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Viewing naturalistic social events in movies activates large-scale brain networks

Title of the dissertation	Brain Mechanisms Underlying Perception of Naturalistic Social Events Luonnollisenkaltaisten sosiaalisten tapahtumien havaitsemisen aivomekanismit
Contents of the dissertation	<p>This dissertation studied how our brain processes social information while we view complex audiovisual stimuli such as movies. Additionally, the thesis investigated how the processing of social information and the related brain activity changes when individuals adopt a role that directs their attention to particular stimulus content.</p> <p>Typically, brain functions have been studied in very simplified experimental conditions. This has made studying some complex brain functions challenging. The studies in this dissertation demonstrate that it is possible to study brain processes underlying perception of simple sensory features, such as sound loudness or visual contrast, and high-level social content, such as language and faces, and even high-order tasks, such as adopting a different perspective toward the movie events during highly complex stimulus conditions.</p> <p>The results of the studies indicate that processing of social information relies on multiple brain networks. The results suggest that the posterior part of the temporal lobe is particularly important for social perception, as it seems to integrate a wide variety of social information from other wide-spread brain networks. The activity of the region also becomes more reliable between people while they focus on social content of movies compared to non-social information. Other brain regions participating in social perception showed activity patterns that could be used to differentiate people based on which perspective they were adopting during movie viewing. The research approaches described in this thesis could further be applied to the study the brain basis of abnormalities in social cognition, and methods developed during the thesis have already been applied in the study of individuals with autism.</p>
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