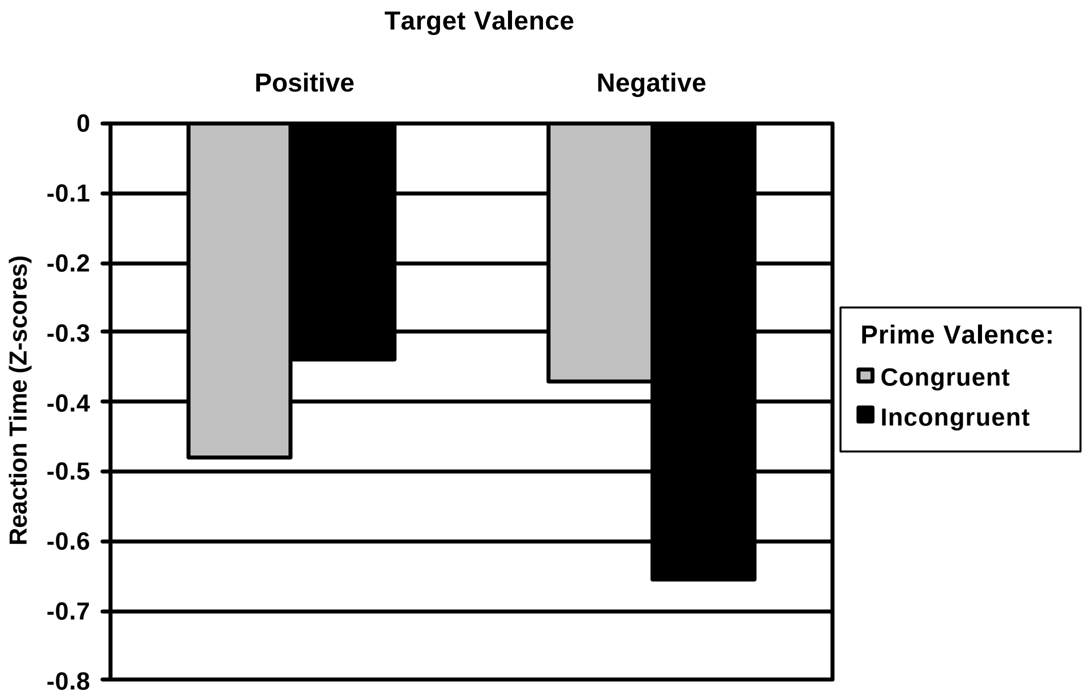
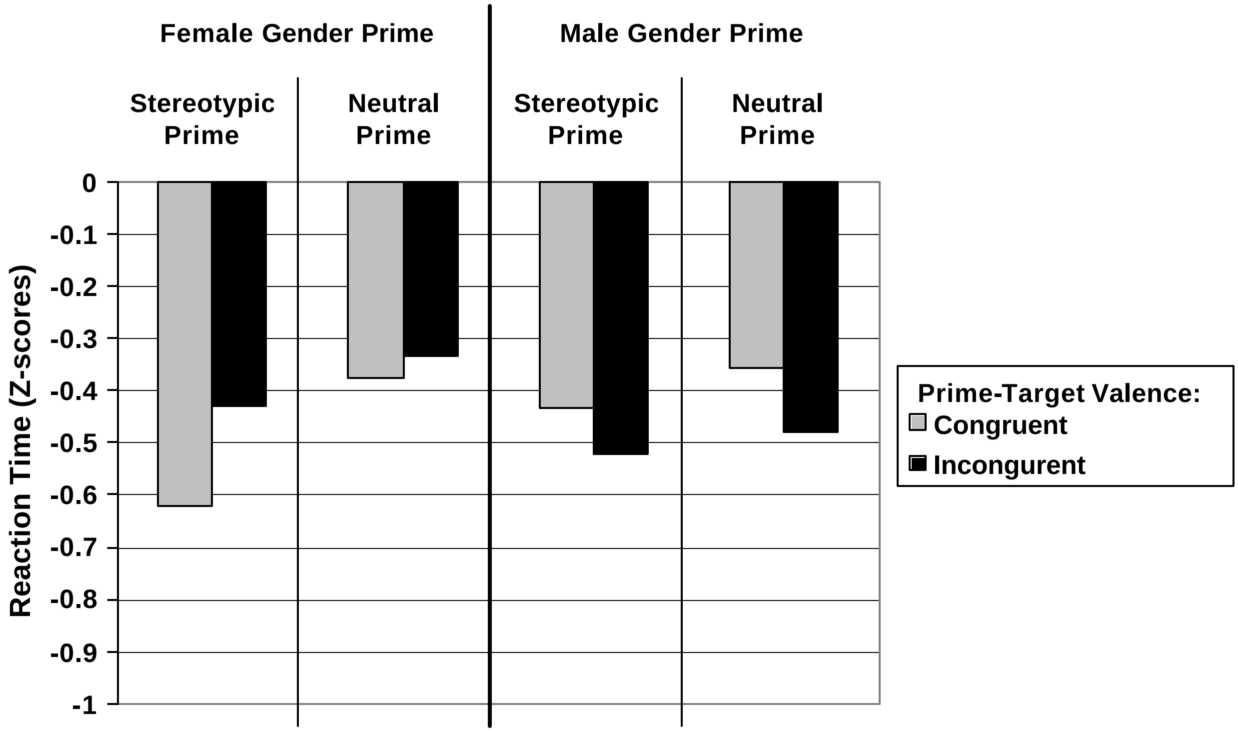
20 ms
50 ms
*
500 ms
INSECURE
50 ms
####CARING####


Target Valence
Positive
Negative
0
-0.1
-0.2
-0.3
-0.4
-0.5
-0.6
-0.7
-0.8
Reaction Time (Z-scores)
Prime Valence:
Congruent
Incongruent


Female Gender Prime
Male Gender Prime
Stereotypic Prime
Neutral Prime
Stereotypic Prime
Neutral Prime
Reaction Time (Z-scores)
0
-0.1
-0.2
-0.3
-0.4
-0.5
-0.6
-0.7
-0.8
-0.9
-1
Prime-Target Valence:
Congruent
Incongruent

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