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Valence-space associations in vertical touchscreen interactions

DOI:10.17504/protocols.io.qagdsbw

Type: Protocol

Proper Citation

Sergio Cervera-Torres, Susana Ruiz Fernández, Martin Lachmair, Peter Gerjets 2018.
Valence-space associations in vertical touchscreen interactions. protocols.io
dx.doi.org/10.17504/protocols.io.qagdsbw

Protocol Information

URL: <https://dx.doi.org/10.17504/protocols.io.qagdsbw>

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Summary: Embodied cognition research suggests that bodily experiences might ground mental representations of emotional valence in the vertical dimension of space (i.e., positive is up and negative is down). Accordingly, recent studies show that upward and downward arm movements may also influence the evaluation of valence-laden stimuli, suggesting that upward (downwards) movements lead to more positive (negative) evaluations. Interestingly, these studies typically did not investigate paradigms that require a direct hand interaction with the stimuli. With the advent of touchscreen devices and their use for experimental environments, however, a direct and more natural hand interaction with the stimuli has come to the fore. In this regard, the goal of the present study is to examine how direct hand interaction with valence-laden stimuli on a touchscreen monitor affects their perceived valence. To do so, participants evaluated emotional pictures after touching and moving them either upwards or downwards across a vertically mounted touchscreen. In contrast to previous findings, the results suggest that positive pictures were evaluated as more positive after downward movements while negative pictures were evaluated as less negative following upward movements. This finding may indicate that a matching between the pictures' valence and the valence associated with their vertical touch location leads to more positive evaluations. Thus, the present study extends earlier results by an important point: Touching the emotional pictures during movement may influence their valence processing.

Associated Publications: Cervera-Torres S, Fernández SR, Lachmair M, Gerjets P (2018) Valence-space associations in touchscreen interactions: Valence match between emotional pictures and their vertical touch location leads to pictures' positive evaluation. PLoS ONE 13(7): e0199972. doi: [10.1371/journal.pone.0199972](https://doi.org/10.1371/journal.pone.0199972)

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External URL: <https://doi.org/10.1371/journal.pone.0199972>

Version: 1

Publication Date: 2018

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Record Creation Time: 20210329T220534+0000

Record Last Update: 20210329T221020+0000

Data and Source Information

Source: