

SEVEN ENIGMAS

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Multimedia arts parallel interdisciplinary sciences in the intentional creation and incubation of meanings from confrontations of order with disorder across a common frontier of constructed events. This paper explores the emergence of meaning from systems on the "margin of disorder," by examining *Seven Enigmas*, an interdisciplinary performance work that brought together artists, dancers, musicians, and scientists at the University of Michigan in an unprecedented collaboration. Visual artist Jim Cogswell created a set design for seven solo dances choreographed by dancer Peter Sparling, mapping out a complex multimedia installation of sculptural objects, film/video projections, and surfaces in motion with human bodies. For elements of his design Cogswell turned to Fred Bookstein, Senior Distinguished Research Scientist whose research deals with morphometrics, the measurement of biological shape and shape change. For the Enigmas Project, Bookstein adapted his computer program Edgewarp to interpret the physical movements of Sparling's dance. The result is a mesmerizingly beautiful morphing grid pattern that appears on giant projection screens behind the dancers and the sculptural elements.

In Seven Enigmas, order and disorder interrelate to produce meanings within each medium separately, and in resonances and in complementarities between media. Scenic elements relate to dancers as instruments relate to science; they are mirrors permitting the emergence of new meanings. one system of order disrupting and enlarging another. The animated grids, which adapt the tools of morphometric analysis to artistic expression, especially contribute to the play between order and disorder by translating the movements of a dancer into another medium with quite a different grammar and syntax. What appears orderly in the grids, the smooth flowing of lines one into the next, is actually the skeletal freedom of the dancer. What is actually constrained in the dancer, the physical spacing of joints, is liberated by the projection geometry of the grid.