

A PLATONIC VIEW OF A NECESSARILY TRUE CONTRADICTION FOUND IN MATRIX DEEP SPACE

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ABSTRACT

Decision sciences classrooms are moving away from the older “talk and chalk” methods to more sophisticated presentations. Now, some classroom work is done online and professors generate erudite computer models for students. The authors have successfully engaged students in subject matter by stimulating them with concise multimedia vignettes. This presentation is concerned with high-level multimedia curricula designed for use in decision science classes.

The presentation is an innovative amalgamation of many facets of mathematics designed exclusively to “tweak” students’ fascination by offering them an argument to ponder. The content of this presentation is a synthesis of the philosophies of mathematics of Plato in contrast to Aristotle and the analysis of matrix space from the point of view of French geo-statistics, which is particularly Platonic. The presentation also includes the matrix algebra of eigenvectors and their allied eigenvalues, which, in turn, can generate subspaces called eigenspaces. Finally, correspondence analysis is used to collapse matrix space.

All of this is designed to capture the students’ imagination by presenting them with a logical contradiction that seems to be true. This conclusion is interesting to contemplate, because, according to Ludwig Wittgenstein, all contradictions are necessarily false.

The presentation’s design includes graphic art created using Adobe Illustrator and Photoshop; animations, produced with a combination of Macromedia Flash, Ulead GIF Animator, and Serif Impact Plus, to symbolize mathematical space; music, edited with Ulead Audio Editor and converted for file size in Musicmatch Jukebox; and short video interviews with French mathematicians and an historian of mathematics, compiled and edited in Ulead Video Editor. The presentation requires a computer equipped with Microsoft PowerPoint with the FlashBack plugin, the video files included in the production, as well as the codecs required to play the video clips.