

Evidence for Haptic Memory

【Main Content】 :

The purpose of these experiments was to investigate the minimum duration of haptic memory representations. [To determine whether tactile memory behaves similarly to a visual memory system and to observe whether it has a similar decay rate.](#)

【principle】 :

This experiment aimed at determining what happens to haptic memory after a delay following exposure to an object. It is expected that like visual memory, haptic memory will show a rapid rate of decay resembling that of the visual iconic system. A decay in haptic memory would be represented in the peak grip force that is used to lift an object. That is, on the first lift of a novel object, participants will produce more grip force than necessary. However, after several more lifts, the amount of grip force produced will decrease. If the memorial representation for haptic information decays in a manner similar to visual information, after a delay (2 s or 10 s) the amount of grip force produced will resemble that produced on the first lift of an object. However, if the haptic memorial representation is very robust, then even after a 2 or a 10 second delay, the amount of grip force produced will resemble that of a lift of a familiar object. That is, the appropriate grip force will be produced. It is expected that load force will resemble the same pattern as that seen for grip force.

【Experiment Procedure】 :

2.2 Apparatus and Procedure

【Conclusion】:

The main findings from this Experiment showed that, as the time delay increased after a period of practice, the grip force used to grasp a particular mass increased to a magnitude similar to that used in the grasp of a novel mass. However, the analysis of peak load force showed a similar pattern to that of grip.