

Research

Basic research for better treatment methods in psychotherapy

The psychologist and neuroscientist Dr Marie-Luise Schreiter advocates closer cooperation between practising psychologists and psychotherapists on the one hand and neuroscientists and experimental psychologists on the other. In July, she is organising an international conference entitled: "Bridging psychological practice and basic research". This is sponsored by the Heidelberger Akademie der Wissenschaften (Heidelberg Academy of Sciences and Humanities).



Ms Schreiter, you conduct basic research in the Department of Psychology. Your focus is on behavioural and cognitive control.

I am generally interested in how emotional states affect the control and guidance of our attention and our behavioural control. Understanding this is not only important for healthy people – it is also essential for understanding psychiatric problems. This is because a number of diagnoses, including ADHD, autism, as well as depression and anxiety disorders, are associated with difficulties in regulating emotional states and controlling the corresponding effects of emotion on behaviour and cognition.

In treatment and clinical practice, the focus is often on how people with psychiatric disorders can regain more control over their emotions or their emotional processing.

Many psychotherapists and clinicians rely on communication strategies related to (visual) perception and imagination for this purpose - and very successfully.

In Tübingen, I would like to conduct more in-depth scientific research on methods that change control over body and emotion perception. To do this, I would first like to document in a database how good people are at controlling their imaginative ability. In the next step, I will investigate and document how emotions can be modulated, i.e. changed, in people and whether this has a measurable effect on controlled behaviour.

What can the change in emotion perception through communication strategies look like in concrete terms?

In people with anxiety disorders, for example, there is often a change in the perception of (ambiguous) facial expressions. These patients tend to classify facial expressions that are actually neutral as threatening or emotionally negative. In therapy, one might try to trigger the patients' perception with detailed stories, verbal strategies involving imagination techniques or suggested experiences, or to modulate it in such a way that they perceive this face as less threatening in the next encounter.

This way, some patients may regain a little more control over their feelings: the negative feelings are still felt, but at the level of perception, these people then understand why they are going in with a feeling of fear that is the result of their subjective interpretation of the particular situations

or encounters. As a result, the feeling of threat is less pronounced because it seems more controllable.

These are therapeutic strategies that therapists have been working with for a very long time. But there is still very little scientific research on why certain strategies work well or for which people certain strategies work well or poorly.

You have worked a lot on perception in your scientific career. Your doctorate was in neurophysiology, and you also trained as a systemic psychotherapist.

I studied and carried out research in England before moving back to do my doctorate in Germany. I did a lot of basic research and mainly dealt with perceptual phenomena such as synaesthesia. Synaesthesia is not a psychiatric disease, but a fascinating type of perception: two senses that normally function separately are connected with each other. The expression can be very different and is highly subjective. There are around 80 different types of synaesthesia. For example, these people may associate the day of the week Friday with the colour blue. Others associate the sound of a trumpet with the taste of strawberries.

Later, I did an internship with a clinical psychologist and learned that perception can also be altered in psychiatric illnesses. After finishing my studies in England, I did systemic training as a psychotherapist and subsequently worked in a clinical setting for several years - parallel to my research work.

I try to keep asking myself the question: what is the social relevance of my research? How can my research be incorporated into new treatment methods for the benefit of patients?

The current mental health crisis as a result of the Coronavirus pandemic - with very many psychiatric illness challenges - has prompted me in this approach.

That is why we advocate a stronger exchange between basic research and clinical practice or therapy...

Exactly. In clinical psychology and experimental psychology, even simple constructs or terms such as emotional regulation, control, stress or arousal currently have different meanings or trigger different associations. In basic research we often measure a construct in a way that psychotherapists do not find very useful in practice.

Constructs in experimental psychology are not directly observable characteristics or dimensions that have to be measured or inferred on the basis of a (behavioural) observation or a test, such as intelligence or creativity. But if the meaning of a term or construct is not clear - how can I measure it at all? What do we need to measure in a person in order to be able to define (objective but also subjective) standards, whether this person is suffering, how much this person is suffering, what form of treatment or therapy this person needs?

To refine these standards, we need much closer cooperation between practising psychologists/psychotherapists and neuroscientists/experimental psychologists.

In July you are now organising an international conference in Heidelberg entitled "Bridging therapeutic practice and basic research"...

Although psychotherapeutic practice and psychological science both emerged from neurology, differences in terminology, working concepts and perspectives have meant that their collaboration diminished rather than increased during the 20th century. Indeed, clinical psychologists have developed a metaphor-rich language of the mind and brain, while cognitive neuroscience and experimental psychology have built up a detailed database of brain-behaviour relationships. But how to translate the data on brain-behaviour relationships to clinically relevant concepts and interventions? Unfortunately, this question is rarely discussed.

Psychological problems affect a person's health at multiple levels, altering underlying physiological, perceptual, emotional and cognitive processes. We therefore need a forum for interdisciplinary exchange between experts in basic brain research on the one hand and practitioners and clinicians on the other.

The conference I am organising aims to bring together both experienced and young researchers in the field of perception, cognition and emotion. At the same time, experienced clinicians as well as young therapists are invited to share their practical knowledge as well as their experience with patients about successful behavioural and psychological changes via psychotherapy.

This exchange will help to identify future research directions, formulate new valuable research questions for basic science, and re-evaluate practice guidelines for clinics and therapy.

I am very proud and also grateful that the Heidelberg Academy of Science is generously supporting this conference. The Academy of Science is funding the travel of the keynote speakers, providing its beautiful premises in Heidelberg and help with the organisation.

The Interview was conducted by Maximilian von Platen

The gap between the disciplines: Bridging therapeutic practice and basic science

International Conference, Heidelberg, July 10th - 12th 2023

Venue and website

- Heidelberg Akademie der Wissenschaften, Karlstraße 4, 69117 Heidelberg
- [Conference-Website](#)

Contact and Registration

- winconference@psycho.uni-tuebingen.de
- [Link zur Registrierung](#)

The main objectives of the conference include:

- Promoting exchange and collaboration between researchers and practitioners.
- Aligning working concepts and constructs between disciplines of scientific research and therapeutic practice.
- Development of research hypotheses to identify more targeted and innovative interventions

Call for papers:

We very much welcome contributions (talks or posters) from early career researchers who wish to contribute to the exchange between psychological disciplines. Due to the limited availability of places, we will give preference to registrations with a contribution, but there are also some places available for

registered guests without a contribution. We will cover travel and accommodation costs for participants whose paper has been accepted as a presentation in one of the symposia (topics for presentations could include: computational psychiatry, interventions, emotion regulation, subjective experience, underlying mechanisms of cognition-emotion interactions, psychotherapy). Participants submitting a presentation are therefore requested to submit an abstract as well as a brief explanation of how their contribution is valuable for the collaboration between scientific research and therapeutic practice.

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