This compilation of cutting-edge philosophical and scientific research comprises a survey of recent interdisciplinary research on cognitive systems, especially concerning knowing-how (part 1) and the role of mental representations in understanding the behavior of humans and animals (part 2). Representational systems provide their owners with useful information about their environment and are shaped by the special informational needs of the organism with respect to its environment. In part 1 on knowledge the volume focuses on recent debates concerning the status of knowing-how. Is knowing-how an irreducible kind of knowledge, or can it be explained in terms of propositional knowledge? In which way is the nature of knowing-how related to the discussions on representational theories of mind? These are the questions that take center stage in the first part. In part 2, the authors address the long-standing dispute about the usefulness of the notion of representation in the study of behavior systems and offer a fresh perspective combining insights from philosophy, psychology and neurosciences.

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