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Donald G. Saari*, University of California Irvine. *A new mathematical frontier: The social and behavioral sciences.*

Mathematics and the physical sciences have enjoyed a symbiotic relationship. A similar opportunity is emerging with the growing mathematical sophistication of the social and behavioral sciences. For instance, an issue to be discussed is the mathematics of voting; orbits of symmetry groups and ideas from chaotic dynamics provide new insights that may explain why your favorite candidate may lose during this presidential season. Functional theoretic extensions suggest why Adam Smith's "Invisible Hand" story need not represent the wishes of consumers, or ... Expect to leave this lecture recognizing how mathematicians can contribute to these important areas, and expect to be worried about what happened in your last important election, or purchase, or ... (Received April 06, 2007)