



Editorial: Experimental Psychopathology: Defining the Field

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We are most happy to introduce this special issue on the identity of experimental psychopathology (EP) as a research domain. Our main aim is to provide readers with a collection of papers that gives insight in the theoretical foundations of EP and its added value relative to other disciplines. Unfortunately, research on psychological disorders is still financially under-supported (Holmes, Craske, Graybiel, 2014), so a case can be made for the necessity of putting EP in the spotlights. Needless to say, we are proud to have a collection of papers by such prominent researchers.

The world of psychological science has previously been described as a group of islands, each home to a tribe or subdiscipline, like social psychology, health psychology, or, indeed, EP (Hughes, De Houwer, & Perugini, 2016). According to Kimmel (1971, p. 7), the activities of the tribe of EP researchers can be described as (1) “the experimental study of pathological behavior” and (2) “the study of experimental pathological behavior”. The first activity concerns studying people who suffer from a psychiatric disorder by use of experimental methodology, while the second activity concerns creating time-limited “mini-pathology” in healthy people by use of well-validated experimental models (Davey, this volume; van den Hout, Engelhard, & McNally, this volume).

Like all tribes, EP researchers have developed their own culture. This culture includes a belief system that consists of a set of (interrelated and sometimes hidden) assumptions. As a general introduction to the special issue, we highlight some of these assumptions below and link them to the articles in this volume.

EP researchers typically think of the human mind as a collection of cognitive processes that mediate how environmental input results in behavior (e.g., attentional processes or habit formation). This is nontrivial, as it

contrasts with other views on what determines behavior (e.g., the willpower of a free self, the power of the Gods, or the position of the stars). Crucially, it is assumed that a deviation in one or more of these cognitive processes is what leads to pathological behavior (e.g., attentional bias or excessive habit formation). Because the processes themselves are nonetheless shared by healthy people and patients alike, it makes perfect sense to the EP researcher to (sporadically) rely on healthy people as research participants (Davey, this volume; van den Hout et al., this volume). It is not like healthy people are from Mars, while patients are from Venus, although some journal editors still systematically reject studies that rely on non-clinical samples (Davey, this volume). What is more is that it is sometimes even necessary to rely on healthy participants. For example, if one wants to find out whether a particular manipulation leads to the symptoms of obsessive compulsive disorder, one needs to test this in participants who do not show these symptoms yet (Gangemi & Mancimi, this volume).

Guided by the assumption that psychopathology can be explained by the same processes that regulate normal behavior, EP researchers typically rely on explanatory constructs that have their origin in fundamental psychological research (Davey, this volume; Waters, LeBeau, & Craske, this volume). One could consider this a constraint on the creativity of the EP researcher: It is not allowed to invoke whichever explanans for pathological behavior, because the explanans has to stem from fundamental psychology. However, this constraint is obviously beneficial when it comes to doing good science: This way, one can avoid explaining psychopathology by use of “esoteric constructs” or by “simple redescriptions” of the to-be-explained pathology, as is unfortunately still seen at times (Davey, this volume). This primacy of fundamental psychology is also of importance when considering the interplay between EP and domains such as neuroscience or genetics (Lonsdorf & Baas, this volume). Despite the common claim that behavioral neuroscience and genetics will surpass the knowledge that is offered by EP, these sciences are logically dependent on EP (Abend, 2016). For instance, if one wants to carry out a brain imaging study on how guilt is related to checking behavior in obsessive compulsive disorder patients, one not only needs a definition of guilt, but also an experimental procedure to induce it (Gangemi & Mancimi, this volume). These challenges (will always) require psychological theory and methodology or, in other words, a science of mind and behavior. As such, behavioral neuroscience and genetics can only be as good as the psychological theories and procedures it is based on.

Having set the scene, we can now sketch what a possible (and maybe radical) Utopia looks like for EP researchers. Imagine a patient coming in with a request for help. As a first step, the patient would participate in a test battery. This test battery would not only consist of an interview, but also of behavioral tests that can circumvent the limitations of self-report (van den Hout et al., this volume). Such a test battery could even be administered before onset of any symptoms, allowing for effective prevention. Based on the test results, the therapist would know which specific set of cognitive processes go awry in the patient, just like one uses a blood test in a medical context. The next step would be to offer the patient a tailor-made program that allows us to remedy those processes that cause suffering. To this end, a set of well-validated training tasks would be available. For example, if testing of a certain patient would indicate deviations in the processes of habit formation and autobiographical memory, the therapy might consist of a set of (computerized) tasks that allow us to change their maladaptive characteristics. Interestingly, some of these tasks are already within reach today (e.g., Ginat-Frolich, Klein, Katz, & Shechner, 2017; Takano, Gutenbrunner, Martens, Salmon, & Raes, 2017). In a maybe less radical Utopia, the main goal of the EP researcher is not to reform the therapeutic process completely, but to successfully update long-existing therapies based on insights from experimental laboratory research. For example, targeting the inhibitory learning processes that are believed to underlie extinction learning seems a promising strategy to enhance the effects of exposure therapy (Waters et al., this volume).

As will be clear from the above, the EP philosophy is at odds with the use of strict diagnostic categories. We acknowledge that any classification system can be (fairly or unfairly) criticized, irrespective of whether its subject is psychopathology, music, or animals. Michel Foucault famously used the following animal categories put forward in an old Chinese encyclopedia (that is, according to a story by Jorge Luis Borges) to make this point intuitive: (1) belonging to the Emperor, (2) embalmed, (3) tame, (4) suckling pigs (5), (6) sirens, (7) fabulous, (8) stray dogs, (9)

included in the present classification, (10) frenzied, (11) innumerable, (12) drawn with a very fine camelhair brush, (13) etcetera, (14) having just broken the water pitcher, (15) that from a long way off look like flies. One may wonder whether or not the DSM-5 does a better job at classifying psychopathology than this Chinese encyclopedia does at ordering animals (Davey, 2015), but in the Utopia of the EP researcher we can get rid of the classification approach altogether. Rigid diagnostic categories create artificial barriers between patients and healthy people, on the one hand, and amongst patients, on the other hand. For example, habit formation is something we all do, but in people who do it a bit more it can under unfortunate circumstances lead to addiction, to excessive rumination, or to symptoms characteristic of obsessive compulsive disorder (Gillan et al., 2014; Watkins & Nolen-Hoeksema, 2014). It is as if the pathology is a kind of parasite that feeds off the otherwise adaptive process of habit formation. Once the therapist would have determined that habit formation is the process that is leading to complaints, therapy that aims to temper this process could start without further need for a diagnostic label.

We hope that the above already gives a bit of an idea of how the EP researcher sees psychopathology and its investigation. Needless to say, the tribe of EP researchers does not agree on everything. For example, independent of each other, two recently proposed frameworks, the functional-cognitive framework (Hughes et al., 2016) and network analysis (e.g., van den Hout et al., this volume), hold that it may be better to put less emphasis on latent cognitive processes in favor of focusing on observable behavior. Such novel ideas can provide a further impetus to reach a goal that all EP researchers share: Attaining a fuller understanding of psychopathology that will - somehow, someday- result in the development of more effective diagnostic and therapeutic tools.

In the first article in this issue, van den Hout, Engelhard, and McNally will provide you with a more in-depth introduction to EP than we did here, with ample attention for the field's historical roots and current controversies. In the second article, Davey zooms in on one of the most pressing controversies: How can we know whether our laboratory models provide us with an accurate reflection of real-life psychopathology? In the third article, Lonsdorf and Baas provide an illustration of how EP can be successfully integrated with other sciences (e.g., behavioral genetics), while, in the fourth article, Gangemi and Mancini provide an example of how the EP approach can further the understanding of specific disorders (e.g., obsessive compulsive disorder) beyond that of other approaches. In the fifth and last article, Waters, LeBeau, and Craske propose a model to guide the integration of EP informed science into clinical practice — the holy grail indeed. These articles provide a snapshot of the exciting stage the EP field is in today and they collectively specify the foundations, prospects and limitations of EP research, an endeavor that is vitally important to a field that is taking on its righteous place in the vast area of clinical translational science.

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