Enhancing the Explanatory Power
of Usability Heuristics

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Several published sets of usability heuristics were compared with a database of existing usability problems in order to determine what heuristics best explain actual usability problems. Based on a factor analysis of the explanations as well as an analysis of the heuristics providing the broadcast explanatory coverage of the problems, a new set of nine heuristics were derived: visibility of system status, match between system and real world, user control and freedom, consistency and standards, error prevention, recognition rather than recall, flexibility and efficiency of use, aesthetic and minimalist design, and helping users recognize, diagnose, and recover from errors.

Development and Evaluation of a Taxonomical Model
of Behavioral Representation Techniques

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A user-centered approach to interactive system development requires a way to represent the behavior of a user interacting with an interface. While a number of behavioral representation techniques exist, not all provide the capabilities necessary to support the interaction development process. We have developed a taxonomical model of behavioral representation techniques. Our model is an epistemological framework for analyzing and comparing existing behavioral representation techniques, as well as developing and evaluating new techniques. We present the model and results of our evaluation demonstrating the model's reliability and utility within the context of behavioral representation techniques.