

## Through the Looking-Glass: Are objects in mirrors really objects?

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Mirrors are common in our everyday visual environment. We use visual information reflected from mirrors for various purposes, like gauging traffic while driving or grooming every morning, but are mirror-reflected objects treated in the same way as real objects? We showed 44 pictures of indoor scenes to 11 observers and asked them to label “everything they saw.” Observers freely viewed one scene at a time and labeled as much or as little as they wanted before moving on to the next scene. They were encouraged to take no more than two minutes per scene. A subset of images was selected specifically for the presence of mirrors with objects visible in those mirrors. Other scenes served to prevent observers from guessing our specific interest in mirrors. Labeling involved clicking on an object to mark its location and entering a text label (e.g., table). Observers placed an average of 16.3 labels per image. In 21 images, an object (e.g., towel) appeared in the room and in the reflection at approximately the same size and image quality. The objects in the room received an average of 8.1 labels. The same objects, reflected in a mirror, were labeled just 0.9 times on average ( $t_{(20)} = 12.0, p < 0.00001$ ). Objects that only appeared as reflections (not visible otherwise), were labeled more often than the objects that appeared both as reflections and in the room. However, such objects were never the most labeled objects in a scene. It might be objected that an object in the room is more “real” than its reflection but in both cases, neither object is real. Both are parts of a photograph. Apparently, the parts of the photograph that represent reflections are somewhat less “real” than the rest, which has interesting implications for visual attention and scene perception.