

Cambridge University Press
0521459761 - The Development of Cognitive Anthropology
Roy D'Andrade
Frontmatter
[More information](#)

Roy D'Andrade has written a lucid historical account of the growth and development of the field of cognitive anthropology. The origins of cognitive anthropology can be traced back to the late 1950s when anthropology was grappling with the problem of understanding native systems of categorization. This book starts with an evaluation of these formative years, portraying the way in which research evolved across more than thirty years to the present. It traces the way in which the early notions about semantics and taxonomies evolved into more sophisticated theories about prototypes, schemas, and connectionist networks, seen as the cognitive mechanisms underlying the organization of folk models and reasoning in ordinary life. This is followed by a review of the most recent research on the social distribution of cultural knowledge and the relation of cultural models to emotion, motivation, and action. The final section summarizes the general theoretical perspective of cognitive anthropology, which treats culture as particulate, socially distributed, variably internalized and embodied in physical structures – a view which opposes structuralist, interpretive, and post-modern conceptions of culture.

Cambridge University Press
0521459761 - The Development of Cognitive Anthropology
Roy D' Andrade
Frontmatter
[More information](#)

The development of cognitive anthropology

Cambridge University Press
0521459761 - The Development of Cognitive Anthropology
Roy D' Andrade
Frontmatter
[More information](#)

The development of cognitive anthropology

ROY D' ANDRADE

University of California



**CAMBRIDGE
UNIVERSITY PRESS**

Cambridge University Press
0521459761 - The Development of Cognitive Anthropology
Roy D' Andrade
Frontmatter
[More information](#)

CAMBRIDGE UNIVERSITY PRESS
Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore, São Paulo

Cambridge University Press
The Edinburgh Building, Cambridge CB2 2RU, UK

Published in the United States of America by Cambridge University Press, New York

www.cambridge.org
Information on this title: www.cambridge.org/9780521453707

© Cambridge University Press 1995

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 1995
Seventh printing 2003

A catalogue record for this publication is available from the British Library

Library of Congress Cataloguing in Publication data

D'Andrade, Roy G.
The development of cognitive anthropology / Roy D'Andrade
p. cm.
Includes bibliographical references.
ISBN 0 521 45370 4.—ISBN 0 521 45976 1 (pbk.)
1. Ethnopsychology. 2. Cognitive and culture. I. Title.
GN502.D36 1995
155.8—dc20 94—4749 CIP

ISBN-13 978-0-521-45370-7 hardback
ISBN-10 0-521-45370-4 hardback

ISBN-13 978-0-521-45976-1 paperback
ISBN-10 0-521-45976-1 paperback

Transferred to digital printing 2005

Contents

List of figures	<i>page</i> x
List of tables	xii
Preface	xiii
1 Background	1
Early history	1
A new agenda and the great paradigm shift	8
2 Towards an analysis of meaning	16
Structure	17
The feature analysis of kin terms	19
A feature analysis of English kin terms	28
3 The classic feature model	31
Polysemy	36
Conjunctivity (or non-disjunctiveness)	38
Short-term memory	42
Chunking	44
Analogy	45
Similarity judgments	48
The feature composition of evaluative judgments	54
Summary	56
4 Extension of the feature model	58
Firewood	58
Semantic networks	62
Finding salient features through similarity judgments	64
Psychological reality again	66
Item by feature matrices	70
Rating correlations based on feature overlap	77
Memory based rating	83
	vii

viii	Contents	
	Applied research	88
	In retrospect	90
5	Folk taxonomies	92
	The generality of the model of taxonomic ranks	100
	Some critiques of the taxonomic rank model	101
	Extended and focal ranges	104
	Focal and extended ranges of color terms	106
	The Roschian synthesis	115
6	The growth of schema theory	122
	The germ schema	126
	Cultural schemas	130
	Image schemas	132
	Schemas as processors	136
	Modifications of schema theory and limitations of connectionist models	141
	Implications of schema-connectionist theory for the study of culture	143
7	Models and theories	150
	Models	151
	The Caroline Islands navigation model	152
	The model of the mind	158
	The American model of marriage	169
	Cultural theories	172
	The cultural theory of conventionality	174
	The theory of essences	176
	An ontology of cultural forms	179
8	Cultural representations and psychological processes	182
	Perception	182
	Memory	184
	Reasoning	193
	Logic and the psychology of reasoning	199
	Distributed cognition, artifacts and representational structure	207
	Consensus and cognition	212
	Summary	216
9	Cognitive processes and personality	218
	Emotion	218
	Internalization	227

Cambridge University Press
0521459761 - The Development of Cognitive Anthropology
Roy D' Andrade
Frontmatter
[More information](#)

	Contents	ix
Motivation		229
Coda		241
10 Summing up		244
A bird's eye view		244
The historical context		248
Final comment		251
<i>References</i>		253
<i>Name index</i>		268
<i>General index</i>		271

Figures

2.1	Chiricahua kinship terms	page 20
2.2	Sex of ego reduction of term F kin types	23
2.3	Sex of alter reduction of term F kin types	23
2.4	Further sex of alter reduction of term F kin types	23
2.5	Reciprocal reduction of term F kin types	23
2.6	Further reciprocal reduction of term F kin types	24
2.7	Sequence difference reduction of term F kin types	24
2.8	Reduced expressions for Chiricahua terms F and I	25
2.9	Feature analysis of English kin terms	29
3.1	Paradigmatic structure of English terms for <i>humans</i>	31
3.2	Paradigmatic structure for English terms for <i>horses</i>	31
3.3	Paradigmatic structure for English pronouns	32
3.4	Paradigmatic structure for second person pronouns used in King James Bible	32
3.5	Paradigmatic structure of a Hanuó pronominal set (adapted from Conklin 1969)	33
3.6	Taxonomy for <i>something to eat</i> (adapted from Frake 1962)	35
3.7	Taxonomy for <i>parent</i>	36
3.8	Taxonomic representation of polysemous senses of <i>man</i>	36
3.9	Types and frequencies of sibling terminology	39
3.10	Hopi sibling terminology	41
3.11	Pairings of selected kin terms	49
3.12	Wallace and Atkins (1960) feature analysis of English kin terms	50
3.13	Diagrammatic representation of Wallace and Atkins (1960) feature analysis of English male kin terms	52
3.14	Diagrammatic representation of Romney feature analysis of English male kin terms	53
3.15	Observed and predicted <i>solidarity</i> scores for English kin terms (n = 65)	55
4.1	Example semantic network model (adapted from Genter 1978)	63

	Figures	xi
4.2 Two dimensional KYST representation of color terms (adapted from Fillenbaum and Rapoport 1971)		65
4.3 Two dimensional representation of judged similarity among common animals (adapted from Henley 1969)		68
4.4 MDSCAL plot for American belief-frames and disease terms		75
4.5 Factor plot for four character traits		80
4.6 Hierarchical clustering of A'ara personality descriptors		87
4.7 U-statistic hierarchical cluster analysis of ratings of propositions about interpersonal relationships		89
5.1 Partial taxonomy for <i>creatures</i> in English		96
5.2 Normalized foci of basic color terms in twenty languages (adapted from Berlin and Kay 1969)		108
5.3 Modal color names for Nafaanra (Ghana) stage 2 (adapted from Berlin, Kay, and Merrifield 1985)		111
5.4 Modal color names for Mura Pirahã (Brazil) stage IIIa (adapted from Berlin, Kay, and Merrifield 1985)		112
5.5 Cluster analysis of color chip sorting data (adapted from Boster 1986)		114
6.1 Logical relations among American disease properties		128
6.2 Prototypic sense of <i>out</i>		134
6.3 Secondary sense of <i>out</i>		135
6.4 Tertiary sense of <i>out</i>		136
6.5 Perceptron with two output units		137
6.6 Connectionist network with one decision unit		138
7.1 Star tracks – etic construction		154
7.2 Star tracks – emic construction		155
7.3 Some causal relations in mental processes in the folk model		162
8.1 Perceptual distances between three color chips		183
8.2 The contingency between being a garnet and being a semi-precious stone		204
9.1 Hierarchical cluster analysis of Samoan emotion terms (after Gerber 1985)		225

Tables

3.1	Large magazine count	page 38
3.2	Kinship terms in six cultures	42
3.3	All possible triads for the set <i>father, mother, son, daughter</i>	49
3.4	Mean number of times each pair of kin terms was classed together	52
4.1	Evaluation of firewood	60
4.2	Consequences of burning certain varieties of wood	61
4.3	American disease terms	71
4.4	American disease belief-frames	71
4.5	American sample, dichotomized data for disease terms and belief-frames	73
4.6	Character trait ratings of six notables	78
4.7	Pearson correlations for four character traits across six notables	78
4.8	Factor analysis of four character traits across six notables	79
4.9	Factor loadings for twenty character scales	81
4.10	Multidimensional scaling of similarity ratings for Norman character traits	82
5.1	Aguaruna plant generics by degree of cultural significance (adapted from Berlin 1976)	96
5.2	Three level taxonomies	117
5.3	Prototypicality (goodness of example) ratings for birds (adapted from Rosch 1975)	118
7.1	Characteristics of marriage commonly expressed in metaphor	169
7.2	Percentage of moral and conventional responses for two cultural practices by culture and age group	175
8.1	Basic descriptions used to identify test chips in the Lucy Shweder experiment	188
8.2	Results of if-then tests	203
9.1	Correlation of selected variables with internalization of the American model of interpersonal behavior for seventy-two Japanese children growing up in Los Angeles (adapted from Minoura 1992)	241

Preface

I wrote this book with two major goals in mind. At present, there is no single book to which outsiders can go to find out about cognitive anthropology. Work in cognitive anthropology has been published in articles spread across a range of journals and edited collections. One goal, then, is to bring some thirty years of work together in one place.

The second reason, related to the first, is that many social and cognitive scientists do not know about recent work in cognitive anthropology. The common view of the field was set in place by work done in the 1960s on kin terms and plant taxonomies. Research during the 1980s and 1990s on cultural models, reasoning, consensus, emotion, memory, motivation, and distributed cognition is less well known. While I have not been able to do a complete review, this book is intended to provide reasonable coverage of current research and thinking.

This book is not a standard textbook; it is too particular in its perspective and involved with current controversy. Nor is it a history of the sort historians of science write, since I have been more concerned with the presentation of ideas than with the intricacies of chronology and first authorship. However, it does try to show how the field of cognitive anthropology developed over time. I wrote it to tell what I believe is an interesting story about a fascinating problem.

What is the problem? The problem is the nature of human culture. One can conceive of a society's culture, in Ward Goodenough's famous phrase, as "whatever it is one has to know or believe in order to operate in a manner acceptable to its members." Certainly humans do learn an enormous amount of cultural knowledge. The problem comes when one tries to understand what that knowledge *is*. Is it lists of propositions? Organized structures of contrasting attributes? A storehouse of images? A collection of taxonomies? A set of computer-like programs? Is it totally language based, or does it include images and physical skills?

Along with these questions about the character of cultural knowledge comes a related set of questions about how other mental processes might effect how that knowledge is organized and used, such as the limitations of short-term memory or degree to which knowledge is necessarily involved with emotion

xiv Preface

and motivation. In turn, these questions lead to other questions about how what is learned affects other mental processes, such as long-term memory and reasoning. And underlying all of this is the crucial issue: how can one formulate these questions so that they can be investigated?

The field of cognitive anthropology has “grown up” with the other cognitive sciences. There has been a constant exchange of ideas across fields, although the practitioners in each discipline are often unaware of the parallel development of the fields or believe that these parallel developments are due to borrowing from their own field. In my experience, I have found that a good idea appears almost everywhere at once across the cognitive sciences, although how seriously and effectively a particular idea is pursued may differ greatly by field.

Overall, the agenda of cognitive anthropology has held to the idea that the study of cognition should be more than a series of propositions which are based solely on laboratory experiments. There is nothing wrong with a laboratory; a great many questions can only be answered through experimentation. However, a general goal of anthropology is to understand the natural world of human life, as it is found. What the anthropologist needs is a theory which will help in understanding how ordinary people normally organize and use knowledge.

Along with the idea that cognitive anthropology should try to understand the way knowledge is used in ordinary life, there is also the notion that cognitive anthropology should study the way in which knowledge is conventionalized into *culture*. Human knowledge is much too precious a thing to be carelessly discarded each generation with the hope that it will be rediscovered in the next. Human knowledge is carefully preserved and passed from one generation to another. Most of what any human ever thinks has been thought before, and most of what any human ever thinks has been learned from other humans. Or, to put it another way, most of what anyone knows is *cultural* knowledge. Cognitive anthropology investigates cultural knowledge, knowledge which is embedded in words, in stories, and artifacts, and which is learned from and shared with other humans.

The number of anthropologists who have been involved in creating the field of cognitive anthropology has not been large. At various times the number of anthropologists and linguists involved in cognitive research may have reached two hundred or so. About a hundred and fifty anthropologists and linguists are cited in the following chapters, along with about a hundred psychologists. Most of the work has been carried out by a shifting core which has never been larger than about thirty persons. Within this group there has been a remarkable spirit of collaboration and good will; the personal attacks and exaggerated claims to precedence and prominence typical of much writing in the social sciences have been notably absent from the cognitive anthropology literature.

This book is dedicated to those who set the agenda of cognitive anthropology: Floyd Lounsbury, Ward Goodenough, Anthony Wallace, Harold Conklin, and A. Kimball Romney. And to the fine folks who helped with this manuscript, many thanks.