



CULTURE, MIND, AND SOCIETY

Cognition In and Out of the Mind

Advances in Cultural Model Theory

Edited by Giovanni Bennardo
Victor C. de Munck · Stephen Chrisomalis



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Culture, Mind, and Society

Series Editor

Yehuda C. Goodman

Department of Sociology and Anthropology

The Hebrew University of Jerusalem

Jerusalem, Israel

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Giovanni Bennardo
Victor C. de Munck • Stephen Chrisomalis
Editors

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Editors

Giovanni Bennardo
Department of Anthropology
Northern Illinois University
DeKalb, IL, USA

Victor C. de Munck
Department of Anthropology, Institute of
Asian and Transcultural Studies
Vilnius University
Vilnius, Lithuania

Stephen Chrisomalis
Department of Anthropology
Wayne State University
Detroit, MI, USA

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Series Editor's Preface

The editors and authors of *Cognition In and Out of the Mind: Advances in Cultural Model Theory* invite readers to rethink how cognitive anthropology contributes to understanding how human beings represent their social realities and form shared knowledge of their local cultural worlds. Cognitive science can benefit much from anthropology's analytical sensitivities and methodologies—following cultural and linguistic variations and how cognitions are used and emerge in diverse social contexts and through practice. Within anthropology, cultural model theory can benefit by exploring human cognition from new perspectives, including evolutionary, historical, linguistic, and contemporary cultural articulations, and examining how shared cultural models are transmitted and spread in everyday life.

In particular, this innovative book marks a *new wave* of applying and theorizing the notion of *cultural models* and how persons and groups process reality and form cultural knowledge. A new wave means a dialogue with previous lines of research and thinking. Indeed, the chapters of this book open up various critical conversations with the by-now classic arguments in cognitive anthropology from the 1980s to the 2000s. As apparent in the different chapters of this edited volume, the previous wave of cognitive anthropologists pointed to the central terms for cognitive anthropologists to discuss further, including *mental representations*,

mental knowledge, cultural schemas, cultural models, cultural knowledge, cultural theories, prototypes, and more. The earlier arguments included the idea that some cognitive schemas, initially recognized by cognitive psychology, are *cultural* in the sense of being *non-universal* ways of representing the world in human minds. These specific types of cognitive schemas are only shared by *a local* social group, and they are termed cultural models when they form organized, *complex* schemas that cover *large sections* of social reality. Thus, such cognitive models are *shared themes* that organize the world for human groups. They are crucial for *representing* the world and *guiding* how a community should operate, its *motivations* to act one way or another, and how members negotiate their lives and choices with others. To differentiate cultural models from other forms of cultural knowledge, the earlier anthropologists assumed that cultural models are usually *not explicit* ideologies or public, well-known discursive representations of reality. Instead, they are *implicit*, profound, taken-for-granted understandings of the world—less acknowledged, perhaps even unconscious ways group members use to organize their world. Given these early definitions, theoretical working assumptions, and arguments, the *methodology* for unraveling cultural models was to extract rich discursive accounts from local group members, usually via extended, in-depth *interviews*, and discover and analyze the *implicit, embedded models in these accounts*.

While continuing the above lines of thought, the contributors to this book *problematize* the earlier interrelated working assumptions of cultural models theorizing by *expanding* the definition of cultural knowledge—in particular, as the book's title indicates, cognition and cultural models are now understood to be articulated and processed *outside of human minds* as well. Cultures, cultural schemas, and models, as defined in the context of cognitive anthropology, are embedded not just in persons' minds. And, as a psychological reality, the mind or cognition is working not just “inside” persons' bodies or selves and crystalized in mental representations. Instead, cultural models and cognitive processes are also located and expressed in persons' material worlds, artifacts, everyday activities, performances and practices, discourses, social organization, institutions, and technologies. In addition, cultural models are not just

the more implicit, less-acknowledged beliefs group members hold but also their more explicit ideas and ideologies about the world.

Hence, the contributors advance cultural model theory by moving beyond a mentalistic understanding of cultural models—beyond the understanding that behaviors, words, or feelings are the outcome of shared mental representations. They thus rethink the interface of cultural models with their targets, such as feelings, actions, and words. They examine how practices, feelings, words, and behaviors are formed—without a deterministic cultural model that presumably produces them. On a more pragmatic level, the authors offer ways to question what counts as a “cultural model,” clarifying its status in terms of, for example, how often it is used and how widespread it is.

The book demonstrates that *expanding* the definitions of cultural models invites new reflections on a series of questions: how cultural models are formed based on and extracted from subjective experiences; how artifacts empower human cognition; how human cognitive work changes in and through interacting with cognitive artifacts; how cultural models are socially shared, learned, and transmitted; how they become objective-like realities; how they change along spaces and times; how they are negotiated; and how they shape and are shaped by behaviors and social norms. Moreover, these new definitions, reflections, and arguments also have methodological implications. Understanding cultural models to include more explicit *consensual* understandings of local social realities, values, and theories means we could find them using multiple new *methods*. This volume opens the doors for new methodologies to decipher and analyze cultural models. In particular, instead of focusing on *implicit beliefs* embedded in people's discursive accounts alone (and for the most part mainly expressed in in-depth interviews), authors in this volume exemplify how to explore cultural models also as explicit discursive claims and in diverse life domains, social spheres, practices, and registers. Accordingly, the authors demonstrate how to use not just qualitative methods and interviews but *also quantitative* methods, offering new measurement tools and combinations of *both* qualitative and quantitative methods.

The broader analytical and methodological implications of this new wave of cognitive anthropological theorizing and research are expressed in chapters that explore how cultural models emerged in both ontogeny

and phylogeny. In addition, I suggest that this book might offer new ways for *bringing psychological and cultural anthropology into closer conversation*. Hence, instead of a common division of labor in which cultural anthropology deals with *public* manifestations of shared social realities and psychological anthropology deals with the *non-public yet shared social realities* located in people's minds, the contributors of this volume invite exploring cultural knowledge and cognitive work as these operate *in and out of the mind and in spaces in-between*. While offering the state of the art in current cognitive anthropology, the volume also points to new horizons and directions cognitive anthropology could take in the coming years.

Jerusalem, Israel

Yehuda C. Goodman

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Notes on Contributors

Andrea Bender received her Ph.D. in Cultural Anthropology at the University of Freiburg (Germany) and is now Professor of Psychology at the University of Bergen, Norway. She has worked extensively on the relationship between culture, language, and cognition, including their co-evolution, with fieldwork conducted in Oceania. Currently, she is Principal Investigator in the NFR-funded “Centre for Early Sapiens Behaviour (SapienCE)” and in the ERC Synergy Grant project on the “Evolution of Cognitive Tools for Quantification (Quanta).”

Giovanni Bennardo is Board of Trustees Professor and Distinguished Research Professor in the Department of Anthropology and the Cognitive Science Initiative at Northern Illinois University, DeKalb, IL, USA. He specializes in linguistic and cognitive anthropology. In 1996, he received his Ph.D. from University of Illinois at Urbana-Champaign, IL, USA and from the Max Planck Institute for Psycholinguistics, Cognitive Anthropology Group, Nijmegen, The Netherlands. He is the writer of six books (three edited) with major publishers such as Cambridge University Press, Oxford University Press, and Routledge. He edited three special issues of journals (*World Cultures*, *Journal of Cultural Cognitive Science*, and *Journal of Qualitative Psychology*) and published a great number of articles in top-tier journals and many book chapters.

Renatas Berniūnas received his PhD in 2012 from the Institute of Cognition and Culture at Queen's University, Belfast, UK. From 2012 to 2022, he worked at the Institute of Psychology at Vilnius University, Lithuania. Over ten years, he has been involved in numerous interdisciplinary and cross-cultural research, with a regional focus on Mongolia. His academic interests combine cognitive anthropology, cognitive science of religion, moral psychology, and experimental philosophy. At the moment, Dr. Berniūnas is associated with the Interacting Minds Centre, Aarhus University, as a Marie Curie postdoctoral fellow. He is conducting research on the Mongolian folk theory of mind.

Stephen Chrisomalis is Professor of Anthropology at Wayne State University in Detroit, Michigan. His previous books include *Numerical Notation: A Comparative History* (Cambridge 2010), *Human Expeditions: Inspired by Bruce Trigger* (Toronto 2013), and *Reckonings: Numerals, Cognition, and History* (MIT 2020). He is the author of eighteen peer-reviewed journal articles and has presented his work nationally and internationally at over sixty scholarly venues.

Victor de Munck is Professor of Anthropology at the Institute of Asian and Transcultural Studies, Vilnius University, Vilnius, Lithuania. He has written numerous books and articles and is currently conducting research on changes in love, marriage, and family cultural models as they affect decisions to marry and have children. He is also interested in the effect of technology on these important modes of intimacy as they have been central to the reproduction and maintenance of the species and the idea of a meaningful life.

William W. Dressler is Professor Emeritus of Anthropology at the University of Alabama (Bill.Dressler@ua.edu). His professional interests focus on cognitive culture theory and research methods, and he has carried out extensive research in urban Brazil with colleagues there. His work emphasizes concepts and methods for examining the health effects of individual efforts to achieve culturally defined goals and aspirations. In 2021 he received the Conrad M. Arensberg Award from the American Anthropological Association for contributions to anthropology as a natural science, and in 2023 he was elected to the National Academy of Sciences.

John B. Gatewood is Professor Emeritus of Anthropology at Lehigh University. He was educated in the four-field tradition of anthropology at the University of Illinois, Urbana-Champaign, and has published and taught in all four fields during his very interdisciplinary career at Lehigh. His research interests are cognitive anthropology, cultural ecology (fisheries), tourism, applied/commercial anthropology, and research methods. Within cognitive anthropology, his primary interests are cognition-in-action and the social organization of knowledge, both of which are relevant to and benefit from cognitive science more generally.

Miriam Noël Haidle is a Paleolithic archeologist and paleoanthropologist. Since 2008, she has been the scientific coordinator of the research center “The Role of Culture in Early Expansions of Humans” (ROCEEH) of the Heidelberg Academy of Sciences and Humanities at the University of Tübingen and Senckenberg Research Institute. Her research focuses on tool behavior in hominins and animals as indicators of cultural and cognitive evolution and the development of complexity.

Jeffrey C. Johnson, PhD is Professor of Anthropology at the University of Florida. He was a former Program Manager with the Army Research Office (IPA) where he started the basic science research program in the social sciences. He has conducted extensive long-term research, supported by the National Science Foundation, comparing group dynamics and the evolution of social networks of over-wintering crews at the American South Pole Station, with those at the Polish, Russian, Chinese, and Indian Antarctic Stations. In related research, he has studied aspects of team cognition and social networks on success in simulated space missions. He has published extensively in anthropological, sociological, biological, aerospace, and marine science journals and was the founding editor of the *Journal of Quantitative Anthropology*, co-editor of the journal *Human Organization*, the author of *Selecting Ethnographic Informants* (Sage 1990), and co-author of *Analyzing Social Networks* (Sage 2018) and *Analyzing Social Networks Using R* (Sage 2023).

Stephen C. Levinson is emeritus director of the Max Planck Institute for Psycholinguistics and Professor Emeritus at Radboud University, Nijmegen, The Netherlands. He is the author of over 400 publications

(<http://www.mpi.nl/people/levinson-stephen/publications>), with research interests focused on the relations between language, culture, and cognition; language diversity; interactive uses of language; psycholinguistics; and language evolution. He has done extensive fieldwork on languages in India, Australia, Mexico, and Papua New Guinea. He is a fellow of the British Academy, Academia Europaea, and the Australian Academy of the Humanities.

Kateryna Maltseva is an associate professor at the Department of Sociology, National University of Kyiv-Mohyla Academy. She holds a PhD in Philosophy from the National University of Kyiv-Mohyla Academy (2002) and a PhD in Anthropology from the University of Connecticut, Storrs (2010), where she taught Psychological and Cognitive Anthropology for several consecutive years and currently continues as an affiliated Research Scientist. Dr. Maltseva specializes in the interrelations between culture and human mental life, her major interests being stress, health disparities, and sociocultural factors in mental health.

Åge Oterhals received his Ph.D. in Process Technology at the University of Bergen (Norway) and is now Senior Scientist at the Norwegian Institute of Food, Fisheries and Aquaculture Research (Nofima), Tromsø, Norway. His main research interest is the development of technologies for upcycling and novel applications of side streams and byproducts in feed and food value chains, and improved sustainability of the industry. He is also the coordinator of fungi and slime mold species surveying in the Bergen Association for Mycology and Foraging.

Dwight Read is Distinguished Research Professor of Anthropology and Professor of Statistics at the University of California, Los Angeles, where he taught from 1970 until he retired in 2012. He is the recipient of the prestigious 2022 Conrad M. Arensberg Award from the American Anthropological Association. He is also a Fellow of the American Association for the Advancement of Science. He received his Ph.D. in mathematics from UCLA in 1970 with Honors. His research addresses both methodological and theoretical issues arising in all the subdisciplines that comprise a four-field anthropology, with particular emphasis on kinship terminologies. He is the co-founder and co-senior editor of

the new eJournal *Kinship* published through the University of California. He has written several books including the most recent *Introduction to the Science of Kinship* (with Murray Leaf) (2021), Lexington Press.

Claudia Strauss is Professor of Anthropology at Pitzer College. She is the author of *What Work Means: Beyond the Puritan Work Ethic* and co-author (with Naomi Quinn) of *A Cognitive Theory of Cultural Meaning*, among other works.

Svenja Völkel is a senior lecturer and researcher at the University of Mainz, Germany. Her research areas include language typology, linguistic anthropology, cognitive linguistics, and language contact with a regional focus on the Pacific region, where she has conducted extensive fieldwork. She has a particular interest in the relationship between social relationships, practices of interaction, forms of person reference (honorifics, kinship terminology, and onomastics), and their underlying cultural concepts in Tongan and other Polynesian languages and societies.

Susan C. Weller is a professor in the Department of Population Health in the new School of Public and Population Health, University of Texas Medical Branch, Galveston, Texas. Her research has focused on improving data collection and analysis methods. She is a co-developer of the Cultural Consensus Model that facilitates identification and description of cultural beliefs and has had NSF-funded projects exploring cross-cultural beliefs on medical and folk illnesses. As a medical anthropologist, she has bridged anthropology and medical sciences for several decades. Work in medical sciences and epidemiology includes detection and management of diabetes; condom effectiveness in reducing heterosexual transmission of HIV; and most recently, thrombotic risk from estrogens in post-menopausal women.

Jing Xu is a cognitive and cultural anthropologist at the University of Washington. Her research examines morality, child development, family and education in contemporary China, martial-law era Taiwan as well as cross-cultural contexts, from an interdisciplinary perspective. She is the author of *The Good Child: Moral Development in a Chinese Preschool* (Stanford University Press 2017; Chinese edition: East China Normal University Press 2021). Her second monograph, *“Unruly” Children*, will

be published by Cambridge University Press. Her scholarship has appeared in English and Chinese journals spanning anthropology, psychology, sociology, and area studies, including *American Anthropologist*, *Ethos*, *Journal of Chinese History*, *Developmental Psychology*, *PLoS One*, *Child Development Perspectives*, *China Review International*, *Cross-Currents: East Asia History and Culture Review*, *Sociological Review of China*, and *Tsinghua Sociological Review*. She holds a B.A. and M.A. from Tsinghua University, a Ph.D. in Anthropology from Washington University in St. Louis (2014), and received postdoctoral training in Developmental Psychology at the University of Washington.

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Introduction

This edited volume is the sixth edited volume in a trajectory of edited volumes linking culture and cognition. The trajectory began with Stephen Tyler's 1969 edited volume titled simply *Cognitive Anthropology*. In that volume, chapters focused on developing a paradigmatic view of the relationship between cognition and culture. Authors employed a structural approach in attempts to elucidate culture through formal systematic methods. Their aim was to elicit cultural attributes about a cultural domain and provide a computational configuration of the relationship between these attributes.

It took 15 more years for the second edited volume to be published by Janet Dougherty. The volume is titled *Directions in Cognitive Anthropology* and was published in 1985. That volume represented an important leap to reconsidering and reformulating the notion of categories from their classical "either or" model of categorization to one based on prototypes. Incorporating the concept of prototype led to considering both concepts and things themselves as being more or less like the exemplar of a category. Thus, categories were now viewed as more organic and dependent on context rather than as essentialized cognitive constructs. In that volume, Gatewood and Keller expanded the study of cognition to its practice in cultural domains.

The 1987 volume by Dorothy Holland and Naomi Quinn, *Cultural Models in Language and Thought*, represented an extension from the Dougherty volume in that it explicitly sought to consider cognition not as computational constructs best represented as a set of frozen attributes linked together but as a shared mental map (or domain) constituted of relevant linked cultural attributes that were fluid and adaptable to personality and context. Their volume was the first to explicitly introduce the concept of cultural models, and the contributors dealt with different kinds of cultural domains. Many used methods first developed at UC Irvine by Romney et al. (1986).

In 1992, Roy D'Andrade and Claudia Strauss edited a new volume, *Human Motives and Cultural Models*, that featured more psychological inputs into our understanding of cultural models. In this volume cultural models were not just structures but also imbued with motivational force that people used to attain goals. This volume re-connected cultural model theory with decision making and the ethos perspectives that were earlier foci of psychological anthropologists. Strauss's paper on personal semantic networks was particularly relevant in presenting the dynamic relationship between cultural models and salient personal experiences. New methods were introduced such as metaphor and gist analysis. Strauss developed a method that combined network analysis with the motivational aspect of cultural models.

In 2005, Naomi Quinn edited a volume entitled *Finding Culture in Talk* in which contributors focused on innovative methodological suggestions and practices regarding the investigation and discovery of cultural models. D'Andrade's chapter included a step-by-step detailed procedure elucidating a very productive strategy employed to yield a cultural model. While there was a tremendous increase of the number of researchers using cultural model theory, even in fields outside of anthropology, there has not been another edited volume on the advances made in this field until this volume.

Culture In and Out of the Mind: Advances in Cultural Model Theory represents the current diverse state of cultural model research as it has been influenced by advances in theorizing both cognitive and cultural processes. Many of the chapters show the influence of radical (or not so radical) embodied cognition which takes cognition outside the brain/

mind and into the behavioral environment and artifacts. Some of the researchers have sought to argue that cognition is more than cultural models. New formulations of cognition are articulated by contributors who have sought to articulate these new “outside the brain” concepts with cultural model theory. Contributors also have used cultural model theory to interpret archaeological findings, inferring cultural models from historic and pre-historic materials. As noted below, many of the contributors emphasize that cognition is mainly cultural, and culture does not just supply the content but also the *raison d’être* of why we cognize (see, for instance, Bender’s chapter). This volume reflects the latest theoretical and methodological advances in the field of cognitive anthropology and also expands the sorts of domains that can be studied not just in the present but in the past and perhaps to predict future conditions.

In October 2021, Prof. Giovanni Bennardo received a grant from the Wenner-Gren Foundation to organize a workshop entitled “Cultural Model Theory: Shaping a New Anthropology” (co-organizers Victor C. De Munck and Susan C. Weller). The workshop was held at Northern Illinois University on May 18–22, 2022. At the end of the working sessions, all the participants agreed that the content of the contributions deserved to be made public. This volume is the result of that agreement.

Culture In and Out of the Mind: Advances in Cultural Model Theory seeks to present a new, well-defined agenda for the role of anthropology in cognitive science and the role of cognitive science in anthropology. Since much of culture is knowledge situated in human minds, then, a clear position about the working of the mind is necessary. Anthropology, as one of the six founding constituent disciplines of cognitive science, allows for the analysis and explanation of ecologically valid cognitive approaches in social context and practice.

Cultural model theory generates specific methodologies and approaches to investigate the relation between human cognition and human behavior. A fundamental goal of this volume is to demonstrate how cultural model theory can unify the four sub-fields of anthropology. In fact, cultural model theory can be used to access human knowledge from an evolutionary, historical, contemporary, and linguistic perspective. This clarity

allows anthropology to assert its prominent position among the social and cognitive sciences.

Since its inception, most of anthropology has aimed to discover, describe, and understand cultural behavior without taking cognition into account. In 1972 [1954], Gregory Bateson introduced the concept of frame as a molar mental organization of knowledge. Thus, a focus on how knowledge relates and affects behavior was established. This knowledge is rooted in human evolution, reflected in artifacts, manifested in institutions, and embedded in languages. Over the last three decades, cultural model theory has fostered an approach to much of culture as mental knowledge shared by members of a community (Holland and Quinn 1987; D'Andrade and Strauss 1992; Shore 1996; Strauss and Quinn 1997; Bennardo and De Munck 2014; Bennardo 2018). Within this theory, knowledge is conceived as organized into mental models shared through social transmission.

Cultural model theory is in a pre-paradigmatic stage; as such the term is often appropriated as a tautological, reified, and foundational episteme used to describe and explain subjective and objective ontologies (for clear exceptions, see D'Andrade and Strauss 1992; Quinn and Strauss 1997). For example, because people have a cultural model of raising their hands in a class to ask a question, they raise their hands; or when a person X expresses feelings of passion, commitment, and intimacy for Y then they are in love. In this case the target expressed feelings are a product of the mental representation for love or cultural model. In this scenario there is always a mental representation for a target set of behaviors or feelings.

The present volume goes beyond such pre-paradigmatic and simple definitions and uses of cultural model theory and considers the possibility of cultural models without a target action or feeling, and the possibility of a target without cultural models. We show how these different relations are possible without entertaining an anti-representational stance. We also seek to posit specific criteria for evaluating the core features and reach of a cultural model (i.e., the degree to which it is shared and used). In doing so, we move cultural model theory to a more paradigmatic stage. Finally, in our insistence on a synthesis of narrative and statistical methods for discovering, describing, and analyzing cultural models, we advance a multi-method approach.

Cultural model theory also addresses the phenomena of externalized cognition, that is, the generation of cognitive artifacts. These latter increase the power of human cognition while significantly altering its internal operations and characteristics. We clarify the criteria to be used in labelling a molar organization of knowledge as a cultural model. In so doing, we indicate the necessary steps to explain what we call in the title of the volume “Cognition In and Out of the Mind.”

When adopting cultural model theory, a separation emerged between research projects privileging a qualitative approach based on the analysis of linguistic data (e.g., Quinn 2005) and a quantitative approach based on the analysis of cognitive data and on the use of consensus analysis (e.g., Weller 2007). This separation delayed the development of the field and reduced its potential to be an effective presence in anthropology. We outline a contemporary cultural model theory that entails a methodological and conceptual path in which qualitative and quantitative data collection and analyses co-exist in a cross-feeding interaction (Bennardo and De Munck 2014). In addition, both are rooted in ethnographic knowledge as a necessary, molding background.

The contributors include both distinguished senior scholars and new voices, across anthropology, linguistics, archaeology, philosophy, and cognitive science. Despite this breadth, they share some common assumptions and goals in human (cultural and linguistic) evolution, histories, contemporary cultures, and languages. Advancing the momentum established by foundational work in this area, this volume contributes both to anthropology, which needs a robust theory of social sharing and transmission (Bender et al. 2010), and to cognitive science, which needs to pay greater attention to cultural and linguistic variation (Levinson 2012).

The book is divided into five parts, each containing thematically linked chapters. Part I, *Cultural Model Theory*, includes three contributions that expand on early work on the genesis and current instantiations of cultural model theory. In “Cognitive Foundations and Cultural Models: The Mental Life of Culture,” Giovanni Bennardo argues that cultural model theory requires a set of assumptions about the nature of culture, the form of cognition, and the place of culture in the mental architecture. Then, he continues, a theoretically motivated methodological path appears as necessary to investigate and discover cultural models.

In “Affordances, Culture and the Self: Constituting a New Cognitive-Behavioral Paradigm,” Victor C. de Munck sets to achieve three goals: the first is to discuss and reject the concept of self as a necessary underpinning or part of cognition and in so doing consider the self a product of the interpreter function of the left side of the brain; the second is to discuss how we cognize affordances and how they are evolutionary adaptations to the environment and therefore cognized; and the third is to reposition cultural models explicitly between cognition and behavior.

In “Cultural Models: A Constructed Reality,” Dwight W. Read suggests that while some cultural models are a mapping from the phenomenal domain to the ideational domain, some of them map the ideational domain back to the ideational domain. In the latter case, the model units are given content through cultural instantiation of ideational concepts and the cultural model with its instantiated units is then perceived as being objective, hence real and natural, even though it is subjectively constructed and then instantiated to give it substance. Cultural models in this sense are foundational since their subjectivity is outside of individual awareness; hence, they are taken as absolutes and not subject to dispute within a community.

Part II, *Defining Cultural Models*, consists of three contributions in which the authors address substantial issues in relations to the nature and definition of the concept of cultural model. In “What is (and is not) a Cultural Model,” Claudia Strauss proposes a set of criteria to distinguish cultural models from other mental representations. She indicates some key features of cultural models as originators of that approach understood them. Then, she proposes some shared mental representations that either are not cultural models or are not cultural models as earlier cognitive anthropologists thought about them. Finally, she considers possible limitations of cultural models as conceived by that earlier generation of cognitive anthropologists.

In “Cultural Models are Intrinsically Normative,” Renatas Berniunas argues that the traditional approach to cultural models provides only occasional references to underlying normativity. What is lacking is a systematic exposition of underlying cognitive and social components and a comprehensive discussion of normativity. Thus, he provides a tentative

account of cultural models as it pertains to normative cognition, its genesis, and its evolution.

In “Thinking While Doing: Active Cognition in Bartending,” John B. Gatewood focuses on everyday activities that involve multiple kinds and scales of cognitive structures temporally integrated with the on-going flow of actions. Some activities rest on specialized knowledge not widely shared among the general public. He describes how reasonably skilled bartenders think through, and during, the process of taking orders and making drinks. Bartenders’ cognition involves several kinds of knowledge structures that are active at different times and in different ways during the production process.

Part III, *Cultural Consensus Theory*, contains three chapters in which the authors introduce and discuss a formal approach for discovering cultural models, that is, cultural consensus theory. In “Validating Cultural Models with Cultural Consensus Theory,” Susan C. Weller, Jeffrey C. Johnson, and William Dressler state that the cultural consensus approach estimates culturally shared answers to a series of related questions, as well as the overall and individual cultural knowledge levels in answering the questions. The cultural model applies when there is sufficient homogeneity in responses across respondents and a single set of answers exists. They conclude by showing how cultural consensus theory can also be used to validate cultural models.

In “Measuring Shared Collective Knowledge and Belief Systems,” Kateryna Maltseva addresses the issue of measuring shared collective knowledge and belief systems. She begins by outlining the theoretical assumptions behind measuring collective constructs in cognitive anthropology and going over the principles of computing inter-informant agreement (consensus) present in the ethnographic data. She then discusses cultural models as an instantiation of intersubjectively shared collective beliefs. Finally, she presents several strategies that can be useful for field researchers to extract and explore cultural models by means of quantitative methods.

In “Cultural Consonance: Extending Cultural Consensus Theory,” William Dressler defines cultural consonance as the degree to which individuals, in their own behavior, match the prototypes for behavior encoded in cultural models. This concept extends cultural consensus theory to