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Shifting backward to say what's front? Spatial referencing of dorsal object arrangements

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Abstract: When referring to spatial arrangements of two objects in the visual field, German native speakers prefer reflection as a subtype of the relative frame of reference. Whether this preference transfers to objects in one's back and whether a mental turn has to precede such dorsal references (turn hypothesis), has recently been explored in studies implementing questionnaires. However, the results hardly supported the turn hypothesis and rather suggested backward projection as an alternative strategy for dorsal references. To test the two assumptions more rigorously, a series of experiments implemented dorsal object arrangements in interview situations and induced dorsal perspectives via turning, shifting or reflecting the actual view of participants. Across experiments and conditions, backward projection consistently emerged as the preferred referencing strategy and only a small proportion of dorsal references accorded with the turn hypothesis. Participants' retrospective descriptions supported this pattern and suggested backward projection to be involved in dorsal referencing.