

- ▶ PAUL SHAFER, *Studying the role of induction axioms in reverse mathematics.*
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Strength beyond RCA_0 comes from two sources: set existence axioms and induction axioms. Typically, work in reverse mathematics focuses on set existence axioms because ordinary mathematical theorems tend to assert the existence of certain kinds of sets (e.g., for every continuous function $[0, 1] \rightarrow \mathbb{R}$ there is a maximum; for every commutative ring there is a prime ideal; for every coloring of pairs in two colors there is a homogeneous set; etc.). However, in this talk we survey some of the results and techniques that arise from considering induction axioms, paying special attention to pigeonhole principles, conservativity results, and diagonally non-recursive functions.