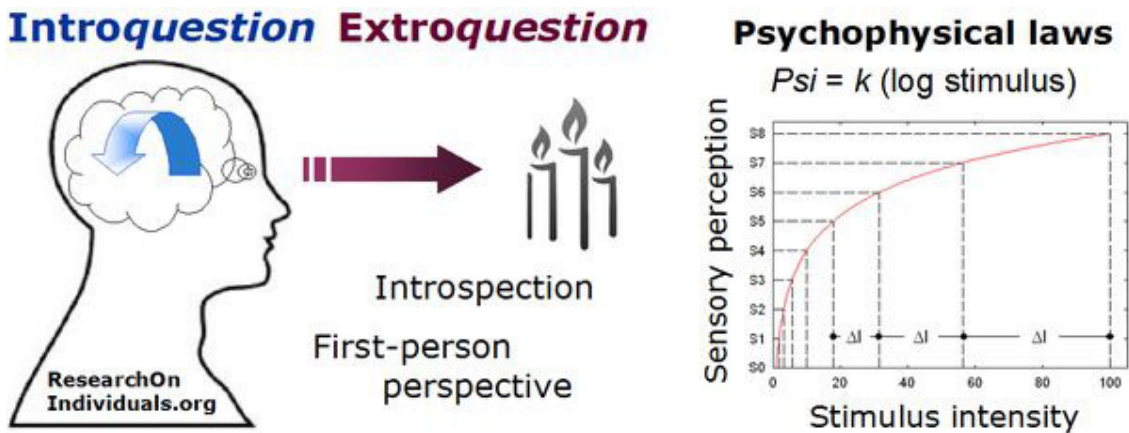


Introspection put back on its feet: New research reveals conceptual leap

Perceiving physical stimuli such as light is not the same as perceiving one's own thoughts and feelings. Introspective findings on the psychophysical laws of stimulus perception therefore cannot prove that all mental life is quantifiable as psychologists have long assumed.



Mental life is accessible only by each individual him- or herself and by nobody else. A key method for exploring a person's psyche therefore is introspection. Introspective methods are aimed at exploring people's own subjective views on themselves—thus, from a first-person perspective. Extrospection, by contrast, is the view that other people hold on someone—thus, from a third-person perspective. But when put under scrutiny from a philosophy-of-science perspective, these differentiations get blurred, a recent research by psychologist Jana Uher showed.

Introspective methods were applied, amongst others, by early psychologists to study how people perceive intensity changes in physical stimuli such as light or sound. They identified psychophysical laws specifying quantitative relationships between the intensity of particular physical stimuli and their subjective perception. These findings were considered the ultimate proof of the assumption that all human experiencing is quantifiable, thus also people's attitudes, feelings, thoughts, motives and other mental events—an assumption that gave rise to the development and widespread use of quantitative methods in psychology, such as questionnaire scales.

Recent research, published in the current *Annals of Theoretical Psychology*, cast new light on the fundamental assumptions underlying quantitative methods in psychology. This research, by Jana Uher, also took a fresh look at the psychophysical experiments on which these assumptions are based.

The article highlighted that perceptions are always involved in any kind of exploration. That is, we can perceive both the external physical world and our own thinking and feeling—and we can do so at the same time. In any given moment, the different kinds of perception are always interwoven. Moreover, any kind of perception takes place in people's minds, thus internally. Clear-cut differentiations between introspection and extrospection therefore cannot be made.

Similarly, the concepts of third-person and first-person perspective methods suggest a clear distinction between the public and the private view—the objective and the subjective. First-person perspective methods denote explorations from the studied individuals' own subjective viewpoint—yet often without specifying what it is that is being explored from this perspective, whether perceptions of external events such as flashes of light or perceptions of own thoughts and emotions.

But there is a fundamental difference: Events in the physical world can be perceived by many individuals, thus from both the first-person *and* the third-person perspective, whereas events in our mental life cannot—they are accessible only by each individual him or herself and by nobody else.

The methods of first-person perspective digital ethnography illustrate this nicely. These methods rely on mobile devices such as miniature cameras worn at eye or chest level to audiovisually capture the individual's subjective perspective during a task or some everyday activities. Hence, these cameras capture people's *outward perspective* on external events including some of their own behaviours in the recording field. But they cannot capture people's *inward perspective* in terms of the thoughts, emotions and motivations that they may have during these activities. These mental activities are directly accessible only by the persons themselves.

Previous methodological concepts fail to make this important distinction because they differentiate introspection from extrospection and first-person from third-person perspective according to the person under study as opposed to the nature of the perceptions investigated. Thus, researchers may consider their observations of some individuals arbitrarily either as third-person or as first-person perspective, depending on whether the focus lies on these people or on the researchers' own subjective views on them.

For enabling clear distinctions, Jana Uher introduced the novel methodological concepts of *introquestion* and *extroquestion* that are differentiated from one another on the basis of both the particular events under study and the particular persons who report on their perceptions of these events.

Extroquestive are all methods for studying events that individuals can perceive as from outside of themselves and that can therefore be perceived—or be made perceivable—by multiple individuals. Importantly, this also applies to events that are naturally located inside people's bodies. Inner organs, for example, can be made perceptible for multiple persons by using surgery or imaging techniques. When many people can perceive the same event, this helps an intersubjective agreement to be reached on how to categorise events, such as the inner organs or bones of humans.

Introquestive methods, by contrast, are all procedures for studying events that can be perceived only from within the person him- or herself and not by multiple people under all possible conditions. This applies only to the events of our mental lives. No matter what sophisticated methods are used: *Psychical phenomena are accessible only introquestively.* No neurosurgeon and no imaging technique can ever make perceptible a person's thoughts and feelings. These methods allow for capturing only the physical events in people's brains and brain physiology that accompany their mental activities but not the mental events in and of themselves.

The novel concepts of *introquestion* and *extroquestion* shed new light on the interpretation of psychophysical experiments and the conclusions drawn from them. They highlight that psychophysicists have explored how people subjectively perceive physical events that are external to their bodies, such as flashes of light, and that can therefore be perceived also by others. Thus, psychophysical experiments clearly rely on *extroquestive* methods. In fact, it is only because the researchers themselves can also perceive the physical events under study that psychophysicists were able to vary and quantitatively measure these stimuli for experimental purposes.

Physical events can be explored with physical methods and can therefore be objectively quantified. This enables quantitative comparisons with people's subjective perceptions. But this is not possible for experiential events because they have no physical properties in and of themselves. Hence, there is no objective counterpart against which to compare people's quantitative judgements of their own thoughts, feelings, attitudes and motivations as indicated on questionnaire scales.

Our perceptions of physical events are determined by properties of these events for which we are sensually receptive, such as lightness. From recurring patterns in our perception, we draw conclusions on properties of these events. We commonly experience these perceived properties as features of these physical events rather than as natural features of our own mental life. Findings on quantitative patterns in stimulus perception thus result from quantitative properties of the physical events under study but not from the mental events involved in their perception.

Quantitative findings from psychophysical experiments therefore cannot provide any evidence that all events of mental life are quantifiable as widely assumed. This erroneous generalisation laid the foundation for the large-scale application of quantitative methods to explore psychical events of all kind rather than only those accessible by *extroquestion*.

Further challenges arise for psychological investigations because psychical events are perceptible only by each person him or herself. This imperceptibility by others entails profound problems because the researchers themselves cannot perceive the events under study. Moreover, direct comparisons of mental events between people or with physical events cannot be made. This differs fundamentally from explorations of stimulus perception and contributes to the many controversies about how to categorise psychical phenomena.

The novel perspectives introduced by the concepts of *introquestion* and *extroquestion* sharpen the methodological foundations needed for exploring the workings of the psyche. They highlight that not all explorations from people's subjective viewpoints allow for exploring their mental lives and that quantitative comparisons of people's judgements with their experiences cannot always be made.

Scientific publications:

Uher, J. (2016). Exploring the workings of the psyche: Metatheoretical and methodological foundations. *Annals of Theoretical Psychology*, 13, 299-324. [[Download](#)]
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