1067-06-528 **Philip Ehrlich*** (`ehrlich@ohio.edu`), Department of Philosophy, Ohio University, Athens, OH 45701. *Surreal Ordered Exponential Fields.*

J. H. Conway's ordered field No of surreal numbers has a rich algebraico-tree-theoretic structure, or simplicity hierarchy, that emerges from the recursive clauses in terms of which it is defined. This simplicity-hierarchical structure is central to No's structure as an ordered exponential field. Among the striking simplicity-hierarchical features of No is that much as the surreal numbers emerge from the empty set of surreal numbers by means of a transfinite recursion that provides an unfolding of the entire spectrum of "numbers great and small," the recursive process of defining No's arithmetic in turn provides an unfolding of the entire spectrum of ordered number fields in such a way that an isomorphic copy of every such system either emerges as an initial subtree of No or is contained in a theoretically distinguished instance of such a system that does. In particular, every real-closed ordered field is isomorphic to a recursively generated initial subfield of No. In the present talk we will draw attention to some of the exponential ordered fields that likewise emerge as recursively defined initial subfields of No. (Received September 14, 2010)