

Self-motion perception induced by cutaneous sensation caused by constant wind

[Psychology](#)



PSYCHOLOGY Self-Motion Perception Induced by Cutaneous Sensation

Caused by Constant Wind This piece of work shows that the presence of multiple sensory modalities often enhance the perception of self-motion to an individual. The modalities may include visual, auditory, vestibular, somatosensory and proprioceptive systems. Ordinarily, self-motion perception can be induced by an input from just one modality. However, combination of visual and vestibular systems are associated with inducing self-motion.

It was theorized that wind or changes of air pressure perceived on the skin could also be a source of perceived self motion perception. For example, when one is moved passively on a vehicle, or actively by walking or running, there is a perception of the wind blowing on the body

An experiment was conducted and it was concluded that the wind which is the cutaneous sensation accompanied by the real self-motion induces illusory self-motion perception at the participants.

In the experiment a horse-riding machine moving back and forth and a fan were used. The fan was to apply wind on the simultaneous movement of the thirteen participants riding on the moving horse. The participants were denied vision and auditory capacities to prove the effectiveness of the experiment. It was also hypothesized that the unstable posture induced by the horse-riding machine facilitated the weak cutaneousvection. The results strongly indicated that the body posture could be an important facilitator or inhibitor ofvection. The body fluctuation by a horse-riding machine provided the participants with unidirectional (back and forth) body movement; therefore it could not bias any direction of self-motion perception. All the thirteen participants perceived cutaneousvection in all direction of the wind

with sway condition revealing that the cutaneous sensation induced self-motion perception caused by constant wind