

2-064 | PERSON-KNOWLEDGE IMPACTS SELECTIVE ATTENTION TO PERCEPTUAL INFORMATION: EVIDENCE FROM ERPS AND FUNCTIONAL NETWORK CONNECTIVITY

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Descriptors: Person Perception, ERPs, Functional Connectivity Analysis

This pre-registered study examined how both perceptual cues (race) and person-knowledge (social status) simultaneously influence attention to faces during social categorizations. Participants ($n = 26$, US-based White identified) categorized faces by race and social status. We employed univariate ERP analyses to capture attention (as indexed by the P200) and multivariate functional network connectivity analyses to assess changes in an attention/executive function network (AEF; based on estimated ACC, IPS, VLPFC, DLPFC locations). We found enhanced P200s when categorizing race compared to status. In addition, we observed greater P200s to high-status White faces compared with high-status Black faces when categorizing by race. This effect was mirrored in the functional connectivity analyses. Within the AEF network, we observed greater functional connectivity in the beta band across the selected locations as a function of perceived race, status, and categorization task. Specifically, we observed greater functional connectivity in the AEF network to high-status White faces relative to low-status White faces when participants categorized faces by their race. These findings suggest that when asked to focus on race, attention is still modulated by status knowledge. Therefore, we obtained convergent evidence that person knowledge shapes attention even when focus is direct at a perceptual category.

2-065 | REWARD POSITIVITY-LOCKED HYPOACTIVATION OF VMPFC IN MAJOR DEPRESSIVE DISORDER: AN MEG STUDY

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Descriptors: Reward Positivity, MEG, Major Depressive Disorder

The Reward Positivity (RewP) is an ERP component elicited approximately 250–350 ms following rewarding outcomes. This signal is modulated by reward prediction error (RPE) indicating that the information content

of rewards affects the RewP. The RewP is also smaller in major depression (MDD+), yet in spite of attenuated reward responsivity, individuals with MDD tend to show intact reward learning. This implies that individuals with MDD are still capable of recognizing and learning from reward; however, they either do not find the rewards as rewarding as the control group or they do not care about receiving a reward. To examine the affective (MDD+) and information content (RPE) contributions to the RewP, we collected MEG data on sixty participants (MDD+ = 32, Control = 28) while they completed a probabilistic selection task (PST). Using minimum norm estimation (MNE), we found that activation in the time region of interest was greatest in ventromedial prefrontal cortex (vmPFC), in line with the vast majority of fMRI research on valuation. After identifying the source of this signal, group differences were examined, showing that activation was diminished in the vmPFC in the MDD+ group ($p = .044$, $d = .545$). We also found that larger RPE was associated with greater activation of the lateral orbitofrontal cortex (IOFC) in both groups, providing further evidence that *information content* and *affective value* of a reward may be processed by parallel subsystems. These findings indicate that anhedonia may drive diminished vmPFC activation specifically related to valuation following reward.

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2-066 | DENSE SAMPLING APPROACHES IN PSYCHOPHYSIOLOGICAL RESEARCH: CURRENT REALITY AND FUTURE POSSIBILITIES FOR STUDYING REAL-WORLD BEHAVIOR

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Descriptors: intensive longitudinal methods, experience-sampling, multimodal data

Human behavior is dynamic, playing out across multiple timescales. Whereas brain activation in response to environmental cues (e.g., lit cigarette) elicits craving almost immediately, withdrawal symptoms manifest across weeks, and alterations in reward-related neurocircuitry leading to drug-related reorganization of the brain takes longer. Although advances in computer portability have made it possible to take psychophysiology outside the lab, granular time scales are rarely used to study brain-behavior relationships *in situ*. This is unfortunate because

intensive longitudinal methods can be used to densely sample individuals in their everyday lives. Intensive longitudinal methods can help uncover individuals' unique lived experiences, the biopsychosocial correlates of those experiences, and characterize brain-behavior dynamics in everyday life—advancing both theory and applied research. By combining intensive longitudinal methods, such as smartphone experience-sampling, with traditional brain modalities (e.g., fMRI, EEG), researchers can overcome the limitations to each. We focus on advancements in combining smartphones and scanners; opportunities for incorporating intensive longitudinal methods into psychophysiological research; and discuss future directions to combine smartphones, scanners, and intensive longitudinal methods with a focus on digital health applications. These approaches hold promise for informing the design of ecologically-relevant personalized interventions and smarter technology that gives more accurate information about people's wellbeing.

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2-067 | THE DEARTH OF SAMPLE DEMOGRAPHIC DESCRIPTION AND RACIAL REPRESENTATION IN CLINICAL PSYCHOPHYSIOLOGICAL RESEARCH

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Descriptors: Equity, Social justice, Individual differences

Generalizability is substantially limited by a lack of racial representation and sample demographic descriptions in psychophysiology research. Researchers, including past SPR presidents, continue to explicitly call for increased and more nuanced reporting. Addressing these concerns is especially prudent for clinically relevant findings to

accurately represent populations of interest and thus inform treatment. Here, we examine sample demographic reports in a preliminary literature review of 3 prominent academic journals that often include psychophysiological measures—*Psychophysiology*, *Journal of Psychopathology and Clinical Science (JPCS)* (formerly *Journal of Abnormal Psychology*), and *Clinical Psychological Science (CPS)*. We coded articles containing studies with psychophysiological measures across 3 decades (1997–2020) for type, sample demographics and psychophysiology method(s) used. Less than 25% of empirical articles in *Psychophysiology*, 50% in *JPCS* and 75% in *CPS* reported race and/or ethnicity in the main text or supplemental materials. Most samples predominantly consisted of White, non-Hispanic participants. Though the description of samples varied by factors such as journal, year, and psychophysiological measure, reporting remains generally inadequate. Future research should more broadly assess journals and psychophysiology articles to fully characterize the issue. Researchers should continue to prioritize equitable representation in their samples and journal policy should assert the inclusion of such demographics – especially for clinically relevant implications.

2-068 | EEG AND MEG SOURCE ANALYSIS OF EMOTION AND FEATURE-BASED PERCEPTION

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Descriptors: Emotion, Perception, ERP.

The Early Posterior Negativity (EPN) and Late Positive Potential (LPP) are reliably modulated by emotionally arousing scenes. In two previous 64-channel EEG studies, we found that, unlike the LPP, the EPN is strongly modulated by exposed human bodies. To resolve potentially distinct cortical sources for body-specific and arousal-driven aspects of the EPN, we conducted scene perception data in healthy college-aged samples with 140-channel MEG ($n = 42$) and 128-channel EEG ($n = 16$, target $n = 40$). The scene content include erotica, sports victory, nudists, Black and White faces, neutral people, threatening people, and mutilations. In the MEG data, a late (300–900 ms) temporoparietal modulation of cortical activity was strongest during erotic scene perception, followed by mutilation and nudist scenes. Early reactivity (150–300 ms) varies across scene content, but reliability is unclear at this stage of analysis. In the EEG data, the LPP is most strongly modulated by erotic scenes, followed by nudist and mutilation scenes. EPN modulation replicated prior findings, with the strongest modulation driven by