

### Poster Presentation (Paper #78)

#### Effect of familiarity and hemisphere on metaphor comprehension

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**Aim:** Current psycholinguistic literature has used stimuli with uncontrolled confounds and definitional inconsistencies (Kasparian, 2013). The current study examined the effect of familiarity and hemisphere on metaphor comprehension, controlling factors such as literal plausibility, sentential context, difficulty and decomposability.

**Design:** The experiment utilised a divided visual field, lexical decision task in a repeated-measures design; a single cohort of 41 individuals underwent a number of independent variables including stimuli (literal, familiar metaphorical, unfamiliar metaphorical) and both hemispheres. The dependent variables were reaction times (RTs) and error rates.

**Method:** Using a divided visual field paradigm, 41 right-handed undergraduate participants performed a computer-based lexical decision task where reaction times and error rates were recorded. Participants were primed by literal, familiar metaphorical and unfamiliar metaphorical sentences, as well as a baseline neutral condition. Priming effects were then calculated.

**Results:** Significant effects were found for familiarity and hemisphere for RTs, errors and priming. Literal conditions were significantly faster to process and more accurately responded to than familiar metaphorical conditions, which were then faster and more accurate than unfamiliar metaphorical conditions.

**Conclusion:** There was an overall processing advantage of the LH over the RH in reaction times, errors and priming effects, supporting both Federmeier's (2007) predictive/integrative and Giora's (2003) graded salience hypotheses. An integrated model combining both hypotheses is discussed, which holds promise as a framework for future research.

### Poster Presentation (Paper #300)

#### Using warnings to reduce categorical false memories in younger and older adults

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Past literature has extensively explored the pervasiveness of false memories using paradigms of semantically related words, such as the DRM paradigm. These paradigms prime participants to remember a novel item that is semantically related to items presented in a list, despite never being presented. Many strategies to reduce semantic false memory production in younger and older adults have been explored, with warnings about the prevalence of these false memories before encoding among the most success. Categorical memory errors are a type of semantic false memory that have been shown to occur with high incidence in younger adults. The current study explored whether warnings could reduce the incidence of categorical false memories in both younger and older adults. Participants were informed that they would be studying a series of word pairs, and in addition half of the younger and older adults were warned about the pervasiveness of categorical errors. All participants then studied a series of word pairs, half of which were categorically related and half unrelated. After encoding the word pairs, participants were presented with the first word of each pair and attempted to recall the corresponding word from the pair. Responses were coded as correct, blank or by the type of error made. Participants in all conditions accurately recalled more categorically related items than unrelated items but also produced more categorical false memories than any other type of memory error. In addition, both younger and older adults given a warning before encoding made significantly less categorical errors than those without a warning. These findings suggest that although categorical memory errors appear to be a pervasive type of memory error in both younger and older adults, warnings are effective at preventing this type of memory error in adults.

### Poster Presentation (Paper #138)

#### High school subject selection in depression related cognitive tests

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**Aim:** To investigate the effect of high school subject selection on cognitive tests relevant to young adults with depression. It was hypothesised that young adults (17-35) who studied advanced

mathematics rather than ordinary mathematics would perform significantly better on cognitive tests associated with problem solving such as Card Sort (perseverative errors) and Tower of London.

**Design:** Cross-sectional design with purposive sampling. Purposive sampling was used to target young adults who had experienced depressive symptoms.

**Method:** Thirty seven young adults ( $M=20.05$  years,  $SD=2.97$ ; 28 female, 9 male) studied advanced mathematics and 78 young adults ( $M=20.19$  years,  $SD=3.61$ ; 57 female, 21 male) studied ordinary mathematics. Participants were classified as either the “advanced mathematics” group: scored at least one high achievement (B grade) with no fails in advanced mathematics A, advanced mathematics B, physics, or chemistry; or the “ordinary mathematics” group who studied ordinary mathematics in their senior year at high school. Participants completed a battery of cognitive tests and semi structured interviews to determine depression severity and disorder classification.

**Results:** Advanced mathematics group had significantly less: perseverative errors ( $p=.009$ ), participants with depression ( $p=.004$ ), depression severity ( $p=.002$ ), anxiety severity ( $p=.015$ ), number of depressive episodes ( $p=.035$ ), and intelligence measure ( $p=.027$ ) than the ordinary mathematics group. Other cognitive tests where the advanced group performed significantly better than the ordinary mathematics group included word recall trial 1 ( $p=.001$ ), trial 2 ( $p=.036$ ), and trial 3 ( $p=.023$ ). A logistic regression with bootstrapping was run and demonstrated that perseverative errors ( $p=.016$ ) as well as word recall trial 1 ( $p=.001$ ) were still significant predictors of mathematics group when co-varied with an intelligence measure, depression and anxiety variables.

**Conclusion:** Young adults who studied advanced mathematics had significantly fewer perseverative errors than young adults who studied ordinary mathematics even when controlling for differences in depression. School subject selection should be included in depression studies to better evaluate whether it is a mediating factor for perseverative errors which are considered a possible trait cognitive deficit for depression.

#### Poster Presentation (Paper #90)

##### The “home” advantage in the FA Cup final

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There is now considerable evidence that game location (home or away) contributes to performance outcomes in sport (Allen & Jones, 2014, *CDPS*, 23, 48-53). The psychological study of the home advantage demonstrates that travel fatigue contributes to negative mood states and poor performances of away teams (Goumas, 2014, *JSMS*, 17, 119-123) and that home advantage effects are moderated by team ability (Allen & Jones, 2014, *IJSEP*, 12, 10-18). This archival study explored the contribution of travel and team ability to success in the FA Cup final. The FA Cup final is an ideal competition to explore travel effects (over relatively short distances) as the competition final attracts a full (or near full) capacity stadium with seat allocation divided equally between the two sets of supporters (audience effects eliminated), the competition is played on a neutral ground (familiarity and territoriality effects eliminated) and there are no competition rules to favour any one team (competition rules eliminated). Data were collected on league position and absolute road distance (from home ground to game location) for winners and runners-up in 131 Cup finals (plus 14 replays) contested between 1872 and 2012. Binary logistic regressions were used to explore whether success in the FA Cup final (win vs. loss) could be predicted by road distance, team ability (league position), year of competition, and the interactions between these variables. A significant interaction of league position and competition year demonstrated that team ability has become an important contributing factor to team success but only in recent years ( $b = -.439$ ,  $SE = .227$ ). Also, the outcome of the competition final was related to the interaction of road distance and competition year ( $b = -.555$ ,  $SE = .211$ ), such that teams travelling greater distances have been less successful in recent years (an effect that was unconditioned by team ability). In short, this study provides evidence that road distance between teams' home stadium and competition stadium is related to victory/defeat in the FA Cup final.