proportion of curved choices in a 2AFC task. We recruited 300 participants and randomly assigned them to one of 8 groups, depending on presentation time (34, 48, 80, 144, 304 ms) and whether or not the target stimuli were backward masked. Our results suggest that preference for curvature arises when stimuli are shown for 48ms or more, and that backward masking markedly reduces this preference when stimuli are shown only briefly. Our results have implications for understanding the early perceptual processes involved in preference for curved contours, and suggest that this effect is quite robust to presentation time but not to competing visual processes, such as those exerted by masking.

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Two signals for verticality

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The sense of straight up, *or verticality*, in the outside world depends on the integration between vestibular-gravitational inputs with visual and somatic signals. However, it remains unclear how verticality is perceived for stimuli applied to the body. To address this question, a psychophysical tactile vertical task has been combined with galvanic vestibular stimulation (GVS). Brief right-anodal and left-cathodal GVS or left-anodal and right-cathodal GVS were delivered at random to induce a pure vestibular sensation of left/right tilting. A sham stimulation condition was included. Participants judged the orientation of clockwise and counterclockwise lines drawn on their forehead. Surprisingly, pure artificial vestibular

signals did not alter tactile verticality. Conversely, verticality was reliably biased towards the neuraxis when participants were asked to physically tilt their head. Such bias was present also for stimuli not aligned with the body midline. Our results support two distinct representations of verticality: a vestibular representation, based on the direction of gravity, which is a reference for visual vertical, and a somatosensory representation, based on the neuroaxis, which is a reference for tactile vertical.

High cognitive load reduces tactile awareness

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The important link between attention and conscious perception is perhaps most strikingly demonstrated in the attentional blindness literature, which has shown that salient information can go unnoticed when attention is focused elsewhere (Simons & Chabris, 1999). In recent years, this phenomenon has also been reported in the auditory modality (e.g. Dalton & Fraenkel, 2012). Here, we present two experiments providing the first robust demonstrations of a tactile equivalent – inattentional numbness. In Experiment 1, we varied task difficulty in a tactile task consisting of sequences of tactile stimuli delivered to one hand. Our results showed that reported awareness of an unexpected tap delivered on the final trial to the unattended hand was lower in the hard task (vs. easy task) condition. In Experiment 2, we varied the level of perceptual load in a tactile target discrimination task delivered to the hands while we presented a brief tap to the forehead on half of the trials. Participants indicated on every trial whether or not they had detected the tap. We found reduced sensitivity in reporting the irrelevant tap under high (vs. low) perceptual load. Overall, our findings suggest that both general task difficulty and tactile perceptual load can modulate tactile awareness.

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A sensitive period for tactile remapping

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When a stimulus touches the skin, the initial representation is a somatotopic map of