Probing the Action Observation Network response to varying levels of action familiarity

Tom Gardner, Aidas Aglinskas, Emily S. Cross

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Abbreviated Title: AON RESPONSE TO FAMILAIRTY

Authors: Tom Gardner, Aidas Aglinskas and Emily S. Cross*

Affiliation:
School of Psychology
Bangor University
Bangor, Gwynedd
LL57 2AS
United Kingdom

***Corresponding Author:**
Emily S. Cross
School of Psychology
Bangor University
Bangor, Gwynedd
LL57 2AS
United Kingdom
Email: e.cross@bangor.ac.uk

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Highlights:

- **The impact of familiarity on AON engagement is debated to be linear vs. nonlinear**
- **We fit regression models to AON ROIs for guitar riff observation and execution**
- **A cubic model best captured AON responses to familiarity for both conditions**
- **Participants' subjective ratings of familiarity reflected a similar cubic function**
- **Findings support a predictive coding + neural efficiency account of familiarity and AON engagement**

Keywords:
Action Observation Network, Familiarity, Direct Matching, Predictive Coding, ROI Regression, fMRI, Neural Efficiency, Music Learning, Guitar

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