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Figural pattern generalisation – the role of rhythm.

Paditz, Ludwig (ed.) et al., Proceedings of the 11th international conference of The Mathematics Education into the 21st Century Project – MEC 21: On turning dreams into reality. Transformations and paradigm shifts in mathematics education, Grahamstown, South Africa, September 11–17, 2011. Grahamstown: The Mathematics Education into the 21st Century Project – MEC 21 (ISBN 83-919465-0-9/pbk). 298-303 (2011).

Summary: This paper uses a theoretical backdrop of enactivism and knowledge objectification to explore the role of rhythm in the generalisation of pictorial patterns. Through an analysis of two vignettes, rhythm is shown not only to be an indicator of the conscious or unconscious perception of structure, but it is also shown that rhythm can be an artefact born out of specific counting processes, an artefact which in turn can lead to structural awareness.

Classification: C30

Keywords: learning; patterns; semiotic means; gestures; algebraic thinking; cognitive psychology