

stimulus earlier when they can predict the temporal occurrence of this stimulus. We tested this prediction by requiring either a response to the onset or to the offset of shortly presented visual stimuli (33 to 100 ms). Temporal predictability was manipulated by a foreperiod (FP) paradigm, in which the time interval between a warning tone and the visual stimulus is manipulated, either being short (800 ms) to allow high predictability of stimulus occurrence or being long (2,400 ms) allowing lower predictability. The difference between onset and offset responses was more pronounced in the short FP than in the long FP, mainly because onset responses were fastened in the short FP. This pattern of results strengthens the early onset hypotheses and suggests that temporal attention prolongs visual persistence of the stimulus. To test this idea directly, we asked participants to compare the duration of two successively presented visual stimuli (first standard for 100 ms, then comparison for 50 to 150 ms) and manipulated the FP in the same way as before. Contrary to the prediction, the duration judgment was uninfluenced by the FP condition. We discuss this result in terms of potential differences in time processing modes evoked by temporal attention, which might have affected the standard and the comparison in the judgment task simultaneously. Taken together, temporal attention influences the perceived temporal attributes of a visual stimulus, most probably by enhancing its persistence.

Adaptation to visual numerosity can affect time perception but not the other way around

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The theory of magnitude suggests number and time are linked by a common cortical metric, and their specialisation develops from a single magnitude system. We investigated the presence of a common processing mechanism underlying numerical and temporal perception using unimodal and cross-modal adaptation. We conducted four experiments, each using a rapid adaptation protocol (100 trials; average trial duration: 1.2 sec) and a 2AFC adaptive staircase method. In a two by two adaptation and discrimination task design, participants adapted to either numerosity or duration and subsequently performed a numerosity or duration discrimination task. Each adaptation-task combination was presented in a separate block. Data analysis revealed that adapting to a high numerosity (80 dots) led to underestimation of the reference numerosity (40 dots), while adapting to a low numerosity (20 dots) led to overestimation of the reference numerosity presented in the adapted location. Similarly, adapting to a long duration (600 ms) led to underestimation of the reference duration (333 ms), whereas adapting to a short duration (67 ms) led to an overestimation of the reference duration. In the cross-modal adaptation conditions, numerosity adaptation affected time discrimination in 60% of the subjects, where adaptation to a high and low numerosity resulted in an underestimation and overestimation of the reference duration respectively. There was no effect of time adaptation on numerosity discrimination. These results indicate that both numerosity and time are susceptible to rapid adaptation, and provide only limited support for the existence of a common magnitude system in numerical and temporal perception.

Contextual motion and transients disrupt visual timing performance

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Visual temporal order judgments can be profoundly disrupted by the mere presence of irrelevant distractor events elsewhere in the visual field. The unique spatial distribution of this remote temporal camouflage (RTC) effect distinguishes it from other contextual phenomena such as motion-induced blindness, surround suppression and crowding. In this study we examine the causal role of motion and visual transients. The task required subjects to report which of two vertically oriented drifting target Gabors, located left and right of fixation, changed direction first across a range of stimulus onset asynchronies. Each target was surrounded by eight vertical distractor Gabors, which were either static or drifting. In the drifting conditions, distractors all moved either in homogeneous or heterogeneous directions, remaining either constant or abruptly switching direction simultaneously. Thresholds were significantly higher in the drifting relative to the static distractor conditions. Of these drifting conditions, performance was poorest when distractors changed direction prior to the target signals. For the non-switch conditions, performance appeared equivalent in homogeneous and heterogeneous direction conditions. Surprisingly, we find that when homogenous distractors move in the same direction as the targets prior to the first target change, performance improves to near static distractor levels. This combination of results implies a causal role for both distractor transients and motion segmentation in RTC.

How the aesthetics of the urban space might shape our implicit attitudes towards brands: The role of artistic „Subvertising“ via modified brand logos

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On closer observation of Street Art it is assumed, that the visual composition of the urban space has partly artistic aspects (Riggle, 2010). Among others the so called „Subvertising“ is seen as art that tries to remove advertising appeal and binge shopping behavior by deliberately sabotaging public advertisements (Harold, 2004). One modification can be the manipulation of a logo design, which generates a negative impact for the brand itself. In the present study (N=32) we examined whether the close to reality presentation of briefly presented, modified brand logos (taken from various sectors: computer, fast food and soft drink) had already an impact on the implicit attitudes towards the associated brands. We controlled for mere exposure effects by pairing companies with similar products for which one set (k=3) was modified and the other (k=3) left unmodified. Implicit attitudes related to these brands, assessed by employing a multi-dimensional implicit association test (md-IAT; Gattol et al., 2011) did not find any change of attitudes when using modified brand logos, at least with the given power which was generally able to detect medium-large effect sizes. This raises the question, whether the actions of the activists really do have the intended effect on the consumers. The paper discusses further possibilities or changes of artistic strategies to be more successful.