

# Time Perception: Interplay of Implied Motion and Spatio-Temporal Patterns

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Studies have shown that motion is a prominent factor influencing how we perceive time durations. For example, targets in motion are perceived to have longer durations than those at rest, and this effect persists even for static images that imply action. However, since motion can be a characteristic of both animate and inanimate subjects, it remains unclear whether this perceptual bias affects both categories similarly. Therefore, this study aims to explore the relationship between implied motion and the intrinsic properties of depicted subjects. Participants performed a temporal bisection task, assessing the duration of still images featuring either inanimate objects or humans, both in implied motion (i.e., still images suggesting movement) and at rest. Results confirmed that subjects depicted with implied motion are perceived to last longer than stationary subjects, with this effect being more pronounced for humans compared to inanimate objects. Additionally, images of moving humans exhibited a specific spatiotemporal effect on reaction times: participants responded faster to right-facing images at longer durations and to left-facing images at shorter durations. Overall, these findings reveal the interaction between implied motion and subject category on perceived duration. The unique spatiotemporal bias in speeded responses to moving human figures suggests specialized cognitive processing likely influenced by evolutionary or social factors.

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