Creativity and the Cognitive Dynamics of Pun Processing
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BACKGROUND
- Understanding puns often requires access to implied double meanings.
- The order of meaning access, as a function of fine and coarse semantic coding, is still unclear, with some accounts stating that the more salient, dominant meaning is putatively accessed first (McHugh & Buchanan, 2016).

HYPOTHESES
- If coarse and fine semantic coding occur in tandem, priming for both dominant and subordinate pun meanings will be evident at earlier and later time points during processing.
- If verbal creativity is an index of ability to coarse code, more verbally creative individuals will more readily access subordinate meanings and perceive process puns.

METHODS

Pun Primed Lexical Decision Task
- Word/non-word judgment

Subjects
N=59, within-subjects design
Performance cutoffs excluded 7 out of an initial 66

Pun Furnnishes Familiarity
- Noun Pair Meaning Production
- Remote Associates Task
- Fluency Task

Analysis
- Repeated Measures ANOVA
- Mixed-effects Linear Regression
- Spearman’s Correlation

RESULTS

Correlation between Creativity and Accuracy
- Spearman’s Correlation revealed a significant positive correlation between accuracy for subordinate meaning targets at 500ms and both fluency (r=0.36, p<0.05) and Remote Associates Task performance (r=0.33, p<0.05).

Semi-partial correlation revealed a persistent positive correlation between Remote Associates Task performance and subordinate target accuracy at 500ms, controlling for fluency effects (r=0.33, p<0.05).

RAT did not significantly correlate with accuracy in any other condition (p’s > 0.10).

CONCLUSIONS
- Group-level results replicate previous findings, but also support the hypothesis that both subordinate and dominant word meanings are accessed early in processing in the face of ambiguity (as opposed to one after the other).
- Future studies should investigate hemispheric contributions to processing at earlier and later time points. If right and left hemispheres are coarse and fine coders, as shown in previous studies, current results suggest they work in parallel.
- Verbally creative individuals displayed a pun perception and modest performance advantage in the subordinate condition. This may be due to heightened ability to access distant meanings of unrelated concepts (like the RAT) or contextually ambiguous concepts (like puns).
- These individual differences findings are the first to link creativity and pun perception.

ACKNOWLEDGEMENTS
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REFERENCES
2. Coulson & Wu (2005)
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5. Treadwell (1970)