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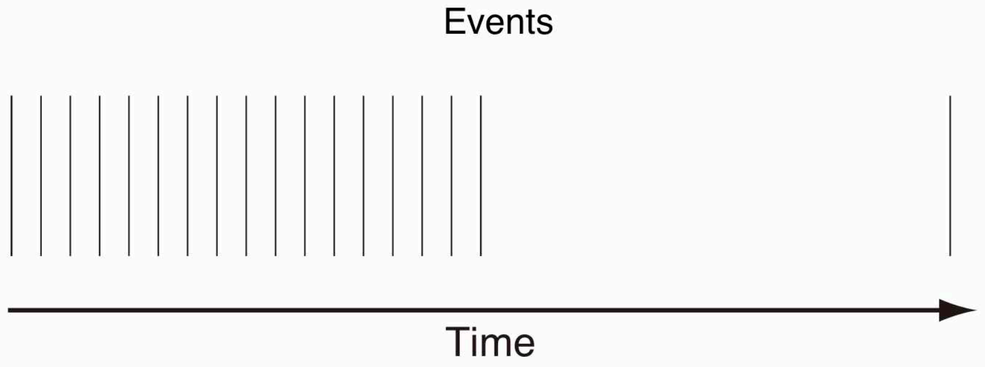
Perceived time duration depends upon the number of perceived events.

Makoto Ichikawa (Chiba University, JAPAN)
Satoshi Okazaki (Chiba University, JAPAN)

Temporal illusions

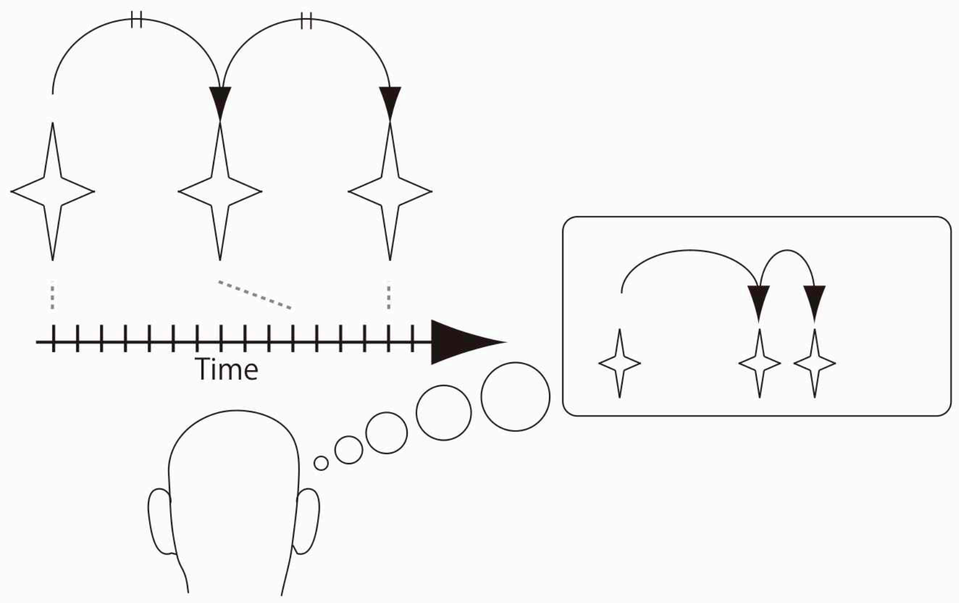
Filled duration illusion:
Is the duration of two movie the same?

• The duration that is filled with more events are perceived to be longer than the duration with few events. Observers tend to misperceive the duration of the movie that is played with a high-speed is longer than the duration of movie that is played with a normal speed, or with a low-speed.



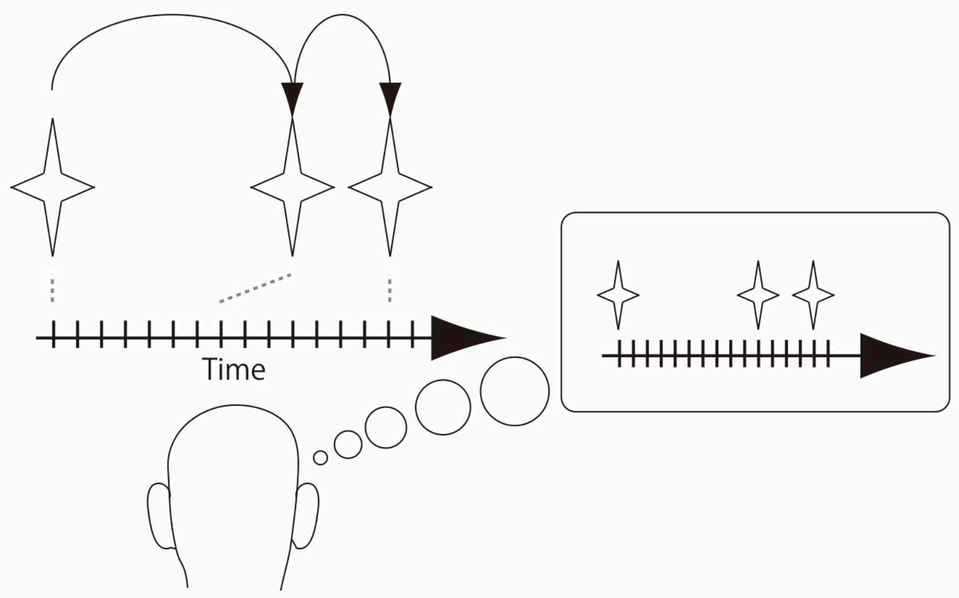
Tau (τ) effect:
Is spatial interval constant?

• If the distance from one stimulus to the next is constant, but the time elapsed from one stimulus to the next is longer, observers tend to perceive the interval that has the shorter temporal interval as also having a shorter spatial interval.



Kappa (κ) effect:
Is temporal interval constant?

• If the time elapsed from one stimulus to the next is constant, but the distance from one stimulus to the next is longer, observers tend to perceive the interval that has the shorter spatial interval as also having a shorter temporal interval.



Dancing dots illusion:
Is there lag between white dots and blue/red circles?

• Processing of stimuli with weak intensity is slower than the processing of stimuli with strong intensity. Intensity of circles that consisted of blue or red dots on black background is weaker than that of large white dots. Therefore, when the whole stimuli are moving, you will see the lag between white dots and blue and red circles. This lag is caused by the difference in processing time in accordance with the stimulus intensity.