ICP 2024 Symposium

Thematic Area: Theoretical and General Psychology

Specific Areas: Perception, Cognitive, Social, Decision Making, Religion, Cultural, Neuroscience, Cross-Cultural, Basic Process, International, Foundations of Psychology

Symposium Title: The Science of Believing: Insights into Behavioral Control, Social Psychology, & Cultural Evolution

---

Raymond F. Paloutzian, Ph.D. paloutz@westmont.edu
Organizer and discussant
Professor Emeritus of Psychology, Westmont College, Santa Barbara, California USA

Psychological knowledge is heavily culture-bound. But the intellectual "gold" we want to understand is universal human psychological processes: How do all humans work, not only those in our own tribe? This ideal is especially relevant at ICP because it is trans-national. This symposium presents the fundamentals of universal human psychological processes of believing. It's not about specific beliefs or clinical concerns with irrational beliefs, "false" beliefs, or delusions, but believ*ing* – anything. Believing is the result of interactive neurophysiological, psychological, and social processes that constitute an integrative core of psychological science. It is mostly non-conscious and non-optional. Believing functions at the same level of importance as perception, learning, and action generation. E.g., try to imagine a healthy human whose system does not automatically do perception or learning -- or believing. Learning is enabled because our system must believe certain percepts. Goal directed behaviour is enabled because our arousal systems must believe signals from our learning and perceptual systems in order to pursue appropriate goals. These "lower" processes interact *via believing* with "higher" social-cognitive processes in which

more conscious-like meanings are made. These then feed the overall pattern of behaviours and beliefs in a social context that can include the operation of situational, overarching, cultural, religious, or worldview meaning systems -- including notions of communicating with "Unseen" gods, spirits, or deceased loved ones -- and can be more reflective, involving post-hoc attributions and, thus, slower. The manifestations vary greatly, but the fundamental processes are cross-cultural human neuropsychological universals. Thus, believing processes underpin intuitive attitudes and consciously motivated behaviour, and drive social and cultural evolution. From the micro to the macro levels of analysis, they are the connective tissue that holds the rest together and enables its aspects to do what they are supposed to. There is no psychology without them.

Brief Content Description

This symposium presents universal human psychological processes of believing, not beliefs, but believ*ing*, from the neuropsychological to socio-cultural levels. The interactive multilevel processes are the integrative core of psychological science.

Keywords: Neuropsychological, Socio-cultural, Meaning-Making

Individual Presentations

(1) Beliefs as Conceptual Accounts: Input-based Classification and Neuroimaging Evidence

Rüdiger J. Seitz, MD seitz@neurologie.uni-duesseldorf.de
Professor of Neurology, Medical School, Heinrich-Heine University Düsseldorf, Germany

A novel hypothesis within cognitive neuroscience posits that beliefs are products of brain processes that result from multisensory perception of external

information within and across modalities in a probabilistic fashion, emotional valuation in terms of personal effort/reward estimations, and encoding of this composite information in memory. Being products that represent brain functions, at this level of analysis beliefs are not accessible directly. But attributions about them can be inferred based on observing someone's overt behaviour. We trust our beliefs because our perceptions of the environment are processed effortlessly and rapidly and typically convey useful information. The external information includes static objects, events that may be evolving over variable spans of time, and communication of narratives whether written, spoken, or other. Beliefs can be classified into categories. *Primal beliefs* are about objects and events, are relevant to individuals, and do not depend on language. *Narrative-based beliefs* are manifestations of conceptual accounts and normative and moral concepts and have a fundamental impact on the evolution of social life and formation of human culture. When the assertions based on beliefs fail, they may be updated or fade. Verbal statements of beliefs reflect a first-person perspective typically grounded in biases such as self-perceived goodness, being well-reasoned, and belonging to a favoured group. Beliefs are of particular importance to the psychological developmental of children and adolescents because as they relate to biological, social, environmental, and economic issues they shape the personalities of people. Functional neuroimaging methods have revealed the expansive cortico-subcortical brain circuits related to the multifaceted processes of belief formation and updating, with a particular emphasis on the involvement of the frontomedial prefrontal cortex. Primal beliefs have been found to differ from conceptual beliefs by their differential involvement of language areas in the brain.

(2) Credition: How Problems with "Belief" Lead to the "Science of Believing"

Hans-Ferdinand Angel, Ph.D. ferdinand.angel@uni-graz.at
Presenter.
Professor Emeritus of Catechetics and Religious Education, University of Graz, Graz, Austria

The idea and concept of belief is rooted in the reflections within Greek philosophy and the language of the ancient Greeks. But the concepts of belief and believing

have not remained static. To the contrary, they have undergone multiple translations over the almost three thousand years since the dawn of Greek thought. Further, although ancient Greek had two terms for belief (πίστις: *pistis*, and δόξα: *doxa*), the later-used Latin language offered one originally polysemantic term for belief, *fides*. Its roots are apparent in many faiths expressed in the English language. The term *belief* originated as a variant of the Old English terms *belȳfan* and *belēfan*, alterations of *gelēfan*, of Germanic origin, and became central in modern philosophical debates. The English language has terms for belief in the singular (*belief*), plural (*beliefs*), and gerundive (*believing*) -- in stark contrast to other languages like German which has only one term to express the concept of belief, the singular (*Glaube*). This semantic conundrum between several versus only one term to conceptualize belief has influenced the approaches to the field and hindered the development of the science of believing -- which originates in a neurophysiological understanding of believing as an embedded and embodied process within individuals. In recent years research on the functions and processes of believing (called *creditions*, coined as analogous to *emotions* for feeling and *cognitions* for thinking and information processing) opened new doors with multiple perspectives for understanding the processes of believing. I will provide a short history of prominent research findings such as believing as brain function, the capacity of believing as result of brain evolution, the role of valuations and meaning making as processes which are integrated within the believing process, the role of memory functions for believing, and the pathological clinical aspects of the believing process.

(3) Can People Believe What They Want? Volition Versus Evidence

Neil Van Leeuwen, Ph.D. nvan@gsu.edu
Presenter.
Associate Professor of Philosophy and Neuroscience, Georgia State University, Atlanta, Georgia, USA

A traditional debate in philosophy of mind and epistemology concerns whether or not people can believe at will. Theorists called voluntarists maintain that it is possible to choose to believe something, even if one has little or no evidence for it (e.g., one chooses to "believe" one's friend is innocent). Theorists called

involuntarists maintain that this is not possible. For example, if one has no evidence (e.g., in the form of memories) that one bought milk yesterday, one cannot just choose to believe that they did; they might pretend to believe it, but one cannot just choose to actually believe what they did not before. In a nutshell: For voluntarists, one can will oneself to believe just like one can will oneself to raise their arm. For involuntarists, such a notion is psychologically inaccurate at best and conceptually confused at worst. In the present paper, I present a novel, linguistic solution to this debate: the word "belief" is polysemous; it can refer in different contexts to different members of a family of related but distinct mental states. Some of these mental states are under voluntary control, while others are not. Importantly, however, the "beliefs" that are voluntary differ in other respects as well: they are less based on evidence; they are less epistemically confident; they are more likely to used for identity signaling; and they are less likely to satisfy norms for honest speech. It is thus a mistake to confuse voluntary "belief" with straightforward factual belief, even if the *word* belief is flexible enough to apply to both.

(4) The Interplay Between Believing Processes, Metacognition, and Mental Health

Nina Dalkner, Ph.D. nina.dalkner@medunigraz.at
Presenter.
Senior Scientist, Institute of Psychiatry, Medical University of Graz, Graz, Austria

Believing processes play an important role in shaping individuals' perceptions, interpretations, and interactions with their environment. Thus, believing processes which are linked to mental health, can strongly influence an individual's overall well-being, behavior, and decision-making. Beliefs encompass a wide range of cognitive processes, including core beliefs, automatic thoughts, schemas, and cognitive biases. The development of beliefs can be influenced by various factors, such as personal experiences, cultural and social influences, and cognitive abilities. Furthermore, the content of beliefs can have a significant impact on a person's mental health and vice versa, as maladaptive beliefs are often associated with psychopathological conditions, including anxiety disorders and depression. Metacognition refers to the ability to reflect upon and regulate one's own

cognitive processes. This includes being aware of one's thoughts, knowledge, and strategies, and being able to monitor and control one's cognitive activities. Metacognitive skills contribute to the formation and modification of beliefs by facilitating critical thinking, self-reflection, and evaluation of evidence. In this context, metacognition plays a crucial role in the emergence of believing processes and thus in mental health, as individuals with higher metacognitive abilities tend to exhibit better emotion regulation, adaptive coping strategies, and resilience. However, the relationship between believing processes, mental health, and metacognition is intricate and multifaceted. While maladaptive beliefs may contribute to the development or exacerbation of mental disorders, metacognitive interventions have shown promise in the treatment of psychological conditions. Understanding the interplay between believing processes, metacognition, and mental health has important implications for clinical practice and psychological interventions. Identifying and challenging maladaptive beliefs, enhancing metacognitive skills, and promoting cognitive flexibility can facilitate more positive mental health outcomes. Here, I aim to provide valuable insights into the current literature of believing processes and metacognition and their relationship to mental health.