

In this study, researchers explored how perceiving and understanding synchrony (simultaneity) relates to combining information from different senses (multisensory integration). Multisensory integration occurs when information from various senses, such as sight and hearing, is merged to form a unified perception. As an example of multisensory integration, researchers used the McGurk effect. In the McGurk effect, people hear a different sound than what they see. For instance, if someone says "ba" but forms the lips for "ga," many people hear "da." This happens because the brain integrates visual and auditory information. The researchers discovered that participants often experienced the McGurk effect even when they did not perceive the sounds and images as simultaneous. This suggests that perceiving synchrony is not necessarily required for multisensory integration. The brain can combine information from different senses even if they do not occur exactly at the same time. Additionally, the researchers found that incongruent information disturbs the assessment of synchrony. This shows that there is a complex relationship between how we perceive time (temporal processing) and how we integrate information from different senses (multisensory integration). The results support a more flexible view of multisensory integration. The brain can combine different features of things at different times, rather than requiring simultaneity as a condition for integration. This challenges the traditional notion that simultaneity is necessary for integration. The research raises new questions about how visual and auditory information are processed together. Further research is needed to better understand this relationship, including how language differences play a role. A better understanding of these processes can also aid in investigating certain conditions.