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Xiaoying Wang, Marius V. Peelen, Zaizhu Han, Alfonso Caramazza, Yanchao Bi



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**The role of vision in the neural representation of unique entities**

Xiaoying Wang<sup>1</sup>, Marius V. Peelen<sup>2</sup>, Zaizhu Han<sup>1</sup>, Alfonso Caramazza<sup>2,3</sup>, Yanchao Bi<sup>1</sup>

<sup>1</sup>National Key Laboratory of Cognitive Neuroscience and Learning and IDG/McGovern Institute for Brain Research, Beijing Normal University, Beijing 100875, China,

<sup>2</sup>Center for Mind/Brain Sciences, University of Trento, 38068 Rovereto, Italy

<sup>3</sup>Department of Psychology, Harvard University, Cambridge, Massachusetts 02138

**Running title:** Unique entity representation without sight

**Keywords:** congenitally blind, visual experience, precuneus, anterior temporal lobe, unique entity

**Corresponding author:** Yanchao Bi, National Key Laboratory of Cognitive Neuroscience and Learning & IDG/McGovern Institute for Brain Research, Beijing Normal University, Beijing, China, 100875, Tel/Fax: (86) 10 5880 2911, E-mail: ybi@bnu.edu.cn

**Abstract**

Famous places and famous people are different from their common counterparts in that we have unique knowledge about individual items, including specific knowledge about their visual appearance and other sensory properties. Previous studies have shown that the processing of unique entities selectively activates a network of brain regions that includes the bilateral anterior temporal lobes (ATL), posterior cingulate cortex and adjacent medial precuneus (PCC/medPrec), medial prefrontal cortex (medPFC), and temporal-parietal junction (TPJ). The degree to which these regions represent visual properties associated with famous people/places is unknown. Here we compared fMRI responses in congenitally and sighted individuals to test whether visual experience contributes to the development of unique-entity responses in these regions. Names of unique entities (famous places, famous people) and generic items (daily scenes such as “bridge”, face parts) were presented aurally to 13 congenitally blind and 16 sighted participants. Sighted participants additionally viewed

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