Invariant Object Recognition Enhanced By Object Persistence

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Challenge of object recognition:

An object will not look the same each time we see it.

E.g.:

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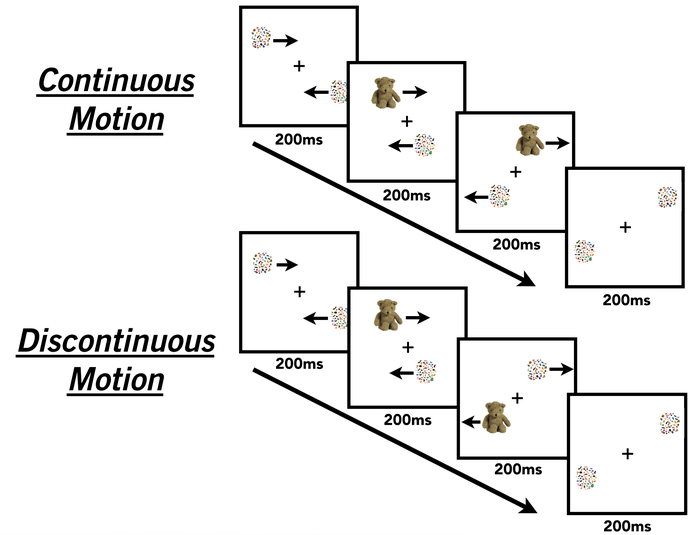
In the long-term this is a problem, **but short-term, an opportunity**, if we have an independent way of knowing the object is the *same* token.

GENERAL METHODS

1. Use **apparent motion** to manipulate perceived continuity during **incidental encoding.**

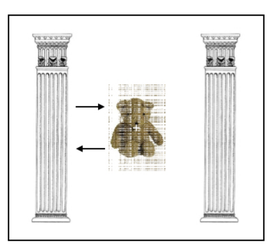
2. Test memory with a standard "***old, similar, new"*** *test.*



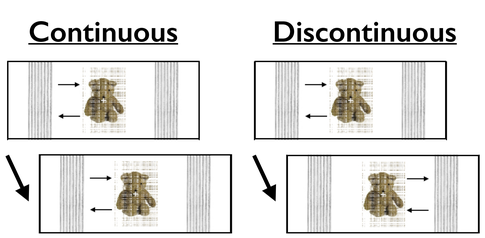
Laws of object physics help us to learn just how different an object can look from itself: continuity constrained temporal association is the engine of object learning.

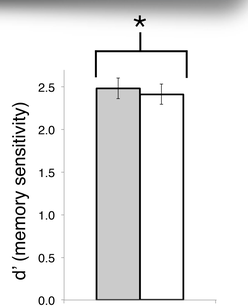
REPLICATION

Manipulate continuity through dynamic occlusion



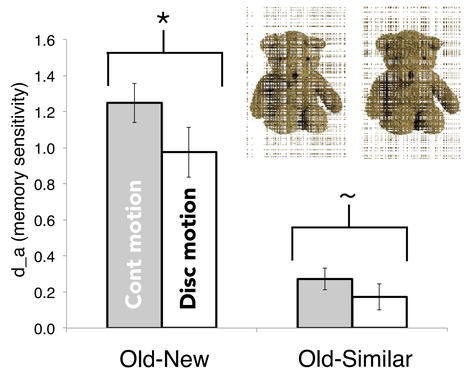
Two encounters, each 1000ms





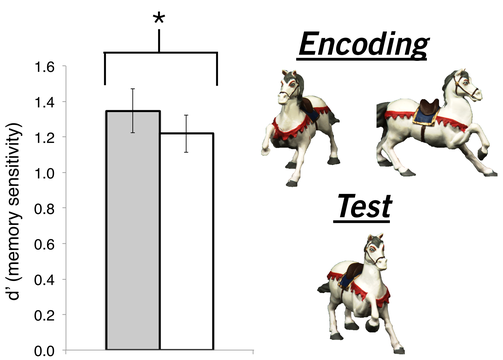
RESULTS

Exp 1: Independently noisy encounters



*NB, Exp 2 and 3 include only old vs. new at test

Exp 2: Encounters and tests at different orientations



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