



SANS

Social & Affective Neuroscience Society



Abstract Book

April 10 - 13, 2024
Toronto, Canada



socialaffectiveneuro.org | [#SANS2024](https://twitter.com/SANS2024) | [@sans_news](https://twitter.com/sans_news) 

These predictions persisted after controlling for various factors, including head motion, gender, Wave 1 loneliness, depression, housing situations, and social interactions during physical distancing.

This data-driven approach provides initial evidence that functional brain networks during social perception can predict changes in loneliness. Lonelier individuals exhibited increased connectivity in brain systems involved in cognitive and attentional control processing of social stimuli, suggesting that greater cognitive sensitivity to social cues may contribute to vulnerability to loneliness amid social stressors.

P1-F-58 - Accurate Perceptions of Leadership in Group Conversations

Landry Bulls¹, Mark Thornton¹

¹*Dartmouth College*

How accurate are people at perceiving who is leading the conversations in which they're embedded? In this study, we recorded 16 unconstrained four-person conversations (N=64) using face-worn microphones. Participants completed pre- and post-conversation survey items that included big-5 personality questionnaires and measures of self- and other-leadership and conversational control. A state-of-the-art deep neural network was used to automatically transcribe each conversation, allowing us to calculate how many words each group member spoke. We analyzed the associations between these variables to assess the accuracy of people's perceptions of conversation leadership. The results provided convergent evidence for the accuracy of these perceptions. First, there was a high consensus among conversant ratings about who (else) led the conversation. Second, participants' ratings of their own control of the conversation were robustly associated with the average ratings of their leadership provided by the rest of their group. Third, both self-rated and other-rated leadership were associated with objective measures of a target persons' spoken word count during the conversation. And fourth, participants' pre-conversation extraversion scores predicted post-conversation leadership ratings at the end of the study. Together these results suggest that people accurately track the spontaneous emergence of conversation leaders in unstructured informal conversations.

P1-F-59 - Investigating conspecificity and relevance effects on voice identity discrimination in dog and human brains using fast periodic auditory stimulation

Dorottya Szilvia Rácz¹, Boglárka Morvai¹, Attila Andics¹

¹*Eötvös Loránd University (ELTE)*

BACKGROUND, AIMS: The ability to discriminate voice identities is essential in many social interactions. Social mates' vocalizations are processed preferentially by many species' brains, but the unique contributions of (hard-wired) conspecificity and (experience-modulated) relevance to this processing preference are unclear. The special relationship of dogs and humans who have shared the same vocal-social environment for thousands of years provides a unique study case to assess the role of these two principles: for companion dogs, humans are highly relevant; for humans with dogs, dogs are more relevant than for humans without dogs. Previous behavioral studies have shown that both dogs and humans can discriminate conspecific individuals by their voice. But a direct comparison between dog and human voice identity discrimination is lacking in both species.

METHODS: In the present study, we investigate the effects of conspecificity and relevance on voice identity discrimination in awake, unrestrained, cooperating dogs and humans using a novel method: a fast periodic auditory stimulation (FPAS) paradigm to measure neural entrainment to rhythmic voice identity changes using non-invasive electroencephalography (EEG). Participants (20 dogs, 20 humans) are presented with short vocalizations: one sound at every 250 ms. Dog sounds are short barks, human sounds are short "ha" utterances. There are four conditions: structured/random dog/human sounds. Every condition is presented in one-minute blocks, with 4 blocks per condition, and with the order of the total 16 blocks pseudorandomized. Structured conditions follow an oddball pattern: two sounds from the same vocalizer are always followed by a third sound from a different vocalizer (AABAAB...), resulting in a base frequency (4Hz, defined by all sounds) and a target frequency (1.33Hz, defined by oddball sounds). Random conditions are used as controls: they contain the same stimuli as their structured counterparts, but no oddball pattern.

ANALYSIS PLANS: We assume that brains only entrain to the target frequency if voice identity discrimination takes place, and only for structured conditions. We will perform frequency domain analyses, calculate Z-scores to define whether power at the frequencies of interest is significantly higher than at the surrounding frequencies, and compare conditions. More efficient voice identity discrimination will be reflected in greater entrainment (i.e. greater power) at the target frequency.

PREDICTIONS: We predict that if processing preferences in voice identity perception are driven by conspecificity, then both dog and human brains will discriminate conspecific voice identities more efficiently than heterospecific ones. But if such preferences are driven by relevance, then dogs will also efficiently discriminate human voice identities; and humans with dogs will discriminate dog voice identities more efficiently than humans without a dog. **FUNDING:** ERC 950159, NAP2022-I-3/2022, ELTE.

P1-F-60 - Perceiver popularity inversely influences spontaneous neural encoding accuracy of familiar others

Joao Guassi Moreira¹, Kiho Sung², Yoosik Youm², Yixuan Lisa Shen¹, Sunhae Sul³, Carolyn Parkinson¹

¹*University of California, Los Angeles*, ²*Yonsei University*, ³*Pusan National University*

BACKGROUND & AIM: Much of human behavior is guided by efficiently and spontaneously processing social stimuli. Popularity is a key type of social information related to status and influence that is encoded in neural representations that are spontaneously activated when viewing familiar others' faces. Prior work suggests accurate encoding of such information varies substantially across perceivers. Yet, little is known about how trait-level variables impact how perceivers spontaneously represent information about their peers when encountering them, and in particular, how a perceiver's own social status relates to how readily and accurately they encode social information about others. We addressed this gap by examining how perceiver popularity affects

2024 Social & Affective Neuroscience Society Conference

<https://socialaffectiveneuro.org/past-conferences/>