1077-55-1982 **Christopher J. Schommer-Pries*** (schommerpries.chris.math@gmail.com). *On the uniqueness of the homotopy theory of higher categories.*

We propose axioms that a quasicategory should satisfy to be considered a reasonable homotopy theory of (∞, n)-categories. This axiomatization requires that a homotopy theory of (∞, n)-categories, when equipped with a small amount of extra structure, satisfies a simple, yet surprising, universal property. We further prove that the space of such quasicategories is homotopy equivalent to $B(\mathbb{Z}/2)^{\times n}$. This generalizes a theorem of Töen when $n = 1$, and it verifies two conjectures of Simpson. In particular, any two such quasicategories are equivalent. We also provide a large class of examples of models satisfying our axioms, including those of Joyal, Kan, Lurie, Simpson, and Rezk. This is joint work with Clark Barwick. (Received September 21, 2011)