

**COUNTING WITH BLOCKS AND HIDE-AND-SEEK
WITH CHARACTER TABLES: BRAUER'S PROBLEMS
AND BEYOND**

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ABSTRACT. Richard Brauer, widely known as the founder of modular representation theory, presented a list of problems in 1963 that set the stage for the study of the so-called local–global conjectures in the character theory of finite groups. These are conjectures that relate the representations and structure of a finite group to that of certain proper (“local”) subgroups, and many have been nicknamed “counting conjectures” due to their nature of comparing various invariants. In this talk, I’ll discuss some of these conjectures and their implications for other interesting character-theoretic problems.