

Applying Neuroscience Research to Boost Creativity

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ABSTRACT:

Many organizations, public and private, link the success of their endeavors to the creative performance of their members. Neuroscientists have learned a lot about the design of spaces in which people, individually and in groups, are most likely to think and act creatively, and their insights can be applied to develop workplaces where individuals and teams charged with creative tasks perform to their full potential. Neuroscientists have tied enhanced creative performance to design elements at a variety of scales, from room to city level. Systematic research has linked specific surface colors (green; Lichtenfeld, Elliot, Maier, and Pekrun, 2012), light colors (3000 Kelvin; Weitbrecht, Barwolff, Lischke, and Junger, 2015), and the presence of leafy plants (Studente, Seppala and Sadowska, 2016) to more creative thinking, for example. Similarly, certain other visual, olfactory, acoustic, and haptic experiences, as well as psychosocial conditions, have been associated with enhanced creative achievement. Individual elements combine in networks that elevate users' creative problem solving capabilities and collectively establish the mental conditions/framework needed to support creative thinking (Schifferstein and Desmet, 2008). Creativity-relevant design-related science has been effectively applied in practice in a diverse set of real world settings via scientist-designer collaborations and obstacles to implementation have been overcome. Designers and other people developing and using environments where complex issues need to be resolved must be familiar with research linking design and enhanced creative thinking—resources are limited and, in many important contexts, we don't have time for "do-overs."

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