

Mental Imagery: From Basic Research to Clinical Practice

Simon E. Blackwell
Ruhr-Universität Bochum

Mental imagery has long been used in psychological therapies, but only more recently has research started to illuminate the relevant scientific basis. Research shows that mental imagery is widely prevalent in everyday life, such as when remembering the past or thinking about the future, and that it is a form of thought that can have a particularly strong impact on emotion, cognition, and behavior. Investigations of mental imagery within clinical populations reveal a range of imagery dysfunctions across many disorders. Research highlights the importance of asking about mental imagery at assessment and considering mental-imagery-based treatment techniques. Drawing on scientific research, mental imagery may be used in therapy not only within the context of established techniques such as imagery rescripting but also more broadly to enhance emotional, cognitive, and behavioral change. An awareness of this research can enhance practitioners' confidence in the scientific basis for the relevance of mental imagery in clinical practice.

Keywords: mental imagery, imagery rescripting, memory, depression, PTSD

The study of mental imagery and its use in psychological therapies both have a long history, dating back to Platonic philosophy (around 400 BC) and the late 19th century, respectively (for a review of this history, see Edwards, 2007; MacKisack et al., 2016). A reciprocal relationship between scientific study and therapeutic application of mental imagery is evident more recently, including in the development of behavior therapy approaches (e.g., Lang, 1977; Mathews, 1971; Wolpe, 1961). This article considers the implications of the current state of scientific research into mental imagery for clinical practice in mental health and highlights some future directions for clinically oriented mental imagery research. The article is not intended to provide a comprehensive review of all mental imagery research, but rather highlights empirical evidence with particular relevance for clinical practice with adults (for a review of

mental imagery research among children or adolescents, see Heyes, Lau, & Holmes, 2013).

Mental Imagery: State of the Science

What Is Mental Imagery?

Mental imagery refers to “representations and the accompanying experience of sensory information without a direct external stimulus” (Pearson, Naselaris, Holmes, & Kosslyn, 2015, p. 590), often described as “‘seeing with the mind’s eye,’ ‘hearing with the mind’s ear,’ and so on” (Kosslyn, Ganis, & Thompson, 2001, p. 635). For example, if you were to stop reading for a moment and instead imagine yourself lying on a secluded tropical beach, you may not only be able to picture the scene—the sand, blue sea, sun, perhaps palm trees—but also imagine the sensations of the warmth on your skin, the smell of the sea air, and the sounds of the waves. This image-based thought is distinct from symbolic forms of cognition, such as verbal-based thought or semantic knowledge about the locations or names of various beaches.

Accumulating evidence from neuroimaging studies indicates that mental imagery is encoded similarly to actual perception, even at basic low-level perceptual areas in the visual cortex. A combination of neuroimaging and behavioral

I thank Marcella L. Woud for her comments and feedback on a draft of this article.

Correspondence concerning this article should be addressed to Simon E. Blackwell, Mental Health Research and Treatment Center, Faculty of Psychology, Ruhr-Universität Bochum, Massenbergsstraße 9-13, 44787, Bochum, Germany. E-mail: simon.blackwell@rub.de