

Stefanie Lis

Head of the Research Group 'Experimental Psychology', Department of Clinical Psychology, Central Institute of Mental Health, Medical Faculty Mannheim, Heidelberg University

Personal information and contact

Date of birth: August 12, 1963
Gender: Female
Phone: (+49) 621 – 1703-4024
Fax: (+49) 621 – 1703-6505
E-Mail: stefanie.lis@zi-mannheim.de

1 Academic Profile

Since starting my professional career, I am a convinced experimental psychologist with the aim to contribute to the understanding of the cognitive mechanism underlying mental disorders. Experimental work in the domain of cognitive neurosciences allows differentiating cognitive, social-cognitive and affective functions impaired in people with mental disorders from those preserved independently of a psychopathological condition. This combines the identification of dysfunction with acknowledging unimpaired or even superior abilities suggesting starting points to strengthening resilience. From my point of view, this constitutes the base for stimulating the development of psychotherapeutic and training interventions targeting specific mechanism. At the core of the experimental approach is the assumption that causal relationships can be uncovered by careful manipulation of variables of interest while simultaneously eliminating or controlling alternative explanations for observed changes in functioning. While this is at the core of experimental work since Wilhelm Wundt founded the first Institute for Experimental Psychology in 1897, acknowledging that small changes in experimental setting might deeply affect the involved processes and in consequence the related finding, is still an important feature of scientific work. I strongly believe that paying attention to this aspect of scientific work might help to understand inconsistent research findings as they are currently in the focus of the replicability crisis debate.

I studied psychology at the Department of Psychology at the Heinrich Heine University at the Faculty of Mathematics and Natural Sciences in Düsseldorf, where I learned from the start that mind and body are two sides of the same coin and that – thanks to Joachim Krauth - data analyses is an important module of scientific work. After receiving my diploma in 1990, my first studies dealt with cognitive dysfunction in schizophrenic disorders at the Psychological Institute in Düsseldorf, a topic with which I kept in contact for the following years at the Psychiatric University Hospitals in Freiburg and Giessen. Early on, I became aware that small experimental details fundamentally influence the cognitive processes induced by a task and affect the interpretation of changes seen in mental disorders. Examples are the consistency of stimulus-response mapping and the predictability of the temporal structure in working memory tasks, or confounds of features in stimuli such as the emotional content and trustworthiness in facial stimuli. While such experimental details might seem trivial in the context of broader research topics, I strongly believe that when being neglected in experimental settings they might lead to misinterpretations of the mechanisms underlying changes observed in individuals with mental disorders and contribute to inhomogenous findings.

During my academic life, I made some side trips such as shifting from cognitive psychology to sleep research. At the Department of Psychiatry at the Albert-Ludwigs-University of Freiburg where I worked as a research assistant from 1991 to 1995, I extended my focus on schizophrenic disorders by being introduced to the relevance of sleep disorders. Finally, I headed the Laboratory for Sleep Medicine and Research in Freiburg. During this time, I gained experience in managing a core facility as well as larger research projects, and supervising multidisciplinary teams in the context of research

projects but also clinical diagnostics and had the opportunity to extend my methodologies skills. I profited from this time when later establishing the ZIPP core facility units of psychophysiology, virtual reality and magnetoencephalography at the CIMH. However, with moving to the Centre for Psychiatry, Justus-Liebig-University, Giessen, in 1995, I returned to my core theme, that is, experimental cognitive research. During the first years in Giessen, I continued my work with Stephan Krieger on decomposing cognitive functions in schizophrenia, now with a focus on identifying different profiles of beneficial effects and aversive side effects of antipsychotic substance by means of behavioural indices and electrophysiological measures in experimental tasks. Moreover, I focussed on maze solving behaviour about which I also wrote my PhD thesis in 2000. Peter Kirsch as the new head of research group Cognitive Neurosciences in 2005 introduced me to functional magnetoresonance imaging opening new possibilities to observe different aspects of brain activity compared with electroencephalography during experimental tasks. With the increasing awareness of the high prevalence of Borderline Personality Disorder in psychiatric patients, I formed the research group on Borderline Personality Disorder (BPD) in 2007. Here, I extended - led by the psychopathological profile of this clinical group - the investigation of cognitive processes to studying social-cognitive processes together with a multidisciplinary team. Since 2011, I am working at the CIMH where I did my habilitation in Clinical and Experimental Neurosciences in 2017 and received an adjunct professorship at the University Heidelberg in 2020. At the CIMH, I head the research group of Experimental Psychology at the Department of Clinical Psychology after transferring in 2020 with the retirement of Martin Bohus from the Department of Psychosomatic Medicine (later Institute of Psychiatric and Psychosomatic Psychotherapy (IPPP)). Due to the close exchange with Martin Bohus as head of the department and his high interest in improving psychotherapeutic interventions in BPD, this position opened new opportunities to translate findings from experimental work in the domain of social cognition into interventions. Because of the experimental work of the last years (supported by the DFG LI 1649/2-2, GRK 2350/B3), the perspective on interpersonal dysfunction in BPD changed. It received a stronger focus on impairments in the domain of biases in the perception and appraisal of social connectedness, its moderation by self-esteem and its consequences for interpersonal behaviours such as interpersonal trust, reciprocity or behavioural imitation. These findings on mechanism underlying interpersonal impairments in BPD formed the basis for my development and implementation of a computer-assisted social-cognitive training game and influenced the development of DBT-SE, a revised version of dialectic-behavioural therapy (DBT) which is one of the well-established psychotherapeutic interventions in BPD. Currently, I am a member of an international team including the CIMH, the CAMH, Toronto and the University Bochum, evaluating the DBT-SE in a pilot study for which I designed and implemented experimental tasks as outcome measures.

Together with colleagues from Italy and Hungary I founded the Section for the Study of Interpersonal Functioning and Social Cognition in Personality Disorders of the European Society for the

Study of Personality Disorders (ESSPD) in 2019. The aim of this section is to create synergies between clinicians and researchers from different disciplines to increase our understanding of the mechanism driving impairments in personality disorders.

While experimental studies in BPD are still the focus of my work collaborations with other departments of the Medical Faculty Mannheim of the University Heidelberg such as the Department of Obstetrics and Gynaecology and Department of Medicine II offered the possibility to investigate mental disorders and the relevance of changes in mental processes in the context of somatic disorders. I appreciate learning from colleagues from somatic medicine while contributing to the collaborations by methodological expertise and the ability to translate symptoms into task settings.

Throughout my work, I had the privilege to learn from senior colleagues such as Stephan Krieger, Peter Kirsch and Petra Netter to mention some. Moreover, I supervised many young colleagues from different disciplines during different phases of their career profiting from their enthusiasm, curiosity and thirst for knowledge resulting in many stimulating discussion in the group. I take pride in seeing some of them prospering in their own autonomous scientific careers today and enjoy keeping in touch with them.

2 Key output of the years 2020 to now

With the start of the Corona Pandemic experimental work had to deal with some challenges. These refer not only to issues in investigating participants in laboratory settings, but also to confounds of overt and covert behaviours. Social distancing and a high unspecific psychological distress can be assumed to affect social cognition particularly regarding the experience of social connectedness. In our research group, we took the pandemic as a natural experiment and studied the effects of measures such as wearing face masks and avoiding physical contact in individuals with BPD and healthy controls (Biermann et al., 2021, Biermann et al. 2022, Schulze et al. 2022). We observed effects of the pandemic in increasing loneliness and wearing face masks biasing social judgments such as the recognition of social cues associated to forming affiliations in experimental tasks. Although one has to interpret our findings with care due to potential selection biases, they also suggest that people with BPD had not been affected more strongly by the recommended behaviours to avoid a spreading of the infection. Beyond this, our data revealed the importance of appraising positive social touch for the sense of belonging, the relevance of positive emotional facial features for more complex social judgement and emphasized that interpersonal trust affects not only the acceptance of, but also the compliance with measures such as keeping physical distance and wearing face masks. Thereby, they bridge the gap between experimental tasks and every-day functioning. Additionally, they contributed to the understanding of interpersonal problems in BPD in general while simultaneously taking the burden associated with the pandemic into account. Moreover, they continued the work of our research group on the interplay between different social judgments (Galinsky et al. 2020).

The new situation of a pandemic in Germany, confronted all people with a so far unknown and threatening situation. To support people in dealing with this, the CIMH and the Ministerium für Soziales und Integration Baden-Württemberg initiated a phone hotline combined with a support website at the beginning of the pandemic in April, 2020 (for further details see Vonderlin et al. 2022, <https://www.psyhotline-corona-bw.de/>). I organised and supervised the set up of this website.

Finally, we were able to publish the first findings of the collaboration between my research group and the Department of Medicine II on inflammatory bowel disease (Atanasovas et al., 2021, 2022; Thomann, Knödler et al. 2021) that was initiated and supported by a project in the context of a DFG funded graduate school (GRK 2350/C3). A PhD student of my research group, Konstantina Atanasova, who I supervised in these studies, finished her PhD in 2022. A MD student who I co-supervised, Laura Knödler, has submitted her thesis. Konstantina Atanasova has now taken a research assistant position at the Department of Medicine II and will take an important role in the collaboration between my research group and the research group of Wolfgang Reindl at the Medical Faculty Mannheim, University Heidelberg while simultaneously pursuing her own scientific career.