

Foreword

in Conte, R., Andrighetto, G., & Campenni, M. (Eds.). (2013). *Minding norms: Mechanisms and dynamics of social order in agent societies*. ix-x. New York, NY: Oxford University Press.

Frank E. Ritter, Series Editor, Oxford Series on Cognitive Models and Architectures

30may13

Our behavior is influenced all the time by social norms, what is expected (i.e., customs), what is required (i.e., laws), and what is moral (i.e., what is ethical). Other names for norms are standard operating procedures, regulations, standing orders, rules of engagement, and customs. All of the data that has been collected to develop and test theories of cognition has been collected where norms actively influenced the behavior observed. However, the effect of norms, how other agents' expectations and behavior influence behavior, has not been very often addressed by cognitive models, architectures, or agent-based research.

As cognitive models become more social and social models become more cognitive, the role of norms in modeling behavior will become increasingly important. Cognitive modelers who read this book by Conte and her colleagues can learn about norms and how to include them in models. Researchers who study norms can better understand the role of simulation and norms.

This book presents a theory of how norms, arising through interactions between individuals, are implemented in and by those individuals. A series of simulations using a new architecture, EMIL, help explain how bottom-up and top-down processes can produce emergent behavior, and provide lessons for work on norms (e.g., how norms can arise through small interactions), and for other architectures (e.g., the many ways norms influence cognition). Through a thoughtful series of models, capabilities are added building up to a system demonstrating necessary and sufficient capabilities for the emergence and function of norms. While the models are not complete and may at times appear far from complete—for some even too incomplete to trust—more complete models will only arise through work like this and the insights it provides.

Currently, most models just act. This work suggests that our models need to have more social cognition, metacognition, implicit reasoning, and reflection to filter actions making them more accurate, knowledge-rich, reflective, and slower.

Is the processing of norms done with fixed capabilities that everyone has or is it knowledge? If it is a fixed capability it belongs in the architecture, but untangling this capability that might have components of both types will surely be interesting, productive, and also enlightening about how humans are both cognitive and social agents.