Consequences of visual production training for neural object representations

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Abstract

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Introduction

Methods

Stimuli

Task and procedure

Recognition task

Production task

fMRI data acquisition and preprocessing

Measuring object representation during recognition and production

Connectivity pattern similarity analysis

Searchlight analysis

Results

0.1 Shared representations during recognition and production

0.2 Sustained selection of target object during drawing within early visual, parietal, frontal regions

0.3 Sustained selection of target object during drawing between regions

0.4 Relationship between target selection and representational differentiation

0.5 Distinct dynamics in target object representation in visual and frontal regions during drawing

Discussion

Code availability

The code for the analyses presented in this article will be made publicly available in a Github repository upon acceptance of this manuscript.

Data availability

The data presented in this article will be made publicly available in a figshare repository upon acceptance of this manuscript.

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Author contributions statement

J.E.F., D.L.K.Y., N.B.T.-B., K.A.N. designed the study. J.E.F. performed the experiments. J.E.F., J.D.W., J.B.G., R.S.L. conducted analyses. J.E.F., J.D.W., J.B.G., R.S.L., K.A.N., and N.B.T.-B. planned analyses, interpreted results, and wrote the paper.

Additional information

The authors declare no competing interests.

References