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*A Mission Impossible?
Paradox Structures, Impossible Forms and Visual Illusions in
Experience-Centered Mathematics Education*

Most of the visual effects are based on mathematically and physically describable phenomena and formalizable processes. Creating visual illusions, paradox structures and “impossible” forms through playful and artistic procedures, holds an exciting pedagogical opportunity for raising students’ interest towards mathematics and natural sciences and technical aspects of visual arts. The Experience Workshop Math-Art Movement has a number of pedagogical methods, which are connected to visual paradoxes and perspective illusions. In the first part of our presentation, we will introduce classroom exercises connected to M. C. Escher’s visual parables, István Orosz’s anamorphoses and Tamás F. Farkas’s paradox structures and impossible forms.

There are certain digital games which employ visual illusions as a part of their game mechanics. Most of these games were not designed as an educational game, but they may be used for educational purposes, to clarify mathematical concepts behind and related to visual illusions (symmetry, perspective, isometric projection etc.) In the second part of the presentation we will analyze which characteristics of these games contribute to the pedagogic impact, and how to best take advantage of them.

Raine KOSKIMAA, Prof., b. 1968, works as a professor of contemporary culture at the University of Jyväskylä, Finland. He conducts research in the fields of digital textuality, computational culture, programmable media, and game studies. He has published widely around the issues of digital literature, game studies, and narratology, and his writings have appeared in several languages. He is the co-founder and co-editor of the *Cybertext Yearbook*, a member in the Literary Advisory Board for the Electronic Literature Organization and in the Review Board for *Gamestudies*. E-mail: raine.koskimaa@jyu.fi.



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