

Haptic spatial orientation processing and working memory

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Abstract Visual processing mechanisms are critically important for perceiving spatial features of our surroundings. This also appears to be so in situations where vision is absent. We will present data from a haptic spatial orientation task (parallel setting of two bars), which show a beneficial effect of a delay between examining the reference bar and setting the test bar, and of noninformative vision (viewing the general setup but not the relevant bar orientations). These results suggest that over time haptic information might be translated

into visuospatial representations which support performance. In line with this, blind individuals performed worse than blindfolded sighted participants on comparable haptic spatial tests, in particular congenitally blind did so. Together, these results suggest a recoding of the haptic information into a more abstract spatial representation during processing in working memory.

Keywords Haptic space • Working memory

