

# COGNITIVE BIAS IN SOCIAL ALCOHOL CONSUMERS: DO STIMULI MATTER?

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## Introduction

Incentive–sensitization theory suggests that individuals consuming drugs on a regular basis will display cognitive bias towards drug-related cues. Research in social alcohol consumers has yet to examine the role of stimulus characteristics on alcohol-related cognitive biases. The following studies therefore examined whether the presence of cognitive biases in social alcohol consumers is stimulus-specific.

## Methods

In study 1,  $n = 72$  (50% male) healthy light and heavy alcohol consumers completed a lexical and pictorial version of the modified alcohol Stroop task. In study 2,  $n = 72$  (50% male) healthy light and heavy alcohol consumers completed a lexical and pictorial version of the visual probe task. Lexical reaction time data were analyzed within a 2 x 2 mixed model ANOVA, with cuetype / validity (alcohol, neutral) as a within-subjects factor, and drinking status (light, heavy) as a between-subjects factor. Pictorial reaction time data were analyzed within a 2 x 2 x 2 mixed model ANOVA, with cuetype / validity (alcohol, neutral) and stimulus set (active, passive) as within-subjects factors, and drinking status (light, heavy) as a between-subjects factor.

## Results

In study 1, lexical Stroop data, indicated no significant main effect of cuetype ( $p = .90$ ), while pictorial Stroop data indicated no significant main effect of cuetype ( $p = .18$ ) or stimulus set ( $p = .76$ ). A significant interaction between cuetype and stimulus set was observed ( $F [1,70] = 9.12$ ,  $p = .004$ ), indicating slower reaction times towards alcohol-related pictorial cues in the passive stimulus set, irrespective of drinking status. No further significant interactions were observed ( $ps > .30$ ). In study 2, lexical visual probe data indicated no significant main effect of validity ( $p = .48$ ), while pictorial visual probe data, indicated no significant main effect of validity ( $p = .68$ ) or stimulus set ( $p = .10$ ). No further significant interactions were observed ( $ps > .51$ ).

## Discussion

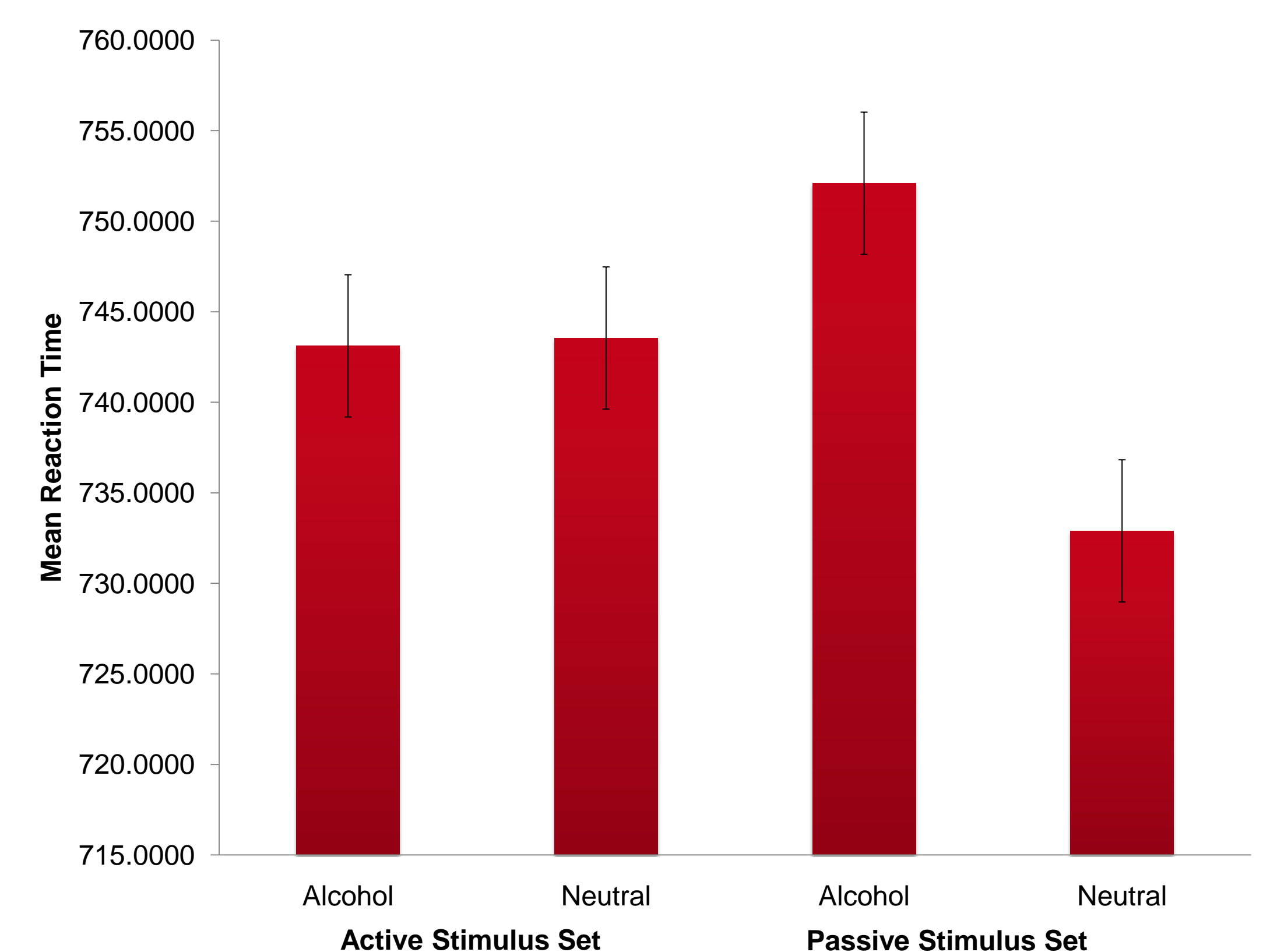
Neither stimulus type (lexical, pictorial) nor stimulus set (active, passive) appears to influence the presence of attentional bias on a visual probe task. Within the modified alcohol Stroop task, selective processing towards alcohol-related cues was observed among a pictorial version within a particular stimulus set (passive). Results indicate the potential role of stimulus characteristics on the presence of cognitive bias.



**Figure 1.** Example of a matched picture pair employed in the passive stimulus set



**Figure 2.** Example of matched picture pair's employed in the active stimulus set



**Figure 3.** Mean reaction time towards cues (alcohol, neutral) in both stimulus sets (active, passive)