COMMUNICATION, ACTION, AND MEANING

The Creation of Social Realities

W. Barnett Pearce
Vernon E. Cronen
## CONTENTS

<table>
<thead>
<tr>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREFACE</td>
</tr>
<tr>
<td>ACKNOWLEDGMENTS</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
</tr>
<tr>
<td>Chapter</td>
</tr>
<tr>
<td>1 WONDER</td>
</tr>
<tr>
<td>Recursive Wonder as Method, or &quot;Where Does This Fit into the Literature?&quot;</td>
</tr>
<tr>
<td>The Function and Scope of Communication Theory</td>
</tr>
<tr>
<td>Overview</td>
</tr>
<tr>
<td>PART I: PERSPECTIVES ON COMMUNICATION AND THEORY</td>
</tr>
<tr>
<td>2 COMMUNICATION AND CULTURE</td>
</tr>
<tr>
<td>Abstract</td>
</tr>
<tr>
<td>Introduction</td>
</tr>
<tr>
<td>The Concept of Communication in Primitive Culture</td>
</tr>
<tr>
<td>The Concept of Communication in Eastern Culture</td>
</tr>
<tr>
<td>The Concept of Communication in Western Culture</td>
</tr>
<tr>
<td>Discussion</td>
</tr>
<tr>
<td>3 THE NEW IDEA OF COMMUNICATION</td>
</tr>
<tr>
<td>Abstract</td>
</tr>
<tr>
<td>Introduction</td>
</tr>
<tr>
<td>The Decline of the Traditional Western Concept of Communication</td>
</tr>
<tr>
<td>Operationalism: A Puritan Attempt to Save the Western Concept of Communication</td>
</tr>
<tr>
<td>Communication as Action: A Revolutionary Concept</td>
</tr>
<tr>
<td>Implications of an Actional Concept of Communication</td>
</tr>
<tr>
<td>Chapter</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>4 THE NATURE OF COMMUNICATION THEORY</td>
</tr>
<tr>
<td>Abstract</td>
</tr>
<tr>
<td>Introduction</td>
</tr>
<tr>
<td>Forms of Theory in Orthodox Social Science</td>
</tr>
<tr>
<td>The Requirements for Communication Theory</td>
</tr>
<tr>
<td>On Doing Autonomous Theory</td>
</tr>
<tr>
<td>PART II: THEORY AND RESEARCH</td>
</tr>
<tr>
<td>5 THE THEORY OF THE COORDINATED MANAGEMENT OF MEANING</td>
</tr>
<tr>
<td>Abstract</td>
</tr>
<tr>
<td>Introduction</td>
</tr>
<tr>
<td>A Dramatistic Metaphor</td>
</tr>
<tr>
<td>The Ancestral Term: The Coordinated Management of Meaning</td>
</tr>
<tr>
<td>Persons and the Management of Meaning</td>
</tr>
<tr>
<td>Interpersonal Rule Systems and Coordinated Management</td>
</tr>
<tr>
<td>The Forms of Communication and the Coordinated Management of Meaning</td>
</tr>
<tr>
<td>The Human Condition and the Structure of Explanation</td>
</tr>
<tr>
<td>6 COMMUNICATION COMPETENCE</td>
</tr>
<tr>
<td>Abstract</td>
</tr>
<tr>
<td>Introduction</td>
</tr>
<tr>
<td>A Historical/Cultural Perspective</td>
</tr>
<tr>
<td>A Model of Individual Competence</td>
</tr>
<tr>
<td>Forms of Interpersonal Systems</td>
</tr>
<tr>
<td>A Study of Perceived Competence</td>
</tr>
<tr>
<td>A Study of Socialized Creativity</td>
</tr>
<tr>
<td>7 THE STRUCTURE OF SOCIAL REALITY: TEN STUDIES</td>
</tr>
<tr>
<td>Abstract</td>
</tr>
<tr>
<td>Introduction</td>
</tr>
<tr>
<td>Simulated Conversations</td>
</tr>
<tr>
<td>Antisocial Logics: The Rules of Fights, Impotence, and Violence</td>
</tr>
</tbody>
</table>
Chapter

The Convoluted Logics of Intimate Relations 265
Institutional Logic: The Study of Organizations 283
The Change of Social Realities 290
Conclusion 301

PART III: IMPLICATIONS

8  COMMUNICATION AND THE HUMAN CONDITION 305

Abstract 305
Introduction 305
Surviving and Thriving in Self-Reflective Social Reality 308
The Prospect for Wonder 314

BIBLIOGRAPHY 315

NAME INDEX 335

SUBJECT INDEX 339

ABOUT THE AUTHORS 341
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>The Concept of Communication in Six Cultures</td>
<td>30</td>
</tr>
<tr>
<td>5.1</td>
<td>Coordination Strategies and Communicative Functions</td>
<td>172</td>
</tr>
<tr>
<td>6.1</td>
<td>Scales Used in a Study of Perceived Competence</td>
<td>219</td>
</tr>
<tr>
<td>6.2</td>
<td>Summary of Data in a Study of Perceived Competence</td>
<td>220</td>
</tr>
<tr>
<td>6.3</td>
<td>Variance in Perceived Competence Accounted for by Aligning Actions and Information Sequencing</td>
<td>221</td>
</tr>
<tr>
<td>6.4</td>
<td>Planned Comparisons Testing Two Theories of Social Reality</td>
<td>223</td>
</tr>
<tr>
<td>6.5</td>
<td>Communicative Functions and Types of Systems</td>
<td>225</td>
</tr>
<tr>
<td>6.6</td>
<td>Items for Ancova Outcome Variables and Covariate</td>
<td>227</td>
</tr>
<tr>
<td>6.7</td>
<td>Summary of Data in a Study of Socialized Creativity</td>
<td>228</td>
</tr>
<tr>
<td>7.1</td>
<td>Correlates of Partner's Unpredictability in a Simulated Conversation</td>
<td>238</td>
</tr>
<tr>
<td>7.2</td>
<td>Correlates of Own Competence in a Simulated Conversation</td>
<td>239</td>
</tr>
<tr>
<td>7.3</td>
<td>Correlates of Other's Competence in a Simulated Conversation</td>
<td>239</td>
</tr>
<tr>
<td>7.4</td>
<td>Correlates of Score at the Midpoint of a Simulated Conversation</td>
<td>240</td>
</tr>
<tr>
<td>7.5</td>
<td>Correlates of Score at the End of a Simulated Conversation</td>
<td>241</td>
</tr>
<tr>
<td>7.6</td>
<td>Correlates of Perceived Choice at the Midpoint of a Simulated Conversation</td>
<td>242</td>
</tr>
<tr>
<td>Table</td>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>7.7</td>
<td>Correlates of Perceived Choice at the End of a Simulated Conversation</td>
<td>242</td>
</tr>
<tr>
<td>7.8</td>
<td>Correlates of Perceived Enmeshment in an Episode</td>
<td>253</td>
</tr>
<tr>
<td>7.9</td>
<td>Correlates of Episode Valence</td>
<td>253</td>
</tr>
<tr>
<td>7.10</td>
<td>A Theory of Rule Structures and Types of Episodes</td>
<td>256</td>
</tr>
<tr>
<td>7.11</td>
<td>A Violent Episode Enacted by Sisters</td>
<td>260</td>
</tr>
<tr>
<td>7.12</td>
<td>Mrs. Flynn's Description of the Confrontation Episode</td>
<td>269</td>
</tr>
<tr>
<td>7.13</td>
<td>Mr. Flynn's Description of the Confrontation Episode</td>
<td>270</td>
</tr>
<tr>
<td>7.14</td>
<td>Dave and Jan's Job Episode</td>
<td>277</td>
</tr>
<tr>
<td>7.15</td>
<td>Dave and Jan's Letter-writing Episode</td>
<td>278</td>
</tr>
<tr>
<td>7.16</td>
<td>Cluster Analysis of Dave and Jan's Episodes</td>
<td>280</td>
</tr>
<tr>
<td>7.17</td>
<td>The Actual and Ideal Social Reality of an Academic Department</td>
<td>286</td>
</tr>
<tr>
<td>7.18</td>
<td>Legitimate and Prohibited Meanings in an Academic Department</td>
<td>287</td>
</tr>
<tr>
<td>Figure</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>5.1</td>
<td>A Model of Hierarchically Organized Meanings</td>
<td>131</td>
</tr>
<tr>
<td>5.2</td>
<td>Primitive Form of a Constitutive Rule</td>
<td>142</td>
</tr>
<tr>
<td>5.3</td>
<td>Primitive Form of a Regulative Rule</td>
<td>143</td>
</tr>
<tr>
<td>5.4</td>
<td>Measurement Model of a Regulative Rule</td>
<td>145</td>
</tr>
<tr>
<td>5.5</td>
<td>Constitutive and Regulative Rules in an Uncoordinated Conversation</td>
<td>155</td>
</tr>
<tr>
<td>5.6</td>
<td>Three Intrapersonal Rule Systems for Conversing in an Artificial Language</td>
<td>156</td>
</tr>
<tr>
<td>5.7</td>
<td>A Comparison of Rules for Information Exchange among the Malagasy and NASA</td>
<td>160</td>
</tr>
<tr>
<td>5.8</td>
<td>Simple and Complex Rules for Getting One's Ball Back from an Adult</td>
<td>163</td>
</tr>
<tr>
<td>5.9</td>
<td>Three Interpersonal Rule Systems for Conversing in an Artificial Language</td>
<td>166</td>
</tr>
<tr>
<td>5.10</td>
<td>A Model of Communication</td>
<td>170</td>
</tr>
<tr>
<td>5.11</td>
<td>Coorientational States in Communication</td>
<td>174</td>
</tr>
<tr>
<td>6.1</td>
<td>Performance Demands in Three Types of Societies</td>
<td>189</td>
</tr>
<tr>
<td>6.2</td>
<td>Initial Representation of the Logic Required for a Recursive Society</td>
<td>197</td>
</tr>
<tr>
<td>6.3</td>
<td>A Model of Communication Competence</td>
<td>198</td>
</tr>
<tr>
<td>7.1</td>
<td>Scales Used in a Study of Unwanted Repetitive Patterns</td>
<td>251</td>
</tr>
<tr>
<td>7.2</td>
<td>Logical Forces in Violent and Nonviolent Episodes between Brothers</td>
<td>262</td>
</tr>
<tr>
<td>Figure</td>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>7.3</td>
<td>Logical Forces in Violent and Nonviolent Episodes between Sisters</td>
<td>263</td>
</tr>
<tr>
<td>7.4</td>
<td>The Flynns' Paradoxical Logic</td>
<td>274</td>
</tr>
<tr>
<td>7.5</td>
<td>Logical Forces in Dave and Jan's Job Episode</td>
<td>281</td>
</tr>
<tr>
<td>7.6</td>
<td>The Social Reality of a High School Counterculture</td>
<td>292</td>
</tr>
<tr>
<td>7.7</td>
<td>Contradictory Elements in the Social Reality of a High School Counterculture</td>
<td>294</td>
</tr>
</tbody>
</table>
COMMUNICATION,
ACTION, AND MEANING
1

WONDER

The most human of human characteristics is that of wondering, and the objects of wonder most characteristically human are human characteristics. Wonder begins with a child's fascinated exploration of its body and surroundings, and continues to adult engrossment in puzzles, problems, games, and the mysteries of life and the universe. The methods of childish wonder have limited power: fingers are tasted, flexed, felt, and waved before the eyes. Adult wonder sometimes uses more sophisticated tools: scopes to record what the eye cannot otherwise see, statistics to locate patterns and differences in data-arrays larger than the mind can interpret, libraries and computers to store and share the thoughts of the community of scholars, and so on. Wonder is a manner of thinking that can use a variety of tools and be applied to any given topic. Koestler (1978, p. 146) described wonder as the fusion of the "tragic" and "trivial" planes of existence. "By living on both planes at once, the creative artist or scientist is able to catch an occasional glimpse of eternity looking through the window of time. Whether it is a medieval stained-glass window or Newton's formula of universal gravity, is a matter of temperament and taste."

"Extensional wonder consists of thinking about objects of consciousness external to the thinker, or objective reality." In this tough-minded age, extensional wonder has been celebrated by grants, awards, and patents, institutionalized in think tanks, and systematized into a scientific method which, as Maslow (1966) noted, enables uncreative persons to be creative. Similar honor is not extended to recursive wonder, which occurs when a thinker thinks about thinking about thinking. By contrast, recursive wonder is tiring to the mind and seems to include something tricky. In the preface of the first edition of The Critique of Pure Reason, Kant said, "Human reason has this peculiar fate that in one species of its knowledge it is burdened by questions which, as prescribed by the
very nature of reason itself, it is not able to ignore, but which, as transcending all of its powers, it is also not able to answer." These questions concern thinking about thinking about thinking, because this creates "strange loops" in which "by moving upwards (or downwards) through the levels of some hierarchical system, we unexpectedly find ourselves right back where we started . . ." (Hofstadter 1979, p. 10).

Strange loops are the structure of Epimenides' paradox ("All Cretans are Liars. I am a Cretan."), Bach's Musical Offering (which modulates upward one key each time it is played, ultimately returning to the original), mathematics (Gödel's proof), and Escher's art which plays optical tricks in a two-dimensional plane. Assume that three persons are standing on the same stair step in Escher's Ascending and Descending. One begins climbing upstairs, one goes downstairs, and the third stands still. After half a circuit, the climbers who left in opposite directions will meet, and after a whole circuit, the three will be on the same step although one did not move at all, one climbed continuously, and the other descended continuously.

In some of his [Escher's] drawings, one single theme can appear on different levels of reality . . . the mere presence of these two levels invites the viewer to look upon himself as part of yet another level, and by taking that step, the viewer cannot help getting caught up in Escher's implied chain of levels . . . This can be mindboggling in itself. However, what happens if the chain of levels is not linear, but forms a loop? What is real, then, and what is fantasy? (Hofstadter 1979, p. 15).

There is a trick in Escher's art and in any recursive system. However, this trickiness is not simply an amusement for an artist or the substance of a debater's strategy, to be replaced by the clear-headed techniques of extensional wonder. Strange loops are the basic structure of recursive wonder, and the major discovery in philosophy, humanities, and social sciences in the twentieth century is that recursive wonder underlies extensional wonder. This is the Theorem of Extensional Wonder: Any sufficiently powerful program of extensional wonder will become recursive, or—more prosaically—if humans look closely enough at any phenomenon, they will see their own reflection and their own intellectual fingerprints, which must themselves be understood as part of that phenomenon.

The stars seem as likely a candidate for nonrecursive wonder as possible, and yet equally careful observers of the same phenomena see very different things. The Babylonian astrologers
could predict astronomical events as well as Ptolemy and better than Copernicus, but each of these interpreted his visions quite differently (Toulmin 1961). Hanson (1958) created an imaginary situation in which Tycho Brahe and Johannes Kepler met in a meadow at dawn to resolve their cosmological differences. At the moment the disc of the sun became visible, each turned to the other with the triumphant shout "See! I am right!" In one sense, they both saw the same thing: their retinal images were (assumedly) identical. In another sense, each saw the vindication of his theory: one saw the sun rise above the unmoving earth, the other saw the earth rotate to expose the unmoving sun. Hanson differentiated "seeing as" from "seeing that," and when the argument becomes this powerful, a theory of cosmology must become as well a theory of humankind and human knowing.

Consider a field of corn. An ear of corn is ostensibly an object whose characteristics and existence are unaffected by the presence or action of the human observer, but the exercise of extensional wonder about corn quickly becomes recursive. One of the great inventions of humankind was agriculture, by which they replaced the ecology of which they were a part with a variety of economies of which they are both cause and effect. Long before the European invasion, Native Americans bred maize (corn) to their own specifications, in the process creating a plant that could not exist without continuing human agency, and other cultures did the same with other products. This solves problems for the farmer, but creates them for the would-be social theorist attempting to limit him/herself to extensional wonder. In a series of remarkably lucid books, Marvin Harris (1974a) attempts to explain the sometimes bizarre patterns of behavior in human cultures on the basis of economic determinism. For example, "pig-loving" Pacific islanders and "pig-hating" Mid-Easterners are both explained as adapting to the exigencies of their economy, hallowing with taboo prohibitions against economically counterproductive behaviors. If Harris's arguments are limited to human responses to given economic conditions, the claim is plausible. However, if the origins of the economic conditions themselves are included in the analysis—that is, if the power of the extensional wonder is increased—human agency is seen as at least part of the source of those conditions. Which explains which? The structure of the explanation is a strange loop, and extensional wonder has again become recursive.

Recursive wonder seems to be unique to homo sapiens. As far as we have been able to determine, humankind is "the only creature which is a problem to itself" (Matson 1976, p. xlv), or, as Mark Twain put it, "man is the only animal that blushing—or needs to!" Recursive wonder is not new to this century. The wisdom literatures
and myths of all cultures have dealt with the question of humankind, for the most part providing a convenient set of answers that reinforces the unity of the social group. Campbell (1968) argued that the myths of all peoples serve four functions: providing a common world view or cosmology; legitimating existing institutions and folkways; locating the individual within the social order; and reminding persons of the mystery that transcends any of the other three functions. The fourth function obviously comprises a strange loop. Most societies have avoided the recursivity it implies by leaving mystery in the hands of specialists—shamans, priests—who in turn support the first three functions (Campbell 1959a).

This comfortable division of responsibility is denied modern society. The ultimate irony of history is that the greatest changes are brought about not by visionaries but by the unintended consequences of actions by conservatives or tough-minded men and women trying to cope with an immediate problem. As Pfeiffer (1977) reconstructs the story, the invention of agriculture—which changed humankind more than any subsequent invention—was a series of small adaptations to immediate problems rather than the product of planning and vision. In much the same way, the unique structure of modern society is the product of efforts to produce something quite different. Specifically, the elevation of recursive wonder to center stage is the unanticipated and largely undesired consequence of the development of more powerful tools of extensional wonder, and their application to the mythological functions of cosmology, social institutions, and individuals. The further these lines of extensional wonder are pushed, the more evident it becomes that they are ultimately recursive, destroying the separation between the mystical function of mythology and the other functions. In contemporary society, only the most naive artist or scientist—that is, one who uses unconscionably weak tools of inquiry—can base his/her work on a consensual cosmology or set of stable social institutions or concept of individual psychology. The minimal requirement of an artist or scientist is to choose among competing concepts, thrusting him/herself into the product of his/her art or science, and thus creating a strange loop. As Campbell (1968) said, in contemporary society "the mythogenic zone is the human heart." It has always been so, but in recent years we have become self-consciously aware that it is so, thus escalating the recursivity.

Langer described the generic ideas of any age as a musical key in which philosophy is played. The philosophy of the twentieth century—like its art and science—is obviously discordant with that of previous centuries in the West. Langer attributes this to the emergence of a new key that transposes the questions of philosophy around new themes.
... the triumph of empiricism in science is jeopardized by the surprising truth that our sense-data are primarily symbols.

Here, suddenly, it becomes apparent that the age of science has begotten a new philosophical issue, inestimably more profound than its original empiricism: for ... the edifice of human knowledge stands before us, not as a vast collection of sense reports, but as a structure of facts that are symbols and laws that are their meanings (Langer 1951, p. 29).

She states that the full implications of the new key are not yet apparent. Others, however, have noted that the recognition of recursivity in all areas of human endeavor creates a problem without useful precedent both for the would-be theorist of the human condition and for humans per se. Morris (1948, pp. 5, 6) said

... man is the being that continually remakes himself, the self-maker, the artisan that is himself the material of his own creation.

Our crisis is a strange one. We are as children playing with high explosives. And we know this. But since we know it we are unlike children. We are afraid of ourselves, afraid that we will be inadequate, afraid to assume the responsibilities that might give us back the joy of innocence.

The note of panic in Morris's statement reflects the concern of many thoughtful people that we have arrived at a point beyond which in principle we cannot proceed. If the Theorem of Extensional Wonder is correct, the only way to avoid dealing with recursivity is to limit ourselves to weak tools. This is the course adopted by many contemporary academics, such as philosophers who have abandoned traditional concerns with metaphysics, aesthetics, ethics, and so on, in favor of an analysis of how persons use words. This course of action seems the best if one accepts the Theorem of Recursive Wonder: No image can completely represent itself, including its representation of itself. A corollary to both theorems is that any scientific theory of sufficient power must represent itself (Theorem 1) but cannot represent itself completely (Theorem 2). The rather desultory conclusion: the best a scientist or artist can do is inherently incomplete.

Obviously, we do not accept this reasoning. If we did, we would hang a painting of modern art or repeat a Buddhist koan rather than pursue a scientific theory of the human condition for
the remaining several hundred pages of this book. Equally obviously, we believe such a theory must be played in a new key. But for a moment, wallow in the genuine despair that characterizes the social sciences and the humanities when faced with the implications of the theorems of extensional and recursive wonder. Regin (1969, p. 23) described the discovery of recursivity underlying extensional wonder as "cultural estrangement," invalidating traditional sources of meaning and identity.

Since we have lost our center, we have given up spatial relations and perspective in painting, dispensed with tonal keys in music, eliminated plot from novel and play, poetic coherence from poetry, legal principle from jurisprudence, resurrection and eternity from religion, a moral basis from political actions, a metaphysical idea from philosophy, the Newtonian unity from our cosmology. Our guides are the thrusts of chance and relativity.

Is it good, is it wrong?
No one can tell. The answer lies in the historical future.

In his poignantly titled *Is Man Incomprehensible to Man?* Rhinelander (1973, p. 97) lamented that "an increase of information has not brought an increase in understanding. On the contrary, the more we know about man, the more mysterious he seems to become." Becker (1975, p. xviii) clearly felt the force of the corollary to the two theorems—and decided to fight it.

... the basic premise of the Enlightenment which I feel we cannot abandon and continue to be working scientists—namely, that there is nothing in man or nature which would prevent us from taking control of our destiny and making the world a saner place for our children. This is certainly harder, and more of a gamble, than I once thought; but maybe this should reinforce our dedication and truly tax our imaginations.

The fundamental feature of the new key in social theory is that the process of theorizing is isomorphic with the phenomenon being theorized about. Any theory is the creation of the theorist and comprises a perspective within which to think about humankind. However, everyone constructs perspectives such as this, as Campbell (1959a) demonstrated in his study of myths. In the context of social interactions, persons construct an interpretable
universe or known space within which they live and move and have their being. Technically, this is called social reality (cf. Berger and Luckman 1966), which can be defined as "that which people believe that other people believe." Thus defined, social reality can serve as a rough description of a social theory as well, making a social theorist a recursively operating person. As universe builders, theorists should differ from innocent civilians in the skills with which they proceed, but not in the substance of what they are doing. Theorists are usually more selective in inviting others to participate in their universe building and more rigorous in evaluating the products of the process. At their best, theorists create a reference group of the most incisive minds, mostly long dead or yet unborn, to converse with, and spare no efforts in constructing situations in which the various elements of their universes may be put to the test.

Acknowledging the isomorphism between constructing a theory about the human condition and the human condition per se is a strategy that we use often in this book: instead of trying to avoid the problems of, for example, recursiveness, we confront the phenomenon directly and build it into the theory. This strategy seems very empirical and satisfying to us, and provides a way of escaping the mordant corollary to the two theorems. At the least, modeling recursiveness in the theory reduces the incompleteness of the representation of reality, and gives the theory the considerable advantage of structural isomorphism even if the representation is incomplete. However, we think it does more. Both theorems are paraphrases of Gödel's proof that any mathematics like Whitehead and Russell's *Principia Mathematica* is incomplete. In recent years, there have been other logicomathematical formulations that explicitly reject the law of logical types on which the Theorem of Recursive Wonder—and most contemporary thought—is based. These systems offer formal modes of analysis that are not limited by the law of logical types and thus may escape the limitations of the second theorem.

If the structure of the new key in a theory of the human condition is recursiveness, its content is communication. Each of us began studying communication for reasons quite different from what compels our continuing interest. To our delight, we discovered that the development of thought in half a score of academic disciplines converges on communication, here defined as the process by which persons collectively create and manage social reality. Communication is the process by which innocent civilians conduct their daily lives and the process by which theorists develop theories about that process. A theory of communication collapses the levels of abstraction at various points in recursive wonder by modeling a process
that is identical at all levels. The particular forms of communication or content of messages may vary between social reality and social reality, but these differences can be discovered and elucidated by a theory of the process by which they are created and managed.

To focus on communication in a theory of the human condition is so far from novel as to appear trite. Regen (1969, p. 76) said, "In the twentieth century . . . man has become self-conscious about communication itself. Practically all modern philosophies deal with it as an essential problem." Matson and Montagu (1967) used forms of communication as more than illustrative metaphors in describing the development of society, and Wiener (1950, p. 27) stated that "the place of the study of communication in the history of science is neither trivial, fortuitous, nor new." However, behind the gloss of ubiquitous enthusiasm for the study of communication lies an incredible array of conceptualizations, many of which are tangential or contradictory. We believe the definition of communication given in the previous paragraph is firmly grounded in the unexpected results of powerful processes of extensional wonder in this century, and have considerable scope. The theory of the "coordinated management of meaning," presented fully for the first time in this book, describes the process of communication considerably differently from any previous theory and specifically consistent with the demands of recursive wonder.

We have taken a leisurely approach to this book for reasons that seem good to us. We invite the reader to accompany us in a consideration of a broad range of issues: we finish (in Chapter 8) with a social philosophy based on a world view (described in Chapter 5) that is not conventional. We believe the claims we make throughout the book are neither shrill nor indefensible in the context of the whole. The reader with lighter appetite will find an abstract preceding each chapter after the first. Those interested in the data and research methods will find Chapter 7 most rewarding, although much that seems arbitrary there is based on the arguments in Chapters 4, 5, and 6. Those interested in the theory per se will find it in Chapters 5 and 6, although it will appear unusual and arbitrary without the careful grounding of Chapters 2, 3, and 4. In fact, if one were to skip any section of the book, it should be this one!

RECURSIVE WONDER AS METHOD, OR "WHERE DOES THIS FIT INTO THE LITERATURE?"

This book is the record of a quest that has taken six years after the hard part was done. We make no apology for the range of
topics included. When we started, we had no intention of browsing through half of academe. On the contrary, we wanted to understand some mundane forms of human communication, but found the concepts available to us in the literature were inadequate for the task. We are both inveterate observers of human sociation, and our development as persons has been warped by—in Jung's terms—disproportionate development of the analytical faculties. At different times, each of us confronted the disparity between what he knew about human communication as a trained observer and what he had learned by reading the professional literature. With each of us, an instructional assignment precipitated the problem: to decide whether to teach communication per se or the literature pertaining to communication, when we perceived the latter as significantly more limited and sterile than the former.

In candor, we should state that we were both trained (at separate institutions) to "do science" in communication, with science being defined quite narrowly with exemplars such as Carl Hovland, Leon Festinger, Martin Fishbein, Charles Osgood, and so forth. At the same time, we both studied less rigorous, more humanistic approaches to communication: rhetoric, clinical and existential psychology, history, and philosophy. Perhaps the excessively narrow rigor of the first made us prone to conceptual disillusionment, and the nonrigorous richness of the latter made disillusionment with current theories and approaches to communication inevitable. In retrospect, the absence of recursiveness is clearly the source of our dissatisfaction with existing communication theory: the more a given treatise attempts to be scientific, the less adequate that representation of communication is to represent the communicative acts involved in building and presenting that theory. On the other hand, less scientific efforts were not very successful in representing communication at any level: we found them trendy, faddish, and culture-centric.

In one sense, we have been true to the exhortations of our graduate instructors to "do science" about communication, but we have had to revise thoroughly what we understood as the method of science. Specifically, we have incorporated unabashed recursive wonder into a process in which we take seriously the virtues of science; falsifiability, replicability, intersubjective reliability, explanation, prediction, control, and so on. The effect has been to exceed conventional limits on scientific activity.

Bateson (1979, p. 242) argued that scientists must use both imagination and rigor: "the two great contraries of mental process, either of which by itself is lethal. Rigor alone is paralytic death, but imagination alone is insanity." The social sciences during the twentieth century have aspired to rigor and often attempted to achieve
It by the exorcism of imagination, Devons and Gluckman (1964, p. 259) stressed "the need to simplify, to circumscribe, to be naive, and so on, in analysis in the social sciences." Rigor consists of a deliberate "limitation to the problems and questions that can be answered. This implies caution and modesty in research."

Limiting one's questions to those that are answerable always implies "answerable with existing methodology," and there's the rub. Every significant advance in science has had to address previously unanswerable questions with new—and at least temporarily inadequate—methodology (cf. Koestler 1964). This is done with wonder and imagination, not caution. Even Thorndike's famous dictum "if it exists, it can be measured" is equivocal. It is usually read to mean "that which cannot be measured by my apparatus does not exist." This reflects a timid, defensive, and cautious scientist who may not ever discover anything, but also will not be perceived by his/her peer group as wrong. We think Thorndike was more Promethean; he meant "there exists in principle a means of measuring anything, and we can develop the apparatus." The early scientists were motivated by wonder, but often described their work inaccurately. Subsequent scientists have too often followed what, for example, Newton said he did rather than sharing his sense of wonder, and thus have lobotomized science.

Isaac Newton was by all accounts an irritable fellow but if he had watched the ever-changing moon as peevishly as the observers of the social scene regard their fellow humans he would have offered a treatise on the unreliability of the lighting at night, rather than a law of gravity. Charles Darwin was a hypochondriac gentleman, fearful of the outcry that would greet his findings, and he did not arrive at the principle of evolution by natural selection in any spirit of reformist zeal. He was first and foremost a man enchanted by living things, who would climb mountains to marvel at the pretty beasts and fossils they concealed. Even in an age of H-bombs and neglected famines, it is not escapist to declare that we should begin an inquiry into human nature with a gasp of wonder.

Without an adequate sense of wonder that humans exist at all, as products of nature able to reflect upon and research into their own existence, we take salient and vulnerable features of our humanity too much for granted (Calder 1976, pp. 7-8).

We have rejected the caution and modesty of contemporary social science (Devons and Gluckman 1964, p. 259) as an unnecessary
and unproductive sacrifice of the spirit of wonder. Many thoughtful persons believe a major breakthrough in the human understanding of humankind is in the offing (cf. Harré and Secord 1973; Sampson 1978; Koestler 1978), and the crucial development is a new conceptual organization of information rather than a simple aggregation of available information or a crucial bit of new data. After all, we are surrounded by the stuff of human experience; the trick is to know how to think about it. The most important skill for a social scientist is that of framing and reframing the phenomena—that is, creating a series of universes and evaluating them to determine which works explain the phenomena.

Because a theory is a way of thinking about data—usually the same data thought about by persons using the perspective of other theories—theory building estranges one from his/her colleagues in precisely the same way in which different cultures or ideologies separate persons. The new theory changes the meaning of the data, and the ways of thinking about data (Koestler 1959). This poses a problem for communication and understanding among scientists. Persons content within their own theoretical perspective must have an unusual ability to see around the corners of their own weltanschauung, or to participate imaginatively in the world view of the new theory if they are to understand it. More frequently, they feel the proponent of a new theory has misunderstood the data, is thinking awkwardly or erroneously, or is trespassing on their professional turf and littering it with inaccuracies. Foucault's (1970) archeology of the history of science shows this is a natural phenomenon. Every group employs rules that they use to define objects and form concepts. Never explicitly articulated, these rules comprise the conditions that writers have to fulfill to make their discourse accepted by their peers as scientific, or economic, and so on. A new theory breaks these rules—offering others in their place—and requires both tolerance and conceptual flexibility not often found among the cautious community of social scientists.

Berger (1961, p. 17) described alternation as the ability to perceive that one's own position is one among many, and to be willing to move among various interpretations of reality. Theories, like the mores and institutions of society itself, appear self-evident and independently real. However, there are events—such as personal trauma, culture shock, the systematic development of what Mills (1958) called "the sociological imagination"—which shatter the normal and reveal social reality or the world view of a theory as precarious. The character of consciousness in these moments includes

... a rather paradoxical phenomenon ... an oppressive sense of bondage ... [and] a liberating feeling that
the social world is far more tenuous than had previously seemed to be the case. This paradox is only a superficial one. The liberating feeling comes from the valid insight that the social world is an artificial universe, whose laws are conventions, rules of the game that have been agreed upon but that can also be broken and against which one can cheat. The sense of bondage comes from the equally valid insight that society not only encompasses us about but penetrates within us, that we are ourselves products and playthings of society, irrevocably social in our innermost being. The one insight uncovers the fictitiousness of society, the other its oppression. . . . Taking together [these] insights . . . we arrive at a very specific sense of precariousness. . . .

The awareness of alternation and its existential possibilities now becomes a sensation of vertigo. . . . Somewhere, even if just under the threshold of everyday thinking, remains the memory of metamorphosis, of masks and cloaks, of the artistry behind the settings of the stage (Berger 1961, pp. 16, 19).

This sense of conceptual vertigo has become a way of life for us during the development of this theory. We have repeatedly invented new concepts that seemed better able to account for human sociation than those we had been using, and then had to go back through all that we knew to see just how much of our conceptual structure had to be changed. Vertigo has been accompanied by keenly felt difficulties in communication with our colleagues, not all of which are the result of our leaden prose.

During the process of developing this theory, we have attempted to describe it in appropriate academic forums. Each attempt has been a progress report of a trip with an unknown destination. While there have been some major continuities at all stages of development, at no time have we known clearly where the ideas in this theory would take us, and often our continued work was not fully intentional. The lines of analysis, like the characters in a play, have taken control. When we have reported the theory, we often have felt like the protagonist in Dickson's (1979, p. 320) novel: "I gave them words . . . and they went away . . . sure that I had told them something of importance, but finding themselves still unsatisfied, and unreassured."

In many instances our work has violated the unstated rules of what scientific discourse should be, and we have elicited responses like these, compiled from rejection letters, reviews, and so forth:
[this is] the classic case of gobbledygook;
[they] will continue to unwind their roll of toilet tissue;
[that is] clearly outside the province of rhetoric;
"certainly heavy"; perhaps too heavy for this journal;
[this] sounds like it is written in a foreign language;
unreadable;
a self-serving display of disparate readings;
presented with unfortunate evangelical fervor;
the position taken in the theory precludes the possibility of doing science;
If I believed that, how could I do research?
the analysis is broad and ill-focused;
the topic and procedure are unlike that in the "front line" journals in the field;
the position adopted is vague and ambiguous;
the time for such intellectual forays into the unknown is past;
he thinks orthogonally to the way a scientist does;
and this summary judgment at an academic convention;
[he] isn't a theorist; he's a speculation-spreader!

Obviously, we have chosen to disagree with these critics.
(More accurately, the logical force of the ideas with which we are working precludes accepting these judgments.) Our position seems reasonable to us on the ground of the ability to do alternation. We understand how our work appears unscientific and confused from within the world view of our critics, but have not seen evidence that the critics understand how our work seems both scientific and coherent from within our perspective. In any event, opposition from the established authorities in the academic community—such as editors and referees of journals—is a more valid index of the novelty of proposed ideas than of their merit: all new ideas are subject to venomous rejection, but only most deserve it. Our task is to extend our ideas to their conclusion, and then let their value be assessed.

THE FUNCTION AND SCOPE OF COMMUNICATION THEORY

When Wiener stated that the study of communication was neither novel nor trivial, he spoke from a limited historical pur-view, reaching into the well of history only as far back as Leibnitz. Had he dipped deeper, he would have changed part of that assessment. The study of the process of communication has a long history, but usually has been treated trivially. In our judgment,
various forms of communication often have been the primary concern of second-rate minds and the secondary concern of first-rate minds. Before the twentieth century, communication was not on the agenda of human wonder, extensional or recursive. It was not dealt with seriously in the wisdom literatures, formal philosophical treatises, or scientific tomes. Communication usually was thought of as public speaking or writing, and was addressed as a practical tool for persuasion or eloquence rather than as a substantive topic in itself.

In the twentieth century, however, the entire intellectual orchestra has shifted to a new key. Whatever the other ambiguities of this new key, communication has become a focal point rather than an ancillary concern. All forms of communication, particularly those that appear the most quotidian and mundane, are now seen as the locus of powerful forces that affect the development of self, of social institutions, of knowledge of external reality and of other minds, and of human philosophy itself.

Consistent with this new perspective, persons are seen as living within a world of symbolic meanings. Even the most brutish of facts—a stone, personal death, and so on—are treated in daily life in terms of their significance rather than their factual existence, and persons construct many institutional facts (Searle 1969) that have no existence except that persons act as if they existed. These symbolic meanings are negotiated and exchanged by persons through communication. The study of communication thus becomes an inquiry into the nature and origin of the world within which persons live.

This definition of the study of communication is functionally equivalent to the descriptions of theory building in the preceding section: both are social processes of constructing a world view or reality. This similarity is not accidental. The most exciting and perplexing aspect of the new perspective is its recursiveness; the processes of communicating and the processes of knowing are isomorphic. The primary implication of this isomorphism is the placement of communication theory at the crux of recursive wonder. The human study of humankind centers on communication. The second implication is methodological. Since a communication theory uses communication as both method and object, the trickiness of recursive systems is present. A theorist must proceed cautiously, alert to differences among levels of social reality and careful not to mistake the content of communication at any given level for the structure of communication per se.

The development of the new key in the intellectual community is fascinating, and has yet to be told adequately. We sketch the major themes in the story in the remainder of this chapter, and
describe the emergence of the new idea of communication in Chapters 2 and 3.

The story begins in the sixth century B.C., a remarkably fertile time when philosophies were articulated from the Mediterranean to China that shaped the cultures of continents for millennia. Three aspects of the thought of the Ionian philosophers were particularly morphogenic for Western culture: the search for an underlying order, the belief that reality is composed of irreducible atoms, and the assumption that the explanation for observed phenomena lies outside the phenomena themselves.

Brzezinski (1976, p. 65) said that "man has always sought to crystallize some organizing principle that would, by creating order out of chaos, relate him to the universe and help define his place in it." To the extent that this is true, it obscures the fact that various cultures have developed very different concepts of order. The classical Greeks differed in important ways from their contemporary, the Buddha, by differentiating between the "appearances," the many events and objects that are perceived by the senses, and "reality," the world discovered by thought. The issues they perceived as intellectual problems were those of accounting for the change and imperfections of sensory experience and of moving beyond it to unchanging and perfect reality. This differentiation between appearances and reality was expressed in early Greek scientific, mystic, and humanistic thought, although there were differences in what was identified as real: Pythagoras proffered numbers, Democritus atoms, Plato the "forms," Aristotle categories of being, and so forth (McClure 1918). This agenda for wonder persisted well into the late Middle Ages.

Galileo was encouraged by the Catholic clergy to pursue his astronomical studies as long as he was merely "saving the appearances" or doing "sky geometry." One major break with the classical Greek heritage (which had been incorporated in Christian theology) was when he and Kepler at about the same time began to assert that the "appearances" were "real." Kepler had been working with a discrepancy of eight minutes' arc in the observed movement of Mars when he made the move that symbolized a change from one world view to another.

Earlier on, if a minor detail did not fit into a major hypothesis, it was cheated away or shrugged away. Now this time-hallowed indulgence had ceased to be permissible. A new era had begun in the history of thought: an era of austerity and rigor.

What caused this change in him? . . . It was his introduction of physical causality into the formal
geometry of the skies. . . . So long as cosmology was
guided by purely geometrical rules of the game, regard-
less of physical causes, discrepancies between theory
and fact could be overcome by inserting another wheel
into the system. In a universe moved by real, physi-
cal forces, this was no longer possible (Koestler

As impressive as this development was—particularly when
brought to full fruition by Newton—it was only half a step. It undid
the Greek separation of appearances and reality, but maintained the
notion that there exists, somewhere, a knowable and inexorable
force that gives order to reality. As long as this assumption in-
formed thought, communication was seen at best as a colorless,
odorless vehicle of thought and expression, permitting persons to
think and converse about the nature of that reality. More often,
however, the uses of communication in discussion and persuasion,
as well as the activity of mind in wonder and imagination, were per-
celved as perverting an understanding of reality and the force that
gave it order.

The derogation of communication is expressed in Newton’s
contempt for hypotheses and truth claims based on argument. These
should be dismissed in favor of data from experiments. Newtonian
science can be characterized as making these claims:

Reality is orderly, best described as a machine;
Reality consists of mass and motion, working according to
precise laws;
Hypotheses, ideologies, and hunches consist of substitutes
for true knowledge;
Substitutes for knowledge preclude learning about and using
nature; therefore:
People should be freed from ignorance by dismissing all
hypotheses and arguments in favor of experiments that
reveal the true relations among phenomena.

Marx’s thought is similarly bereft of positive functions of
communication, and can be summarized in these statements:

Reality is orderly, best described as a dialectic of economic
forces;
Reality consists of the socioeconomic structure of society,
following laws of economic determinism;
Ideologies, beliefs, and personal meanings consist of illusions
that persons mistake for reality;
Illusions pervert awareness of reality and lead to oppression; therefore:
People should be freed from illusion by learning the social and economic laws.

Since Kant, theorists have fallen back yet another step. Rather than looking in nature for the knowable and inexorable force that gives order beneath the diversity of appearances, they have looked within the human mind for universals of logic, language, or symbolism.

Contemporary structuralists emphasize communication, but treat it as clues, a web of words obscuring the fundamental order of language (Chomsky), speech (Jakobson), or culture (Levi-Strauss). The task of the theorist is to identify the order that underlies the change and disorder of the appearances. To this end, Levi-Strauss searched for a universal semantico algebra in the myths and customs of "no history" cultures that would reveal the universal, primitive, and nonrational logic common to all humans. Chomsky set himself the task of producing a grammar of transformations that would account for all and only grammatical forms of sentences, arguing that the result would be a description of how the human mind works.

Like the structuralists, Freud treated communication as a source of information about the underlying order. His thought may be summarized in parallel structure to Newton's and Marx's:

Reality is orderly;
Reality consists of the phases of psychosexual development and the organization of the psyche;
Ideologies, beliefs, symbols, fetishes, and so forth, consist of illusions that people mistake for reality;
These illusions prevent awareness of reality, retard the development of the person, and lead to neuroses and psychoses; therefore:
Persons should be freed from illusions by achieving insight into the meaning of symbols, learning the stages of psychosexual development, and so on.

The remarkable characteristic of these formulations of the "architects of the modern age" (Fromm 1962, p. 11) is their oneness with the whole tradition of Western thought:

[They] were imbued with the conviction of the fundamental orderliness of reality, the basic attitude which sees in the workings of nature—of which man is a part—not merely secrets to be discovered but pattern and design to be explored (Fromm 1962, p. 11).
But in this conviction, they echo the ecstasies of Pythagorean initiates into the mysteries of numbers, the sentiment behind Plato's myth of the cave, and the Christian drama of sin and salvation.

Common to all of these world views is the assumption of underlying order necessitated by some offstage person or force or laws—and that communication per se is not very important.

Two factors in the twentieth century succeeded in dislodging the assumption of underlying order. One was Einstein's theories of relativity, which lead logically to a conclusion that order is only apparent from particular perspectives. (It is a testament to the power of the idea of order that Einstein refused to relinquish it even when his own work had undermined it!) The second was the collapse of the rational humanism born in the Enlightenment and bolstered by science triumphant in the nineteenth century. World War I and the Great Depression were more than catastrophes: they destroyed the confidence that there was a knowable order.

Not everyone was able to reconstruct the pieces of a demolished intellectual heritage: one genre of expression in this century is that of elaborate walls of despair and meaninglessness. However, a coherent understanding of the new key in philosophy can be developed around these five principles. First, reality is not necessarily or even usually orderly. It may contain contradictions, confusion, paradoxes, and so on, as normal, knowable features (cf. Watzlawick 1976). Rather than trying to discover the underlying order that would explain disorder, the primary function of research and theory is to describe and assess the implications of disorder.

Second, reality consists of the juxtapositions of a person's symbolic meanings and beliefs about what actions are necessitated by what meanings. As such, reality is negotiable, consisting of an emerging set of meanings and actions, well described by Turner (1974, p. 14):

... the culture of any society at any moment is more like the debris, or "fall-out" of past ideological systems, than it is itself a system, a coherent whole. Coherent wholes may exist ... but human social groups tend to find their openness to the future in the variety of their metaphors for what may be the good life and in the contrast of their paradigms. If there is order, it is seldom preordained ... it is achieved—the result of conflicting or concurring wills and intelligences, each relying on some convincing paradigms [emphasis added].
Third, the fundamental assumption of the Ionians—the belief that there is something out there that controls human action and gives order to reality—is defined as an illusion, replaced by the assumption that there is a reciprocal causal relation between the forms of communication and the structure of social reality, such that each is explained by the other. This concept is a radical extension of the movement toward an immanent rather than transcendent explanation of events. The sixteenth- and seventeenth-century scientists broke the dichotomy between appearances and reality, making the bold claim that the explanation of the appearances lay within the appearances themselves, but they could not complete the move. Since they believed the atomic theory, they were forced to explain different states or movements by various entities as the result of the action of some other force. However, if entities are not irreducible atoms but variously structured systems, then the explanation for their action may be found by describing their natures or powers (Harré and Madden 1975). In retrospect, this seems an obvious move that had been precluded only by the historical commitment to some version of atomism. Here the life sciences showed the way, with physics following. Anatomists had long recognized that the bodies of various animals were differently organized, and a description of this organization showed the relative powers of the organism, and this explained their behavior. For example, a simple one-celled animal will be very predictable, acting in virtually the same way at all occasions. An intermediate complex organism may act in a variety of ways; a very complex organism, such as an adult human, may have so many options that s/he is unable to do all that s/he can do.

Rather than appealing to the mechanistic structure of the universe as did Newton, an unmoved mover as Aristotle, the divine hand of providence as George Adam Smith, socioeconomic laws as Marx, or psychosexual development as Freud—all of which are off-stage, external to the actual communication between persons—this perspective looks at the process of communication itself as the explanation of why people communicate as they do and why communication has the effects that it does.

... the primary locus of constraint and control ... In all nonengineered living systems ... is the structural relation of the system itself. ...

This informational conception of the immanence of the locus of constraints and controls in the relations between the "partials" of an ecosystem is a conception we in the West have had to rediscover in this
century, once the Newtonian energy-entity equilibrium
models of social and biological reality were found
wanting. . .

The notion of external controls has been the pri-
mary impediment to understanding systemic behavior
(Wilden 1979, p. 18).

Fourth, illusion is perceived as preventing persons from un-
derstanding and taking control of their reality. The more one
searches for a transcendent explanation, whatever its content, the
more one is blinded to the operation of forces immanent within the
system, the fact that the person is him/herself a cause and an ef-
f ect.

Finally, persons should be freed from illusion by being given
the conceptual tools necessary to identify the forces working within
processes of communication. Every society places a series of de-
mands on the performance of the individuals who comprise it: one
must know how to hunt to be a competent Eskimo, to fight to be a
fourteenth-century French knight, and to handle complex technology
and symbolism to be a twentieth-century American. The assump-
tion of a reciprocal relation between communication and social real-
ity builds recursiveness into contemporary society, and places an
unprecedented set of demands for normal performance: persons
must deal with the thickness of recursivity by assuming respon-
sibility for their own meanings. Perceptual psychologists have dif-
ferentiated between figure and ground as if the latter necessarily
contextualized the former. There exists, however, a class of re-
versible figures in which what is figure and what is ground depends
on the perceptual set of the observer. But even these do not ex-
press the demands placed by an explicitly recursive society.

Hofstader (1979) exuberantly celebrated recursivity in his
story of a record player so strong it could play a note that would
destroy it. In much the same way, both historical and intellectual
events in contemporary society have generated tools for analysis
so strong they destroy the assumptive base on which they were built.
The task of contemporary social theorists is to explain this develop-
ment and to present a theory that will enable those participating in
recursivity to understand themselves. Hindu and Buddhist thought
have long celebrated escape from the wheel of cause-effect, of re-
birth, into nirvana. The explicit recursiveness of contemporary
society has forced us to take one foot off the wheel—to step outside
the systems of which we are part—and we do not know into what we
are stepping. We believe the theory presented here provides con-
ceptual tools useful for analyzing this situation and the prospects
for surviving and thriving in a self-reflexive society.
OVERVIEW

The function and scope of a communication theory may best be indicated by a series of definitions. Social reality is what people believe and believe that other people believe. Communication is the process by which persons cocreate and comanage social reality. Individuals may be modeled as a system of rules for meaning and action, and the juxtaposition of two or more intrapersonal rule systems produces an interpersonal rule system that exerts logical force controlling and constraining various lines of sequential action. The human condition is that of being variably enmeshed in multiple systems, each with its own logic of meaning and order, and communication competence consists of being able to control the extent of one's enmeshment in those systems. Communication is inherently problematic, consisting of conjoint behavior by two or more persons functioning within interpersonal rule systems that cannot be fully known or controlled by any of the individuals involved. Social realities are normally disordered, and specific forms of disorder have important implications for personal and interpersonal developments.
PART I
PERSPECTIVES ON COMMUNICATION AND THEORY
2

COMMUNICATION AND CULTURE

ABSTRACT

Communication has always had a reciprocal causal relationship with culture: basic cultural assumptions and mores determine the forms and functions of communication, and the forms and functions of communication determine the development of cultural institutions. Although no culture other than contemporary Western has been aware of this relationship, it can be demonstrated by a cross-cultural comparison of various cultures. Such a comparison also achieves a purposive defamiliarization with the contemporary Western concept of communication by showing that other cultures have thought quite differently, but equally cogently and consistently. Primitive and Eastern cultures are characterized by a relatively low value placed on coordinative communication, perceived as profane and as a subset of ethics, respectively. Western culture is an unstable amalgam of two traditions, the theocentric Levantine and the humanistic European. The uneasy relations among these influences produced the modern concept of communication that is sufficiently powerful to reveal its own inadequacies, setting the stage for the development of the new idea of communication.

INTRODUCTION

The most obvious and significant characteristic of humankind is that it creates and is created by culture. Physically, homo sapiens have not changed appreciably in the last 20,000 years, and the differences among races are few and trivial. However, humans have created a bewildering array of cultures that comprise very different universes in which persons live, and create different ways of being human. The interpretations of life and the world vary so much
among cultures that sometimes it is hard to believe they share the same planet. Some cultures live by the mercy of a vengeful God amid devils and temptations, while others are harmoniously adapted to an environment in which everything needed is readily available and there is little to fear. Practically any act condemned as sinful or evil in one society is an esteemed virtue in another, and what is common sense in one culture is unthinkable in another. For example, artisans in Mid-Eastern civilization saw the potential of the wheel in transportation devices, and wagons and chariots became a morphogenetic force in Eurasian cultures. This use of the wheel was not obvious; the Aztec knew of the wheel and used it for children’s toys, but apparently no one thought of it as a transportation device. Similarly, the ancient Greeks knew of the steam engine, but did not see its utility as a source of power.

Prior to 10,000 years ago, all human societies were small hunter/gatherer bands. Such societies still exist, but something made many groups begin to change. From a single, rather simple type of culture, many types of human societies have emerged, varying greatly in size, complexity, and life-style.

In all evolution there is no transformation, no "quantum leap," to compare with this one. Never before has the life-style of a species, its way of adapting, changed so utterly and so swiftly. For some fifteen million years members of the family of man foraged as animals among animals. The pace of events since then has been explosive. The entire sequence from the first farming villages, the first sharp break with hunting-gathering, to a world dominated by cities, to the even more highly urbanized future which, before the end of the twentieth century will see the coming of super metropolises made up of several hundred million persons each—all this has been packed into an instant on the evolutionary time scale, a mere 10,000 years (Pfeiffer 1977, pp. 28-29).

None of the cultures of humankind except contemporary Western society has treated communication as important. Contemporary Westerners became interested in communication in a two-step process. First, the development of communication technology created a situation that concerned many thoughtful people, expressed in a broad range of research programs designed to assess the effects of radio, television, and so on. Second, the results of that research, combined with other intellectual developments, posed a disquieting dilemma that necessitated a major rethinking of the nature and role of communication.
Communication always has been a process limited by the constraints of time and distance. The development of communication technology reduced these constraints and made Western analysts believe that communication comprised a novel cultural force in their society. The printing press reduced the cost in time to produce messages that could be disseminated over a distance, and the invention of telephone/telegraph and broadcast media has made both time and distance negligible, given the appropriate transmission, relay, and reception apparatuses. During World War I and World War II, these capabilities were used for international propaganda with an unknown effect, but clearly demonstrating a potential that worried national leaders. In the United States, Franklin Roosevelt began to use radio as a powerful tool of national coordination and control, and other politicians used a media mix in their campaigning, forcing a revision of current wisdom about the art of winning elections. Many previously unthinkable feats have become commonplace. Billy Graham's electronically amplified voice enabled him to preach to over a million people with a single sermon during a rally in Korea—probably the largest audience ever addressed by a public speaker. When Neil Armstrong stepped on the moon in 1969, there was live color television coverage (actually there was an approximately 1.5 second transmission delay)—a phenomenon so remarkable that none of the first-man-on-the-moon science-fiction stories had suggested it. In the space of a single generation, television has become a ubiquitous phenomenon in industrialized societies, and, on average, American children spend more time with their television set than in school, with peer groups, or with non-TV family interactions.

These highly visible forms of communication precipitated a frantic concern that communication was doing something to us, probably something that we do not want. An expensive and sometimes militant campaign was conducted to document the effects of the proliferation of communication technologies. Surprisingly to those conducting this research, the ubiquitous TV, the omnipresent radio, the daily paper, and so on, did not seem to have any clear and unique effect (Klapper 1960). Schramm (1971) soberly concluded that "communication is not nearly so simple a thing as we once thought it was." Mass communication seems to replace other social institutions and performs their functions, rather than constituting something new.

Schramm's conclusion implies one of two things: the prevalence of communication in contemporary society gives a semblance of importance to a phenomenon that is not particularly significant, or communication has always been much more important than had been realized.
As soon as these alternatives are posed, the problem is productively reframed and the relative importance of two major literatures shifts. Histories and ethnographies ostensibly say little about communication and treat communication as an index of the underlying order of the culture. But what if there is no order transcendent to the patterns of daily life? What if the processes of communication themselves consist of the collective creation and management of social reality? If this perspective is useful, then the data from historians and ethnographers may be reinterpreted as the primary source of information about the nature and effects of communication. The wisdom literatures and folkways of various peoples may say little about communication or may even derogate its function, but in so doing they are explicit guides to the culture's use of communication in the continuing process of creating itself. At the same time, surveys documenting the incidence of particular content in contemporary media or assessing the relative credibility of various media have only local utilitarian value.

In this century, a new idea of communication has been developed that identifies it as a culturally morphogenetic process. The explanation of and evidence for this idea require a transcultural perspective. The origin of the new idea of communication may be traced to two factors, each of which estranged the wondering minds of twentieth-century Western scholars from their culture. One factor was the study of non-Western cultures by anthropologists who—to their everlasting credit—allowed their data to refute their theories about cultural development. The traditional view was that all cultures were on a single developmental dimension, with the European most advanced and primitive cultures most backward or underdeveloped. Modernization of primitive cultures was thus an ethical, responsible act of facilitating progress in ways that the culture would inevitably follow sometime on its own. This theory was refuted by the evidence that in most important ways—language and mythology—primitive cultures were fully as advanced as modern cultures, leading to the revised theory that there are many separate, different cultures. The implication of this concept is that the perspectives, mores, and assumptions of the anthropologists' own culture was one among many, rather than the apex of linear development. The task of cultural studies thus shifts from "How can we help them to become like us?" to "How is it that different cultures develop?"

The second factor that permitted the development of the new idea of communication was the inexorable discovery of recursivity underlying extensional wonder. The use of the most powerful tools of inquiry led back to the inquirer as a purposive agent whose choices affected the results of analysis and observation. The work of Wittgenstein, Gödel, and Heisenberg, among others, forced a
shift from the question "What is the nature of reality?" to "How does human activity affect our knowledge of reality?"

This chapter describes the ways some of the major human cultures have thought about communication. This survey serves two functions. By examining the best minds of very different cultures, a deliberate defamiliarization occurs, enabling the identification of and escape from one's own ethnocentric perspectives. Second, by examining how communication actually functioned in these societies—although this almost always differs significantly from how the members of that society thought it functioned—the origins and implications of the new idea of communication can be appreciated.

Table 2.1 summarizes the way six cultures thought about communication. The criteria naming the rows represent basic philosophic topics, and provide a common orientation to facilitate comparison. Representatives of the various cultures would not necessarily agree that these are the relevant topics or that communication is related in any way with them. That does not, however, detract from the utility of these for cross-cultural comparison: it is informative to know that the humanistic Western tradition thought of communication and ontology as closely related, but Eastern culture did not.

A disclaimer is deserved. We believe the comparisons among cultures are necessary to develop a nonethnocentric theory of communication, but, obviously, the description of each culture is incomplete. We do not pretend or aspire to be museum curators of human history and culture. Rather, we are analysts, abstracting from the wealth of detail whatever serves our purposes.

THE CONCEPT OF COMMUNICATION IN PRIMITIVE CULTURE

Primitive denotes a particular type of culture, different and discontinuous from modern culture, and with demonstrable survival capability and unparalleled stability. It does not have the invidious meanings of backward, simplistic, ignorant, or foolish. Some primitive cultures still exist with apparently the same structures they and other groups possessed 20,000 years ago. Primitive languages, myths, and social relationships are fully as rich and varied as their modern counterparts. Some contemporary advocates describe primitive culture not only as a viable but also as a preferable way of being human.

As in all cultures, the concept of communication in primitive society is inextricably intertwined with its ontology and epistemology.
<table>
<thead>
<tr>
<th>Ontology</th>
<th>Epistemology</th>
<th>Aesthetics/Ethics/Politics</th>
<th>Concept of Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primitive</td>
<td>Reality is &quot;sacred.&quot; The &quot;profane&quot; events of history are unimportant unless made part of the sacred through myth and ritual.</td>
<td>Myths are the source of knowledge. A logic of identification is used to fuse the sacred and profane. Knowledge consists of act—e.g., sacralizing rites—rather than in doctrine.</td>
<td>irrelevant</td>
</tr>
<tr>
<td>Eastern</td>
<td>Reality is &quot;one,&quot; undifferentiated, and whole.</td>
<td>Perceptions are atomistic, unrelated, and unextended. Language inevitably distorts both reality and perception. &quot;Enlightenment&quot; consists of becoming aware of the oneness of reality and the limitations/distortions inherent in attempts to describe or think about reality.</td>
<td>Important. Philosophical &quot;systems&quot; are ethics and guides to enlightenment and/or escape from pain.</td>
</tr>
<tr>
<td>Western</td>
<td>Various positions. Sophists deny the possibility of knowledge; Plato calls for an enlightened perception of the Forms; Aristotle a rational empiricism.</td>
<td>The structure of language and the structure of reality was not dissimilar. Knowledge might be achieved through careful (e.g., logical) talk, or expressed in talk if achieved through, e.g., scientific classification of specimens.</td>
<td>Subordinate to politics and metaphysics.</td>
</tr>
<tr>
<td>Levantine</td>
<td>The sacred is at specific times imminent in history. History began and will end with a theophany and consists of an arena in which God reveals Himself.</td>
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<tr>
<td></td>
<td>Wisdom consists of interpreting historical events as revelations of God. Knowledge is a description of the sacred and the content of theophanies.</td>
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<tr>
<td></td>
<td>Aesthetics unimportant except as they contribute to subordination of the historical to the sacred. Politics and ethics represented by &quot;thy will be done on earth as in heaven.&quot;</td>
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<td></td>
<td>Sacred communication is asymmetrical: God reveals self to humans through commandments, prophets, natural and human disasters, etc. Interpersonal communication reflects theocratic politics, asymmetrical decrees from leaders, or ethics, where communication is simply a means of influence or expression of the virtues.</td>
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<table>
<thead>
<tr>
<th>Modern (19th century scientific)</th>
<th>The world is a machine which operates according to fixed laws.</th>
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<tbody>
<tr>
<td></td>
<td>Mechanistic empiricism: the discovery of mathematical relations among phenomena are evidence of the laws constituting the order of reality.</td>
</tr>
<tr>
<td></td>
<td>Relatively unimportant.</td>
</tr>
<tr>
<td></td>
<td>Communication is an odorless, colorless vehicle of thought and expression.</td>
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<table>
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<tr>
<th>Contemporary</th>
<th>Much of reality is socially constructed; knowledge of the rest is affected by social processes.</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Intersubjectivity of perceptions; empirical falsification of theoretical statements.</td>
</tr>
<tr>
<td></td>
<td>Important, but positions differ about the link between ontology and aesthetics.</td>
</tr>
<tr>
<td></td>
<td>A form of human action by which persons co-create and co-maintain social reality.</td>
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</table>
Primitives make an important differentiation between two levels of reality: the sacred and the profane (Ellade 1963). The sacred consists of the existence of the gods and the performance of archetypal events, such as creation of the universe. The profane consists of the quotidian ordinariness of particular persons, daily life, historical events. The relation between these levels of reality is the key to understanding primitive society: the sacred is all that is really real; the profane becomes real only as it is identified with the sacred in myth and ritual. The historical fact that, for example, there was a flood last year, is meaningless and unimportant until and unless that flood can be treated as an enactment of an archetypal event performed by the gods. The historical details of last year's flood are unimportant, and the story of it will be tailored to fit the myth. A contemporary journalist's passion for historical facticity is unthinkable, and would be treated by primitives as perverted as it seeks to elevate the profane over the sacred—a fundamental blow to the universe as created by primitive culture.

By disregarding the profane except as the enactment of the sacred, primitive culture utilizes a nonlinear concept of time and a logic of identification rather than predication. Levi-Strauss (1966) described primitive societies as having no history because they do not cognitively orient themselves as being after particular events and before others. Rather, they live in a continual present, identified with the whole of their mythology. Unlike modern European philosophers, they are not estranged from their ecology or the cosmos by their own actions. To the contrary, virtually all of their activities consist of sacralizing rituals, in which the profane events and acts of daily life are identified with the eternal sacred reality. Campbell's "lesson of the mask" describes the logic of fusing the profane and the sacred. In many primitive rituals, a member of the tribe will put on a mask and—although everyone knows the wearer and the fact that the god in the ritual is a man wearing a mask—will identify him as the god depicted by the mask.

He does not merely represent the gods; he is the god. The literal fact that the apparition is composed of A, the mask, B, its reference to a mythical being, and C, a man, is dismissed from the mind, and the presentation is allowed to work without correction upon the sentiments of both the beholder and the actor. In other words, there has been a shift of view from the logic of the normal secular sphere, where things are understood to be distinct from one another, to a theatrical or play sphere, where they are accepted for what they are experienced as being and the logic is
that of "make believe"—"as if". . . . It is a primary, spontaneous device of childhood, a magical device, by which the world can be transformed from banality to magic in a trice (Campbell 1959a, p. 22).

The logic of identification rather than predication in a timelessness universe has given Western analysts great difficulty. Imitating claimed that "the mental attitude in which the great religious feasts of savages are celebrated and witnessed is not one of complete illusion. There is an underlying consciousness of things 'not being real'" (quoted by Campbell 1959a, p. 23). Similarly, Marett characterized the primitive human as "a good actor who can be quite absorbed in his role, like a child at play; and also, like a child, a good spectator who can be frightened to death by the roaring of something he knows perfectly well to be no 'real' lion" (quoted by Campbell 1959a, p. 24). "It was theater and more than theater," wrote Pfeiffer (1977, p. 21), "illusion and more than illusion, because nothing is as real as illusion believed collectively."

All these interpretations seem tainted with a touch of ethnocentrism. It seems more consistent with the data reported by these observers to conclude that persons in primitive culture simply did not make the same distinctions between the real and the imaginary as do modern Western scholars, not because they were incapable, but because they found the distinctions unimportant or dysfunctional. In fact, Frake (1964) found precisely this among the Subanon in the Philippines. Both he as a modern and the primitive Subanon perceived some participants at a feast to be natural and some supernatural, but they did not agree on which were which. More significantly, the differentiation meant different things: the opposite of natural for the modern man Frake was imaginary or unreal; for his primitive informants, supernatural meant uniquely significant or powerful.

The ability of primitive societies to fuse the mundane and the sacred produced a life engulfed in meaning or significance. A farming village did not simply sow in order to eat and survive; the agricultural cycle was subsumed in the eternal cycle of the cosmos and the sower was—quite literally, to his mind—participating in the creation of the universe. The nonlinear concept of time is essential to understand the synonymy of sacred and profane in primitive life. The participant in a primitive ritual was not symbolically participating, or recreating the event, but was—in the timeless present—actually involved in the sacred reality.

This ontology/epistemology produced two major forms of communication, but not a recognition of communication per se as a topic for wonder. The first form pertained to myths and rituals,
and fidelity to the sacred truths was paramount. Fidelity in this sense, however, is very different from the contemporary usage. Factual accuracy was unimportant and irrelevant, since that deals with the merely historical. If a young man performed a heroic act, the deed was meaningless unless it could be perceived as the enactment of a mythological event. If some details were lost or falsified in the retelling of the young man's actual deeds, it was of absolutely no importance. However, once a deed has been sanctified by identification with the eternal, primitives are highly adept at accurate oral transmissions of legends, myths, and rituals. Modern researchers frequently have been astounded by the ability of primitives to maintain a story without verbal distortions for many generations.

Communication per se was not an important topic in the content of the myths. Primitive cosmology is filled with real and vicarious violence and explicit sex. Euphemisms are not considered virtues, and subtle wordplay not celebrated. Verbal explanations of myths or rituals are nonexistent or irrelevant, secondary to direct action. William Robertson Smith stressed the nonverbal nature of primitive society by noting the absence of creeds and the lack of antipathy toward heresy characteristic of Christianity:

...the antique religions had for the most part no creed; they consisted entirely of institutions and practices. No doubt men will not habitually follow certain practices without attaching a meaning to them; but as a rule we find that while the practice was rigorously fixed, the meaning attached to it was extremely vague, and the same rite was explained by different people in different ways, without any question of orthodoxy or heterodoxy arising in consequence (quoted by Ross 1957, p. 17).

Smith probably overestimated the concern members of primitive society placed on attaching a meaning to habitual practices. The heirs of the Greeks traditionally have trouble believing their concern for analysis and articulation is not a common property of humankind.

The second form of communication involves the profane topics of merely historical or daily events. As Malinowski (1923) showed, profane talk is actually very important in primitive society, but the logic of their epistemology and ontology makes it imperative that they not perceive it as important. Primitive people engage in a great deal of profane talk about tasks or simply to express social relatedness.
Both forms of communication in primitive society occur in stable patterns, with little innovation or cleverness. Sacred talk (in myth and ritual) is stable because the myths are changeless and the enactments of them are generally unaffected by history. Profane talk recurs in stable forms precisely because it cannot—on pain of losing one's cosmology—be treated as important. Regardless of the content, a person who treats a profane topic as important—for example, for self-expression, freedom of speech, the conscience of a critic, or other reasons—has by identifying the profane as important violated the logic of the society. For example, turn-taking among the Burundis is strictly ritualized, with the sequence of turns predicated on the social status of the speakers (Albert 1978). A modern person would find the repetitiveness appalling and the rigidity dysfunctional—both of which evidence a belief in profane communication as an important tool for social action or the discovery of truth in a way that primitive society did not.

Although the idea never would have occurred to them, the way members of primitive societies communicated, created, and sustained the social reality within which they lived. Further, the importance given to sacred, but not to profane, communication is an illuminating index of that social reality.

THE CONCEPT OF COMMUNICATION IN EASTERN CULTURE

Within the richness and diversity of Eastern philosophy and history, there is a coherent view of the nature of humankind within the universe. The common ontological assumption is that reality is "one," undifferentiated and whole; the common epistemological assumption is that persons perceive a succession of absolutely particular, unique, and unrelated events (Shcherbatskoi 1962). The combination of these assumptions comprises a thoroughgoing caution against the possibility of propositional knowledge. Language is seen as inherently deceptive because words and propositions portray events as general, related, and enduring, which falsifies both reality and perception. Wisdom, or enlightenment, consists of breaking through the false appearances produced by the logic of language, and realizing the fundamental impossibility of verbalized knowledge and the unreality of nameable social institutions.

The Eastern understanding of the perniciousness of communication is comparable to Kaufman's polemic against language:

Words are not the names of objects of experience, . . .
A noun is not the name of a thing but an attack on a
thing: a noun tears a thing out of its environment, strips it of its defenses, and hales it into court for an indictment. . . .

Nouns, verbs, adjectives, and adverbs are all implicit comparisons and potential criticisms: they represent a thrust beyond the present, a violation of the given, a forcible removal of a thing, activity, or quality into a critical environment.

A pronoun is like a suit one gives a prisoner after he has been stripped of his identity. . . .

(Kaufman 1961, p. 78).

At one with Eastern wisdom literatures in his understanding of the relation between what can be said and what is, Kaufman then drew a characteristically Western conclusion by celebrating the function of language. "Words are the works of art that make possible science. Words are the abstractions that make possible poetry. Words signify man's refusal to accept the world as it is." According to Eastern sages, a refusal to accept the world as it is is the epitome of folly, and language is a seductive, inherently flawed means of coping with things as they are.

This world view obviously does not accord communication an honored place. In Eastern cultures communication occurs in two forms, which we describe as coordinative and philosophic. Coordinative communication is used as a necessary tool in regulating society and facilitating the accomplishment of daily tasks, and, like profane communication among the primitives, it is explicitly identified as having no connection with reality. Because it is strictly utilitarian, and often a misleading tool as well, many forms of ordinary communication are ritualized: "who says what to whom through what channels with what effect" (Laswell's definition of communication) is fully specified by consensual agreement. Within these conventions, the use of communication is evaluated according to aesthetic and ethical criteria rather than ontological or epistemic ones. To Eastern ears, the conversations of Westerners sound clumsy, overrated, and disingenuous (Hall 1977), and their concern for truth irrelevant and absurd.

Western religious and political creeds are ontological and purport to describe truth or reality. The Four Noble Truths of Buddhism are ethical.

1. Now this, O monks, is the noble truth of pain: birth is painful, sickness is painful, old age is painful, sorrow, lamentation, dejection and despair are painful. . . .
2. Now this, O monks, is the noble truth of the cause of pain: that craving, which leads to rebirth, combined with pleasure and lust, finding pleasure here and there, namely, the craving for passion, the craving for existence, the craving for non-existence.

3. Now this, O monks, is the noble truth of the cessation of pain: the cessation, without a remainder, of that craving: abandonment, forsaking, release, non-attachment.

4. Now this, O monks, is the noble truth of the way that leads to the cessation of pain: this is the Eightfold Way: namely, right views, right intention, right speech, right action, right living, right effort, right mindfulness, right concentration (Durant 1954, p. 430).

The Buddha "cared everything about conduct, nothing about ritual or worship, metaphysics or theology" (Durant 1954, p. 431). He refused to answer questions about eternity, immortality, or God. The goal of Buddhist ethics was the avoidance of desire: one who understands should be equally unmoved by triumph as by tragedy, and will not differentiate among events, persons, or things in the realization that all are ultimately one.

The other Eastern ethical leader was Confucius, who had much to say about communication but always limited its use to the practical affairs of daily life and government. In the Analects, Confucius said that "the whole end of speech is to be understood" (XV, 40), and that the "Higher Man" is characterized: "In regard to his speech he is anxious that it should be sincere" (XVI, 10). During most of Western history, communication has been seen as a subset of epistemology. Either communication has been seen as a means for the discovery of truth or as a relatively innocuous means to express truth, and a high value is placed on being willing and able to speak, particularly to argue one's position on controversial issues. McCroskey (1977) described "communication apprehension" as a socially undesirable trait associated with immature and unconfident persons. In societies dominated by Confucian influences, communication is a subset of ethics. Persons enter relationships with others that are previously defined by the morality of the culture, and the norms specify that they should be taciturn rather than talkative. Further, since language is an inherently deficient means of describing reality, to correct or disagree with one's friend or superior is a foolish discourtesy. The Western concern for communication apprehension would never occur to a person following Confucian thought (Kang and Pearce 1980). This cultural difference has exacerbated
intercultural communication problems. Westerners often ask direct questions of Easterners—such as "Do you know the way to the Hilton hotel?"—which Westerners think are straightforward and appropriate, but Easterners find insulting and crude. To help the clumsy Westerner save face (not find the hotel), the Easterner may give an answer even though s/he does not know the location of the Hilton. The answer is a lie, which is perfectly appropriate in Confucian thought because all statements distort reality and this statement serves ethical values.

The second form of communication, which we have called philosophic, makes a virtue out of the necessity implied by the ontological and epistemic assumptions. Consider the logical paradox involved in making the statement that any statement distorts truth. Since the statement both describes a category of statements and is a statement itself, a self-reflexive paradox is formed: how can one say without distortion that one cannot make statements without distortion? In Europe at the turn of the twentieth century, Bertrand Russell solved the problem by issuing an imperative statement to the effect that "You may not use a statement both as a member of a class and a description of that class!" Conversely, Eastern philosophers during the last two millennia dealt with self-reflexivity by developing communication devices that demonstrate rather than describe the discrepancy between reality and the means of communication. The value of these devices is to facilitate the transcendence of the semblance of knowledge embodied in statements and to achieve enlightenment.

The Indian wisdom literatures—the Upanishads—contain many question-and-answer sequences impenetrable to the modern Western mind until it is realized that they are demonstrations that verbal answers to verbal questions are necessarily false, and no one answer is better than another.

Then Vldag da Sakayla questioned him. "How many gods are there, Yajnavalkya?"

He answered, "As many as are mentioned in the hymn to All the Gods, namely, three hundred and three, and three thousand and three."

"Yes, but just how many gods are there, Yajnavalkya?"
"Thirty-three."
"Yes, but just how many gods are there, Yajnavalkya?"
"Six."
"Yes, but just how many gods are there, Yajnavalkya?"
"Two."
"Yes, but just how many gods are there, Yajnavalkya?" "One and a half."
"Yes, but just how many gods are there, Yajnavalkya?"
"One."

The Upanishads also contain passages in which a somewhat literal-minded student will try to answer a question, and ask his teacher "Is this it?" The reply is always "neti, neti" or "not that, not that," until the point is made that there is nothing that can be said that is correct.

The point of Eastern philosophic communication is the denial of the content of anything that was said.

In India, the objective is to be born from the womb of myth, not to remain in it . . . freed from the pedagogical devices of society, the lures and threats of myth, the local more, the usual hopes of benefits and rewards (Campbell 1969, p. 56).

Chief among the methods used to escape from the seductions of simulated knowledge is the koan. The koan is an askable question for which there is no appropriate answer, which is precisely the point. The koan inculcates an experience of frustration, and demonstrates that the use of language leads to verbal traps that misrepresent reality. The most familiar koan is "What is the sound of one hand clapping?" For Westerners, it is instructive to compare the koan with a question on a multiple-choice examination: on a test, a question has one preferred or correct answer and several distractors. The respondent is graded by the percent of times s/he selects the preferred response. A Buddhist in training will be given a koan to meditate on, then asked for an answer. If the answer represents an attempt to think logically within the distorted system of language, he will be given a ritualistic beating. An appropriate answer is one that indicates the respondent's awareness that there is no correct answer. The classic case of such an answer was to a question about wisdom: "Master, what is the nature of enlightenment?" "A bowl full of snow," he replied.

The Taoist Lao-Tze (or "Old Master") was the most explicit in his descriptions of the limitations of philosophic communication.

Those who are skilled do not dispute; the disputations are not skilled . . . when we renounce learning we have no troubles . . . the sage constantly keeps men without knowledge and without desire, and where there are those who have knowledge, keeps them from presuming to act (Durant 1954, p. 653).
Lao-Tze's most famous—and, to Western ears, most confusing—saying was "He who speaks, knows not; he who knows, speaks not."

**THE CONCEPT OF COMMUNICATION IN WESTERN CULTURE**

The distinguishing characteristic of Western culture is its instability. Western culture is really the uneasy product of two distinctly different cultures, European humanism and Levantine theocracy. The humanistic tradition treated ordinary profane conversation as important, and the theocratic tradition suggested that absolute certainty was both possible and necessary. The combination of those two ideas produced a society in which communication had a central role.

The European Humanistic Tradition

The Greeks celebrated talk and assumed that it was the appropriate vehicle for the discovery and expression of truth. During the fourth century B.C., three strikingly different philosophical positions were taken, each of which assumed that communication functioned as an odorless, colorless vehicle of thought: the sophists, Socrates, and Aristotle.

The sophists were professional skeptics about the possibility of knowledge, at least in part because they were well aware of the plasticity of speech; they could "prove" anything. Gorgias is reputed to have said, "Nothing exists. If something did exist, it could not be known. If it were known, it could not be expressed." Abandoning truth as a criterion but retaining the use of communication as a means for conducting personal and public business, the sophists and ordinary Greek citizens developed the skills of oral discourse to unparalleled heights.

Proficiency in argumentative speech making—which the primitives would understand as trivial, Taoists as foolish, and Confucianists as unethical—was considered an essential skill for a citizen. All societies have a mythic figure who functions as an example for others to emulate. In ancient Greece the exemplary person was Achilles, quick of tongue, valiant in battle, and—importantly—fortunate to have a poet of the stature of Homer to record and proclaim his exploits. To some extent, the social order of the Greeks is best explained in terms of providing an arena in which persons could perform "legendable" feats before an appreciative audience. One such field of honor that combined both the occasion and the audience was
politics, and in many Greek cities the primary duty of the citizens (which excluded women and slaves) was participation in politics.

Participation took the form of public oral argument, and the Greeks made a fine art out of verbal duels. The sophists offered to teach persons how to persuade others regardless of the facts of the case.

The story of Corax and Tisias illustrates the celebration of disputation. Corax had studied rhetoric with the sophist Tisias, and Tisias sued him for nonpayment. The Greek courts consisted of several hundred citizens before whom the plaintiff and the defendant appeared and pleaded their case. Since they had to speak for themselves—and since some people brought accusations more for sport than for justice—it was important for all citizens to be able to defend themselves. In this case, Corax's defense was a dilemma, either horn of which would lead to his acquittal. In essence: "You must award the case to me, because if I fail to persuade you, then Tisias has taught me poorly and I should not have to pay; but if he has taught me well, then I will persuade you that I should not pay."

No slouch himself, Tisias countered: "Corax must pay. If he convinces you that he should not pay, then I have taught him well, and deserve payment; but if he does not persuade you, then you will decide that he should pay." These arguments, of course, amount to a clumsy koan, and over the muted sound of one hand clapping, the decision was reached to dismiss the case with the not-too judicial observation, "a bad crow from a bad egg." (Even in defeat, the Greeks went down quipping: "crow" in Greek is pronounced korax and puns on Corax's name.)

The distinguishing characteristic of Greek culture was that it gave an important social role to ordinary, nonmythic communication. Public decisions—whether to build a city wall or a navy—were made by democratic vote of a considerable portion of the city's population on the basis of forms of talk that would have been considered trivial in primitive society and fundamentally distorted in Eastern societies.

Their reliance on talk as a means for personal honor and public decisions made the Greeks inscrutable to their Asian contemporaries. The Persians, who crossed swords with the Greeks several times, had developed a culture in which the "manly virtues" of friendship and the military arts were prized, but talk was not. The role of talk as a means of philosophy and decision making was limited, among other reasons, by the importance of the horse in Persian society. Persian gentlemen were expected to be expert horsemen, and never appeared in public on foot—a custom that reduced the opportunity for oral debate even if the Persians had wanted to conduct business that way. In fact, the Persians had nothing but contempt for the talkative Greeks. The Persian King Cyrus said it best:
"I never yet feared the kind of men who have a place set apart in the middle of the city in which they get together, and tell one another lies under oath" (Parkinson 1963, p. 18).

By treating coordination as an important form of communication, the Greeks were the most important predecessor of modern society. Plato fought it as hard as he could. Bellah (1978) interpreted Plato as offering Socrates as a substitute for Achilles as the example for young men to emulate, and a realistic philosophy as a substitute for sophistic skepticism. As a replacement for Achilles as a cultural hero, Plato depicted Socrates as performing legendable feats of argument against the sharpest minds of the day and demonstrating physical courage and exemplary ethics in the face of death, yet living a life of contemplation and pursuit of knowledge rather than one of swordplay. To replace skepticism, Plato argued that persons could have a direct perception of the truth by understanding the eternal forms that lie behind the imperfect things of daily life.

This position has an interesting relation to both primitive and Eastern world views. Like primitive cosmology, Plato’s is two-leveled, with the tangible lower level of historical entities and events considered the less important. Plato and Eastern philosophers agreed that ultimate reality was not—as primitives believed—imbbedded in symbolic and ritualistic reenactment in daily life; rather, a person must understand the fundamental differences between the structure of ordinary thought and experience—coordination—and the structure of reality. Although they differed about the nature of ultimate reality—Plato agreed with the primitives that it was more permanent, static, and enduring than the flux of experience—Plato and Eastern philosophers viewed communication as a flawed instrument, the correct use of which could lead to enlightened realization of its flaws. Contemplation of the koan and mandra, one way of Buddhistic enlightenment, is roughly comparable to Plato’s use of the dialectic.

A close reading of Plato’s dialogues shows that Socrates never really takes a position on the issues; rather, he keeps on showing that all facile definitions and solutions are inadequate. The Phaedrus intertwines two themes: the nature of love and the nature of a good speech. The internal structure of the dialogue is a series of speeches about love, each of which is better than the one before in several respects, including its ontological stance. The perfect speech must be made by a person who knows truth, even though he may lie in the speech to succeed in persuading the audience. This position has caused Western scholars much difficulty, which they usually resolve by assuming that truth is in principle articulate, but concessions must be made to the limitations of the audience (Kennedy 1963, pp. 74–79). However, the Phaedrus considered as a whole rather than as
a series of speeches suggests a radically different interpretation. The position Socrates takes about love changes from speech to speech, until at last he advocates the position he opposed at first. One could interpret this as an evolutionary argument toward a better position on the issue, but that would be extremely anachronistic: the concept of progressive evolution was not an important metaphor in fourth-century B.C. Greece. A more plausible interpretation is that Plato was making a point about communication as well as about love and speeches: no matter how technically excellent a speech is, it still is a flawed instrument of inquiry. Enmeshing oneself in the logic of language leads from one opinion to another, but not to truth. The purpose of studying communication for Plato, as in Eastern wisdom literatures, is to demonstrate its own inadequacies and thus lead the novice to the realization of the importance of transcending quotidian reality.

If this interpretation is correct, it is easy to see why Plato considered the sophists his natural enemies. They agreed that communicative coordination was the process by which matters of fact, value, and policy were decided. However, not being enlightened, the sophists did not understand the type of communication that provoked insight; they assumed there was no inherent reason why any askable question—such as a koan—could not have an adequate answer, and had little patience for those, like Socrates, who were more concerned with demonstrating the immensity of problems rather than concocting solutions. The celebration of oral adroitness seemed to the sophists an adequate process because their skeptical rejection of the existence of truth led them to accept the persuasiveness of an idea or presentation as the criterion for evaluating it. They boasted of their skill in rhetoric (the "art of discovering in any given instance all of the available means of persuasion") rather than in dialectic (the method of social inquiry leading to enlightenment), and proclaimed the art of persuasion to be "both beautiful and just." For this, Plato pronounced them quacks who knew how to appeal to the masses and how to make "the worse appear to be the better," but who did not understand the nature of their craft. Rhetoric was a "knack, like cookery" leading to mere opinion rather than being an art stemming from an enlightened understanding of truth.

Plato's bid to replace Achilles with Socrates, and skeptical verbal dueling with careful dialogues leading to enlightenment, failed miserably for two reasons: his student Aristotle was able to develop a much more sophisticated model for the use of coordinative communication, and Aristotle's student Alexander so completely filled the ideal of Achilles that we still call him "the Great."

The latter was the more important. Immediately—Alexander's military conquests created a world order in which men of action
were prized more than those following the Socratic dictum "the unexamined life is not worth living." In this turbulent social order, virtually all of Plato and Aristotle's writings were lost by the Europeans. However, the reintroduction of Aristotle's writings (the Islamic culture had preserved them) into Europe about 1,500 years later had a profound influence on the development of modern culture.

Aristotle developed a revolutionary intellectual paradigm in which the world of history or particulars was considered important and organized according to knowable properties. Further, the structures of language, thought, and reality were considered isomorphic, such that the development of rules of correct thinking were expressed in language (logos is the etymological root of logic and means both word and power of reason) and provided a tool for developing certain knowledge. Like Plato, Aristotle held out the promise of certainty; like the sophists, he offered a learnable technique for argument that did not involve a mystical enlightenment; and unlike either, he proposed a world of experiencable entities that operated by knowable causes.

As a group, the classical Greeks are distinguished by their use of coordinative communication as an important tool of inquiry and decision. The Greeks were protected from discovering how problematic coordinative communication can be by their ethnocentrism. They considered themselves civilized and all others barbaric because persons from other cultures could not speak Greek or participate in Greek social institutions, including oral argument. By a neat circular pattern of reasoning, those who would have created problems in coordination were disenfranchised (Vogel 1975, p. 4).

One remarkable event illustrates the difference various roles of communication have in the development of social institutions. As Alexander led his armies into India, he was told that a particular city was honored to be the home of nine holy men. Being a good Greek, Alexander equated holy with wise, and wisdom with ability in oral argument. Anticipating a good evening of debate, he invited the nine to join his camp, and was astonished that they refused. His next delegation insisted that they come to him, making thinly veiled threats if they did not. They again refused, and by now intrigued, Alexander went to their village. He found nine naked, blinded Hindus blistering in the sun, who would not speak to him, much less participate in civilized disputation about the meaning of life. This must have been quite a shock to his ethnocentric Greek culture.

Two factors undid the Greek celebration of coordination. The rise of the Roman Empire usurped politics, religion, philosophy, and social institutions for power rather than discussion; dialectic was without a role and rhetoric became the art of embellishment rather than persuasion. With the diminution of the individualistic,
politically active, and intellectually aware Greek culture, the influence of Levantine religion increased.

The Levantine Theocratic Tradition

The primary characteristic of Levantine culture is a passion for knowledge that is beyond doubt. The ontological assumption—similar to the primitive—is that of a two-leveled reality in which the divine is perfect. Unlike primitive cosmology, the sacred is only partly immanent, making some but not all aspects of daily experience holy and some secular. Primitive animism imputes the existence of gods or spirits in every aspect of life, and draws from a practically infinite supply of gods. Levantine religions—at least in their later forms—posited the existence of one God, who is present in some persons and some places but not in others.

This cosmology produces a strong logic of meaning and actions. The infidel is literally godless. The only important forms of communication are theophanies, in which God is revealed to humans through events (the exodus, the Babylonian captivity, the burning bush), through persons (prophets), and through inspired communication (the commandments, the Covenant, prophecies). Significant communication events are one-way, from God to humans, and static, protected by taboos, rituals, and enshrinement in the holy books.

The difficult history of the name of the Hebrew God provides an illuminating example of the importance accorded to theophanies and the perceived unimportance of human communication. Early Hebrew was written without vowels, and the name of God—probably pronounced "Yahweh"—was thus written only with the consonants. A taboo against speaking the name of God developed, and readers of the scriptures would substitute the euphemism "Elohim" when they came to "God." When vowels were added to the written language, the Hebrews reached an intriguing compromise between the euphonic needs of oral readers and the religion's need to preserve the text; the name of God was written with the consonants of Yahweh and the vowels of Elohim. Christian scholars trying to translate the Hebrew text and unaware of the natural history of languages rendered the result a very non-Hebraic "Jehovah."

In Levantine society, the means of communication are considered capable of expressing truth, as when God speaks or inspires persons, but the process of communicating is considered irrelevant to the discovery of truth. A great deal of debate about religious and political issues occurs, but always within the bounds of revealed truth. The culturally morphogenetic statement is "Thy will be done on
earth as it is in heaven," or "as above, so below." The architecture of Sumer, the organization of roles in the Egyptian court, the design of the Jewish temple, and the configuration of Christian cathedrals are all visual metaphors of an attempt to recreate the theological in the social order. For example, the Levantine concept of holy places is expressed in the chancels of Christian churches—areas reserved for the use of the clergy, too holy for ordinary or unordained persons. Further, the split chancel (with an altar between) structure of Catholic churches illustrates a purer Levantine heritage than the typical Protestant design with a pulpit in the center. (Protestantism was caused by and reflects a mixture of Levantine and humanistic traditions.) The sacraments, a uniformed clergy, and a hierarchical church organizational structure are all remnants of Levantine culture.

Freedom of speech is obviously not a virtue in Levantine society; subordination of speech—and thought and action—to the truth is the goal. As Cyrus's derogatory comment about the Greeks revealed, profane communication was considered trivial. These ideas had important consequences in subsequent history.

The Uneasy Combination of Traditions

The history of Western culture may be usefully understood as the unstable interaction of fundamentally contradictory intellectual and social traditions. Each period of Western history may be seen as one of a series of accommodations between Levantine theocracies and European humanism. Within each period, the forms of human communication were shaped by the prevailing cultural assumptions and the practice of communication exacerbated the instability of those assumptions.

The uneasy amalgam of the two traditions may be clearly seen in Hellenistic science, in the development of Christianity after the first century A.D., and the establishment of the Holy Roman Empire. Awareness of the strains and potential for accommodation between these traditions is an important precursor for understanding the development of modern society in the Renaissance, the Reformation, and the Enlightenment.

Without public acknowledgment of the Levantine influence, Hellenistic scientists combined the Levantine assumption that somewhere out there is an underlying, eternal reality with the humanistic methodology of human reasoning and observation. (Interestingly enough, this same combination was repeated some 1,500 years later to produce the European scientific revolution.) For example, Euclid assumed the configurations of geometry were eternally valid, and
devised the axiomatic method of theory that remained as the unchallenged standard for conceptual rigor until the twentieth century. In a triumph of humanistic reasoning and research, Pythagoras discovered an isomorphism among numbers, geometric shapes, and the musical tones produced by plucking strings of various lengths, and announced that he discovered the mysteries of the universe. He and his followers then created a Levantine mystery religion in which only initiates could know the holy knowledge.

The early development of Christianity reveals the uneasy accommodations between the Levantine and Greek traditions. The New Testament is divided into several parts written from very different perspectives. The synoptic gospels—Matthew, Mark, and Luke—and the book of Acts are thoroughly Levantine; the gospel of John and the Pauline letters are clearly Greek.

The synoptic gospels present Jesus as a Levantine rabbi, whose teachings are more like those of the Buddha and Confucius than Socrates or Aristotle. These teachings are clearly more theocentric and ethical than humanistic and political. Part of the revolution that Jesus brought to the Judaism of his day was an emphasis on the spirit rather than the letter of the law—which sounds like Confucius—and an ethical compassion for individuals of meager means—which sounds like the Buddha. Similarly, the book of the Acts of the Apostles—which Connor (1940) called a "Jewish Christian" book—records the sermons of many of the early leaders. The significant aspect of these sermons is that they insisted that a theophany—an intrusion of the sacred into history—had occurred in the life, death, and resurrection of Jesus, but they seemed unconcerned with doctrine.

It is neither probable nor important that the sermons in Acts are accurate transcripts; neither the Greek nor Hebrew culture placed particular value on verbatim records because, in different ways, they did not think them important. Thus Herodotus, a serious historian, served a more noble purpose than mere historical accuracy by placing unlikely speeches in the mouths of generals on the eve of battle and statesmen at the forum. In the same way, the diagnostic value of the sermons attributed to the disciples in Acts are not diminished by their surely distorted reportage; they represent even more accurately what the early community of Christians thought was important. In a characteristically modern endeavor, the German theologian Rudolf Bultmann demythologized the kerygma or preachings of the apostles by attempting to abstract the doctrinal content of early Christianity into a series of propositions. The result is thin by any standards, and a serious distortion of the world view of the early Christians.
In the writings of Paul, a number of Greek concepts were subtly introduced into Christianity. Maslow (1966) contrasted Jesus, the ecstatic visionary, and Paul, the organizer, as different personality types. They were, and they inhabited different worlds, defined for them by their culture. However, it was in the gospel of John rather than in Paul's writings that the Levantine theophany was bluntly reinterpreted in Greek philosophical thought. The concept of the Word, "the logos," was a well-established concept in Greek philosophy, meaning something like "the principle of rationality." John explicitly linked this concept with the person of Jesus and the Levantine notion of revealed truth.

In the beginning was the Word, and the Word was with God and the Word was God. . . . And the Word was made flesh, and we beheld his glory.

These thunderous phrases contain code words that express an equivocal rapprochement between Levantine and humanistic cultures: there has been a theophany and its content is reason. Since theophanies are irrational, this message was a strange loop, initiating many attempts to reconcile Levantine theocracy and, specifically, Aristotelian cosmology. The most important development was the linkage of Levantine certainty with Greek propositional logic, which altered both traditions.

It is impossible for any one . . . to fail to notice a difference of both form and content between the Sermon on the Mount and the Nicene Creed. The Sermon on the Mount is the promulgation of a new law of conduct; it assures beliefs rather than formulates them; the theological conceptions which underlie it belong to the ethical rather than the speculative side of theology; metaphysics are wholly absent. The Nicene Creed is a statement partly of historical facts and partly of dogmatic inferences; the metaphysical terms which it contains would probably have been unintelligible to the first disciples; ethics have no place in it. The one belongs to a world of Syrian peasants, the other to a world of Greek philosophers.

. . . the main question to which I invite your attention . . . asks, not how did the Christian societies come to believe one proposition rather than another, but how did they come to the frame of mind which attached importance to either the one or the other, and made the assent to the one rather than the other a condition of membership (Flatch 1957, pp. 1, 2).
The distinctive characteristic of Greek thought was the extent to which it treated coordinative communication as important. The influence of this idea was to shift Christianity from an emphasis on morality to an emphasis on propositional truth expressed in creeds. However, Christianity did not become simply another Greek or Roman religion. From the Levantine tradition, Christianity drew the notion that the contents of its beliefs were exclusively true, linked via divine revelation to sacred truth.

This exclusivity, more than anything else, offended the non-Christian authorities in the early centuries of the Christian era. Pliny the Younger described his treatment of Christians to the Emperor Trajan circa 112 A.D.:

... this is the course that I have adopted in the case of those brought before me as Christians. If they are Christians, if they admit it if I repeat the question a second and a third time, threatening capital punishment; if they persist I sentence them to death. For I do not doubt that whatever kind of crime it may be to which they have confessed, their pertinacity and inflexible obstinacy should certainly be punished [emphasis added] (Bettenson 1963, p. 4).

Pliny's policies seemed to work. He reported to the emperor that previously abandoned temples and the bustling economy that was fueled by purchases of sacrifices to the many gods were once again thriving.

The early Christians' claim to an exclusive share of truth was difficult to maintain as they lived in a milieu of articulate philosophy. The uneasy strain between the two traditions is revealed in the different positions taken by two spokesmen toward pagan philosophy. Writing about 150 A.D., Justin extended John's use of the logos, or Word, as the middle term linking Greek philosophy to Levantine revelation.

... the teachings of Plato are [not] contrary to those of Christ, but ... they are not in all respects like them; as is the case with the doctrines of the others, stoics, poets, and prose-authors. For each discoursed rightly, seeing that which was suited to him through a share in the seminal divine reason (Word); but they that have uttered contrary opinions seem not to have had the invisible knowledge and the irrefutable wisdom. Whatever has been uttered aright by any men in any place belongs to us Christians; for, next to God, we worship and love the reason (Word) which is from the unbegotten
and ineffable God; since on our account He has been
made man, that, being made partaker of our suffer-
ings, he may also bring us healing [emphasis added]
(Bettenson 1963, p. 7).

On the other hand, Tertullian (writing circa 200 A.D.) found nothing
to desire in Greek philosophy. This is pure Levantine:

It is this philosophy which is the subject matter of this
world's wisdom, that rash interpreter of the divine
nature and order. In fact, heresies are themselves
prompted by philosophy. . . . Wretched Aristotle!
who taught them dialectic, that art of building up and
demolishing, so protean in statement, so farfetched
in conjecture, so unyielding in controversy, so pro-
ductive of disputes; self-stultifying, since it is ever
handling questions but never settling anything. . . .
What is there in common between Athens and Jeru-
salem? What between the Academy and the Church?
What between heretics and Christians? . . . Away
with all projects for a "stoic," a "Platonic," or a
"dialectic" Christianity! After Christ Jesus we de-
sire no subtle theories, no acute inquiries after the
gospel. . . (Bettenson 1963, p. 78).

These ontological and epistemic beliefs set in motion a
powerful logic that affected the forms of communication that were
considered legitimate and vice versa. Tertullian clearly opts for a
two-leveled mythology in which sacred communication is all that is
important, and it is one-way: God's revelation of himself to human-
kind. Social coordinative communication is unimportant, and to use
the powers of reason or argument as a way to discover what God is
like is counterproductive, leading only to heresy. In this logic are
the seeds of jihad, totalitarianism, and a view of humans as passive,
dependent creatures. Justin, on the other hand, plays the Greek
game of using coordinative communication as an epistemic device,
but slips in an almost Platonic notion of an ultimate ontologic reality
that subordinates epistemic endeavors. Since truth is revealed, the
efforts of persons in argument or philosophic analysis are correct
to the extent that they approximate the truth; erroneous if they differ.
In this logic are the seeds of scholasticism.

The third arena in which the Levantine and Greek traditions
reached uneasy alliance was in politics. In the early fourth century
A.D., the Emperor Constantine reversed precedent, first by legiti-
mating Christianity and then by giving it privileged status. Legend
describes Constantine as having a vision of a cross and a cryptic message he interpreted as the divine command: "In this sign, conquer." In a more cynical age, it seems possible to interpret his actions as motivated less by a Levantine theology than by a calculated assessment of the effects of a more Levantine-like social logic operating within a culturally diverse, geographically spread empire beset by enemies. Perhaps Constantine realized that the Justinian form of Hellenized Christianity may be interpreted as justifying compulsory adherence to its creeds, and perhaps he saw that ostensibly sanctimonious efforts toward converting non-Christians and enforcing doctrinal orthodoxy were useful for political reasons. Whether Constantine deliberately planned it or not, a novel European culture was born, caused and symptomized by a unique emphasis on coordinative communication in literature, science, and politics, but always subservient to the one-way sacred communication from God to humankind.

For nearly a thousand years, this part-Levantine, part-humanistic culture was relatively dormant, locked in a cultural logic that limited individual and societal innovation. This logic was the result of the imperfectly integrated ontological and epistemic beliefs that simultaneously made the affairs of daily existence trivial by comparison with sacred truth, but important as an arena of ethics. Tuchman (1978) described many of the contradictions in medieval life that stifled change and cumulative development. As a result, medieval Europe was self-consciously inferior in martial and fine arts, philosophy, and science to the Arabic culture of North Africa and the Middle East, which had maintained a closer connection with the classical Greeks and had achieved a less restrictive accommodation between humanism and their form of Levantine religion.

In this context, Thomas Aquinas brought medieval thought to its clearest expression and thus, inadvertently, set in motion the forces that would destroy it. Aquinas's move was to integrate fully the Greek celebration of coordinative communication—in the form of Aristotelian logic—and the Levantine reliance on one-way sacred communication during theophanies. The reasoning went like this: divine revelation produces uncontestable truth claims, but does not apply to all topics. Aristotelian logic provides a way of deducing conclusions that are as valid as the premises. The combination of these two—one from Athens, one from Jerusalem—yields a guaranteed method for achieving unquestionable truth about a broad range of topics. The medieval scholastics deduced the shape of the earth, the structure of the solar system, the divine right of kings, and so on, by the use of logic and the content of revelation.

The power that the Thomistic program conferred to clarify the relationship between the sacred and the profane, and to
extend the unassailable hand of clerical certainty to all parts of every intellectual enterprise was in itself the death knell for medieval society. Before describing the way in which the Thomistic program collapsed, pause for a minute to consider the reciprocal causal relation between social reality and forms of communication.

Unlike primitive society, where it was ubiquitous and integrated with the mundane, sacred communication in Western culture was controlled by official institutions. Only ordained priests could perform religious ceremonies, and any mystical or artistic experiences that were not specifically authorized by the Church were considered profane, heretical, or inspired by the devil. The truth was considered expressible in propositions, but the content of the church-sanctioned dogma was to be affirmed, not debated or questioned: neither rhetoric nor dialectic belonged in sacred communication. Some of the popes were remarkably forthright in expressing their role as custodians of truth, which they would dispense to others who should receive it gladly, with no questions asked. In 1079, Pope Gregory VII said, "Holy Scripture should be a secret in certain places; lest if it were plainly apparent to all men, perchance it would be little esteemed and subject to disrespect; or it might be falsely misunderstood by those of mediocre learning and lead to error." Hundreds of years later, when the enlightened monarchs Frederick of Prussia and Catherine of Russia proposed educating the serfs, the clergy resisted vehemently, arguing that the established institutions of society would be undermined by universal education. They were precisely correct, as evidenced by still later revolutions throughout the European nations.

The banishment of rhetoric and dialectic from sacred communication both reflected and caused the development of social institutions that perpetuated a hierarchically organized society in which truth descended from God to his Vicar to his ministers, and so on. The hierarchy was so strong that it vied with monarchs for power, and often won. In 1302 Boniface VIII said, "It is altogether necessary for salvation for all human creatures that they should be subject to the Roman pontiff."

The use of Latin for sacred communication in the mass as well as papal bulls, and so forth, also reflected and caused the banishment of rhetoric and dialectic. Combined with purposeful illiteracy, the use of the Latin Vulgate Bible effectively disenfranchised the overwhelming majority of the population from any involvement—except as passive observer or parroting participant—with sacred communication. When Wycliffe and Luther translated the Bible into English and German, respectively, the Church fought them with fire and sword but not with argument. Having the scriptures in the vernacular reduced a person's dependence on the Church
(1) There is the sin, whereby they deserve not only to be separated from the Church by excommunication, but also to be shut off from the world by death. For it is a much more serious matter to corrupt faith, through which comes the soul's life, than to forge money, through which the temporal life is supported. Hence if forgers of money or other malefactors are straightway justly put to death by secular princes, with much more justice can heretics, immediately upon conviction, be not only excommunicated but also put to death (Bettenson 1963, pp. 186-87).

When Luther appeared at the Diet of Worms, summoned to answer the charge of heresy, he was asked to recant what he had written. A careful analysis of the argumentative structure of this occasion—as the Nuremberg trials will provide for another critical moment in history—reveals the fundamental connection between alternative forms of communication and social structures. Luther wanted to debate the issues, to introduce coordinative communication where the Church demanded only sacred communication be allowed. He asked that those portions of his writings that were in error be identified since he could not recant everything he had written, because some of that had been quotations from scripture. Seeing the trap clearly—their heirs in the eighteenth century would not, and lost bitterly as a result of letting the philosophes introduce rhetoric, dialectic, and even science into what had been reserved for one-way sacred communication—the Catholics at Worms insisted that he submit to authority rather than reason by recanting totally. Luther's reply was a classic inaugural of the modern age: "Here I stand. God help me, I can do no other" (Bainton 1950).

Within the Thomistic program, coordinative communication had an important role for the demonstration and expression—but not the discovery or invention—of truth. The idea was the old one of linking the Hellenistic logos to the "Word of Jesus" to produce a set of words—a creed—that expressed divine truth. During the council of Nicaea, 325 A.D., the delegates were trying to identify the content of their faith, and trusted in the ability of words to such an extent that they condemned specific alternative wordings. After stating what they believed, they added:
And those that say "There was when he was not," and "Before he was begotten he was not," and that "He came into being from what-is-not," or those who allege that the son of God is "Of another substance or essence" or "created" or "changeable" or "alterable"

These the Catholic and Apostolic Church anathematizes (Beilenson 1963, p. 36).

Throughout Christian history, not only the persons of heretics but also the propositions they espoused were condemned. In London in 1382 and again at the Council of Constance in 1415, these propositions—among others—attributed to John Wycliffe were listed as condemned:

7. That if a man be duly penitent any outward confession is superfluous and useless.
10. That it is contrary to Holy Scripture that ecclesiastics should have possessions.
14. That any deacon or priest may preach the word of God apart from the authority of the Apostolic See or a Catholic bishop.
17. That the people can at their own will correct sinful lords.

Note that the idea of condemning propositions is sensible only given the unique Western concept that communication is closely linked to ontology, that statements serve as useful descriptions of reality.

A continuum of sorts is suggested in which the variable is the role of coordinative communication. In Eastern thought, the alleged fundamental discontinuity between reality and communication implies that the content of any proposition is distorted if it tries to depict truth; thus communication is primarily ethical or political, and the medieval European use of creeds and concern for heresy seem foolish. The medieval European theologians and philosophers differentiated between sacred communication and mundane talk, with the latter trivial and the former a blueprint of reality and a means of salvation. From their perspective, heretics were trivializing the sacred, muddying the waters of knowledge, and jeopardizing the hope for salvation of themselves and others. The heretics—foerunners of modernism and, in many ways, heirs of the Greeks—identified the one-way sacred communication as having its locus on the individual rather than the institution of the Church. Since there
were many revelations, sacred matters at least sometimes became
ennmeshed in rhetoric and dialectic, the techniques of mundane co-
ordinative communication.

The celebration of coordinative communication both reflected
and caused a social logic that threatened the hierarchical social or-
der of the medieval world. This was no mystery. The content of
the propositions of Wycliffe, and even more those of the Lollards
who extended his political reasoning, clearly legitimates lines of
action detrimental to the privileged status of the clergy and aristoc-
rac. Further, the proclamation of Henry IV in 1401, which de-
clared that heretics should be publicly burned, is explicit about what
the dissenters were doing and why it bothered him:

... they make unlawful conventicles and confederacies,
they hold and exercise schools, they make and write
books, they do wicked by instruct and inform people,
and, as much as they may, excite and stir them to sedi-
tion and insurrection, and make great strife and division
among the people, and do daily perpetrate and commit
other enormities horrible to be heard, in subversion of
the said Catholic faith and doctrine of the Holy Church,
in diminution of God's honour, and also in destruction
of the estate, rights, and liberties of the said English
Church. ... [emphasis added] (Bettenson 1963, p. 252).

Medieval Europe included three forms of communication.
Mundane communication was considered trivial and—as among the
primitives—it was important that it remain unimportant. Forms of
address and conventions about who could speak about what to whom
served to reinforce the status distinctions within the social order,
and were ritualized into patterns so pervasive that they could only
be challenged by use of coordinated communication—already defined
as trivial—to talk about coordinated communication (Hilzinga 1954).
This self-reflexive loop helped the European aristocracy maintain
its position for millenia. Learned communication and sacred com-
unication were considered important, and were linked by Aquinas
in a program whose power was its own downfall.

The problem with the Thomistic epistemology is that it should
have produced absolutely certain knowledge about everything, and
the Church and nobility generally acted as if it did. Disagreement
with the pronouncements of theologians was prima facie evidence
that one was mad, bad, or sick, according to this reasoning. If
someone objected, as Galileo did to the official geocentric model of
the solar system, this implied either that s/he was expressly deny-
ing the premises of syllogistic reasoning, which came from divine
revelation, and was therefore a dangerous, burnable heretic; or s/he was denying the validity of logical reasoning and thus an un-educated or perverted public menace having no right to his/her own opinions, much less to speak publicly.

Without intending to do so, Aquinas conferred upon theology that virtue prized by the modern philosophy of science: falsifiability. So long as the Church limited itself to pronouncements about heaven and souls, persons could be unconvincing or disagree, but without much hope of proving the point either way—after all, the Church regularly trotted out God Himself as a character witness for their side. But when theology was tied by the (apparently) inexorable bonds of logic to factual statements about historical and experiential events, the Church entered arenas in which it could no longer insist on its pristine authority. The Thomistic program crystallized the culture of medieval Europe into a rigid enough structure that it could be shattered. The intrusion of coordinative communication intruded into realms of truth and knowledge, constituting a historically unique function of communication.

A rising individualism, fueled by disgust at the self-serving excesses and incompetencies of the Church and nobility, received direction from the rediscovery of the classic Greek philosophy and arts. The primacy of the self-contained intellectual system of medieval Europe was subterfuged by the recognition that Socrates was as estimable as Jesus, and Greek ethics at least as lofty and certainly more eloquently articulated than the early Christian writings. Further, the advent of regular worldwide travel brought news of societies that worked at least as well as the European, but followed very different social logics. For example, the pervasive sexual repression in European culture had been justified by the claim that a sexually expressive society would be chaotic. However, the astronomical expedition to Tahiti returned with descriptions of a viable culture totally unlike the European. The tumultuous years of the Reformation and Renaissance resulted from the recognition that there was life—artistic, literary, and religious—outside the rigidities of the orthodoxies of their culture. Many artists began to take the propositions of theology as irrelevant, as in Michelangelo's David: a thoroughly pagan Greek sculpture scantily disguised by the name of a Judeo-Christian hero.

The scientists took a more direct approach, and specifically endorsed proposition that were proclaimed false by theologians. Even the contemporaries of Aquinas initiated a new appeal to observation as the source of knowledge: the elevation of mundane experiment and experience as the criterion of epistemology and the symptom of ontology. Robert Grosseteste wrote an essay in the early thirteenth century on the shape (spherical) of the earth that "is made
evident both by natural reasons and by astronomical experiences." Campbell clearly saw the significance of this statement.

And the reference here to experiences, instead of to the usual authority, is marvelously important: a word of infinite promise. For it is the heralding word, at last, of Europe against Asia, future against past, individual quest, and the sharp cut of "proof" into the grip of "faith." It marks the beginning of that irretrievable break from untested error that was to uproot and demolish, within the next four centuries, every support of that age of the monumental arts which for a period of some five milleniums had held mankind enchanted in a dream of toil and beauty, misery and wonder, serving gods abiding in a house of myth only a league or so beyond the moon. The term describes the first absolutely indispensable requirement of any sort of science or maturity of mind whatsoever (Campbell 1968, p. 590).

The forces that act on cultural logics, however, work slowly. Precisely the same issue of authority versus experience—and of the legitimate boundaries of sacred and coordinative communication—lay behind the crime of Galileo. Galileo was accused of "holding as true a false doctrine," and teaching and publishing his opinions, including "answering the objections which were continually produced from the Holy Scriptures, by glazing the said Scriptures according to your own meaning." Consider closely the nature of the proof the Church brought against Galileo's telescopic observations:

1. The proposition that the sun is in the center of the world and immovable from its place is absurd, philosophically false, and formally heretical; because it is expressly contrary to Holy Scriptures.

2. The proposition that the earth is not the center of the world, nor immovable, but that it moves, and also with a diurnal action, is also absurd, philosophically false, and theologically considered, at least erroneous in faith.

It is one of the many ironies of history that both Galileo and his friend the pope, each acting in terms of his conscience in a difficult situation, were both wrong about astronomy: both earth and sun move.
The bridge between the medieval and modern was nowhere better marked than by Kepler, who had intended to celebrate God's handiwork by demonstrating the perfection of the organization of the solar system, but who instead believed his data when these indicated that planetary orbits were elliptical.

DISCUSSION

The purpose of this chapter is to document the fact that the nature and role of communication have been variously understood by the several cultures of humankind, and to describe some instances of the reciprocal causal relationship between the forms of communication and the social order. The contrast among the primitive, Eastern, and two traditions in European concepts of communication and its relationship to ontology, epistemology, and ethics illuminates many of the characteristics of those societies.

Most attention in this chapter has been given to Western culture. This feature reflects the learning histories of the authors as well as the greater dramatic interest in a culture imperfectly built on two incompatible traditions. Further, it is the Western heritage from which came the new idea of communication—which has undergirded the analysis in the preceding pages of this chapter.

The medieval period ended not with a whimper, but with a succession of quite loud bangs. It is not our purpose to recount that history—it has been well and often chronicled. For our purposes it suffices to observe that for the first time since the Greek golden age, ordinary communication was considered important, and its use as a means of inquiry, education, debate, and—perhaps above all—play, revolutionized the culture by introducing widespread philosophic ecstasy.

The Renaissance had gone back beyond Christianity to explore the pagan mind; the Reformation had broken the bonds of doctrinal authority, and, almost despite itself, had let loose the play of reason. Now these two preludes to modernity could complete themselves. Man could at last liberate himself from medieval dogmas and Oriental myths; he could shrug off that bewildering, terrifying theology, and stand up free, free to doubt, to inquire, to think, to gather knowledge and spread it, free to build a new religion around the altar of reason and the service of mankind. It was a noble intoxication (Durant and Durant 1965, p. 607).
Our understanding of the nature and function of communication suggests that the primary change that occurred during the Renaissance was a shift in the social usages of various forms of communication. Open-ended coordinative communication in which many persons participated was linked to the basic ontological and epistemic beliefs of the culture, supplanting the one-way, hierarchical, closed system of sacred communication. This change was fought out in many arenas, usually with little explicit attention to communication. But with the advantage of hindsight, we can see that it was the use of particular forms of communication that fueled the emerging logic of modern society.

Social institutions and individuals are shaped by the array of prohibitions and permissions offered them by society, and the freedom to think and speak as one chooses is a powerful formative force. John Stuart Mill’s classic essay On Liberty (1859) addressed the value of free speech in discovering truth, but its primary effect was on the creation of a particular type of person.

The logic of modern society is so powerful that the term modernity is now used technically to describe a particular constellation of attitudes and behavior patterns. Inkeles (1976, pp. 235-36), one of those who deliberately induce cultural change in nonmodern societies, describes the characteristics of the modern man:

(1) He is an informed participant citizen; (2) he has a marked sense of personal efficacy; (3) he is highly independent and autonomous in his relations to traditional sources of influence, especially when he is making basic decisions about how to conduct his personal affairs; and (4) he is ready for new experience and ideas, that is, he is relatively openminded and cognitively flexible... The modern man is also different in his approach to time, to personal and social planning, to the rights of persons dependent on or subordinate to him, and to the use of formal rules as a basis for running things.

Without deprecating the well-earned ecstacy of the Enlightenment, or minimizing the truly revolutionary character of modern humankind, it is easy for a well-acculturated Westerner to exaggerate the extent of changes from medieval to modern society. The surface appearance—technology, forms of government—are greatly changed but the amalgam of Levantine and humanistic traditions remains uneasy. The fundamental ontological assumptions changed in content but not in structure: the modern West is fully as far from primitive and Eastern cultures as was the medieval era. The
ecstatic eighteenth-century philosophes who wrote the Encyclopaedia and the Promethean nineteenth-century scientists who revealed the natural laws of the universe for the good of humankind, still believed in the existence of a knowable reality that could be described propositionally without significant distortion.

In the modern view, coordinative communication is the means of exchange in the free marketplace of ideas, the fullest use of which is the best means toward truth. Consider the rationale for Mill’s insistence on freedom of speech:

If all mankind minus one were of one opinion, and only one person was of the contrary opinion, mankind would be no more justified in silencing that one person, than he, if he had the power, would be justified in silencing mankind. Were an opinion a personal possession of no value except to the owner; if to be obstructed in the enjoyment of it were simply a private injury, it would make some difference whether the injury was inflicted only on a few persons or on many. But the peculiar evil of silencing the expression of an opinion is, that it is robbing the human race: posterity as well as the existing generation; those who dissent from the opinion, still more than those who hold it. If the opinion is right, they are deprived of the opportunity of exchanging error for truth: if wrong, they lose, what is almost as great a benefit, the clearer perception and livelier impression of truth with error (Mill 1859, p. 24).

The contrasts intended in this chapter may be made by reading this statement by Mill in conjunction with the primitive concept of profane speech, Lao-Tze’s judgments about the speaking patterns of “they who know,” and Aquinas’s justification for executing heretics.

However, the modern concept of communication did not call attention to itself as a topic for much study, except in the form of rhetoric (the means of effective argument) and linguistics (in the sense of learning new languages so as to increase the boundaries of the marketplace of ideas). For our purposes, the modern concept of communication has two irremediable faults. First, it is at best another alternative in the array of concepts produced by human societies: it does not subsume or explain how it was developed or how it is that other societies employ a vastly different concept. We take a deliberately Olympian perspective, seeking an understanding of communication adequate to explain its different functionings among the various ways of being human. Second, it is wrong. The utilization of coordinative communication enabled its defects to be discovered, and set the stage for the development of a new idea of communication.
3
THE NEW IDEA
OF COMMUNICATION

ABSTRACT

The social and intellectual milieu of the twentieth century facilitated the development of a new concept of communication, abstract enough to subsume as particular instances the communication patterns in various cultures. The new idea is that communication is a form of social action that can best be studied as a process of creating and managing social reality rather than as a technique for describing objective reality. The new idea is fundamentally discontinuous from traditional Western thought and has far-reaching implications for theory, social philosophy, and research.

INTRODUCTION

Each of the concepts of communication described in Chapter 2 is inextricably linked to the ontological, epistemic, ethical, and aesthetic beliefs of a particular culture. The social institutions, folkways, and cultural personalities of each culture "in-formed" the patterns of communication that occur, and these in turn "in-formed" the society. Because each of these concepts is culture-specific, it displays but cannot account for the recursiveness of communication and thus is inadequate as a communication theory. To merit inclusion on the agenda of human wonder about humankind, a theory must be based on a conceptualization adequate to subsume as special cases and to explain the patterns of communication that occur in any given culture.

The intellectual and historical events of the twentieth century produced a unique environment in which it was possible for just such a concept to develop. The history of Western civilization may be viewed as the result of a dialectical conflict between the incompatible logics of the Levantine and humanistic traditions, each
unable to assimilate or eradicate the other. Many of the turning points in European history were the collapse of temporary accommodations between these traditions. In the nineteenth century the humanistic tradition was predominant. Through the orderly exercise of science and reason, Europeans and Americans confidently expected to usher in a century of unprecedented peace, prosperity, and progress. These hopes were brutally shattered by events in the arenas of the intellect and politics.

Both Levantine and humanistic thought included what we now know to be a major mistake about the ability of symbolic systems to represent truth. Groups that had very different ideological orientations similarly treated communication as an odorless, colorless vehicle of thought; the axiomatic form of theory was considered a perfect form of proof in geometry; Pythagorean mysteries were thought to describe the structure of the universe; statements arranged in a valid Aristotelian syllogism were understood as an infallible process of reasoning that is as true as its premises; and divine revelations verbally expressed in a book, on tablets of stone, or in papal bulls were defined as truth. The persistent reminders of the ineffable were usually dismissed as mystics, witches, or simply ignorant persons. From the Inquisition to Ph. D. dissertation defenses, the propositional statements to which one assents have been taken as an index of the condition of one's soul, the content of one's thinking, and the substance of one's feelings. Mostly in the twentieth century, a series of events undermined this assumption about communication, producing several species of intellectual despair as well as a vigorous attempt to purify the traditional concept of communication or to find a suitable replacement.

In politics, dreams of a humanly created utopia were shattered in World War I, the Great Depression, and a nagging sense of historical impotence. The calamities in the first half of the twentieth century were not markedly greater than those of previous centuries, such as the fourteenth (cf. Tuchman 1978), but the circumstances made them particularly bitter. Hopes were never higher than at the turn of the century, and they were all pinned to a benevolent humanism. The Levantine tradition was largely disenfranchised or reinterpreted (in an ironic reversal) so that faith became the handmaiden of reason. The superstitions and otherworldlinesses of the Levantine tradition were generally regarded as repressive ignorances that humankind had now outgrown in what some called the "Post-Christian Age," and in which Nietzsche, Althizer, and others proclaimed that "God is dead." The debunking of religion was so complete that when triumphant humanism was seen to contain the same four horsemen of the apocalypse—disease, famine, war, and death—as earlier accommodations between traditions, many found it impossible to return to
a collective faith in a higher power, the traditional Levantine last bastion of hope for the oppressed.

The result was despair without refuge, and this created political and intellectual instability. Bailey (1958, pp. 116-17) described the content of the disillusionment by comparing the "European Zeitgeist" at mid-nineteenth and mid-twentieth centuries.

<table>
<thead>
<tr>
<th>Mid-Nineteenth Century</th>
<th>Mid-Twentieth Century</th>
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<tbody>
<tr>
<td>1. There is progress.</td>
<td>1. There is no progress.</td>
</tr>
<tr>
<td>2. Social evolution is linear.</td>
<td>2. Social evolution is cyclical.</td>
</tr>
<tr>
<td>3. Western civilization is moving continually toward greater heights in cultural and social development.</td>
<td>3. Western civilization is in a period of disintegration and decline.</td>
</tr>
<tr>
<td>4. Man is rational.</td>
<td>4. Man is irrational or non-rational.</td>
</tr>
<tr>
<td>5. Society is composed of individuals who, being rational or capable of becoming rational, shall boost mankind to new levels of accomplishment.</td>
<td>5. Society is composed of masses who, being non-rational or easily influenced, shall reduce mankind to mediocrity.</td>
</tr>
<tr>
<td>6. Scientific truth and knowledge are beneficial for society.</td>
<td>6. Scientific truth and knowledge may be harmful for society.</td>
</tr>
<tr>
<td>7. Myth and superstition are harmful.</td>
<td>7. Myth and superstition may be beneficial.</td>
</tr>
<tr>
<td>8. A society represents a harmony of interests, a communio bonum.</td>
<td>8. A society is composed always of conflicting interests.</td>
</tr>
<tr>
<td>9. Society is ruled by the consent of the governed.</td>
<td>9. Society is ruled by the elite.</td>
</tr>
<tr>
<td>10. Democracy and humanitarian social values serve to protect individual and community interests.</td>
<td>10. Democracy and humanitarian social values are unfortunate mistakes that result in the rule of uneducated masses.</td>
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The effect of this despair was pluralization. Campbell (1968) and Fromm (1962) interpreted broad social forces and historical events as throwing individuals on their own resources to create meaning
for their lives, and people responded in different ways. Some turned to versions of the old Levantine mythology, others to totalitarian political movements, and still others to secularized religions and moralities and to individualistic, faddish, pop movements in psychology. Contemporary Western society is an unassimilated aggregation of persons whose world views and life-styles are traditional, modern, or bizarre.

This environment has been alternatively proclaimed disastrous and facilitative for individuals and social life, but there is no doubt that it has been fertile soil for intellectual activity, particularly for recursive wonder. The ideal of a large, synthetic, philosophical system has seemed irrelevant or unattainable to the thinkers of the twentieth century, and they have instead developed the tools of analysis to unprecedented and fruitful power (White 1955, p. 9). In a sense, the political and intellectual despair—the resounding crash of collapsing systems of thought—liberated twentieth-century thinkers from the unarticulated premises of their culture. They were both forced and enabled to think about their culture from the outside because they and the people whom they studied, painted, or wrote about were profoundly disillusioned with the failed promises of the humanistic tradition, were filled with uncertainty tinged with panic, and had begun to suspect that even the most substantial appearing realities were the products of pooled pretense. Further, the denizens of the deepest recesses of the ivory tower found the lines of inquiry suggested by their intellectual milieu, and enabled by unprecedentedly powerful analytic tools, led to findings that invalidated the initial assumptions on which those tools were based. Precisely these circumstances produced an idea of communication—and of humankind—abstract enough to transcend the confines of any given culture, and thus adequate for a communication theory. We call this the "new idea" of communication. Simply stated, it is the idea that communication is an activity of collectively creating and managing social reality. This idea is fundamentally discontinuous from the traditional Western concept of communication, and its implications can best be understood by retracing some of the intellectual developments that produced it.

THE DECLINE OF THE TRADITIONAL WESTERN CONCEPT OF COMMUNICATION

Whether in the tradition of the Greek logos of Levantine theophanies, communication has been thought of in principle as a nondistorting vehicle of thought and as an adequate means for describing reality. This assumption meant that communication per se
was never the focus of inquiry. The story of the withering away of the traditional concept thus must start with those topics in which communication was used as a tool. The story has two parts: the reluctant recognition that the pursuit of philosophy, science, math, and so on, did in fact utilize communication; and communication is an inherently flawed servant of inquiry and expression.

Western philosophers, theologians, and politicians have always used statements or propositions as the means of achieving or expressing knowledge. The substance of knowledge was identified with the content of the statements a philosopher could make. The further this program was pushed, however, the clearer it became that it was inadequate.

By the middle of the eighteenth century, philosophy had got itself into a most embarrassing situation. . . . while the empiricists lacked knowledge of the real world, the rationalists lacked knowledge of the real world. . . . with Hume [the empiricists] came to the conclusion that we cannot know (i.e., be certain about) this world. The rationalists, on the other hand, had plenty of absolutely certain knowledge, but it was not about this world of experience; it was only about the relations of their own ideas (Jones 1952, p. 813).

Kant brilliantly formulated the problem by differentiating between analytic and synthetic statements (the predicate is contained in the subject in the former but not the latter), and between a priori statements that assert universal and necessary connections, and a posteriori statements that assert only generalizations from previous experiences. The rationalists could make analytic a priori statements and the empiricists could make synthetic a posteriori statements, but neither comprised the traditional Western ideal of indisputable knowledge about the order that underlies the shifting appearances.

Western epistemology required synthetic a priori statements. Kant’s attempt to determine how these statements could be produced raised issues that have implications far beyond the problem he originally addressed. The most significant move was that of addressing the relationship between the knower and the known, a topic the Greeks had not perceived as an issue (McClure 1918, p. 2), and about which Kant’s predecessors had felt nervous but had not dealt extensively. Kant argued that knowing is a cooperative act between the knower, who supplies categories or ways of organizing information, and reality, which supplies the content of perception. Both are absolutely necessary. Kant said, "thoughts without content are
empty, intuitions without concepts are blind. It is just as necessary to make our concepts sensible, that is, to add the object to them in intuition, as to make our intuitions intelligible, that is, to bring them under concepts" (Jones 1952, p. 827).

By making knowing cooperative, Kant faced the problem of recursivity. How can one know that one knows? Does not the awareness of one's self as a knower contradict the principle? Is self the knower or the known? Can it be both simultaneously? Kant's predecessors had fumbled badly in accounting for the role of the self in epistemology. Locke remarked that the self collects certain ideas of its own, without recognizing that this stipulated process undercut his epistemological theory. Hume frankly confessed his inability to account for self-reflective awareness. Kant made a valiant attempt in the "Transcendental Deduction" to show that the categories transcend knowledge, preexisting the perception of the unity of self.

Kant ultimately concluded that all mathematical and some natural scientific statements had the characteristics of the synthetic a priori. In this sense, he was a conservative, triumphantly discovering a means of achieving the intellectual goals of his culture. His effect on the history of thought is quite otherwise. His work is a watershed: there are no Kantians, but every serious thinker since Kant has had to take him into account. By breaking the separation between the knower and the known, Kant initiated a line of inquiry that inevitably included recursivity, and strange loops are not the structure of the order of the universe assumed by traditional Western philosophy. Few analysts—and certainly not Kant himself—saw that the problems lay with these underlying assumptions and the use of propositions as content of knowledge; yet the difficulties Kant experienced began to wither the traditional Western concept of communication.

Frege had an even more direct effect, demonstrating that propositions inherently have multiple meanings, not necessarily consistent with each other. A number of persons had been attempting to construct a calculus of reasoning, to give logic the power of mathematics. Frege noted at least one problem in the process: verbal propositions are more ambiguous than numerical expressions, and the various meanings do not submit equally to logical operations. Each proposition may be identified as having referents, or entities that are named by the statement; sense, or the sensory perceptions that are produced by those referents; and meaning, or the connections among propositions. These differentiations challenge the assumed isomorphism between propositions and reality. For example, the statement "The present king of France is bald," since France is now a republic, has no referent, no sense, but
clear meaning. The effect of Frege's linguistic analysis was to demonstrate that a great deal of carefulness is required in performing mathlike logical operations on statements. The same, for example, deductive operation on the statement about the present King of France and a comparable one about the present Queen of England will have very different results in meaning than in referents and sense. But this carefulness is outside the system of logic per se; it pertains to the user of logic, and to use language carefully to describe the carefulness necessary in using language creates a self-reflexive pattern in which the possibility of strange loops is very high.

Wittgenstein's _Tractatus Logico-Philosophicus_ was an explicit denial of the traditional Western concept of communication. It is best understood as an argument that refutes a position by extending it to a point of absurdity, or as the world's longest koan. Wittgenstein made the traditional Western concept of communication explicit as the picture theory. In this theory, propositions are pictures whose form must be similar to the structure of reality: "It is because, and only because, both language and the world possess a common logical structure that it is possible for the one to describe the other" (Morrison 1968, p. 67). Note that words are not considered pictures of things. Wittgenstein is here closer to Kant than to Frege, substituting the categories inherent in language for those Kant identified in the mind of the knower, but agreeing that the phenomena of experience become the content of ideas the structure of which is supplied elsewhere.

Wittgenstein's clever move is to use seven propositions that assume the picture theory to move to an irrefutable claim that the picture theory of language is inherently inadequate. It is nothing novel in Western tradition to conclude that "anything which can be said can be said clearly," but Wittgenstein added, "but there are some things which cannot be said," which stands in fundamental opposition to the concept of the logos as incorporated in both humanistic and Levantine traditions. Unsayable things can be shown, and this reveals the recursive trickiness of the _Tractatus_. The most important unsayable thing is the form of language itself, which must be identical to that of reality. It is unsayable because it would require a language without the properties of language to describe it, and this is impossible (Morrison 1968, pp. 72-73). However, by stating that not all things are sayable, Wittgenstein had successfully shown that the picture theory is inadequate in a manner consistent with the picture theory.

Wittgenstein said that if people understood him, they would see that the propositions of his argument are nonsense. But is this an elaborate hoax or a mind game for perverted intellects? Hardly!
Because Wittgenstein so carefully followed the content of the picture theory, his ability to tie it into a strange loop indicates that the picture theory itself has a recursively convoluted structure that cannot be parallel to the structure of an ordered reality. Some venerable assumption in Western tradition—either about communication or reality—must be sacrificed.

Wittgenstein opted for a form of mysticism that denied the ability to describe the nature of reality. Unable to describe reality, we should abandon the attempt. The seventh and last proposition states, "Whereof we cannot speak; thereof we should be silent."

Wittgenstein’s mysticism has a pronounced Buddhist flavor, and was rightly perceived as a fundamental attack on the methods and goals of the whole Western intellectual enterprise. Unable to refute Wittgenstein’s reasoning, the picture theory itself came under careful reanalysis. The Implications of the Tractatus could be avoided if an alternative concept of communication could be devised.

The most common formulation of the problem was this: Is it possible to understand language in such a way that it can describe both reality and its own structure? Russell initiated the most widely accepted line of reasoning by arguing that language itself is hierarchically structured, such that various levels are distinct and refer to lower levels. Russell wrote:

These difficulties suggest to my mind some such possibility as this: that every language has, as Mr. Wittgenstein says, a structure concerning which, in the language, nothing can be said, but that there may be another language dealing with the structure of the first language, and having itself a new structure, and that to this hierarchy of language there may be no limit (quoted in Copi 1971, pp. 107-08).

The language that describes reality per se is called an object language, the structure of which is described in a "metalinguage," the structure of which is described in a "metametalinguage," and so on.

Russell formulated his solution as the theory of logical types, in which he specified that a statement referring to a class cannot itself be a member of that class. This theory is often illustrated as solving one type of semantic paradox, that which is self-reflexive. Consider this example:

1. Grass is red.
2. Pi are square.
3. All statements in this box are false.
Using object language, we can quickly agree that statement 1 is false and that statement 2 is nonsensical, but statement 3 poses a problem. It cannot be true without declaring itself false, and if it is false, then it truly describes itself. According to Russell's theory of logical types, statement 3 is seen as a part of a different language than statements 1 and 2, which can be visualized by redrawing the box so that statements 1 and 2, but not statement 3, are inside. The boundaries of the box serve as a visualization of the distinctions between levels of language.

Russell's solution has not been universally approved. Some recent critics deny that it is a solution at all, but simply a philosopher offering edicts about what may and may not be done with language. There is merit to these criticisms, and we will return to them later. But accept for the moment the model of an indefinitely extended hierarchy of languages that Russell presented to his contemporaries. This model may relate to the picture theory in either of two ways. First, the structure of reality may be reflected in the structure of object language, but must be described in a humanly created metalanguage that is necessarily different in structure from either object language or reality. If so, this constitutes a major revision of the traditional Western concept of communication, and introduces recursivity as a central process. If humans use a humanly constructed language in which to describe language, how is there any certainty in knowledge? Are not knowers using the products of their knowing to know? And is this not a strange loop? Logicians following Russell have clearly seen that the concept of a hierarchy of metalanguages completely undermines the notion of truth as the relationship between a proposition and objective reality.

An essential part of what we shall call the "levels of language" doctrine is that semantical predicates, such as "true," "false," "designates," etc., for the terms and formulas of a given language L can not consistently be defined or introduced into that language L itself, but can occur only in the metalanguage for L (Copi 1971, p. 108).

That is, if Zeno says "apples are red," we cannot say in the same language or any language that has similar structure whether that statement is true. But what is lost in this incessant shifting among levels? At least the traditional notion of communication as a colorless, odorless vehicle for thought. Consider Luther's predicament at the Diet of Worms, where he was ordered to recant all that he had written. Because his Catholic interrogators demanded that he define his writings in toto as a class, any statements he made about
their truth or falsity must be in a metalanguage. The question may then be raised about the relationship between the languages L and meta-L. By definition they may not have the same structure, and if not, what reason is there to assume that they have any useful relationship? The meaning of a statement recanting or refusing to recant the propositions in another, differently structured language is at best problematic.

The second way of interpreting Russell's theory is that the hierarchical structure of language itself is isomorphic with reality. Although this is remarkably similar to the world view espoused by General Systems Theorists (cf. Laszlo 1973), we are aware of no one who has developed this argument, perhaps because Gödel demonstrated that the procedure was in principle incapable of being completed.

Russell's theory of logical types was a part of the massive Principia Mathematica in which he and Whitehead attempted to set forth the mathematical principles by which various statements might be proven. The attempt is perhaps best understood as a highly technical exercise in the spirit of Kant's search for synthetic a priori statements. Dissatisfied with their efforts, Gödel invented a system in which the object language of mathematics (numbers) and the metalanguage about mathematics (propositions defining and relating numbers) could both be represented in the same language, in this case, numbers. By using Gödel-numbering, the structure of object and metalanguages may be made isomorphic, thus permitting an unprecedentedly rigorous examination of what is required to prove a statement using an axiomatic system like that of Euclid, Wittgenstein, or Whitehead and Russell. Gödel demonstrated that the axiomatic method of proof—which had been the highest ideal in the West for 25 centuries—was inherently limited.

... we must conclude that if arithmetic is consistent its consistency cannot be established by any meta-mathematical reasoning that can be represented within the formalism of arithmetic!

This imposing result of Gödel's analysis should not be misunderstood: it does not exclude a meta-mathematical proof of the consistency of arithmetic. What it excludes is a proof of consistency that can be mirrored by the formal deductions of arithmetic (Nagel and Newman 1958, pp. 96-97).

Gödel continued to show that his criticism applied not only to Whitehead and Russell's system in Principia Mathematica, but also to all axiomatic theories.
Gödel trumped Wittgenstein. Where Wittgenstein had used a strange loop to show that language could not do what it had been called upon to do, Gödel constructed a technique that would have the same effect when applied to any axiomatic system of knowledge. Not only language but all of the tools of human inquiry in extensional wonder were shown to rest on proofs that they themselves could not prove were satisfactory. This created tremendous epistemic uncertainty. How could a knower know if the process of knowing s/he was using was a good one? Whatever evidence s/he found must come from another, equally questionable system, and so on. An infinite regress was initiated in which the proofs of the proofs of the proofs ... remain unproven. These developments divorced the symbolic systems of language, logic, and math from reality, and made them appear to be entities in themselves, with their own logics but scarcely adequate tools for discovering or describing reality. Even if synthetic a priori statements could be rigorously made, their truth could not be assessed in the same language in which they were made; there is no way to prove their validity in the language in which they were made; and their relationship to reality is at best uncertain.

The last bastion of indisputable knowledge was geometry. Here, at least, reality was ordered and paralleled by human thought. Most Western philosophers, particularly Euclid, Descartes, and Kant, assumed that imagination or physical intuition was flawless. "If we saw a geometrical truth clearly in our mind, not just with our eyes, then we saw it with complete certainty" (Carnap 1966, p. 126). Perhaps the classic geometric truth was that parallel lines on a plane will never touch. However, a series of geometers began to doubt it. The earliest was Gauss, who replaced the parallel-line axiom and discovered that he could construct an internally consistent, non-Euclidean geometry. He did not publish his work for reasons that foreshadow the argument we will advance in chapters to come: the meaning of his non-Euclidean geometry was reinterpreted as an act of attack in the social context of mathematics. In a letter to a friend, he described his work and reported

... deriving some interesting theorems from it. He adds he did not care to publish those results because he was afraid of "the outcry of the Boeotians." The reader may know that, in ancient Greece, the Boeotians, inhabitants of the province of Boeotia, were not highly regarded. We can translate his statement into modern idiom by saying, "these hillbillies will laugh and say that I am crazy." By "hillbillies," however, he did not mean unlearned people; he meant certain professors of
mathematics and philosophy. He knew they would think him out of his mind to be taking a non-Euclidean geometry seriously (Carnap 1966, pp. 130-31).

In the twentieth century, Lobachevski, Riemann, and others did publish non-Euclidean geometries, equally rigorous but substantially different from what had been perceived as the correct geometry. Non-Euclidean geometries were the complement to Gödel's proof in destroying Western attempts to construct a propositional system that described reality and that, when extended by logico-mathematical operations, would discover new truth. Gödel's proof constituted formal evidence that no such system was possible. Non-Euclidean geometries did much more. They showed that the internal consistency, elegance, and rigor of a system had no necessary relation to truth since any number of equally elegant systems could be devised. Further, they showed that the intuitive obviousness of facts, such as the sum of angles in a triangle must add to 180°, is a function of enmeshment in a symbolic system rather than a reflection of reality. Because people had learned Euclidean geometry, they perceived its axioms as obviously true. What if they know no geometry, or had studied only a non-Euclidean geometry, or lived in a space that did not resemble a plane, that is, one with a pronounced convex or concave curvature? Physical intuition is at least partly a function of one's social environment. Perhaps persons communicating with each other do not create geometric facts, but they do determine what will appear obvious and what unthinkable.

These considerations lead people to treat symbolic systems as entities in themselves, rather than as descriptions of reality. In Frege's terms, language, logic, mathematics, and new geometry have abandoned claims to reference and sense in favor of studying the meaning of symbols within particular systems.

Today, we often take a purely formalistic approach to an axiom system. We do not ask what interpretations or applications it may have, but only whether the system of axioms is logically consistent and whether a certain statement is derivable from it. But this was not the attitude of most mathematicians in the nineteenth century. For them, a "point" in a geometrical system meant a position in the space of nature; a "straight line" in the system meant a straight line in the ordinary exercise in logic; it was an investigation of the space we find around us, not space in the abstract sense... (Carnap 1966, p. 130).
This formalism profoundly disturbed many thinkers during the first half of the twentieth century with questions like these: If there is no way to prove the consistency of a system of logic/math/language without resorting to unproven premises outside the system, how can we be sure that anything we know is true? If the logic of a symbolic system has a semblance of reality to those enmeshed in it, how can we prevent ourselves from a foolish confidence warped by that system? How can persons enmeshed in different systems ever come to agree about facts or to coordinate conversations? In his own commentary on his early work, Wittgenstein (1953, Sec. 108, p. 46c) sounded as if he had reached ultimate despair:

We see that what we call "sentence" and "language" have not the formal unity that I imagined, but are families of structures more or less related to one another—but what becomes of logic now? Its rigor seems to be giving way here. —But in that case doesn't logic altogether disappear?

We suspect a touch of the dramatist in the old philosopher here, because two answers have been given to these questions and Wittgenstein is importantly involved in both. The solutions are operationalism and action theory.

OPERATIONALISM: A PURITAN ATTEMPT TO SAVE THE WESTERN CONCEPT OF COMMUNICATION

From Descartes and Newton to the Vienna Circle, positivists have been the puritans of science, characterized by the attempt to exclude all truth claims save the most indubitable, and then to combine these into an error-free corpus of knowledge. In the twentieth century, Wittgenstein's *Tractatus* was grievously misunderstood by a group referred to as the Vienna Circle, who set themselves the remarkable task of purifying language by excluding any statement not made in object language. Consistent with Francis Bacon's dictum that what is needed is not wings but chains for the imagination, they decided to dispense with the problems of metalinguage, incompleteness, and recursivity in a frenzy of empiricism.

If our characterization of the *Tractatus* as the world's longest koan is accurate, the scandalous dimensions of its misuse by the Vienna Circle is clear: like a novice Buddhist, they attempted to give a reasonable answer to a problem deliberately formulated to show the dysfunction of reason. The resulting intellectual enterprise is strangely contorted and presents a dessicated portrait of communication.
The twentieth-century positivists agreed with Wittgenstein that language is a poor picture of reality, but they identified the problem as the sloppy use of nonobject languages by scientists and philosophers rather than as inherent in the nature of language and human knowledge. Extended verbal debates—such as the 2,000 years of philosophizing about the nature of "virtue" from Plato to Jonathan Edwards—was seen as profitless. However, they were more impressed with Wittgenstein’s statement that "there are things which can be said which do not exist," than "there are things which exist which cannot be said." Rather than following Wittgenstein to his conclusion—"whereof we cannot speak; thereof we should be silent"—they actively devised a program designed to purify language so that they could avoid speaking nonsense. The solution was to limit scientific language to statements that had no meaning (in Frege’s usage) other than their reference, and all referents must be operationally defined so as to be "sense-able." Any statement that does not denote a sensible referent is literally nonsensical, and any meaning other than the sense-able reference is a troublesome surplus meaning. The positivists solved the problem of the fit between reality and the logics of various symbolic systems by denying the utility of the higher symbolic features of these systems. They argued that the human mind is free to imagine anything, but when persons work scientifically, they will accept as meaningful only those concepts that are operationally linked to sense-able entities and those theories that are potentially falsifiable by specifiable observations. True theories are those that successfully resist strenuous efforts to disprove them.

For our purposes, operationalism is important because it attempted to salvage the traditional Western use of propositions as the means and content of knowing—and failed. By retaining the use of propositions, the shape of intellectual inquiry had to change significantly. In science, a description of method was developed in which knowledge was expressed as generalizations of empirical observations from which analytic statements, surplus meaning, ideology, and so on, have been purged. Historians of science have shown that this simply is not the way scientists have worked (Koestler 1959; Burtt 1954; Harré 1970). In philosophy, virtually all the traditional concerns—metaphysics, ethics, and so on—were abandoned as illusionary or as topics about which philosophers have nothing interesting to say. The legitimate form of intellectual activity from this perspective is a haughty criticism rather than a Promethean constructivism.

We need only formulate the criterion which enables us to test whether a sentence expresses a genuine proposition
about a matter of fact, and then point out that the sentences under consideration fail to satisfy it. . . .

The criterion which we use . . . [is] verifiability. We say that a sentence is factually significant to any given person, if, and only if, he knows how to verify the proposition which it purports to express—that is, if he knows what observations would lead him, under certain conditions, to accept the proposition as being true, or reject it as being false (Ayer 1946, p. 35).

At best, operationalism functions as a prescription for how philosophers and scientists should use language, not as a basis for describing and explaining communication as it occurs in a variety of cultures. At worst, this position produces a carping denial of the reality of human communication, including discussions of God, love, hope, politics, and so on. Either way, operationalism cannot describe or explain the array of communication that occurs in human experience.

COMMUNICATION AS ACTION: A REVOLUTIONARY CONCEPT

The failure of operationalism cleared the way for the development of a radically new concept of communication. The essence of the new concept is that communication is a form of action persons perform toward or in the context of others. These actions are constituted by the meanings individuals have of them, and acts thus create as well as reflect the reality persons perceive and in which they live.

Action theory is not now and never has been an integrated propositional calculus. For the most part it was developed by persons apparently oblivious of related work in other disciplines. The element common to action theorists is more of a perspective than a creed, an affirmation of the recursivity of human knowledge and social institutions rather than a shared, demonstrably valid technique for dealing with it. The description of the development of this concept of communication in the following paragraphs does not purport to be an intellectual history, complete with the description of historical influences. The attempt to write such a history would be frustrating because the ideas have not developed cumulatively. In this section we will indicate some of the major themes of the new idea and describe the work in which they originated. The conclusion of this chapter is our attempt to articulate the new idea of communication. In Chapter 4 we consider the implications of this concept
for doing science about communication, and Chapters 5 and 6 contain the explication of this concept into a coherent theory. Four ideas were necessary in the development of the action theory concept of communication. During the last century, each of these ideas was discovered, apparently independently, by a number of persons and put to a variety of intellectual uses. The full significance of the combination of these ideas has yet to be fully discovered, although various thinkers in the humanities have shown greater sensitivity to or willingness to address these implications than the social scientific community.

Acts as Objects of Study

The most crucial and least likely idea is that the prosaic historical acts by particular individuals are an appropriate and useful topic of study. All of the major components in the Western intellectual heritage—Thomistic theology, Aristotelian rational empiricism, Newtonian mechanistic empiricism, Hegelian philosophy of history, and Kantian categorical thinking—assumed that general, categorical, and unchanging events were real and illuminating, and specific, particular, and changing acts by persons were exemplifications of general principles and unimportant in themselves. Weber disagreed, arguing that "the individual and his action" is the "basic unit" or "atom" for analysis. This reversed the direction of analysis practiced by Dilthey, Hegel, Ranke, Marx, Pareto, and other contemporaries. Rather than using specific acts as exemplifications (documents, manifestations) of general concepts (such as class, power, and so on), Weber believed that "it is the task of sociology to reduce these concepts to 'understandable' action, that is, without exception, to the actions of participating individual men" (Gerth and Mills 1946, pp. 55-56). This concept's implications are profound: it changes the definition of what is real and what is humanly constructed, it changes the structure of explanation, and it requires the social sciences to differ significantly from the natural sciences. General concepts are not real, they are reifications of particulars; the unreal general is explained by the particulars; and, since novel acts are continually being produced, social science is necessarily incomplete. As Gergen (1973) noted, the social scientist functions more as historian than as the discoverer of universal laws, in part because persons change when they are made aware of what they are doing.

Malinowski independently developed a focus on communication as a form of action. While doing ethnographic research in Melanesia, he noted that the structure of the native language was so different from European languages that a literal translation of
native speech was incomprehensible. This presented a problem since Malinowski inherited a theory that language is "the expression of thought by means of Speech Sounds," and that communication is thus "reflected thought" (Malinowski 1923, p. 326). The observed differences among languages thus refuted either the assumed unity of logic (that is, since languages differ, their users must think differently), which was in Malinowski's intellectual milieu an astonishing notion, or the assumed relation between thought and language. Malinowski chose to replace the traditional view of language as a colorless, odorless vehicle of thought with a well-developed action theory: "language in its primitive function and original form has an essentially pragmatic character; that it is a mode of behavior, an indispensable element of concerted human action... to regard it as a means for the embodiment or expression of thought is to take a one-sided view of one of its most derivative and specialized functions" (Malinowski 1923, p. 316). The meaning of words and the type of speech that occurs cannot be understood apart from the "context of situation" in which they occur, which determines their function. Malinowski's action theory makes the same intellectual move as Weber's sociology. Rather than treating language as a real entity, the characteristics of which can explain any particular linguistic utterance, the practical, historical communicative acts persons perform explain and create language. "In our Theory of Meaning, we have seen that Language serves for definite purposes, that it functions as an instrument used for and adapted to a definite aim. This adaptation, this correlation between language and the uses to which it is put, has left its traces in linguistic structure" (Malinowski 1923, p. 327).

At midcentury, an older Wittgenstein inaugurated a development in philosophy that—apparently without realizing it—paralleled Malinowski in anthropology and Weber in sociology. In the Tractatus, Wittgenstein had taken a mystical position (cf. Morrison 1968) because the noniconicity of language and reality had destroyed his confidence in the ability of using logic to discover or describe reality. In later life, Wittgenstein proclaimed the Tractatus as "not a very good book" (we suspect this was a way of snubbing those whose thought for three decades had been dominated by it), and turned his attention to the way persons actually communicate. If language does not describe reality, what is happening when people use it? Wittgenstein's answer: they are playing games, and this is a very important business. The meaning of any communicative act is in how the language is used in the context of a game, and the array of games that a person plays comprises his/her "form of life" (Wittgenstein 1953). For example, a customer who says "I'll have the red ones" has done something completely unintelligible outside
of the language game of shopping, but makes excellent sense if it enables the shopkeeper to locate and deliver the desired product.

Malinowski (1923, p. 322) noted that outside the limited confines of academe, words are used to "produce an action and not to describe one, still less to translate thoughts." Austin (1962) and his student Scarle (1969) deduced the same conclusion from Wittgenstein's thought. Austin demonstrated that there are many language uses that do not even purport to describe reality, as evidenced by the fact that it is irrelevant to describe them as true or false. Utterances such as "You are beautiful," "I pronounce you husband and wife," and "Come here!" are performatives: they do things rather than describe things, and they must be assessed in terms of whether the act was pulled off well or not instead of the truth value it possessed.

This emphasis on speech acts is an obvious denial of operationalism, and the contrast between the two attempts to respond to the withering away of the traditional Western concept of communication is an evidence of the revolutionary nature of the new idea. Rather than attempting to shore up the linkages among thought, language, and reality, the new idea is that communication is a type of action that must be understood in terms of the act rather than linguistic referents. This shift in orientation implies that communication is an important part of the study of humankind, and that increasingly sophisticated extensional wonder has, as suggested in Chapter 1, led to recursive wonder.

Actors' Meanings

The second necessary idea for action theory was that actors' meanings must be taken into account. The things people do—including linguistic and nonverbal communicative acts—are essentially mechanical movements, but are interpreted, and people respond to the interpretations they make rather than to the movements themselves. It was this insistence on person's meanings that led Weber to his commitment to the individual as the unit of study. The key to Weber's grand theories of societal structures was his analysis of four types of action, differentiated on the basis of actors' meanings. The way people think determines how they act, and those actions comprise and create society. In this way, ideas become historical forces. For example, Weber (1958) explained the disproportionate prosperity of Protestants (compared with Catholics) as the result of the combination of the ideas of Protestantism and capitalism. Because of what they believe, Protestants act in ways that are rewarded with economic success in a capitalist economy.
Freud's psychoanalytic theory stressed the importance of meanings as well as their nonisomorphism with reality or logic. Disappointed with the results of physiological studies of hysterical persons, he began to do case studies and stumbled onto an idea presaged in neither Eastern nor Western thought: both intrapersonal (for example, dreams) and interpersonal communications are symbolically related to experience. The structure of symbols imposes an organization on one's experience somewhat analogous to the logic of a mathematical or geometric system. To understand what someone says, it is necessary to relate the message to the content of the other's experience according to the logic of symbolization.

In true Western fashion, both Freud and his student Jung attempted to discover the true meaning of symbols. Freud used the intrapersonal psychological states—the life principle (sex) and the death wish—as the explanations. Jung argued all humans share a racial unconscious comprised of symbols given common meaning in the thinking, art, and culture of all societies. Like Jung, Campbell (1968a, p. 273) found similarities among the folktales of various peoples:

... there are indeed universal mythological themes, which in the various provinces have appeared in local transformations appropriate to the differing local scenes; ... furthermore, the ultimate source and references of such enduring themes cannot have been the changing outward environment of geography, history, and belief, but only some enduring inward realities of the species.

The significance of Campbell's work is that he shifted the focus from the content of mythology to the question of how persons use myths, and thus from a traditional Western approach to one consistent with action theory. He cited four functions of mythology that, quite independently of their content, seem common to all cultures: (1) myths provide a cosmology or shared image of the universe; (2) myths validate and maintain the established social order, for example, by defining and legitimating social roles and institutions; (3) myths enable the "centering and harmonization of the individual" by locating the individual as a part of a larger whole such as the Chosen People, the Party, and so on; (4) myths awaken and maintain in the individual "an experience of awe, humility and respect" in recognition of "ultimate mystery." The first three of these explain the source of those seemingly self-evident beliefs that, when elaborated by the operation of history and adult mentation,
comprise a socially shared system of rules for meaning and action within which persons may play the available repertoire of language games for their fun and profit, but outside of which—for example, in intercultural contexts—communication becomes much more difficult. The fourth perpetually disrupts coordinated communication by reminding persons that there are alternative ways of acting or interpreting action. The fourth function of mythology seems as if it contradicts the other three, but they are not mutually exclusive. The simultaneous presence of all four functions is the criterial attribute of art.

Art communicates, but it is more than communication. It conserves and reinforces social norms, but it destroys them. It is highly traditional and depends on the skills and techniques, the forms and patterns of the past, but it is only good when it is individual, fresh and novel.

Art is particular and concrete, where science is universal and abstract. Yet the particular in art . . . may also be a symbol of the universal (Ross 1957, p. 216).

Bateson (1976) added an important component to the idea that actors' meanings are important: meanings are socially learned rather than universal or idiosyncratic. In his early work as an anthropologist, he found that a long and usually systematic program of social instruction lay behind the forms of behavior characteristic of particular cultures; even acts members of a culture interpreted as natural were in fact learned. For example, the Ball were noted for distinctive behaviors while in a trance. Bateson produced photographic evidence that children were trained to assume the postures associated with the trance, to learn when a trance is appropriate, and so on. Many contemporary sociologists study the methods persons use to construct meanings. For example, Douglas (1971, pp. 173-212) listed seven principles describing the way persons "construct meanings and use rules."

A primary implication of the emphasis on actors' meanings is that a theorist cannot assume the phenomena observed in the past will be repeated in the future. Garfinkel (1967) refused to generalize from his studies, explaining they are demonstrations that people use methods to construct meanings, not a statistical sample of what those methods are. Meanings are inherently slippery, and the Theorem of Recursive Wonder (stated in Chapter 1) must be dealt with in some way. Action theorists are agreed that even the processes by which persons construct meanings for the actions they and others perform are the appropriate topic for study, but they
are far from achieving a consensus on how this can be turned into a theory and research program.

Actions as the Construction of Social Reality

The third idea necessary for action theory concerns the effect of human actions. A number of theorists have shown that social reality is created and managed through social acts.

In his analysis of Protestant prosperity, Weber argued that ideas are causal forces in history. He did not describe the implications of this position consistently, but his interpreters note that it presupposes an ontology very different from the mechanistic machine of Newton, the logical categories of Kant, or the inexorable dialectic of ideas described by Hegel. Rather, Weber’s concept of reality resembles the dynamic, open-ended heroic age of the Hellenistic and imperial Roman period: social reality is what men of action have made it to be and it will be changed by their subsequent human action.

Weberian sociology is inspired by a kind of existential philosophy involving two negations established before the fact, as it were. No science can ever tell men how they should live or societies how they should be organized; and no science can ever tell humanity what its future is. The first negation distinguishes him from Durkheim, the second from Marx.

The future is not predetermined. And even if certain future events are predetermined, the man of action—or man, pure and simple—will always be free either to reject this partial determinism or to adapt himself to it in any of its various ways (Aron 1970, p. 233).

Mead’s concept of social action stressed its function in creating the self concept of the actors as well as significant symbols and social institutions. According to Mead, not even the individual is an irreducible atom for the analyst: the self is to some extent precarious, given by those with whom one communicates.

The individual experiences himself as a self, not directly, but indirectly, from the standpoints of other members of the same group. . . . He becomes an object to himself by taking the attitudes of other individuals toward himself within a social world in which
both he and they are involved. He can take those attitudes because what he says to others can mean the same to himself as it does to them. For when he speaks he hears his own words, and thus learns what words mean because he can observe how they . . . affect others, as well as how they affect him (Duncan 1968, p. 76).

According to Mead, persons engage in a symbolic interaction with others that simultaneously and reciprocally defines both the symbols used and symbol users. Once defined, the social order exists because persons treat it as real and it functions to facilitate interpersonal coordination. "The 'world' in which we live" has

. . . been characterized and interpreted, its meanings expressed and analyzed, by our forebears. Thus society has, to some extent, created the world we perceive, its shapes, its meanings, its beauties and uglinesses. We inherit, by being born in society, an intelligible world and a system of symbols, and we cannot have one without the other (Ross 1957, p. 239).

Both Weber and Mead describe a dynamic reality constructed by social acts, although Mead envisions the self as an epiphenomenon of interpersonal interaction in contrast to Weber's more autonomous actor. The most explicit description of socially created reality, however, is the much more static ontology of speech acts. Searle (1969) differentiated brute facts, which exist independently of human action (for example, a rock), from institutional facts, which exist specifically because persons define them as real and act in such a way as to make them real (for example, a threat made by brandishing a rock). Most of human life occurs in the context of institutionalized facts. For example, that a particular person exists as a physical entity is a brute fact; but that person becomes the president, a world-renowned scholar, a hero, and so on, only because people define him/her as such and act accordingly. Searle argues that speech acts constitute institutional facts by using speech acts strategically. Watzlawick (1976) expressed much the same idea by differentiating first-order reality (things-in-themselves) from second-order reality (things-as-interpreted), and defining communication as the process of creating a shared second-order reality.

Disorder

The fourth and most difficult idea necessary for the development of a concept of communication as actional was the acceptance
of disorder. Throughout Western history, the major thinkers assumed that somewhere in or behind the flux of experience was an order which, if it could be discovered, would provide a suitable object for rapt contemplation or the ability to describe, predict, and control events. Laplace argued that the order of reality is sufficiently rigorous that if one knew any event completely, s/he could retrodact the history of the universe in every detail and predict all subsequent occurrences. In the human sciences, the ancestral question has always assumed there is a social order and asked, as Hobbes did, how it is possible and what are its characteristics.

The three ideas described above preclude—or at least make improbable—the notion of an underlying, inexorable order, and from the perspective of action theory, the assumption that order exists is dysfunctional. As Donohue, Cushman, and Nofsinger (1980) have shown, the questions asked and methods used by researchers differ significantly depending on whether they assume the social order preexists and communication is a device by which persons simultaneously orient to it, or whether there is no social order and communication is a device by which persons attempt to construct it. To us, the choice between these options is clear. A focus on human actions as the appropriate unit of study introduces indeterminacy, and the simultaneous but not necessarily coordinated actions of many persons create disorder.

Those theorists who insisted that the study of humankind must include persons’ meanings for their own and others’ actions were confronted by a problem: the meaning or intent of a particular act quite often was very unlike its effect. For example, the prosperous Protestants studied by Weber wished to serve God according to their morality, not to create modern capitalism, but this in no way reduced their effect on the economic structure of Europe (Gerth and Mills 1946, p. 58). Similarly, Farb interpreted human sacrifice by the Aztecs as the consequence of a logic of events unintended and out of the control of the priests, who inadvertently started it by promulgating a theology of propitiating the gods.

Once the Aztec religion initiated the practice of human sacrifice to forestall the cataclysms awaiting the people, it was trapped in a circle of events. Sacrificial victims could be obtained only through war, yet war could be waged successfully only by sacrificing victims; and to obtain these victims, the Aztec had to go to war. The loop of necessity thus expanded to include increasingly greater sacrificial offerings. Bows and arrows, which had been important in the early phases of Aztec conquests, were largely replaced by the spear and the
battle-ax. . . . The reason for this switch may have been that it is difficult to take prisoners using the bow and arrow. Most Aztec battles seem to have been fought hand to hand, and the enemy either disarmed or beaten unconscious before being dragged away (Farb 1978, pp. 191-92).

Both Protestants and Aztecs seem caught in a logic of events initiated but not fully explained by their meanings for their actions. At least, this suggests that actors' meanings are not a sufficient explanation of social reality; more disturbing, it suggests the operation of disordered forces.

Bateson found that the families of schizophrenics were characterized by social disorder, to which each family member unintentionally contributed and which in turn affected those persons. He started with the traditional Western reverence for order—describing himself as holding "sacred . . . something in the nature of patterns"—and angry because those patterns are distorted, producing schizophrenia (Bateson 1957, p. 9). The further development of this position as "the interactional view" (Wilder 1979) stressed the interpersonal nature of meaning. The meaning of a dance step depends on the relationship between the movements made by both partners: a step backward means something different depending on whether the partner steps forward or backward. In just the same way, the action performed by any one person depends on the actions performed by others. Consider the sad state of a relationship between a tyrannical employer and a sullen, malingering employee. How do such relationships develop? Perhaps the employer offered the employee a peer status, which would confer prestige but also impose responsibilities. The employee rejected the responsibility, preferring a mild dependency relationship. It does not require the services of a great scriptwriter to imagine the kind of conversations that lead from this initial disagreement to the final, mutually distasteful relationship. Further, it is impossible to place the blame on either person. The essence of the interactional view is that the meanings of the acts of neither person stand alone; rather, each affects and is affected by the other. Bateson argued that one cannot be a master unless others are willing to be slaves, one cannot be a teacher unless others are willing to play the role of learners, and so on.

Finally, Bateson's (1972) observations of the social interactions of humans and other mammals suggested that messages have meanings at several levels of abstraction simultaneously, and these are not necessarily consistent. Bateson described his insight as emerging from observation of animals playing in a San Francisco
zoo. Having a relatively limited repertoire of behaviors, animals play by doing virtually the same thing as when they fight: they stalk, pounce, bite, claw, and so on, with the important exception that in play these actions are not as vigorous as in a fight. Animals somehow convey the message that "this is play," in which a bite on the throat means "this bite which resembles a real bite does not mean the same thing that a real bite does."

When Bateson and his colleagues began examining human communication, they rediscovered what Wittgenstein had demonstrated: language enables the statement of impossible things. Not only does language provide a distorted portrait of reality, but it also permits the construction of paradoxical injunctions: a command to perform two actions simultaneously, each of which precludes the other. In precisely the same way that the statement "This statement is false" embodies a self-referential paradox involving truth, other statements embody self-referential paradoxes involving action. Consider these paradoxical injunctions:

"Be spontaneous!"
(How can you? Even by addressing the question you prohibit compliance with the command.)

"Don't be so obedient!"
(No matter what you do, you are wrong.)

Consider these knots in the fabric of the social order:

"I'd never belong to a club that would have me for a member!"
(Describe the pattern of this person's social life.)

"I could never respect anyone who loved me, and I could never love anyone whom I could not respect."
(Not only is this a recipe for loneliness, this person is a walking disaster for other people who might try to develop a relationship.)

Little Johnny comes home from school with a bloody nose.
His Father says, "Johnny, always obey your Mother, and the next time that bully hits you, you hit him back!"
His Mother says, "Johnny, always obey your Father, and the next time that bully hits you, you run right straight home and I'll talk to his Mother."
(How does Johnny do all that he has been told to do?)

Watzlawick's (1976) poignantly titled book, How Real Is Real?, draws the appropriate conclusion. Social reality is constructed by the meaningful acts of persons, but the social reality produced by this process is not necessarily or even usually characterized by
order. If there is a transcendent power or person who imposes order on social reality, we could not know it; if there is not, then individuals cannot control the meaning of their actions because those meanings are dependent on the context of the acts by others. Patterns of culture, which are very easily discernible and very efficacious in structuring the experience of any individual, are the product of conjoint action by many persons. Where order exists, it is not necessarily logical or desirable, and more often the structure of social reality may be better described in terms of patterns of disorder. Watzlawick suggested confusion and disinformation as analytic categories.

IMPLICATIONS OF AN ACTIONAL CONCEPT OF COMMUNICATION

Few, if any, of the contributors to the intellectual revolution of the last 100 years intended to study communication. However, the confluence of many apparently unrelated lines of inquiry has resulted in an unprosaged conceptualization of communication, which permits unprecedented attention in a variety of disciplines.

Studies of humankind have produced an understanding of the human condition as being variably enmeshed in multiple symbolic systems, each with its own logic of meaning and order. These systems include intrapersonal symbolism and panhuman symbolic and mythological themes, language, interpersonal relations, the demands of tasks, and the preexisting patterns of culture. Each of these systems creates a "groove of logic" that facilitates some forms of action and impedes others, and these acts create the social reality in which persons live. However, these systems are not necessarily or even normally orderly; frequently they produce paradoxical injunctions for action. Further, none of these systems can be demonstrated as either complete or true. The content of these developments sufficed to break Western scholars out of their ethnocentric preoccupation with communication as a way of describing truth and/or of achieving coordinated action by common reference to the most probable approximation of truth possible. Once freed, analyses of the role of communication in various cultures were conducted, and the results of these studies provide the strongest evidence for the integrity of many separate systems: particular communicative acts that make good sense in one culture are unthinkable or foolish in others.

This interpretation of the human condition necessitates a concept of communication abstract enough to describe the function of communication in all cultures, and specific enough to orient inquiry
within any given situation. There have been literally hundreds of definitions of communication offered, and model making seemed the chief concern of our discipline between the 1950s and the early 1970s. These definitions usually do not reflect an awareness of differences in communicative functions across cultures or the developments in the history of ideas described in this chapter. We offer this as a more adequate expression of the new idea of communication: a form of human action by which persons cocreate and comaintain the social order.

Three implications of the new idea of communication may be drawn. First, communication must be described, explained, and evaluated in terms reflecting the morphogenic forces of the systems in which it occurs. Communication as defined above is an integral topic on the agenda of human inquiry, rather than a peripheral concern. It has affinity with topics dealing with the nature and functioning of humankind rather than with truth or logic.

Second, since there is a reciprocal causal relationship between apparently mundane communicative events and the characteristics of the social order, particular forms of communication may be seen both as causes and effects of social institutions. This serves to refute the ethic of traditional societies in which the duty of persons is to find their place and fit into it, and to support the modern notion of the individual as at least in part the locus of the responsibility for society. For example, the cycle of poverty may be explained as the result of rules for meaning and action that were inculcated in individuals through communication and then govern their subsequent behavior.

The reciprocal relation between communication and social institutions may be illustrated by the absurdity of transporting particular social institutions to other cultures. An academic convention at which research reports are read would seem irrelevant and foolish to Buddhists, but singularly appropriate for Western scientists. To an extent generally not recognized, the folkways and institutions of each culture depend upon a consensually shared system of rules for meaning and action. The National Aeronautics and Space Agency (NASA) is a prototypically Western entity that simply could not function as it now does if staffed by members of the Malagasy culture, a people who have social rules prohibiting the free exchange of information (Keenan 1973).

Further, the reciprocal relation between communication and the social order makes interpersonal (rather than public), mundane communication a topic whose importance has been recognized by no other culture. The pattern of a father's parenting is not just a matter of idiosyncrasy or ethics: the transactions within the family create the identities of the individuals—particularly the children—in
ways that will affect their behavior in other relationships. Recognizing this, social scientists can explain the generative mechanism of the forces that account for the wisdom of the old proverb, "The fathers have eaten sour grapes; the teeth of the children are set on edge." Knowing not only that this is so, but understanding (at least partially) why it is so, the society must decide whether the patterns of family communication are in the domain of the public interest, and whether to leave the development of persons—saints and sages and child molesters—to the uncontrolled operation of historic forces, or to intervene as it has with sanitation and compulsory vaccinations against disease.

Third, communication in modern society has the structural configuration of self-reflexive paradox. As a society, persons are aware that the fingerprints of human agency are all over the social order. Being aware that whatever they do or refrain from doing both reflects their culture and creates its subsequent form, they cannot act naturally or spontaneously. The comedian David Steinberg recreates the paradox in a skit in which a psychologist tells a patient during his first session: "I am a psychologist! I have had years of training! I can interpret your every movement! Now [gesturing toward two identical chairs in the middle of the room] pick a chair, any chair, it makes no difference which chair you pick, simply go and sit in one of these chairs." Obviously, the patient cannot pick spontaneously once he has been told his choice is being monitored and evaluated as a criterion of his emotional/mental problem. (Regardless of where the person sits, Steinberg qua psychologist shrieks, "Aha! Sex maniac!")

The careful reader will have noticed an equivocation in the discussion of the first and second implications of the new idea of communication. Sometimes persons are described as submerged in their culture, limited by the choices available within the groove of logic provided for them, and being a self that itself has been defined in interactions with others. At other times, the individual is described as the locus of control and responsibility. The equivocation is deliberate because, to some extent, both are true. The facts of the matter have the properties of the self-reflexive paradox, and a nonparadoxical description would be to that extent erroneous.

H. G. Wells was as clear an apostle of modernity as any, and yet he floundered on an inability to embrace both sides of this paradox. His message in numerous novels, histories, and tracts was that of individualism: If you do not like your life, you can change it. In his last publication, a pamphlet, morosely titled "Mind at the End of Its Tether," he noted that his claim was not fully accurate. Social systems generate a logic individuals alone cannot avoid, much less alter, and yet his position of individualism is true enough to
make a comfortable enmeshment within a single system not a viable option for modern men and women.

The traditional ways of doing theory and research, like the mores guiding social behavior, are inadequate to deal with disorder, much less paradox. However, our survey of intellectual and political developments in the twentieth century makes it clear that a theory sufficient to describe modern society must be able to include paradox, and our survey of various cultures shows that a theory sufficient for inclusion on the agenda of human wonder must be able to include a variety of concepts of communication and ways of being human. The structure of such a theory must be carefully considered.
THE NATURE OF COMMUNICATION THEORY

ABSTRACT

Positivism, abstract systems, and natural systems are three forms of theory in the current social scientific literature. None of these is adequate to account for the characteristics of communication and the problem of recursivity in knowing. Four extensions of natural systems theory are proposed, producing a viable structure for a communication theory. The most significant changes from orthodox social science are a focus on interacting systems that have an irregularly complex logic that is open to change, and the use of a logic that includes autonomous or self-reflexive operators as a normal function. The effects of these extensions are to stress the nature of the necessity hypothesized to operate in a given phenomenon, to change the function of data from the building blocks of theory to markers of the characteristics and actions of variable structure entities, and to change the function of theory from a purported literal description of reality to an act performed by a theorist with mythic or metaphoric meaning. Since theorizing is an action, it is best evaluated by felicity conditions rather than truth conditions. This function of theory is a radical departure from tradition, but is paralleled by at least four comparable moves: mathematics, modern art, myth, and metaphor.

INTRODUCTION

There has been no communication theory before this century, and in this century there has been no theory capable of dealing with the new idea of communication. Prior to this century, few persons thought communication worth the effort of formal analysis. The closest approximations of theory were handbooks of practical tips
for orators in the style of the Greek rhetoricians. In this century, many persons have been aware of the value of a communication theory but were unable to find a suitable structure for it. The very characteristics that have brought communication to the attention of theorists exempt it from the forms of theory used for other phenomena; the attempts to do communication theory in traditional ways have been spectacularly unsuccessful.

Years ago, we asked "If we had a theory of communication, what would it look like?" Our first thought was that we could array several forms of theory and select the one that best fit the characteristics of communication. However, we discovered that none of the available forms of theory is capable of dealing with the corollary to the theorems of extensional and recursive wonder (cf. Chapter 1), with the demonstration that communication is a cultural phenomenon and is culturally morphogenic (cf. Chapter 2), and with the new idea of communication (cf. Chapter 3). A viable theory of communication must be based on a novel structure, and this necessitates the development of some new principles in the philosophy of science.

The various literatures relevant to communication contain three models for doing theory, which we describe as positivism, abstract systems, and natural systems. Ideas do not travel at uniform speeds, particularly in a time of intellectual upheaval such as the twentieth century, and champions of schools of thought do not immediately abandon old ideas when new ones are announced. With this caveat, a dual conceptual movement may be described: in the philosophy of science, the influence of positivism waned and that of the two-systems approaches developed in much the same way and for the same reasons that the traditional concept of communication withered and was replaced by various forms of action theory. In Chapter 3 we proffered a concept of communication that is the culmination of the development of the new idea of communication. In this chapter we critique and extend recent developments in the philosophy of science, informed by our conceptualization of communication, concluding with a description of the nature of a theory of communication.

FORMS OF THEORY IN ORTHODOX SOCIAL SCIENCE

Even a casual reading of the social science literatures reveals that the research is informed by very different methodological assumptions, and that these assumptions function as cultures. Persons are enculturated into particular clusters of metatheoretical assumptions by the tribal processes of graduate school and by the socializing
forces of invisible colleges of like-minded persons who establish norms for topics and procedures of research, who exchange reciprocal support for self concepts, and who recommend each other for grants, tenure, promotions, and so on (Crane 1972; Price 1973). Like all cultures, these schools of thought facilitate communication within the group and impede it across group boundaries, and make it likely that members of the group will do theory and research consistent with the common paradigm (Kuhn 1970).

Pearce, Cronen, and Harris (1980) described seven intellectual cultures in Western history, six of which have contemporary exemplars in the communication literature. Our present purposes are analytic rather than historical. In this section we will describe only three approaches to communication theory, and discuss them only to the extent that they inform the development of the philosophic themes we need for our theory. The direction of movement from positivism to natural systems is a useful guide for our conceptual extrapolation later in the chapter.

Positivism

Positivism is the philosophy of science that informs operationalism, described in Chapter 3. The common characteristic of positivists is an attempt to eliminate all truth claims except those that can be accepted with certainty, and then to build a theory on that positive foundation. Historically, positivists have assumed that the smallest units of analysis (clear ideas or simple perceptions) were preferable to complex ones, complex entities could be explained as the summative combinations of simple ones, and knowledge consists of statements of the association between variables.

For positivists, a well-formed scientific proposition has the form \( Y = f(X) \), or "variable Y varies as a function of variable X." The origins of such statements are observed co-occurrences between these variables and, used as the major premise of a disjunctive Aristotelian syllogism, such statements permit explanation of previous occurrences and prediction of future ones of Y if X is known.

It is important to distinguish the internal structure of scientific propositions from the relationships they have with other propositions. The internal structure consists of operationally defined variables and an empirical generalization of the relationship between them. Positivists accept Newton's and Hume's distrust of reason as a source of information about the world, and Hume's argument that cause cannot be known empirically: "the content of scientific propositions is exhausted by what can be immediately
experienced" (Harré and Madden 1975, p. 28). However, the relationship among propositions assumes that the universe is orderly, a "machine of events . . . running in a sturdy mechanism of before and after" (Bronowski 1978, p. 25). Once an empirical generalization is formed, it may be treated as a lawlike statement and be used in a propositional calculus following traditional logic. Carnap expressed the positivist program succinctly,

The observations we make in everyday life as well as the more systematic observations of science reveal certain repetitions or regularities in the world. Day always follows night; the seasons repeat themselves in the same order; fire always feels hot; objects fall when we drop them; and so on. The laws of science are nothing more than statements expressing these regularities as precisely as possible.

... science begins with direct observations of single facts. Nothing else is observable. Certainly a regularity is not directly observable. It is only when many observations are compared with one another that regularities are discovered. These regularities are expressed by statements called "laws" (Carnap 1966, pp. 3, 6).

The use of empirical generalizations as laws of nature is problematical. Obviously, no generalization can be completely empirical because it is impossible to observe all instances of variables X and Y, including those in the future; usually the relationship between variables is less than exact. Many positivists responded to the lack of exact relationships by cheerfully accepting a probabilistic explanatory and predictive ability, attributing the lack of certainty to the state of the instrumentation or to unknown intervening variables. But this move is warranted only on the basis of the positivists' faith in the machine-like orderliness of reality, and that faith, illegitimate according to the positivistic philosophy of science.

Those not sharing the unquestioning faith of the positivists have initiated an inquiry into the nature of necessity, or those forces or processes that make things have to be the way they are observed to be. At issue is whether \( Y = f(X) \) is an accidental generalization that describes variables that just happened to co-occur when the scientist was watching (and thus have no necessity and no explanatory or predictive power), or a law that describes variables that have to co-occur (and thus have necessity and explanatory and predictive power). The issue is difficult and cannot be decided by inspecting the semantic form of the statement or its operationalization.
of terms. The observation of the next instance also will not suffice, as one still does not know whether the relationship is accidental or real.

For some time it appeared that the question of skepticism in the tradition of Hume, or faith in the spirit of Newton, was a matter of individual preference. Recently, however, analytic philosophers have offered a way to determine whether a relationship between variables described by a scientific statement is necessary or is merely an accident. The device is a counterfactual conditional, and it works by posing a particular alternative to the stipulated relationship. First, the form of a scientific statement is changed slightly to this: \( (x) \exists (P \supset Q_x) \), or "there is an entity \( x \) such that if \( P \) is \( x \), then \( Q \) is also \( x \)." Second, the counterfactual conditional statement is made: \( (x) \exists (\neg P \supset \neg Q_x) \), or "there is an entity \( x \) such that if \( P \) is not \( x \), then \( Q \) is not \( x \)." If there is a necessary relationship between \( P \) and \( Q \), then the original statement entails the counterfactual conditional; if the relationship is only accidental, then the counterfactual is not entailed.

Fortunately for those few of us who unaccountably do not relish the symbolic manipulations of analytic philosophy, precisely the same argument has been presented in a much less dry context (Niven 1975). Consider this apparently innocuous, if somewhat unusual question: Would a Muslim vampire be frightened by a crucifix? Assuming for the purpose of the example that thirsty vampires in Europe can be thwarted by conspicuously brandishing a symbol of the Christian faith, would the same effect occur if the vampire did not know or appreciate the symbol? The question is ostensibly about generality—does the domain of the effect pertain to all vampires or only those with a Judeo-Christian ethnic heritage—but obviously turns on the nature of the necessity. If the necessity pertains to some natural power of the crucifix, then the race, religion, or creed of the would-be predator should be irrelevant. However, if the effect of the crucifix depends on its symbolism, then those who do not know or respect its meaning should be immune. The latter alternative suggests the empirically testable hypotheses that pantheistic vampires will be significantly more emaciated than agnostic or atheistic vampires, and leads to the imminently reasonable implication that the International Guild of Vampires should assist its members to relocate to countries where the dominant religion is not their own.

In our judgment, the function of the extensive literature on counterfactual conditionals is to expose the extent to which positivism depends upon an untestable faith in an underlying order, and to sensitize theorists to the necessity of specifying the necessity behind empirical generalizations. This literature does not solve the
problem of differentiating between a law and an accidental generalization for three reasons. First, the entailment of the counterfactual conditional is a matter of the theorists' perception. Using this device helps theorists know and articulate their own minds better, but the difference between a skeptic and a positivist remains the faith of the latter that the observed relationships are isomorphic with natural law rather than accidents. Second, in the complex world of multiple relationships outside of philosophy journals, the formal invalidity of the argument from a counterfactual conditional becomes pernicious. It cannot handle so common a phenomenon as equipollency: an event-object that may be caused by any of several things. For example, the argument

1. \( (\exists x) (P x \supset Q x) \)
2. \( \neg P x \)
3. therefore, \( \neg Q x \)

does not follow, because it does not preclude \( (\exists x) (R x \supset Q x) \) or \( (\exists x) (S x \supset Q x) \); and so on. The statement \( Q x \) may obtain if any of the following obtain: \( P x \), \( R x \), or \( S x \). If so, there is a multiple necessity between, \( P \), \( R \), and \( S \) and \( Q \) in a manner that the counterfactual conditional will not depict. For example,

1. \( (\exists x) (P x \supset Q x) \) and/or \( (R x \supset Q x) \)
2. \( \neg P x \) and \( R x \)
3. therefore, \( Q x \)

Is there a necessary relationship between \( P \) and \( Q \)? Yes, but that is not the whole story.

Third, the device of counterfactual conditionals does not permit the differentiation among several types of necessity, which some theorists have argued is crucial (cf. Cushman and Pearce 1977; Cronen and Davis 1978).

Systems Theories

The concern with necessity leads to a type of thinking inimical with the positivist philosophy of science: a consideration of the types of connections among events and the nature of the entities that act. In physics, the assumption that reality consisted of minute corpuscles of matter whose changes consisted entirely of motions was replaced by a concept of reality as continuous, nonmechanical fields. Einstein said, "This change in the conception of reality is the most profound and fruitful one that has come into physics since
Newton" (Laszlo 1973, p. 23). The new physics resembles the biological sciences that have traditionally assumed that the phenomena of life are best explained by describing the organization of living things. Rather than use the positivist notion of correlations among discrete, successive events, biologists have modeled the structure of organisms as the explanation of the powers they have, for example, to orient toward light, to reproduce, and so forth. With the inception of the microbe theory and later the development of the relation of species to the ecology, biologists have discovered that the relations among entities are exceptionally complex. For example, neither the activity of a microbe nor its host may be explained without describing both the internal structure of each and the reciprocal effect of each on the other. Systems theory has now been extended to virtually all phases of academe, with the common assumption that the interrelationships of events must be accounted for. Two maxims summarize the perspective of systems theory: "The whole is greater than the sum of its parts," and "The system itself is the best explanation of a system."

There are two quite different schools of thought in systems theory. These have different assumptions about the location of systems and how research should be conducted and interpreted. One group may be described in Miller's term (1978, pp. 16-17) as dealing with abstract systems; the other deals with what Miller (1978, pp. 16-17) calls concrete and Harré and Madden (1975) call natural systems.

Abstract Systems

The abstract system approach is appropriately considered a patch and repair of positivism using sophisticated statistical tools to account for the complexity and organization of reality. Systems are abstract because they exist in the mind of the observer, not in reality. Like positivists, the theorist looks for a specified relationship between variables. Unlike positivists, an abstract systems theorist assumes that reality is sufficiently complex that he will have to partial out the effects of many other variables. In effect, the system is defined as a large set of variables (rather than, for example, two), and knowledge consists of a description of the interrelation of these variables. The title of Blalock's (1969) influential book, Theory-Building, is most revealing of the ties to positivism. The content of the book concerns statistical techniques for analyzing many variables simultaneously. Rather than $Y = (f) X$, a theory consists of a set of regression equations or a path model among many variables.
Natural Systems

The other systems approach argues that systems exist independently of their being modeled, and that the structure of these systems explains the observed regularities among events.

There is an ontological tie that binds sequential events together, but it is not event-like. It is the persisting generative mechanism consisting of powerful particulars and natural agents which produces the sequence of events and states and endures throughout. . . . It is just the same ontological tie that binds together sequential events and states as binds together the co-existing properties and powers of things and materials into naturally necessary clusters (Ilarré and Madden 1975, p. 131).

Given the conceptualization, the natural necessity of observed events is the empirical existence and properties of the entities that exist and act. Since positivism and the abstract systems approach will only admit the existence of measurable variables, for them the ontological tie is forever offstage, requiring the faith of a medieval monk on the part of theorists. The natural systems approach reverses this relation between necessity and co-occurring variables. Rather than infer the necessity of observed recurring relationships between variables, the necessity itself is empirically observed as the characteristics of the entity being studied.

This shift has striking implications for the conduct of research and the topics of theory. Ilarré (1977) argued that natural systems vary in the extent of their powers. Some simple systems are automations, controlled by external causes and with little or no ability to select among possible responses. Complex systems are more autonomous, and can decide how they will act regardless of external events. The structure of a theory consists of models of the phenomena being studied that will specify the extent of their autonomy. Classical physics had developed an offstage model of reality as homogeneously simple and reactive to other events, frequently illustrating it by reference to the action of billiard balls striking each other. Ilarré and Madden found the limitation to a single model distressing and dysfunctional for the study of more complex entities. "For us, a billiard table is relevant . . . only in so far as it is conceived of as surrounded by the players, and embedded within a gravitational field." Obviously the game of billiards must be explained differently than the action of a billiard ball. More profitable analogies for causality and action are
...a springtime plant forcing its way upwards towards the light, ...the pulsing, surging movement of the protoplasm within an amoeba, ...a flash of radiation as a positron and an electron meet, ...the mobility and imaginative control of his own actions exercised by a human being, ...the potent configuration of a magnetic field (Harré and Madden 1975, p. 7).

A Comparison

The world views of positivists and systemists differ considerably, and this is reflected in the way they work and the form of knowledge claims they produce. For positivists and abstract systems theorists, the building blocks of theory are statements describing correlations among variables, and a model is a luxury useful only if it provides a parsimonious summary of these correlations. For natural systems theorists, the building blocks of theory are models depicting the nature and powers of enduring entities, and descriptions of correlated events are useful as marker variables, tracing the presence and action of these entities.

The difference between positivists' and natural systems theorists' notions of the building blocks of theory is manifest in their treatment of data. Positivists believe their data; statistical relationships, expressed verbally, are the theory. A subsequent finding of a different statistical relationship constitutes a refutation of that theory and leads to the postulation of another. Because they believe that there is an underlying order, they believe they will ultimately isolate a relationship that is sufficiently lawlike to resist subsequent attempts at disconfirmation. Natural systems theorists—bear us carefully, please—do not believe their data in this sense; statistical relationships (or a variety of other indicators) mark the presence of powerful particulars whose actions constitute observable events. Sophisticated entities—particularly those that monitor and regulate their own behavior—are expected to display varied forms of behavior and, most significantly, the events they produce are in no means isomorphic with their own structures. The event of an iron filing moving across a piece of paper is an indication of the presence of a magnet, but certainly not an adequate representation of magnetism. For that, a model of magnetic fields is required. The reader with a penchant for the absurd may amuse him/herself by attempting in positivist fashion to infer the theory of electromagnetic fields of describing the movements of iron filings, each of which is assumed to be following a universal law of nature. The problem is that in the presence of a magnet some move left, some
move right, and some simply stand on end. For those not attracted to magnetism, football presents a useful mental experiment. Using the positivist principles of reductionism and observing sequential events, one might develop the Theory of the Movements of the Left Guard. It would take little effort to deduce a relationship between the snap of the ball and the movement of the guard, and the theory might initially state: when the ball is snapped, the left guard moves forward. This generalization will be disconfirned on the first pass play, when the guard moves backward, but the theorist can handle this with probability statements. The revised theory may state, when the ball is snapped, the left guard will move (.67) forward and (.33) backward. The theory will begin to lose all utility when a team begins to use play-action passes, screens, sweeps, and trap blocking—not to mention flea-flickers—but even if the percentages were specified, it would confer little understanding of the game. Abstract systems theorists would do better putting the movement of all players into a statistical solution. A natural systems theorist following Harré's ethogenic procedures would do best of all by stealing the team's playbook or interviewing the coach and the player.

THE REQUIREMENTS FOR COMMUNICATION THEORY

Humans are very complex entities, having the power to act in ways ranging from something very like a pure agent to something very like a pure automaton. This complexity makes them very difficult to model. Matson (1976, p. xiv) described humankind as the only animal that is a problem to itself. It may be added that humankind is a particularly difficult problem, requiring a new form of theoretical structure.

A communication theory must deal both with the characteristics of communication described in Chapters 2 and 3, and with the recursiveness in knowing discussed in Chapter 1. Although none of the theoretical structures described in the preceding section is adequate, the natural systems approach may be extended in four specific ways to provide a viable structure for communication theory. The nature of these extensions is consistent with the direction of intellectual movement from positivism to natural systems, and from the traditional to the new idea of communication.

Conjoint Action of Holonic Systems

Communication was defined in Chapter 3 as a form of human activity by which persons collectively create and manage social
reality. The stressed words in the definition depict communication as a process in which more than one person participates. If persons are modeled as entities having the properties of complex systems, then a communication theory must include a representation of the conjoint action of multiple entities.

Our reading of the systems theory literature indicates that very little attention has been given to patterns of interaction among systems. Although the basic orientation does not preclude the study of conjoint action, systems theorists have usually focused on the intrasystemic organizing features of single systems. For example, Harré's ethogenic research procedures are limited to the meanings particular actors have for their actions, precluding analysis of the relationship among several actors' meanings. The result is an inability to account for patterns of social action that do not proceed as planned or expected by that person (cf. Pearce 1979). Even Miller's influential living systems used intersystemic interaction as a device to classify the structures of single systems. Miller (1978, pp. 18-19) distinguished totipotential from partipotential systems on the basis of intersystemic action. Totipotential systems are "capable of carrying out all critical subsystem processes necessary for life," while partipotential systems "must interact with other systems that can carry out the processes which it does not, or it will not survive . . . partipotential systems must be parasitic on or symbolic with other living or nonliving systems."

Harré's research methods and Miller's concern with the maintenance of systems states have led them to lines of inquiry not well adapted to explain the collective creation and management of social reality. What Searle (1969) called institutional facts are very real even if not physical. They are constituted by the conjoint actions of many persons, and those who do not acknowledge these institutional facts are proclaimed heretics, counterrevolutionaries, deviates, and so forth, and often made to suffer for it. The processes by which these institutional facts are created and used in the conduct of social life is central to communication theory.

The natural systems perspective can be extended to account for conjoint action in two ways. First, the focus of concern may be changed from sequential states of single systems to sequential acts produced by interacting systems. This move makes the existence of social institutions and situations and the performance of social episodes the focus of theory rather than, for example, homeostatic mechanisms within systems. Second, the world view of Harré and Madden may be made significantly more complex by incorporating Koestler's concept of the holon. Harré and Madden (1975, p. 7) described a world comprised of distinct entities of variable complexity. Koestler (1978) noted that many of these entities are simul-
taneously wholes in themselves and parts of other wholes, and that their natures and powers must take both characteristics into account.

The term "holon" is a combination of the Greek holos (whole) and the suffix -on (particle or part, as in proton).

The concept of the holon is meant to supply the missing link between atomism and holism, and to supplant the dualistic way of thinking in terms of "parts" and "wholes," which is so deeply engrained in our mental habits, by a multi-level, stratified approach. A hierarchically-organized whole cannot be "reduced" to its elementary parts; but it can be "dissected" into its constituent branches of holons... (Koestler 1978, p. 197).

To think holonically is to view enduring entities as Janus-faced, as simultaneously parts and wholes. Recall the discussion in Chapter 3 about the appropriate unit of analysis, in which Weber differed sharply from his colleagues by describing the individual rather than the social order as the appropriate unit of analysis, Malinowski contrasted with the linguists by insisting on the context of situation, and the later Wittgenstein subordinated particular utterances to language games. The concept of the holon implies that none of these is fully right: persons are systems in themselves but also constituent parts of other systems that are more extensive in space or time. A well-formed theory must include several units of analysis. The communication theory presented in Chapter 5 envisions persons as holonic components of interpersonal systems, and the content of the theory relates the characteristics of persons and the structure of the interpersonal system to the patterns of communicative acts that are performed.

Irregular Complexity

The logic of personal and interpersonal systems is not uniformly organized. Persons are more knowledgeable, sophisticated, and complex about some things than about others. A person may have different powers in different domains of activity, for example, academics, athletics, and social relationships.

Irregular complexity in the logic of systems may be modeled with a field-dependent logic. Tomlin's (1958) study of argument in the history of science revealed that the meanings of terms and the acceptable warrants for propositions differed among fields of inquiry. This concept may be applied to the domains of activity in which an entity participates.
The Openness of Systems

The current literature in systems theory stresses the difference between systems that are open—that is, in which information and material may penetrate the system boundary—and systems that are closed. Humans are obviously open systems, but as communicators they are open in a manner not presaged in the literature.

Systems often are defined in terms of their organization or logic, such that information or material that enters becomes a part of the system by being operated on by the logic of the system. Food becomes part of the human body by the digestive operation of the system; a bullet does not. After some period of time, a given system may have replaced all of its matter but remains the same system because the logic is unchanged. Even open systems are closed to changes in logic.

However, data clearly show that humans are open to changes in logic, and may change even in the course of a particular communicative event—that is, persons learn, get mad, switch strategies, and so on. Further, changes in logic are self-perpetuating since they inform subsequent communication acts that alter events, and so on. The minimal conclusion from Chapter 2 is that various cultures have developed different logics. Since it has been well demonstrated that cultural differences are socially acquired rather than being, for example, genetic, the observed differences in cultures represent the results of changes in the logics of communicators.

The openness of systems to changes in logic is perceived as a problem because it apparently introduces an uncontrollable indeterminacy into the phenomena. If all else changes except the logic, a scientist can still use propositions describing the logic that can be verified as true or false. But if the logic itself is open to change, any description of it may change from accurate to inaccurate at any given time and without notice. The solution to this problem entails abandoning the traditional Western concept that entities are irreducible. In positivism, this concept takes the form of identifying the smallest possible entity as the unit for study in systems theory. It also takes the form of assuming that there is a true logic for any given system that can be represented propositionally. The alternative is consistent with the descriptions of various cultures in Chapter 2 and with the developments in logic, mathematics, and geometry reviewed in Chapter 3. Equally viable systems may have very different logics, some of which seem absurd or invalid from the perspective of the other. The task of theorists is to model the logic of various systems, including that system’s ability to change its logic.
This solution introduces an important change in the content and function of theory. Positivists and abstract systems theorists treat theoretical statements as summaries of empirical observations. Natural systems theorists treat models as representations of the logic of a system. In a theory about entities open to changes in logic, theoretical statements must be both iconic and noniconic representations of the system's logic. As iconic representations, they describe the state of the system at any given point; as noniconic representations, they describe the extent to which the logic of that system is likely to change.

The form of theoretical statements produced by these perspectives is quite dissimilar, and it is not surprising that proponents of one approach simply do not recognize as theories the efforts informed by other perspectives. At a convention during which we had presented several papers on the "coordinated management of meaning," one leading positivist in our discipline enjoined us to "stop telling us about theories and give us one." What he wanted was a statement of the form $X = (f) Y$, in which $X$ and $Y$ were observable variables. From our perspective, any such statement is misleading and simplistically false: persons and interpersonal systems are open to changes in logic as well as in information and material, and any empirical generalization is an accident, valid only as long as the logic of the system does not change. An acceptable form of statement might include a description of the relationships among variables contextualized by a statement about the type of necessity requiring these relationships.

Recursivity

The simultaneous iconic and noniconic function of theory creates the familiar problem of recursivity. The content of theory must both represent the logic of personal and interpersonal systems at any given time, and describe the extent to which that logic is subject to change. This requires the theory to be expressed in a symbolic system that is simultaneously an object language and a metalanguage.

According to the Theorem of Recursive Wonder, an accurate dual-level symbolic system is impossible; no image can completely represent itself, including its representation of itself. This theorem, of course, is simply a paraphrase of Wittgenstein, Whitehead and Russell, Gödel, and others, and if it is correct, the corollary stated in Chapter 1 is unavoidable: any scientific theory of sufficient power must represent itself, but cannot represent itself completely. In Chapter 1, we stated that we did not accept this conclusion but did not explain how we proposed to escape it.
The issue can be stated clearly. Human knowledge about humankind is inherently recursive. The content of what is known affects the processes by which knowing occurs, and the process of knowing affects what is known. Does recursitivity produce a vicious circle, or is there some place to ground a theory whose authenticity is not merely stipulative or consensual?

Orthodox Social Science

There have been two responses to the problems of recursivity within orthodox social science, both of which have been foreshadowed in previous chapters: a hierarchy of metalanguages and a collapse of levels onto the factual.

Whitehead and Russell's theory of types urges language users to keep levels of languages separate in a hierarchy of metalanguages. What it actually does is to make a desperate attempt to differentiate the things described from the person who described them (Iwone and von Foerster 1975, p. 1). This solution has not, and in principle cannot, work. Following the theory of types, the theorist is inevitably precluded from a place to stand by being placed in a strange loop. Aquinas's categories of existence are useful. There are (1) things that exist; (2) things that exist and move; (3) things that exist, move, and think; and (4) things that exist, move, think, and think about thinking. Clearly, the only type of entity that can study type 2 entities is a type 3 entity, to study a type 3 entity, a type 4 entity is required, and so forth. A critic of Aquinas's category system must be at level 5 and capable of thinking about thinking about thinking. And so it goes—any act of theorizing about the level N must be at level N + 1.

This recursive spiral is vicious rather than benign because infinitely escalating levels of abstraction quickly exceed human cognitive ability. Bateson's (1972) analysis of the logical levels of learning and communicating was based on the assumption that each higher level requires more complex concepts and operations, and that the human mind is soon out of its depth. Bateson's insight is supported by twentieth-century developments in metamathematics and modal logics, the understanding of which requires much greater mental energy than any particular math or logic. But if complexity were not prohibitive, the sheer amount of detail would be. Miller (1967) demonstrated that the human mind has a finite capacity for processing information: about seven, plus or minus two, bits at any given time. Larger amounts of information are dealt with by chunking, which is treating a cluster of bits of information as if it were a single bit. A theory is a formal device for chunking information, allowing the theorist to lift him/herself from the morass
of data by his/her own brain cells. But the problem—like that of
Archimedes who would move the world with his lever and fulcrum—is that of finding a place to stand. If there is no limit to recursive-
ness, then at whatever level N the theory is written, the theorist
must be thinking and communicating at level N + 1, and the very ex-
istence of the theory is sufficient evidence to show it incapable of
accounting for the level of activity necessary to produce it.

Faced with much the same problem of recursiveness in ac-
counting for motion, Aristotle resorted to the device of an unmoved
mover. Within the Whitehead and Russell framework, theorists of
human action must somehow locate a comparable unthought-of-
thinker—without, of course, thinking about this thinker. Since this
does not seem a productive line of development, we must find some
other way of dealing with the problem.

The method chosen by eighteenth- and nineteenth-century
physical scientists and by most twentieth-century social scientists
was that of facticity, or objective empiricism, which attempts to
avoid the vicious circle of infinite regress by collapsing all levels
of language into the object language. Specifically, the theorist at
level N utilizes a method purported to describe the level N-1 with-
out distortion. This distortion-free description of the next lower
level is accomplished by exorcising any characteristics of level N
thinking that are not also present at level N-1, and thus functions
as a self-administered lobotomy in which the use of the scientists'
reason and imagination is deleted. Reynolds (1971) acerbically
described this positivist/operationalist response to recursivity as
the attempt to produce "knowledge untouched by human minds" in
which the data are allowed to speak for themselves without the
fallible intrusion of the scientists' interpretation. This position is
perhaps best exemplified by Freedman's disparaging comments
about the premature review of the literature on the effects of crowd-
ing:

The research has only been going on for a few years,
and since the findings are rather inconsistent and con-
fused, it seems that people should be doing research
rather than worrying about theories. . . . It is per-
factly all right for people to offer hunches or tentative
explanations . . . but to start presenting theories
when we don't even know what the facts are is an ex-

The attempt to exclude higher human abilities—intentionality,
reason, and imagination—from the conduct of science has produced
some interesting convolutions in the social sciences. For example,
part of the folklore of the social sciences contrasted two models of man found in psychology textbooks. In the first chapter of these texts, the traditional psychology-as-a-science polemic, the psychological researcher was portrayed as purposive, reflective, and resourceful, in all, an admirable and autonomous entity. However, in the following chapter that discussed the assumptions of psychology, the subjects of psychological research were described as reactive, behaving in ways unaccounted for by higher cognitive processes and responding to the immediate stimulus or reward. At the least, the use of the second model limits the generality of these texts: the content of psychological textbooks is inapplicable to the authors of those texts and to those who conduct the research on which they are based.

Further, the strategy of facticity belies the history of science— as opposed to its self-presentation—in which the imaginative powers are central. Scientists are often closet thinkers; they think, and think well, but pretend not to, maintaining a presentation of self as a curator of facts.

Science has been supposed by most modern thinkers to be a matter of ascertaining the hardy objective "facts." Sometimes, it was admitted, scientific theories are adventitiously beclouded by the working of some scientist's imagination, but only (it was to be hoped) temporarily so (Polanyi and Prosch 1975, p. 64).

The actual history of scientific discovery is unambiguous. Major scientific ideas were discovered in ways that give white-smocked, laboratory-bound researchers nightmares: dreams, visions, analogies, obviously fallacious models, and so on (Koestler 1964). Pearce stressed the role of aggressive imagination in science.

When a man desires ardently to know the truth, his first effort will be to imagine what that truth can be. He cannot prosecute this pursuit long without finding that imagination unbridled is sure to carry him off the track. Yet nevertheless it remains true that there is, after all, nothing but imagination that can ever supply him with an inkling of the truth. He can stare stupidly at phenomena; but in the absence of imagination they will not connect themselves together in any rational way.

It is not too much to say that next after the passion to learn there is no quality so indispensable to the successful prosecution of science as imagination. Find me a people whose early medicine is not mixed
up with magic and incantations, and I will find you a
people devoid of all scientific ability (quoted by

Finally, the facticity solution to the problem of recursiveness
is unworkable because of the unescapable interaction between the
knower and the known. Both laboratory studies of the process of
perception (Powers 1973) and philosophical analyses of the processes
of theory construction and verification (Kuhn 1970) belie the notion
that percepts are unaffected by the characteristics of the perceiver.
Rather, the overwhelming evidence suggests that reality per se can-
not be known. In the simplest case, that that exists is perceived
through the distorting and biasing filters of the observer's physical
and conceptual perceptual apparatus. There have been no more
careful observers of the human condition than experimental social
psychologists, but the presence of experimenter effects even in the
most rigorously controlled settings has been demonstrated all too
often. Rosenthal (1976) has shown that patterns of subtle cueing of
subjects and directional errors in coding data occur unconsciously
even by the most scrupulous researchers. Theorists, experim-
ters, and innocent civilians alike can know the world as they per-
ceive it, and their perceptions inevitably add or detract or distort.
In more sophisticated arenas, such as human social action, the
process of knowing is not only veridical, it alters the phenomena.
At the level of society, Bronowski defended financial and moral
support for the scientific community by citing the many changes in
the ways of being human that have been brought about by scientists,
from better shoes to a longer life expectancy.

... In the last hundred years the average span of life
in England has increased by twenty years ... and
these twenty years have been created by applying to
daily life, to clothing and bedding, to hygiene and in-
fection, to birth and death, the simple ideas of
science—the fundamental ideas I have been talking
about: order, cause, and chance. If any ideas have
a claim to be called creative, because they have
created life, it is the ideas of science (Bronowski
1978, p. 147).

Bronowski seems to have overlooked the problem this creativity
creates for science. How does one use the ideas of "order, cause,
and chance" to explain the deliberate human construction of hygienic
social conditions?
Characteristically, many positivists and abstract systems theorists have responded to the difficulties with the facticity solution to recursiveness either by ignoring it as a nonscientific problem of metatheory, or by revising their instruments and research protocols to minimize the effects in particular studies of experimenter effects, demand characteristics, and so on (Sampson 1978). Others—often in a midcareer crisis of confidence—have concluded that the Western intellectual heritage is perilous, scientific knowledge is impossible, and the social sciences comprise "a decaying mass of ideas that is robbing us of our vitality" (cf. Schlenker 1977, p. 316).

An Alternative

We described the hierarchy of metalanguages and facticity as orthodox responses to recursivily because both are consistent with the traditional Western concepts of truth, logic, or reality. However, we described both as inadequate because they use a logic that forbids self-reflexivity to describe phenomena characterized by self-reflexivity. Obviously, our position—like that of most of the twentieth-century intellectual community—is heretical in its assumption about reality. We propose to be more consistently heretical: if reality and logic do not have the same structure, then let us devise a new logic. The key move, since recursivily cannot be avoided, is to include it as a part of the logic.

The structure of a logic that includes recursivily has been developed by Brown and extended by Varela. Brown was impatient with the infinite hierarchy of metalanguages envisioned by Russell, feeling that it was an attempt to run away from paradox and recursiveness rather than explain it. Brown (1972, pp. ix-xi, 54-68) argued that recursivily is a problem only if one assumes that traditional Western logic—based on Aristotle's three laws of thought—has a special affinity for truth. By freeing this particular logic from the pretensions of truth, theorists are free to invent new logics that have different properties. In fact, this move in logic precisely parallels a useful development in mathematics. Self-reflexive linguistic statements are not different from many mathematical statements, such as $x = \sqrt{-1}$ or $x = 1/x$. These statements were problematic as long as persons believed that there were only three types of numbers: positive, negative, and zero. When the set of numbers was enlarged to include imaginary numbers, these mathematical statements no longer were perceived as problems. Brown's logic of indication is a calculus that does not share the conceptual limitations of Aristotelian thought, and permits self-reflexive statements to be used in legitimate forms of thinking in the same way that the
The concept of imaginary numbers permitted the previously unthinkable "square root of minus one" to be used in mathematical calculations. Varela's (1975) extension of Brown's logic institutionalizes self-reflexive statements as a new state. Brown defined statements as either indicating a state or leaving it void, and detailed the laws of form deriving from this function. Varela described the autonomous state as one in which the statement indicates itself, and as such has a different logical form than the other states. The symbol for the autonomous state is a stylized snake biting its tail.

For our present purposes, the details of this logic are less important than its function, which Varela (1975, p. 6) clearly realized. The new logic is a logic of logics rather than a logic of truth as traditionally conceived. It may better be used to model the logic of particular entities than as a tool for the deduction of valid conclusions and the establishment of knowledge. As such, it is particularly useful for a theory of communication.

At last we are prepared to explain how we avoid the corollary to the theorems of extensional and recursive wonder. Although the Theorem of Recursive Wonder expresses traditional wisdom, we flatly deny it. The use of a logic of logics including the potential for autonomous self-indication invalidates the claim that no representation can represent itself completely. Consider again Aquinas's categories of existence. There is an infinite series of levels only if the thinkers at each level use a logic of indication. The vicious circle is closed down if the thinkers at the highest level use a logic of self-indication, symbolized by □ and awkwardly expressed verbally as "those who exist, move, think, and think about themselves thinking."

Brown described his hesitation in announcing what seems in retrospect such a straightforward solution to a problem that had vexed thinkers from Zeno to Russell.

Recalling Russell's connexion with the Theory of Types, it was with some trepidation that I approached him in 1967 with the proof that it was unnecessary. To my relief he was delighted. The Theory was, he said, the most arbitrary thing he and Whitehead had ever had to do, not really a theory but a stopgap, and he was glad to have lived long enough to see the matter resolved (Brown 1972, pp. viii–ix).

ON DOING AUTONOMOUS THEORY

The four extensions of the natural systems perspective in the philosophy of science provide the basis for a communication theory
consistent with the conceptualization of communication in Chapters 2 and 3, and with the recursivity of human knowledge about humankind discussed in Chapter 1. The nature of this theory is in significant ways different from others in the social sciences.

A theory of communication is isomorphic with communicating per se: both are actions. Recall the discussion of the painful development of the new idea of communication, in which traditional assumptions were replaced by action theory. This move implied that the truth of what was said in communicating was less important than the felicity with which the communicative act was brought off. Felicity conditions are determined not by comparing the content of messages to reality, but by inspecting the communicator in the context of social reality. Because persons are relatively autonomous, open to changes in logic, differentially complex, and holonic components of interpersonal systems, it is not necessary to look beyond or behind the person for the causes of the assessment of the act. Both can be done by studying social reality as it is collectively created and managed. Particular communication acts may be represented with the autonomous operator $\Box$ because once they are performed, they become the causes of the social reality that defines and causes them.

In the same way, the development of a theory is an autonomous act, inextricably linked to the previous assumptions, biases, and social climate that the theorist brings to the situation and also fully a cause of those assumptions, biases, and social climate. Viewing the theorist as an autonomous actor suggests the irrelevance of truth or falsity for evaluating a theory. Rather, a theory of communication may better be evaluated by some analog of felicity conditions that permits a judgment about whether the theory was done well.

The criteria for doing well derive from the analysis of the nature of the act of theorizing. It is the intrusion into the interpersonal domain of the ideas of the theorist, and, as Thomas and Zamecki (1920) demonstrated, enacted ideas are best evaluated by their effects. Some theoretical ideas are better than others (quite irrelevant of either being true) because they lead to theories that are better representations of reality. To draw again from the contrast of images of humankind in introductory psychology textbooks, a theory based on the idea of humans as passive reactors to reinforcement schedules will not adequately account for the purpose, innovative accumulation of resources depicted in the semiautobiographical polemic about psychology being a science. But where does the standard for evaluating one theory as better than another exist? Obviously, we have two ideas in mind here. We believe in an objective reality that has properties that object if wrongly repre-
sented. A low level of theorizing may adequately be evaluated by its power to describe without objection the phenomena. However, the level of knowing involved in a communication theory is much more sophisticated, and recursiveness increases with the power of the tools of wonder. For a communication theory, the criterion of whether it is done well is appropriately autonomous: Can the theory account for itself?

This criterion again emphasizes the isomorphism between the acts of theorizing and communicating. Watzlawick (1976) asked "How real is 'real'?" and in a speech in 1979 attempted to answer the question with reference to truth. Either there is a reality such that what we say is true or false, or there is no reality—at least none accessible to us—in which case all knowledge is imaginary and persons are the blissfully unaware architects of their own reality. These alternatives are fully orthodox with Western patterns of thought and dysfunctional because of it. The question is better answered: "reality is as real as persons make it." If people believe in witches and act accordingly, there will be burnings at the stake, mysterious signs, and all the other accoutrements of black magic. But this superstitious reality is very different from one in which persons act in the knowledge that their actions create their reality. In autonomous social reality, such concepts as responsibility, freedom, and morality have very different meanings than they do in a social reality perceived as irrelevant to human action.

The difference between an autonomous social reality and one perceived as true is precisely the same as a theory perceived as an autonomous act by the theorist and is understood as a true map of reality. The argument to this point has been that reality has objected not only to the particular maps that have been imposed upon it, but that there is reason to believe that any nonrecursive representation of reality will be incomplete in important ways. The solution proposed here is to construct a theory that does not attempt to represent only the relations among the variables in reality, but also the recursiveness and changeable structure of reality.

We anticipate strenuous objection to this proposal, consistent with the comments listed in Chapter 1. Unsympathetic readers may well feel short-tempered with a theory that blatantly proposes to dispense with both truth and facts. What resources are left for theory building, for doing research, or for knowledge? Must we accept a detached cynicism or a weary mysticism, or is there a way of doing theory consistent with this discussion that will command the energies and attention of reasoning persons?

The nature of communication theory we propose implies a radical shift in the assumptions about reality, truth, logic, and knowledge, but in a historical context, such shifts—though difficult—
are not rare. In Western culture alone we have described seven such shifts (Pearce, Cronen, and Harris 1980), and that review started after the major changes in human history had occurred (cf. Campbell 1959a; 1959b; 1959c).

Granted that it is difficult for persons in any intellectual milieu to examine another and “find its explanations reasonable and its view of the world natural” (Bronowski and Mazlish 1962, p. 108), there are at least four models for how the human intellect functions when it explicitly embraces recursiveness and thinks autonomously. In mathematics, theorists have reframed the concept of number to include imaginary numbers, and explored the logics in which these entities are constituent parts. Mathematicians have provided a useful example of willingness to follow their reasoning even when it contradicts the inherited cultural wisdom embodied in common sense. Many mathematical systems are nonintuitive, and yet usefully describe particular domains of reality or potential realities.

Some forms of modern art have explicitly addressed the problems of recursivity. The pictures by Escher, among others, depict the problems of thinking autonomously. We find the art objects themselves delightful reminders of the difficulty of thinking autonomously, but are frankly disturbed by the example of the movement itself, which seems to be able to express the problem but has little to say about it. Perhaps modern artists have made a negative autonomous statement—“We can say nothing about this” (which is, of course, a statement that denies the possibility of its own existence)—which contrasts with the positive autonomous statements made by mathematicians who affirmed the reflexivity inherent in imaginary numbers and proceeded to develop important new computational tools.

The affinity of metaphor and theory has long been acknowledged, but we think it goes beyond the limits assumed by conventional wisdom. Black (1962) said, "Perhaps every science must start with metaphor and end with algebra; and perhaps without the metaphor, there would never have been any algebra." Similarly, MacCormac (1976) argued: "That science utilizes metaphors is not accidental, for without them it would be impossible to pose a novel hypothesis intelligibly." We think Black and MacCormac err by assuming that the role of metaphor is confined to early, formative stages of theory construction, to be replaced by hypothesis testing and formal algebras. Rather, we believe that theory is metaphorical regardless of its level of development—whether heuristic model or formal algebra—and that the theory at each stage of theory development may be used as a live or dead metaphor.

Entire forests have been sacrificed to publish the millennia-long discussion of metaphor, and we will sidestep many perennial issues. A metaphor exists when a person says "S is P" and means
"S is R," and has reason to believe that others will hear him as saying "S is R" even though R is not equivalent to P (Searle 1978). This formal definition—like many theories of how metaphors work—does not account for the power that metaphors sometimes possess (cf. Polanyi and Prosch 1975, pp. 75-76). This power is described by the tension theory, which states that metaphors are shocking because, if taken literally, they are absurd.

Ordinary language does not surprise us. Even former metaphors that are now widely accepted do not cause us to pause and consider how to utter them. Ordinary discourse is expressive of commonplace experience; it is well confirmed and well established. We know what we mean when we speak, or at least we think we do, whereas when live metaphors enter the conversation we feel uneasy about them. . . (MacCormac 1976, p. 81).

The shock value of metaphors wears off, however. "Interestingly, the 'as if' quality of many metaphors disappears altogether after a time . . . [they end] up as a commonplace part of our ordinary language. We call these dead or faded metaphors" (MacCormac 1976, p. 76).

The differentiation between live and dead metaphors is crucial, and the locus of the difference is in their usage. Obviously, the same metaphor may be live for one person and dead for another, making the identical content of the metaphorical message mean in quite different ways for each person.

Theories may function as either live or dead metaphors depending on how the theorist uses it. The content of a theory may be understood as a literal description of the phenomena—in which case it is a dead metaphor. On the other hand, as a live metaphor it functions to evoke cognitive and emotional meaning. The metaphor breaks the vicious circle of infinite regress by providing a statement that simultaneously functions at two levels—or, better, follows a logic in which hierarchical categories need not be kept scrupulously separate. The dual and simultaneous use of a theory as a live and dead metaphor is autonomous, and makes a simple evaluation of the theory impossible. For example, as a dead metaphor, the theory functions as if it were a literal description of the phenomena. As a live metaphor, the theory functions as a creative act by the theorist. Theorists who treat their theories only as dead metaphors have not done well because they have been excessively prosaic and forgotten the imprint of their own actions on the theory. On the other hand, theorists who treat their theories only as live metaphors have not done well because they have not provided reality a chance to object to their theory.
The social role of myth also provides an instructive analog for a scientific community based on an autonomous logic. In his study of mythology, Campbell concluded that despite differences in mythic content, the myths of all societies serve four functions: cosmological (providing a common world view), sociological (legitimating existing institutions and folkways), psychological (locating the individual in the social order), and mystical (reminding the individual that reality extends beyond what can be known or experienced). It does not take a genius to see that the fourth function contradicts the first three. The tension between these functions has been dealt with by most persons by incorporating the first three co-ordinative functions into their life-style and letting the fourth, mystical function operate when and if it can.

The paramount function of all myth and ritual... has always been, and surely must continue to be, to engage the individual, both emotionally and intellectually, in the local organization... the whole system of child-
hood fantasy and spontaneous belief is engaged and fused with the functioning system of the community... thereafter, the man is neither physically nor spiritually a general model of the species Homo sapiens, but specifically an example of a certain local type, developed to function in a certain way in a certain field (Campbell 1959a, p. 467).

However, there has been a class of persons in every culture who have fully felt the tension between the fourth and the first three mythic functions. In primitive society these were the shamans, who have much to teach contemporary theorists.

Unlike their fellows, shamans were aware that the content of their tribal myths were a map enabling coordination rather than literal depictions of reality, that is, that the myths were dead metaphors. In addition, however, they knew that the myths were simultaneously live metaphors, depicting something beyond the local scene. They were not privy to a truth denied their fellows; rather, they looked at shared truth claims in a unique way, comparable to treating a metaphor as simultaneously live and dead, and as a theory as an autonomous act. Shamans interpreted the content of myths in two opposing but simultaneous manners:

- Functioning as a "way," mythology and ritual conduce to a transformation of the individual, disengaging him from his local, historical conditions and leading him toward some kind of ineffable experience. Functioning
as an "ethnic idea," on the other hand, the image binds
the individual to his family's system of historically
conditioned sentiments, activities, and beliefs, as a
functioning member of a sociological organism
(Campbell 1959a, p. 462).

In primitive society, there is a culturally staged shamanistic crisis
by which an individual was set apart from the group as someone
special. Among modern scientists, a prolonged period of formal
study coupled with the necessity of conducting some original re-
search constitutes a striking parallel. In any event, like shamans,
scientists somehow achieve a dramatic distance or essential aliena-
tion from those who can look at the phenomena of nature or human-
kind without wonder, or who can accept things for themselves rather
than as indicative of something beyond. Shamans are separated
from their fellows not by a renunciation of either society or the
world, but "from an overpowering realization of their depth . . .
the rupture is rather with the comparatively trivial attitude toward
both the human spirit and the world that appears to satisfy the great
majority" (Campbell 1959a, p. 253). This description closely re-
sembles Maslow's unabashedly shamanistic description of science.

For my part, I think that I have got more "poetical" ex-
periences from my own and others' researches than I
have from poetry. I have got more "religious" experi-
ences from reading scientific journals than I have from
reading "sacred books." The thrills of creating some-
thing beautiful come to me via my experiments, my ex-
plorations, my theoretical work rather than from paint-
ing or composing music or dancing. . .

Science at its highest level is ultimately the or-
ganization of, the systematic pursuit of, and the enjoy-
ment of wonder, awe, and mystery. . . . Science can
be the religion of the nonreligious, the poetry of the
nonpoet, the art of the man who cannot paint, the humor
of the serious man, and the lovemaking of the inhibited
and shy man. Not only does science begin in wonder;
it also ends in wonder (Maslow 1966, pp. 151, 153).

The lesson of the shaman is that of using theories as live and
dead metaphors simultaneously. The content of particular myths
and theories are seen as important, but as vehicles for both meta-
phoric usages rather than as literally true. Myths are frequently
misinterpreted by being read as propositional inventions or creeds.
"The shallowest minds see in it the local scenery; the deepest, the
foreground of the void . . . for the human mind . . . is the ultimate mythogenic zone—the creator and destroyer, the slave and yet the master, of all the gods" (Campbell 1968, p. 472).

The models from mathematics, modern art, metaphor, and mythology demonstrate that doing autonomous theory well requires a curious ability to reverse figure and ground, to take the content of one's theory both seriously and playfully, to be simultaneously committed to and detached from the product of theorizing. Perhaps the best description is that of an intellectual playfulness, realizing that:

... play produces the feeling of enjoyment, of freedom; it means relaxation. But the enjoyment is never divorced from seriousness, the freedom is bound by strict rules, and the relaxation counter-acted by intense concentration . . . play is self-contradictory. It binds and it frees, it moves and concentrates, it is tense and it is relaxed at the same time (Regin 1977, p. 61).

The theory that follows in Part II is, like all theories, a myth created by human minds. It is no more true than it is blue or dry; these are all irrelevant universes of discourses. Read it as a live metaphor, evocative and heuristic, and as a dead metaphor, as a description prediction and measurement model.
PART II
THEORY AND RESEARCH
5
THE THEORY OF THE
COORDINATED MANAGEMENT OF MEANING

ABSTRACT

The metaphor of the undirected theater is presented. Treating
the metaphor as dead produces the ancestral term "coordinated
management of meaning," which guides the development of measure-
ment models for a theory of human communication. The structural
component of the theory focuses on a holonic relation between inter-
personal and intrapersonal rule systems, in which rules describe
the way individuals process information. Interpersonal rule sys-
tems are structurally deficient in that they have no superordinate
cybernetic monitor and the individuals who comprise them are
variably enmeshed in multiple systems simultaneously. The func-
tional component of the theory describes communication as variably
coherent, controlled, and valenced to all participants. The theory
enables both causes and reasons to be combined in a single explana-
tory format that suffices to the extent that persons are fully en-
meshed in interpersonal systems.

INTRODUCTION

Part I laid the foundation for a theory of communication. The
concept of communication developed in those chapters was a form of
action by which persons collectively create and manage social reality.
This definition implies a mutual causal relationship between the
forms of communication that occur and the content and structure of
social reality, necessitating a theory that locates communicators
within larger social groups. Following the argument in Chapter 4,
persons are construed as systems that are holonic components of
an interpersonal system. This conceptualization allows this charac-
terization of the human condition: that of being variably enmeshed
in multiple systems, each with its own logic of meaning and action.
The theory presented here focuses on communicators as enduring entities, acting in the nexus of many systems.

Consistent with the argument in Chapter 4, the theory functions as a myth or metaphor. If the theory works as a live metaphor, it will evoke an understanding of communication consistent with the description in Part I. If it works as a dead metaphor, it will describe variables that can be observed and measured to account for the phenomena of communication.

A DRAMATISTIC METAPHOR

The theater is a mirror of human experience, but sometimes an examination of the reflected image may be more revealing than observing the original. Social analysts from Shakespeare to Goofman have found the theater a useful metaphor. However, ours is a special version of the theater: the "undirected play." We will present the metaphor, then contrast it with others.

Your perspective, like that of God, a novelist, or a social theorist, purports to be omniscient. You may view the undirected play as a whole or from any specific locus. The acoustics and lines of sight are, for you, perfect.

Picture a large space with indistinct and distant boundaries, within which are many clusters of objects, haphazardly arranged. Some clusters are isolated, some contiguous. Some clusters seem thematic, like coherent sets for a play, with props, focused lighting, and so on. Others are partially or inconsistently lighted or in darkness; there are places that are well illuminated but barren of any props. Some clusters seem abandoned supplies from a storeroom, or refuse from a shop, or senseless combinations of incompatible materials. Let your imagination be rich.

Into this area, introduce a large number of persons. These people know that it is important to be a part of a dramatic performance, but they do not know what play is being produced, whether they are to be members of the crew, the cast, or the audience, or who else is in their play. Assume that all persons know at least some lines from some plays, but that various individuals differ considerably in the specific plays that they know, the number of scenes they can perform in each play, and their skill in determining what play is being produced.

Persons move from group to group hoping to find a performance in which they are allowed to play a part that they know or can improvise. Imagine a person arriving at a particular group and, by way of introduction and request, speaking a line from Hamlet as Ophelia. If the others reply with lines as Polonius and Hamlet,
then communication can proceed. More likely, however, Ophella's lines will be answered with something from the pen of Sophocles or Neil Simon, and confusion, frustration, and recriminations may result. Perhaps the person stays in the group and tries another set of lines from another play, or perhaps moves on hoping to find <i>Hamlet</i> being produced somewhere, with Ophella not yet cast.

Exploiting the stipulated omniscient point of view, envision the whole area as if from a catwalk near the roof. From this Olympian vantage, the scene is a cacophonous bedlam with isolated pockets of coherence. Some groups of people have achieved coherence by orienting themselves to the objects in one of the clusters, letting—for example—the image of a church define their respective roles and scripts; others apparently stumble accidentally on a group of others prepared to enact the same script; some persons move from group to group, mouthing the only lines they know and cursing the others for their incompetence; still others are able to improvise a performance without a common script; and others rally around individuals who will tell them their lines during the performance.

Some people do not move among groups. They were born in a particular group, have been taught a role, and do not know or care that there are other groups just out of earshot performing a whole different genre of plays. Some groups deliberately turn away wanderers who might confuse their group with scenes and roles from other plays.

There is no director to this absurd theater, and thus no one to identify what play is to be performed and who shall have what parts. Although some individuals within various groups offer themselves and perform directorial functions, they remain a part of the cast and create at best a play within the play, as <i>Hamlet</i> visualized his fantasies, and, in <i>Man of La Mancha</i>, Cervantes dramatized his allegories.

As a live metaphor, the undirected play evokes the richness of the variety of communicative styles, the varied ways of being human, and the inherently problematical nature of communication. As a dead metaphor, it contrasts usefully with other dramatistic metaphors and the contrast suggests the lines for theory and research.

The use of a dramatistic metaphor is certainly not novel in the social sciences. By treating drama as a literal description of society, Duncan (1968) and Burke (1969) generated useful understandings of cultural and social processes as enactments of the motifs of victimage, identification, hierarchy, and so on. Goffman (1959) used the dramatistic metaphor in analyzing social interactions ranging in size from the institutional to the dyadic. In social
psychology, the dramatistic metaphor—dead and embalmed—has soberly been presented as role theory, and claimed to integrate the social sciences (cf. Biddle and Thomas 1966). Many sociologists have used the metaphor more loosely to inform their analyses of conversation and social structure (cf. Brisselt and Edgley 1975).

Although truth is not an appropriate criterion for a metaphor, it may be said that all metaphors err or distort their referents, but some err in more useful ways than others. Most of the current uses of the dramatistic metaphor seem to err unproductively in two ways. First, with the possible exception of Kenneth Burke, they employ an unrelieved literalness by treating the metaphor only as dead, consistent with an Aristotelian definition of metaphor as a simile stated without the explicit comparison "like" or "as." However, we believe the live sense of metaphor is vital. Second, many of these err unproductively by using something akin to Broadway plays as the metaphor, rather than the full range of theatrical options. These two errors combine, as Donohue, Cushman, and Nofsinger (1980) noted, to create an analysis of social action as fully scripted, with the parts all assigned, a complete array of props, and collusion to the extent of having a script girl in the wings (for example, a writer of etiquette or a social scientist doing descriptive research) who will whisper prompts should one of the actors momentarily falter.

This image of a fully scripted and casted social order may well be adequate for a high context, traditional society (cf. Hall 1977), but not for modern society in which change is valued and enigmatic situations are normal. The metaphor of the undirected play errs in a more productive way by including the potential for multiple scripts, improvisational theater, plays within plays, utter chaos, and so on, happening simultaneously at different places. The nature of the relationship between performance and a preexisting script or social reality becomes a variable to be negotiated by communicators and to be empirically determined by researchers.

THE ANCESTRAL TERM: THE COORDINATED MANAGEMENT OF MEANING

The metaphor of the undirected play is sufficient to initiate a line of inquiry, but not precise enough to direct it. Even when communication has been located, the phenomena do not come pre-packaged and prelabeled for analysis. Consider a hypothetical Congress of the Council of Communication Societies, at which various experts are to analyze the same communication event, in
this case; an oral conversation between two persons. It is not at all farfetched to assume that the conversation would simultaneously be perceived and described as a series of sounds represented by the International Phonetic Alphabet by one type of linguist; as a set of sentences having particular grammatical structure by another type of linguist; as a series of referents and predications by a linguistic philosopher; as a series of speech acts by a different kind of philosopher of language; as participation in a culturally sanctioned game by an ethnographer; as a symbolic expression of underlying personality by a psychoanalyst; as an ethically disreputable manipulation of other people by a humanistic psychologist; as an act of sedition or blasphemy by a political scientist or theologian; and as the exploitation of social rules to achieve coordination by us. These experts may be said to be observing the same thing only by benefit of the equivocal use of language, and subsequent learned discourse among them is unlikely to be profitable or even coherent.

Since the phenomena of communication do not come clearly labeled, debates between proponents of various conceptualizations have enlivened, if not illuminated, the literature. Despite, for example, Müller and Berger's (1977) suggestion that closer attention to the data obviates the need for metatheoretical choice making, all theories rest on a series of decisions about the nature of the phenomena and the data appear to the theorist to have properties suggested by those decisions. The best theorists can do—and the least they should do—is to articulate their assumptions clearly and search for the most useful ancestral term.

An ancestral term is the first approximation of an explanation of a metaphor. It describes the experience evoked by a live metaphor and establishes the parameters for further elaboration into a coherent and rigorous theory. As such, the ancestral term kills the metaphor at least to some extent, just as a scholarly explication ruins the humor of a joke.

The participants in the undirected play may be analyzed from many perspectives, but our ancestral term suggests that they be viewed in terms of the means and the extent to which they are coordinating their meanings. The ancestral term may be partitioned and explicated in terms of persons, interpersonal rule systems, and forms of communication. Specifically, the term management of meaning requires the description of persons; the term coordinated management is explained in terms of interpersonal rules for meaning and action; and the phrase coordinated management of meaning affords an opportunity to describe various forms of communication.
Since communication is defined as a form of action, an understanding of communicators requires an understanding of persons as social actors. We approach this topic with a genuine sense of humility. The best minds of our species have stocked dusty shelves in the bowels of libraries with learned treatises about the human condition, with notable lack of success. Despite centuries of observation and study of humankind, "an increase in information has not brought an increase in understanding. On the contrary, the more we know about man, the more mysterious he seems to become" (Rhinelander 1973, p. 97). Both as thinker and as thought-about, "Human beings are the most awkward species on earth, the most uneven in development, the most beset by obstacles that are not intrinsic to the task" (Bruner 1971, p. 178).

The social sciences have not done particularly well in the age-old dialogue about the human condition. Calder (1976, p. 9) characterized scientific modelers of humankind as cartoonists, producing narrow-minded caricatures none of which "looked capable of building memorable civilizations." However, social scientists have produced three conceptualizations that in combination seem capable of generating a more satisfactory account of the human condition. First, Ilarré's Copernican revolution in the philosophy of science provides a framework for a rigorous anthropocentric social theory, focusing on actors as behaving entities rather than on event objects per se. Second, persons have been described in terms of structures for processing information, and these models have been found to have considerable power. Third, the new idea of communication provides a way to describe the reciprocal relationship between particular individuals and larger social entities. The theory of the coordinated management of meaning is structured around these concepts. We conceptualize persons as variably complex, multileveled systems of rules for meaning and action, who transmute sensory awareness into information and information into actions on the environment.

The Organization of Meaning

Recall the dramatistic metaphor: as persons approach a group, they hear or see only disturbances in the environment in the form of, for example, acoustic or optical nerve stimulation. At some point in the process, both Shakespeare's and Woody Allen's dramatic verse are converted to neuroelectrical impulses. The ability of persons to interpret those impulses as lines from a play,
and to respond to saying the appropriate next line is a remarkable phenomenon, involving the management of meaning. From the vantage of the omniscient observer, a knowledge of which persons know what scripts and what roles, and of which persons know scripts by rote learning and which are skilled in improvisation and ad-libbing is of tremendous utility in making sense of the cacophony. Such an observer can explain why a particular group clings so doggedly to the script it is enacting (for example, it's the only one they all know); why particular persons are drawn to some groups and shunned by others (If all an actor can play is Rhett Butler, there are not many productions he can participate in); why some groups are so inconsistent (they all think that improvisation is the highest form of drama); and so on. The observer can even predict sometimes what will—or cannot—happen.

All of these abilities by observers (qua social scientists) depend on their knowledge of actors' meanings. However, there has been a concerted effort in this century to eliminate cognitive variables from scientific theories of human behavior. We suspect that teachers of intellectual history in the twenty-fifth century will have great difficulty convincing their students that they are serious when they describe the noncognitive approaches to humankind in the first half of the twentieth century, but we are still confronted with an intellectual milieu in which theorists must apologize for daring to suggest that people act on the basis of their interpretations of the meaning of things.

For three quarters of a century, resourceful, prolific, and well-financed researchers attempted to develop a strictly behavioral science without recourse to mentalistic constructs, and they failed. Their history is marked by a series of successive retreats from the original position as more and more intervening variables have intruded between stimuli and responses (Koch 1964). Some currently describe themselves as cognitive behaviorists, making a final capitulation of the noncognitive program but apparently oblivious to the historical irony of the term. Two lines of research inadvertently demonstrated the ubiquity and importance of actors' meanings. Studies of minimal social situations or zero history groups placed subjects into situations in which they had no cues for how they should act—somewhat analogous to an actor moving from one cluster of people objects to another in the dramatistic metaphor. The most significant result of these sometimes bizarre manipulations was the realization that the task was impossible. Persons brought with them or invented in the occasion cognitive guides to action. As Orne (1962) put it, "persons make meaning and order, even in the absence of meaning and order."
A second line of research discovered that people are sometimes very inventive in developing interpretations. A series of studies utilized noncontingent rewards. Persons were given a task involving pushing a button when certain kinds of stimuli were presented. They were told that a light in front of them would flash when they had performed correctly. The manipulation was that some subjects received an accurate pattern of flashing lights (that is, the light was contingent upon whether they performed correctly or not), but others received a pattern of lights previously determined, not contingent on their behavior. The results indicated that subjects in both groups developed theories that explained how their behavior was correct, and that the theories of the subjects in the noncontingent situation were much more complex than those in the contingent treatment. To top it off, when subjects from both treatment groups were allowed to discuss their respective theories, virtually all agreed that the more complex theories from the noncontingent reward group were more probably correct (Wright 1962).

Dulany posed a direct challenge to the behavioral approach in his hypothesis theory. He replicated Greenspoon's classic study, which showed that reinforcing plural nouns by saying "uh-huh" was followed by an increased number of plural nouns. Dulany showed that subjects developed hypotheses about what was going on. Those who displayed the conditioning were those who correctly inferred the experimental manipulation; those for whom the conditioning did not work had developed alternative hypotheses. Brewer (1974) interpreted this research as debunking the evidence for conditioning in adults. More significantly, it made cognitive concepts available for researchers, and showed that an explicit cognitive orientation is more powerful than one limited to observations of behavior.

These research traditions confirm what is immediately apparent to an international tourist or an ethnographer: people seldom deal with reality per se. They invest socially shared meanings into minute gestures (such as the wink of an eye) and large rituals (war), and into utilitarian objects (bedpans) and noniconic symbols (a national flag), and act in ways unintelligible to one who does not understand those meanings. Reflecting on the elaborate etiquettes of dining, Koestler (1978, pp. 73-74) said, "we can only conclude that even while eating, man does not live by bread alone." Farb noted that the display of cultural artifacts in museums, such as an Eskimo kayak, is a lie because they are stripped of their social reality and presented only as a physical thing.

The physical presence of the kayak in a museum cannot be regarded as a substitute for the idea of kayak-ness, for no one can ever transport certain aspects of a kayak
to a museum. These aspects, no less a part of it than the wooden frames and skin cover, include who owns it, who is allowed to ride in it, taboos concerning its use, and so on. Only when these and many other things are known can anyone understand what the kayak truly means to an Eskimo (Farb 1978, p. 43).

A cognitive approach consistent with a modified natural systems philosophy of science describes the structure of information processing rather than the content of particular beliefs. Such a structural model seems curiously empty. "The result of this approach is a model nearly devoid of specific behavioral content," wrote Powers (1973, p. xi). "I once felt that it was my duty to supply the model with content as well as form, but I am wiser now, and much more impressed with my ignorance." This so-called ignorance is wise if, as we believe, persons are open to changes in their logic and their logic legitimates variously broad arrays of behavior in different situations. Descriptions of the structure of information processing permit the disambiguation of some of Harré's terms, such as "natures" and "powers." Persons' natures are the apparatus by which they transmute sensory experience into information and information into action. Persons' powers are the array of things that they can do because of their natures.

Ample evidence attests to the organization of persons' meanings, and to the fact that this organization is systemic rather than simply a mechanical aggregate of discrete entities. If meanings were mechanically organized, the significance attached to any percept would remain constant and the meaning of the whole would simply be the algebraic sum of salient attributes; studies of person perception, however, have demonstrated that this is not the case. When lists of adjectives describing a person were manipulated by changing one adjective, and it was found that this changed the meaning of the other, unaltered adjectives (Della 1976). Further evidence of the interrelation of meanings comes from a study that demonstrated that specific situations elicited whole clusters of meanings relevant to the stimulus (Stollard and Cannon 1972). Of course, this is the principle behind psychoanalysis, Rorschach tests, Thematic Apperception Tests, and sociodrama. In addition, the cognitions used to assign meanings in one situation may be different than those employed in others (Della 1975).

Bateson used the concept of hierarchical organization of meaning to explain a particularly complex form of social action, "play," and to demonstrate the inherent problematic nature of communication.

I saw two monkeys playing, i.e., engaged in an interactive sequence of which the unit actions or signals were
similar to but not the same as those of combat. It was
evident, even to the human observer, that the sequence
as a whole was not combat, and evident to the human
observer that to the participant monkeys this was "not
combat."

Now, this phenomenon, play, could only occur if
the participant organisms were capable of some degree
of metacommunication, i.e., of exchanging signals
which would carry the message "this is play" (Bateson
1972, p. 179).

The existence of this metacommunicative message, however, com-
plicates rather than simplifies the problem of describing communi-
cation, because the metacommunicative statement "this is play" has
the formal properties of a paradox in which messages are used
simultaneously at different levels of abstraction. The metacommun-
icative message says, in effect:

"These actions, in which we now engage, do not denote
what would be denoted by those actions which these ac-
tions denote." The playful nip denotes the bite, but it
does not denote what would be denoted by the bite
(Bateson 1972, p. 180).

An analysis of a common conversational device, indirect
answers to questions, shows the presence of multiple levels of
meaning. People frequently do not answer questions directly.
Rather than providing the requested information, they make an ap-
parently unrelated response that they expect the asker to hear as
an answer. Comparable to the metacommunicative meaning of a
nip and "this is play," an indirect response invokes a contextualiz-
ing frame in which the message denotes something other than what
the words are usually expected to denote (Nofsinger 1976). Below
are three conversational excerpts used in a study by Pearee and
Conklin (1979), in which a direct question is answered directly or
indirectly. In each instance, the A version includes a direct re-
sponse, the B version an indirect response.

1A. Tom: Hot enough for you today?
   Harry: It sure is.
   Tom: This heat's got to break sometime.

1B. Tom: Hot enough for you today?
   Harry: I always sweat like this when I'm cold.
   Tom: This heat's got to break sometime.
2A. Jim: Did you do well on the exam?
Bill: No, I didn't.
Jim: Sorry to hear it. Better luck next time.

2B. Jim: Did you do well on the exam?
Bill: Does the Pope have a mother-in-law?
Jim: Sorry to hear it. Better luck next time.

3A. Pat: Would you like to go to the concert with me tonight?
Mike: Yes, I would.
Pat: I'll be over about nine.

3B. Pat: Would you like to go to the concert with me tonight?
Mike: If the sun still rises in the East.
Pat: I'll be over about nine.

Seventy-seven subjects (undergraduates in Massachusetts and Iowa) were asked to describe and critique these conversational excerpts on a questionnaire. There were no significant differences between male and female subjects' ratings, or between those of subjects from New England or the Midwest, which implies that the rules for processing these forms of information were comparable for all subjects. However, the subjects evaluated the three excerpts containing indirect responses differently.

The indirect response in the exam and concert excerpts does not say no and yes, respectively, but these were heard by the subjects as an appropriate way of saying no and yes. Further, some information about the context or frame brought about by the metacommunicative aspects of these messages were elicited by asking subjects to contrast the excerpt containing the direct and indirect responses. Indirect responses were perceived as more unusual and humorous than direct responses.

The hot-enough excerpt was perceived differently from the other two. An exploration of these differences indicates that the frames or contexts people use to interpret messages are not arbitrary, but exist within a matrix of perceived appropriateness. A large number of subjects perceived the "I always sweat like this..." as not an answer to "Hot enough for you today?" To determine why this indirect response did not invoke a context that would have redefined its meaning, we examined subjects' responses to an item asking for a global evaluation as to whether the excerpt was of good or poor conversation. Our reasoning was the interpretation of the message as good or poor communication would depend on whether a satisfactory frame could be imposed, and the ability to locate a satisfactory frame would depend on the interpretation of the appropriateness of the metacommunicational messages. The data indicated that virtually all of the subjects who
described the excerpt as poor communication also described the indirect response as inappropriate, disrespectful, and unfriendly. Apparently, the sweat-like-this statement sounded harsh and contemptuous, generating a relational meaning that precluded the subsumption of the excerpt within a context that would legitimate interpreting the indirect response as having the same content meaning as the statement, it sure is. This finding suggests that persons have a complex network of relations among meanings within and among various hierarchical levels, and implies that a theory of persons as processors of information must describe several levels of meaning and the organization within and among levels.

In several places we have proposed a hierarchical model of actors' meanings, which includes from four to seven levels, although the list is not always the same (cf. Pearce 1976; Pearce and Conklin 1979; Pearce, Cronen, and Conklin 1980; Cronen, Pearce, and Harris 1979). Obviously, we are much more committed to the necessity of conceptualizing persons' meanings as hierarchically organized than in arguing the number or sequence of levels. Recall that our purpose is to model the way persons process information, not to describe a true ordering. We expect persons to differ in the number of levels of abstraction they use, in the sequence of levels, and in the extent to which meanings at various levels are consistent with those on other levels. By describing these differences, we will have gained important information about various communicators that can relate to various forms of communication.

The levels of meaning in the hierarchy model in Figure 5.1 serve as a heuristic device, sensitizing the subsequent discussion and research to these topics. Further, the figure may be read as an attempt to integrate several existing strands in the literature that seem focused on meanings at different levels of abstraction.

Level 1

Content refers to the referential cognitive processes by which individuals organize and interpret the world as it is ultimately perceived. As Kelly (1955) said, these percepts are "the creative capacity of the living thing to represent the environment and not merely respond to it." The evidence clearly shows that the process of perception is a complex one in which the characteristics of the perceiving organism are very much a part. At this point, we neither want nor need to rest our argument on any particular claims about the structure of perception except the most general: events themselves cannot account for a person's experience as an intervening, filtering, interpretative process generates the substance of experience. Additional detail about the nature of this process is welcome information but irrelevant to our central argument.
FIGURE 5.1

A Model of Hierarchically Organized Meanings

ARCHETYPES

LIFE-SCRIPTS

EPISODES

CONTRACTS

SPEECH ACTS

CONTENT
Speech acts are the things one person does to another person by saying something. The notion of speech acts comes from Austin (1962) and Searle (1969) in the philosophy of language, and focuses on what semioticians call the pragmatics (rather than the syntactics or semantics) of discourse. The key to understanding speech acts—and why speech acts are an appropriate unit of analysis—lies in the differentiation between speech as the production of messages and speech as the use of messages in human affairs (or pragmatics). Since we are concerned with persons as the focal point of our theory, we do not take language as an existing phenomenon requiring explanation (as does Chomsky), or the production of particular utterances (as do interaction analysts), and so on. Rather, speech acts are what persons do in communication (whether they actually speak or not) as interpreted as an interpersonal exchange of meaning.

The vocabulary of speech acts is self-explanatory. Speech acts include such things as threat, promise, inform, advice, insult, compliment, and so forth. In several studies we have asked subjects to code transcripts of conversations by labeling the speech act intended and understood by the speaker and person spoken to respectively. Although we never tried to determine if their labeling was correct—that would be an inappropriate criterion—we found subjects easily able to perform the labeling task in a way that revealed much about their interpretation of what was occurring (Cronen, Pearce, and Smiley 1979; Pearce, Lannamann, and McNamee 1979; Harrils, Cronen, and McNamee 1979).

Two types of meanings are often differentiated: denotative/referential and connotative/relational. We subsume both of these under the rubric "speech acts" for the difference between them is not, as some early analysts thought, that the first is inextricably linked to events or objects in external reality, and that the other is linked only to fuzzy meanings inside the heads of persons. Rather, the locus of the meaning of both referential and connotative statements is within the meaning structures of individuals. This suggests that within the repertoire of speech acts, there are some whose primary force is referential, some connotative, and some both. It makes more sense to differentiate among these as forms of the same phenomenon than to separate them as different types of entities.

Austin's and Searle's discussions of speech acts are often associated with rules in a way important for the further development of our theory. Austin argued that speech acts are irrelevant to the criterion of truth, but are relevant to felicity conditions by which they may be evaluated. For example, the felicity conditions of a well-brought-off promise include the promiser's intent to do
what he promised and the promiser's having the ability to do what he promised, but not the promiser's control over time, tide, and acts of God. The evaluations made of a promiser who simply neglected to perform as he said he would are different from those made of one who was prevented from performing the promised act by the hailstorm after the tornado that forced his plane to ditch at sea, which caused a blackout during the operation, which slowed his recovery from injuries sustained when his life raft was run down by an oil tanker. But where do these standards for evaluation, or felicity conditions come from? Searle (1969) was most explicit: they are rules by which persons in society regulate their social interaction.

Level 3

Contracts denote the propensity persons have to define relationships with others as things having particular attributes. Formal jurisprudence recognizes some forms of contracts as legally binding, whether they are publicly declared (a marriage), formally written and notarized (a divorce settlement), or implicit (common-law marriage, as in Marvin v. Marvin). Standard usage in our society includes something like contracts between friends, participants in social situations, and even adversary relationships (cf. Schelling 1960). Carson (1969) suggests that some contracts are like legal documents and others like contract bridge: temporary agreements about what is trumps, who is the dummy, and an explicit criterion for success and the termination of the contract.

There are four aspects to interpersonal contracts: boundaries, repertoires, valence, and enmeshment. Boundaries identify the differences between we and they, and may be described in terms of inclusiveness or width, permeability, rigidity, and enmeshment (Minuchin 1967; 1974). Repertoires denote the array of events that are legitimated within the contract. Valence is a complex topic. The research on equity theory (Carson 1969) has taught us that simple affect toward the relationship is not enough. Valence is the configuration of the affect for this contract, individuals' comparison level for their social relations, and the comparison level for alternative contracts they perceive as actually available. Enmeshment describes the extent to which persons identify themselves as within the system.

Level 4

Episodes are "communicative routines which [the participants] view as distinct wholes, separate from other types of discourse, characterized by special rules of speech and nonverbal behavior and
often distinguished by clearly recognizable opening or closing sequences" (Gumperz 1972, p. 17). The distinguishing characteristic of episodes is that they include a temporally extensive pattern as well as an abstract meaning, such that a particular speech act, when perceived as part of an episode, is not only contextualized hierarchically but also temporally. The meaning of the act entails and is entailed by the context of the preceding and subsequent acts.

Since episodes are perceived as wholes, they are at least potentially nameable by subjects, although ordinary language must be sometimes strained a bit. It is fairly easy to sensitize persons to episodic meanings. For example, they recognize the different time spans involved in "having coffee with" and "having dinner with"; the different obligations when asked what they were doing last night during a friendly chat and a courtroom interrogation. One technique persons use to critique the behavior of others is to label episodes and differentiate among the obligations for each, such as: "Hey! What am I, your mother? I don't have to tell you what to do!" or "This conversation is legally privileged, so don't hold back, don't lie, don't make yourself look good." In each case, the sense of what speech act is appropriate is related both to higher level meanings and to the temporal context, particularly anticipated subsequent acts.

Academic recognition of episodes comes from several lines of inquiry, apparently independently. One was formal analysis of strategic behavior. Studies of the "prisoner's dilemma" game show that the amount of trust or suspicion that is developed is more a function of patterns of sequential play (and anticipated sequences) than the result of any single act (Tedeschi, Heister, and Cahagan 1969). Berne's (1964) transactional analysis is based on the assumption that people play games in which the meaning of behavior at any given instance is a function of its location in a sequence designed to reach a predetermined outcome. In recognizing temporally durative strategies, academicians have caught up with what every teenager knows from courting activities: ostensibly innocuous acts—a touch, a glance, a smile—are important because of their implications for subsequent acts.

A second literature that includes an analysis of episodes is that form of descriptive anthropology, sociology, social psychology, and sociolinguistics that deals with persons in a variety of cultures and contexts. Perhaps the clearest example is ethnoscientific or the new ethnography. The purpose of ethnoscientific is to understand cultures by enabling the investigator to see the world "through a native's spectacles," and to discover "beneath richness and variability, the invariances that make communication possible—the elements and structure of cultural codes. [The members of a culture]
cannot totally predict each other's actions, but they seldom surprise one another very much. We should, in principle, be able to replicate their expectations" (Keesing 1971, p. 48). The primary research procedure of ethnoscience is componental analysis which, in our terms, attempts to locate and describe the episodes that a culture defines for itself. For example, Frake's studies of the Subanon shows that the physical act of consuming food means something quite different depending on whether it is done as a "meal" or as a "feast." "It is always appropriate to ask in Subanon, 'what is the reason for this feast?' To ask 'what is the reason for this meal?' would sound somewhat odd in uncontrived contexts" (Frake 1964, p. 472). Feasts function as offerings of various types, each of which has a different function in an elaborate exchange system with the gods. The meaning of the acts involved in the feast are not only determined by the hierarchical identification of meaning, but also by temporally prior and subsequent events (such as illness or a good harvest).

The social psychologist Argyle performed much the same analysis as ethnoscience, in this case using the metaphor of a game. Social interaction, he argued, consists of an array of games, each with its own rules for meaning and action, and requiring a particular set of social skills to perform. "If two or more people want to play a game, they must decide what game it is to be and then agree to keep the rules. Otherwise, there is chaos" (Argyle 1976, p. 175).

The third literature that utilizes the concept of episode is conversational analysis. One of the most commonly noted features of oral discourse is that it is truncated and much is deleted: "human communication is based largely on what is left out of a discourse. People rarely specify everything they intend to communicate. Rather, they specify enough to lead the hearer to an understanding of what is meant. They leave out anything they assume the hearer can figure out for himself" (Shank 1975, p. 167). Several research programs attempt to explain the process by which persons supply missing meanings, citing purely retroactive ad hoc interpretation (Garfinkel 1967), recourse to a universal logic of communication (Grice 1975), or social rules (Nofzinger 1976). As indicated in our interpretation of Pearce and Conklin's (1979) data, we find it more consistent with our theory to explain this phenomenon as one matching the observed sequence of messages with the patterns expected to occur as defined by episodes. This approach is consistent with the research of Hommelvelt (1974) and Shank (1975). Shank explained communicators' ability to interpolate missing meanings by arguing that both conversants know the structure of the episode, and that all they need to represent it cognitively is some specific content and information at particular option points within the script
that will direct it in one way or another. "A script is a grand chain of conceptualizations that have been known to occur in that order many times before... what a script does is to set up expectations about events that are likely to follow in a given situation" (Shank 1975, p. 181).

The repertoire of episodes known by a particular communicator is analogous to the snatches of scripts known by actors in the undirected play. To the extent that an observer can know what episodes are known by the various actors in a group—and the extent to which they are tied to those episodes—s/he possesses a specifiable amount of descriptive and predictive power.

Level 5

Life-scripts refer to that repertoire of episodes that a person perceives as identified with him/herself, the array of interactive situations that are consistent with a recognition of "this is me" or "this is something I would do."

The term life-script is borrowed from transactional analysis because it is semantically compatible with the dramatistic metaphor and connotes a sense of a sequence of scenes with variable content and structure in which persons interact with others. The alternative term, self-concept, has two invidious connotations: it is static and monadic. With Sullivan (1953) and others, we believe that the self is forged in social interaction, and can best be described in terms of real or potential interaction patterns rather than as a monadic, egocentric entity. In the normal process of socialization, a person learns (directly or vicariously) a large repertoire of episodes, some of which are defined as things that s/he would and would not do (the "me" and the "not-me" in Horney's terms).

Further, some of the episodes that are defined as me are positively and some negatively valenced (the "good me" and the "bad me"). By conceptualizing the self as a repertoire of episodes that are enacted sequentially, we focus attention on a number of variables that are informative about human action. For example, the range of episodes associated with the life-script may vary among persons, and that portion of the life-script involved with a particular contract may vary among the participants in a relationship.

Consider the natural history of a close personal relationship in which marriage occurs. One way of describing the relationship usefully is in terms of the ratio of episodes within the contract to those within the life-script. In a not completely hypothetical example, George and Marsha meet while in high school. The first years of their relationship are described by a rapid increase in the ratio of contract episodes and life-script episodes, including a
number of events, such as their marriage, in which the contract enabled them to expand the range of episodes in their life-script. (Beneath the scholarly prose of the previous sentence lie the multiple passions and ecstasies of young love, the thrills and fears of social and economic partnership, the complex reactions to becoming a parent, and so on—check your local newsstand for more graphic portrayals.) However, the demands and opportunities of his job expanded George's repertoire of episodes—including highly valenced episodes—in his life-script, and Marsha's repertoire of episodes as homemaker and mother became more circumscribed. The ratio between the episodes in their contract and in each of their life-scripts reduced. When they were 45 and the children had left home, they discovered they had little in common. (The previous sentence is a prosaic statement of Ionesco's The Bald Soprano.) Knowing these ratios enables an observer to describe and predict some of the things that will happen in such relationships.

We look exception to the term self-concept because it implies—at least to us—a static concept. The assumption seems to be that there is such an entity as a self, which adolescents have to find at considerable cost to themselves and others, and that scientists may use as a predictor/explanation of behavior. The latter usage has not worked well at all. The debate about the utility of traits has raged for years in social psychology, and the evidence seems clear that traits provide some predictive information but not enough to support a science. Argyle (1976) attempted to bring order to this controversy by resorting to a field theory, arguing that behavior is a function of a multiplicative relation between personal traits and the demands of the situation or episode. This seems improbably mechanical to us.

Rather than identify the self with any traits assumed to extend across situations, whether as an entity or as a multiplicative function, we prefer to think of the self simply as that cluster of episodes defined by the person as those in which s/he does or might participate. This conceptualization focuses attention on the extent to which persons vary in the number of episodes in their life-script and on the degree to which the content and structure of the episodes in their life-script are homogeneous. These features become variables for empirical study rather than problems for theory.

**Level 6**

Archetypes are at the highest level of the hierarchy. All of the levels of meaning discussed above comprise a way of punctuating the sensory inputs from the events and entities of experience. We have argued that such punctuating or interpretation is irrelevant to
the criterion of truth, but that it is also not capricious. There is a fundamental logic that is used to frame experience, and at the most abstract levels this comprises archetypes. We are not sure what form archetypes take, and in this we are in excellent company.

Rather than attempting to describe or define archetypes, we will simply argue that there seems to be something at this level that not only guides individuals in punctuating experience, but which also—beneath the diversity of culture, situation, and personality—is common enough to make those punctuations communicable. Let us assume three things: meanings are imposed on the stream of experience rather than being derived from it; meanings require comparable framing if they are to be understood well enough for coordinative communication to occur; and coordinative communication is observed to occur even—with difficulty—across centuries and cultures. How is it, then, that persons frame experience comparably? The answer suggested here is that humans share a common physiology and live in a world with common physical properties. The recurrent verities of human experience—birth, maturation, death, joy and agony, hope and despair—coupled with a perceptual and neurological structure that is relatively undifferentiated in the context of a similar environment in which "up" requires more exertion than "across," sharp things cut and hurt worse than round things, and so on, have produced a common enough experience that similar contextualizing patterns have been developed.

Full circle, from the tomb of the womb to the womb of the tomb, we come: an ambiguous, enigmatical incursion into a world of solid matter that is soon to melt from us, like the substance of a dream. And, looking back at what promised to be our own unique, unpredictable, and dangerous adventure, all we find in the end is such a series of standard metamorphoses as men and women have undergone in every quarter of the world, in all recorded centuries, and under every odd disguise of civilization (Campbell 1949, pp. 12-13).

The Structure of Information Processing

The hierarchy model is a heuristic device for identifying the types of meanings persons make and for identifying their relative levels of abstraction. It does not, however, describe the process by which sensory input is transmuted into meaning and action, or the means by which meanings at one level of abstraction are related to others at that level and to higher and lower levels. We repre-
sent the linkages among meanings within and between hierarchical levels as rules.

We chose the concept of rule because it stands between an excessively static and an excessively chaotic representation of social reality (Cushman and Whiting 1972). In our usage, rules are descriptions on how persons process information. This differs from two other uses in the literature. Some use rule as a label for a weak empirical generalization: events that happen as a rule are regular, but do not have the generality or nomic necessity associated with a law. Another usage is a synonym for social norm, and denotes an evaluation or behavioral contingency that is agreed upon by virtually everyone. The differences among these may be seen in the existential locus of the rule. As an empirical generalization, the referent of a rule is in the event-objects produced by various actors; as a social norm, the referent is in a community; as a description of information processing, the referent is "in the head" of persons.

We do not claim that constitutive and regulative rules are entities that exist, endure, and have powers. Rather, we claim that persons are enduring, powerful entities that process information, and that constitutive and regulative rules are useful heuristics for describing the way they process information. Specifically, formal models of rules serve as analogs for description and as measurement models for empirical research.

Logical Operators

Since rules purport to describe the way persons process information, the structural elements will express entailment in a fashion similar to that in formal logical syllogisms. However, there are at least four reasons for using a non-Aristotelian logic: the irrelevancy of truth as a criterion for action or ways of punctuating experience; the necessity of including hierarchical relationships; the necessity of including an operator denoting the autonomous state; and the importance of representing entailment as having variable strength depending on the characteristics of persons rather than formal relations among propositions. These considerations produce a hierarchical, episode-dependent, deontic logic, in which five operators are needed.

We borrowed the disjunctive operator $\lor$, or "if . . . then," from traditional logic, but with some rather important changes. In the expression $X \lor Y$, we express a sense of sequential entailment of actions rather than a simultaneous entailment of identification. Traditional logic would unpack the phrase: "If there is an entity with characteristic X, then it also has characteristic Y." In our
usage, the phrase means, "if an entity perceives X as having occurred, that entity perceives that it should do Y." Second, we describe the strength of the entailment denoted by the operator as a variable rather than as a category.

The "counts as" operator, \( \rightarrow \), we created by stealing the symbol for rewrite statements from linguistics and the concept from the speech act philosophers of language. This symbol denotes a meaningful definition in the form of an identification of a sensory input as a meaning or one meaning as equivalent to another.

The hierarchical operator, \( \Uparrow \), is taken from Brown (1972) and is read "in the context of." For example,

\[
\frac{X}{Y}
\]

means Y in the context of X and implies that whatever is asserted about Y is limited to this context. The expression

\[
\frac{\text{play}}{\text{insult} \rightarrow \text{joke}}
\]

means that one should laugh if one is insulted during play, but if the context is changed, the meaning of insult is expected to change as well.

The autonomous operator, \( \square \), is taken from Varela (1975) and is read, simply, "and." The statement "I \( \square \) family" is read "I and family," and denotes reciprocal contextualization equivalent to

\[
\frac{\text{family}}{1} \quad \text{and} \quad \frac{1}{\text{family}}
\]

The autonomous operator enables us to state without paradox messages that are inherently paradoxical in traditional logic. For example, primitive peoples do not share the modern differentiation between self and society. To be sure, they can recognize the difference but they do not think about it in the same way as a person in a modern culture. For modern persons, identifying the self is a problem because they feel that it must be inside or outside of a hierarchical operator. What primitive persons' thought about the self is better represented by the autonomous operator, making the identification of self unproblematic. Consider this statement we heard in a moment of self-analysis: "If I were then who I am now, I wouldn't have to do what I did then; but if I hadn't done what I did then, I wouldn't be who I am now." What is cause and what is effect? The statement describes a strange loop that is impenetrable to Aristotelian logic, but is easily described using the autonomous operator: I am \( \square \) what I did.
Finally, deontic operators describe the nature of the entailment. Persons perceive appropriatenesses among acts, ranging from simple contiguity (where particular events are perceived as appropriately occurring together simply because they always have in the past) to well-articulated moral, conceptual, or scientific cosmologies (where particular events are perceived as appropriately occurring together because it is God's will, or expresses human values, and so on). Von Wright (1951) developed a deontic logic in which the entailments were degrees of "oughtness" rather than truth conditions, expressed as the operators obligatory, permissible, irrelevant, and prohibited. We employ more the principle than the content of von Wright's deontic logic. In our research protocols, we have converted the deontic operators to scholar variables that measure the strength of the implication between meanings that persons believe are appropriate.

These operators provide the structural elements necessary to represent regulative and constitutive rules.

**Constitutive Rules**

Constitutive rules specify how sensory inputs count as meanings, or how meanings at one level of abstraction count as meanings at another. For example, the statement "you are beautiful" counts as the speech act "compliment"—at least sometimes, given the episodic contextualization "dating" or the contract contextualization "friends." However, the context "argument" or "enemy" may make another constitutive rule salient that identifies the statement as "sarcasm insult."

The primitive form of a constitutive rule may be algebraicized as shown in Figure 5.2. This primitive form specifies that in a certain context, if specific antecedent conditions are satisfied, then meaning at one level of abstraction counts as meaning at another level of abstraction. For example, constitutive Rule 1 in Figure 5.2 should be read: In the context of the episode "playing the dozens," if it is the other's turn, then insults to one's mother and to one's father both count as gamesmanship, and is to be evaluated as a demonstration of verbal skills.

Constitutive rules describe one aspect of information processing: the assignment of meaning. They do not describe the process by which particular acts are felt appropriate. That is the function of regulative rules.

**Regulative Rules**

The primitive form of a regulative rule may be algebraicized as shown in Figure 5.3. This form specifies that in the context of
FIGURE 5.2

Primitve Form of a Constitutive Rule

\[ CR = \frac{MC_k}{\Lambda \triangleright [MC_l \rightarrow MC_j]} \]

Where:  \( \Lambda \) = Antecedent Condition

\( MC \) = Meaningful Construction

\( l, j, k \) = Levels of Abstraction

\( \rightarrow \) = Read "Counts as"

\( \triangleright \) = Read "In the Context of"

\( \Rightarrow \) = Read "If . . . Then."

Example:

Episode: Playing the Dozens

\[ CR_1 = \]

\( \Rightarrow \) Opponent's Turn

\( \Rightarrow \) [Insult to Mother

Insult to Father

Gamesmanship]
**FIGURE 5.3**

**Primitive Form of a Regulative Rule**

\[
RR = \left[ \begin{array}{c}
A \supset (Do(\text{ACTN}_i))_{i \leq n} \supset C
\end{array} \right]
\]

Where:
- **RR** = Regulative Rule
- **A** = Antecedent Condition
- **Do** = Deontic Operator (obligatory, legitimate, prohibited, residual)
- **\( \supset \)** = Read "If . . . Then"
- **ACTN_i** = Read as "Action." A class term for specific speech act(s) or extended episode(s).
- **ACTN_j** = Meaningful construction of social action at a level of abstraction
  - Higher than level i.
- **C** = Consequent Conditions

**Example:**

**Life-script of "A Brother"**

\[
RR_1 = \left[ \begin{array}{c}
\text{Brother initiates playing the dozens} \supset \text{(Legit. (engage in episode of playing the dozens))}
\text{Maintain status in the Group} \supset \text{(Legit. (scoff at that "kid's game"))}
\end{array} \right]
\]
certain social action, if given antecedent conditions obtain, then there exists some degree of force for or against the performance of subsequent actions. The primitive form further indicates that within a context of social action, if an antecedent condition is followed by specific action(s), then some consequences ought or ought not to follow. For example, regulative Rule 1 in Figure 5.3 should be read: in the episode of playing the dozens, if the opponent insults my parent, then it is obligatory to top his/her last insult in order to avoid the consequence of losing the game.

Because regulative rules guide sequential action, they exist only in those levels of the hierarchy model where the meanings are temporally durative. Regulative rules are cognitive reorganizations of constitutive rules.

The structural form of regulative rules expresses more than our imaginative prowess. The format is necessitated by and adequate to account for the results of a wide range of research about social action. Specifically, the literature suggests that the performance or interpretation of any speech act is importantly contextualized in three ways. First, as Koestler (1978) noted, acts are hierarchically contextualized such that the meaning of the part depends upon the whole, but not vice versa. A number of studies have described the assignment of meaning to messages as a process of "tacking back and forth" between higher and lower level meanings (cf. Bateson 1972; Rommetveit 1974).

Second, temporally antecedent conditions have been shown to contextualize—in this case, alter the probability of the occurrence of—subsequent conditions. Stech (1975), Raush (1965), and Penman (1977) have found that certain types of messages tend to follow specified other types. Argyle (1976) found that situational factors consistently account for a greater percentage of the variance in behavior than personality traits, and clinical studies show that a failure to adjust messages according to antecedent conditions is a sign of psychological disorder (Moos 1968).

Third, temporally consequent conditions—or the expectation that a given behavior will elicit a particular response—also contextualize sequences of behaviors. Bruner's (1974) analysis of mother-infant dyads and Maler and Solem's (1962) small group process research demonstrate the effect of desired or expected consequences on current behavior.

Measurement Models

The various components of a rule are depicted as interrelated, but the algebraic formulas are merely place markers for linkages that may vary widely in strength. In this sense, the formulas serve
as measurement models, for we do not assume the entailments on acts to be consistent across any individuals' rule system or between various persons' rule systems. Figure 5.4 depicts the linkages among the components of a regulative rule including four hierarchical levels. Each linkage can be measured as a variably strong entailment.

**FIGURE 5.4**

Measurement Model of a Regulative Rule*

*Arrows represent linkages among components: solid lines depict prefigurative force; broken lines practical force. Each linkage may be converted to a scalar value, and each component has a measurable valence. Logical force is a function of these valences and linkages.

**Act-antecedent linkage.** This describes the extent to which a person perceives a particular act or array of acts as entailed because of the preceding event or action. When this linkage is stronger than any other, the person perceives his/her act as caused, rather than, for example, purposeful. If an observer asked a person "Why did
you do that?" answers using the term "because of" and referring to previous events are indicative of a strong act-antecedent linkage.

**Range of action.** Regardless of the source of entailment, the array of actions the person perceives as legitimate to perform may vary. In extreme cases, a person may feel there is absolutely no legitimate act available (such as, in a double bind) or that anything is legitimate (such as, in an enigmatic situation). In more usual circumstances, the person may feel obligated to perform a particular act or to choose from a specified range of acts.

**Act-consequent linkage.** An actor may feel compelled to perform a specific act because it is necessary to bring about a particular subsequent event (such as, an act by another person). When this linkage is stronger than any other, the person perceives his/her act as purposive, and if asked "Why did you do that?" is likely to say "in order to" and refer to some subsequent event.

**Act-episode linkage.** Note that this and the other arrows in Figure 5.4 that move between hierarchical levels are double-headed, representing the possibility of both causal and purposive linkages. This dual-directional entailment is discussed at some length below, but for the purposes of the measurement model, simply note that persons perceive the entailment between particular acts and particular episodes to exist and to vary. For example, the episode of Mass obligates the participants to perform specific acts in a way in which casual chatter does not. On the other hand, phatic communion as described by Mallnowski (1923) does not obligate any specific acts but does prohibit some, such as, taking the content of the conversation seriously. The strength of these linkages between various episodes and particular arrays of actions affords the basis for a structural description of episodes. For example, rituals are episodes in which all acts that are not obligatory are prohibited; games are episodes in which some acts are obligatory, some are prohibited, and an array are legitimate; and enigmatic episodes are those in which incompatible acts are legitimated. This analysis resembles Harré and Secord's (1973), but suggests the possibility of empirical measurement as well as anecdotal analysis.

**Consequent-episode linkage.** The performance of some episodes may require that the other person perform a particular act. Persons sometimes perform actions that have very weak linkages to the antecedent, episode, and so on, but a strong link to a consequent that in turn has a strong link to the episode. If asked "Why did you do that?" an analytical respondent may well reply "In order
to get Sally to do what she did because that is important for our performing this episode." In some convoluted social situations, there may be a problem: the only act that has a strong link to a consequent that is obligatory for the episode itself is prohibited by the episode.

**Act-contract linkage.** Particular interpersonal relationships may be defined by the array of acts they prohibit, obligate, and legitimate, and the meaning of particular acts may be defined as expressions or negotiations of various interpersonal relationships. This suggests a structural basis for devising taxonomies of relationships and a rationale for doing interaction analysis in terms of relational meanings of acts.

**Consequent-contract linkage.** To maintain or achieve a particular relationship with another person, it may be necessary to get them to perform some act.

**Contract-episode linkage.** One way of defining a contract is by the episodes it obligates, legitimates, and prohibits.

**Contract-life-script linkage.** A person's definition of self may necessitate the maintenance of particular relationships, or those relationships may be irrelevant to the life-script. The strength of this linkage should combine with the strength of the contract-act linkage, and so on.

**Episode-life-script linkage.** The concept of self may be measured as those episodes the person feels s/he must perform, may perform, and may not perform.

**Act-life-script linkage.** An individual's conception of self-inaction "who I am," may seem to necessitate some acts with greater force than others. Sometimes strong act-life-script linkages cause persons to act in ways apparently incongruous with the demands of the episode or their desired consequent conditions.

The measurement model may be further complicated by assuming that each element in the model has a valence, ranging from very positive to very negative. The power of the model in Figure 5.4 to describe a wide array of social situations is considerably enhanced by the addition of valence. Not only can persons tie themselves in knots by having contradictory entailments among components, but also it is possible to feel obligated to perform loathsome acts and prohibited from performing desired acts. This
ability to depict the conflicts between duty and will and the complexity of social relationships seems to us a significant attribute of the model. The measurement model of hierarchically organized constitutive and regulative rules depicts persons as variably structured systems that process information. One value of this conceptualization is that it permits further extension into a model of interpersonal processes in communication.

INTERPERSONAL RULE SYSTEMS AND COORDINATED MANAGEMENT

Both the dramatistic metaphor and our definition of communication focus attention on collective, conjoint actions by persons. This raises the question of how individuals should be analyzed vis-à-vis the group. Consistent with the discussion of holonic organization in Chapter 4, we characterize persons as variably structured systems who, when they start taking other persons into account, are components of interpersonal systems. This section describes the characteristics and function of interpersonal systems. The argument may be summarized in two statements.

The rules of communicating individuals internmesh to form an interpersonal system, of which persons are holonic components. The interpersonal rule system is structurally deficient:

- It lacks a systemwide cybernetic monitor, but has cybernetic monitors within each of the components;
- The locus for meaning in communication is intrapersonal, but locus of action is interpersonal;
- Communication is inherently problematic because there is no cybernetic monitor extensive enough to regulate the sources of action; and
- The component systems, persons, are potentially only partially enmeshed in any given system and potentially multiply enmeshed in multiple systems.

The mechanism by which persons become intermeshed into an interpersonal system lies in the structure of regulative rules. In a regulative rule, the act a person is to perform in any moment lies between an antecedent and consequent event, both of which are performed by other persons, and is hierarchically contextualized by other meanings that are transpersonal. Although it is useful to describe regulative rules as representations of intrapersonal information-processing procedures, when persons begin acting in
social contexts, important parts of their regulative rules are controlled by those others. Further, their acts become the antecedents and/or consequents for other persons' actions. In a very literal sense, persons do not act in isolation from others.

We suggest the term coordination as an ancestral term for interpersonal action. Because coordination is inherently transpersonal, it orients inquiry away from two less productive lines of inquiry: intrapersonal management of meaning, and the interpersonal management of other peoples' meanings.

A great many thinkers have stressed the ability to manage one's own meanings in social situations as perhaps the single most important prerequisite for living the good life. The Four Noble Truths of the Buddha clearly appeal to the intrapersonal management of meaning: the cause of pain is identified with caring about things and the solution is to stop caring. Aristotle's ethics of the middle way has much in common with Buddhistic thought, but the later Roman stoics—particularly Epictetus—are the Westerners who most closely approximate Buddhist fascination with the intrapersonal management of meaning. Arendt (1978) argued that the concept of willing, deliberately choosing to initiate a line of action, is a relatively recent development, first expressed in full form by St. Paul in the Epistle to the Romans. Subsequent Christian theology has often emphasized a "Damascus road" experience of conversion or radical restructuring of meanings as the key to happiness.

Particularly in the West, however, persons have been more inclined to manage other peoples' meanings than their own. Since Protagoras proclaimed the art of persuasion to be "both beautiful and just," rhetoricians, courtresses, advertisers, and social scientists have devoted an unbelievable amount of energy to the task of discovering how to influence other people. Formal treatments of this topic range from the canons of argumentation to the devices of brainwashing, and from nonverbal cues in impression formation to control of information in national propaganda. More important for present purposes, the control of other peoples' meanings has been the governing rationale for the study and use of communication. From the classical Greeks to the present, the dominant concept of communication has been what Schramm (1971) called the bullet theory. In this view, communication is something one person does to another, and the content of the message is isomorphic with the effect. The clearest example of this dead metaphor is the research design used for over a decade by Ilovland and his associates at Yale: a source (which might be experimentally varied) would produce a message (which might be manipulated) to an audience (with assigned characteristics) to produce effects that were measured and treated as the dependent variable (cf. Ilovland, Jants, and Kelly 1953).
A large number of people—including Hovland (1959) himself, in a poignant reconciliation of the differences between the results of experimental and field research—realized that this metaphor/ancestral term simply did not lead to the asking of the most useful questions. A long history of studies of political and consumer decision making (Blumer and Katz 1974) showed that persons in the audience are active, selecting among persons to communicate with and media to attend to; that the social relationships among the audience affect their response to messages; and that persons use media and messages to gratify their own needs, which may be very different from the intentions of the message source.

Balance theorists and coorientation theorists from Newcomb (1953) to Chaffee and McLeod (1968), stressed the multifaceted relationship between persons who communicate, a variable neatly obscured by the perspective of the bullet theory. Newcomb's discussion of autistic hostility indicated the necessity for considering the effects on both the source and receiver; persons who think they disagree with a friend about a particular topic may systematically avoid talking about that topic to prevent an exacerbation of the disagreement, which may threaten the friendship. If the person incorrectly perceives the disagreement—that is, they actually agree—the resulting conversation patterns preclude discovery of the agreement. This pattern of conversational topic management would never have been discovered using research built upon the bullet theory metaphor, because it necessitates examining the source's decision-making processes. Similarly, Chaffee and McLeod devised a measurement model of interpersonal coorientation about topics that differentiated between actual agreement, perceived agreement (congruency), and the accuracy with which each person perceived the other's attitude toward the topic. They found communication seldom changed agreement, but frequently increased the accuracy with which each person perceived the other. These data would not have been collected under the bullet theory as an ancestral term because they necessitate conceptualizing both the source and the receiver as affected by the message.

The bullet theory makes sense only when informed by a positivist philosophy of science in which entities are defined reductionistically: message variables, personality traits, and so on, are assumed to exist and have stable properties. The utility of these metatheoretical assumptions was challenged by Rogers and Bhowmik (1970), among others, who introduced relational variables, which were defined by the relationship between two measurements rather than as a function of any single entity. Although this might appear simply as a matter of computation, it directly refutes the corpuscularian world view essential to the positivist tradition.
Rogers and Bhowmik were asking much the same question as had Aristotle and Hovland: What kinds of persons are most persuasive? The answer had always been "It depends," but Rogers and Bhowmik were able to specify that what it depended upon was a pattern of relationships between sources and receivers rather than on characteristics of either in isolation. They postulated the existence of the variable homophily (such as, preference for sameness), and their research and others showed that an optimal level of homophily makes persuasive attempts most successful. With either too much or too little similarity, the predominantly conservative or change-impeding forces of audience activity come into play.

In a parallel development, an increasing number of communication scholars began to question the utility of an approach to communication that focused solely on the intent to persuade. Matson and Montagu (1967) described an "unfinished revolution" in which communication was being used as a means of increasing human choices rather than reducing them by persuading a person to act or believe in a particular way. Rogers (1961), Buber (1947), and others described patterns of communication—and adduced considerable evidence for their social importance—that could not usefully be described using, for example, Hovland's rendition of the bullet theory metaphor. The problem lay in the dependent variable. If a syndrome of genuineness, accurate empathic understanding, and unconditional positive regard increased persons' ability to choose among a larger array of alternatives, then their behavior became less predictable to the message source or the experimenter, and this ruined the logic of hypothesis testing.

The significance of this unfinished revolution lay in the argument Matson and Montagu made: these are processes writ large in the development of culture in the twentieth century, not just limited to the psychologists' therapy session. Maslow (1966) stated his objective as a social scientist as that of "Increasing persons' ability to predict their own behavior while reducing their ability to be predicted by others," and Gergen (1973) somberly concluded that the conduct of research, and particularly the publication of its findings, inevitably changes the society studied, such that social science writes history, not predictions. Even if these positions are overstated, they belie the utility of the bullet theory metaphor.

It is nothing new to berate the bullet theory for its inadequacies. The problem consists of developing an alternative. The coordinated management of meaning includes a simultaneous focus on persons, systems in which persons are components, and patterns of conjoint actions explained by the properties of the interpersonal systems. This approach contrasts with the three perspectives on communication that, in addition to the repudiated bullet theory,
account for the bulk of communication theory and research. These perspectives may be characterized as individualism, which focuses on intrapersonal variables; conversational analysis or interaction analysis, which focuses on properties of talk or other emitted behaviors; and interactionalism, which focuses on the relationship between persons.

The individualistic approach is based on the assumption that a person's behavior is responsive to his/her interpretations of the environment, not to the environment itself. All that exists of a relationship is the way it is perceived by an individual. An interpersonal relationship is the same nonexistent entity as perceived by two or more persons.

The clearest exemplars of individualistic researchers are those who, like Steinfalt (1978), search for characteristics of persons—personality traits, beliefs, and so on—that will account for their decisions to communicate and the effects of that communication. These trait theorists have been loudly assailed recently by situationalists, who argue that more of the variance in communication behavior and effects may be accounted for by specifying the situation than the characteristics of the individuals. This controversy seems pointless, however, since both focus exclusively on the individual, with one group searching for trans-situational personal characteristics and the other arguing that situation-specific demands for action, as interpreted by the individual, are more powerful.

Another major group of individualists are constructivists. As articulated by Della and others, the individual's primary task is to make sense of the environment, which s/he does by developing a system of constructs, each of which is a bipolar continuum. Particular percepts are located at the intersection of an array of constructs and thus give the meanings very hard, very cold, somewhat white, somewhat transparent, and so on, as the representation of ice. The individual's development of his/her construct system goes from global to differentiated, and the degree of complexity is understood to be an important explanation in the individual's role-taking ability, impression formation, and so on.

The argument common to all of these individualistic theorists is that the observer must somehow get into the head of the actors, and this is all the information really available or necessary on which to base explanations. This shared assumption is specifically denied by the interactionists, who argue it is either impossible or unnecessary to know communicators' meanings. Rather, the focus is on the interpersonal relationship as a real entity without attempting to describe any individual person as such. This argument is based on Bateson's claim, as elaborated by Watzlawick and others
(Wilder 1979), that the meaning of any given event lies in the configuration of which it is part (cf. Bateson 1979). A description of any single person or any single act without a description of the persons or events contextualizing it is worse than useless. Consistent with these premises, these analysts describe relationships as exemplars of a more general pattern, such as, symmetrical or complementary or schizogenetic, and explain the existence of patterns on the basis of rules. These rules are descriptions of regularities derived from redundancy analysis (Watzlawick, Beavin, and Jackson 1967): the question of whether either or both of the persons in the relationship know the rules of useless and unanswerable.

The conversation analysts and interaction analysts reject both the possibility/necessity of identifying actors' meanings and the utility of identifying a particular configuration of persons as an entity. Instead, they focus on texts: transcripts or recordings of actual conversations. In terms of the dramatistic metaphor, they are the critics who attempt to locate the hand of the playwright behind the dialogue, or perhaps the character of the director behind the scenery. One of the most sophisticated exemplars of interaction analysis is Stech (1975), who defined "statements" as the irreducible particulars of reality, labeled each statement in a number of conversations according to a coding scheme, and computed the probability of various types of statements occurring in sequence. By repeating this process across several types of conversations, he claimed some degree of domain and syntactical generality, leaving the nature of the necessity undescribed.

A large group of conversational analysts, following Grice (1975), developed a procedure in which conversation itself is considered an entity with a structure—for example, a logic—which necessitates certain forms of message sequencing and conversational implicatures by interlocutors. Grice quite explicitly searched for inherent properties of conversation—which he called maxims—which would logically require the observed forms of conversation, while disdaining the "merely empirical demonstrations" that the logical properties were actually followed. Nofsinger (1975) shifted from Grice's emphasis on conversation per se to persons as information processors as the entity requiring theoretical explanation. Nofsinger observed particular conversational forms—such as, the demand ticket for a speaking turn and indirect responses to questions—and proposed rules that describe how persons apparently process information. Nofsinger claims the rules he writes are capable of accounting for action in the instances he describes. He has not addressed the issues of generality or necessity, or even asserted that persons actually know these rules and act upon them.
We believe that a concept of interpersonal systems comprised of intermeshed rules in which coordinated management occurs is a more useful perspective than those reviewed above.

Figure 5.5 presents a worked example of the logic of conversation produced by the intermeshing of two personal systems of rules for meaning and action. Note that each person's interpretations and utterances are appropriate given his/her own constitutive and regulative rules, and that each sequential act interlocks with the other person's rules as the consequent of the preceding act and the antecedent of the subsequent act. Note further that the logic of the interpersonal conversation is incoherent, differing from the intentions or logic of either the Casual Contemplator of the Human Condition or the Tough-minded Social Scientist.

The logical force of intrapersonal systems is produced by the intermeshing of two or more persons' rules, and this logic is not necessarily isomorphic with the structure of either or both of the individuals' rules. This characteristic explains the claims made by some systemists that the system is its own best explanation or that systems cause themselves. If there is a knowable property of the interpersonal system that subsumes but is not subsumed by the characteristics of persons, then it is clear how individuals can feel lost in something "bigger than the both of us" or forced to act in ways against their will.

The concept of a transpersonal logic of action, which individuals can influence but cannot control, has elicited strong opposition in some scholarly circles. However, using the conceptualization of persons presented in the preceding section, we have developed a simple demonstration that makes two points: the meanings of particular individuals combine to form interpersonal systems whose structure bears no mathematically functional relationship to the characteristics of the persons who comprise it; and a study of the actual sequences of acts produced by two persons does not necessarily reveal either person's rules for meaning and action. (Obviously, this demonstration was constructed with premeditated malice to refute the claims for the utility of the perspectives employed by the individualists, the conversational/interaction analysts, and the interactionists, as well as to illustrate our position.)

Consider the message system in Figure 5.6, comprised of an artificial language in which there are only four messages: \( O \), \( \Box \), \( \Delta \), and \( \star \). Assume that users of this message system have learned a grammar that permits only some messages to follow others, and persons, \( A \), \( B \), and \( C \) differ in the complexity of the rules in their personal system. Assume for the purposes of demonstration that the goal of every conversation is to use all four shapes (messages) as soon as possible, and that all persons must follow their rules (anything not expressly permitted is forbidden).
### Constitutive and Regulative Rules in an Uncoordinated Conversation

#### Greeting Ritual
- **Greeting** → *(Oblig (Great))* → Continue Chat
- **Greeting** → *(Legit (Discuss status of projects)) (Legit (Summarize findings))* → Be informative, continue the professional chat.

#### Friendly Joking
- **Joke** → *(Legit (Show Appreciation of Joke)) (Legit (Reply with Joke))* → Be Friendly Continue Joking
- **Profesional insult** → *(Legit (Reply with insult)) (Legit (Walk away))* → Equalize Status Terminate Episode

#### Professional Chat
- **Exchange of Insults**
- **Exchange of Insults**

#### Enigmatic Episode
- *(Oblig (Make another joke)) → Continue Friendly Exchange*
- "Next time, if you don't want to talk just say so. There's no need to insult me."
- *(Oblig (Express hurt feelings and terminate)) → Terminate Episode*
FIGURE 5.6

Three Intrapersonal Rule Systems for Conversing in an Artificial Language

These are the only symbols in a language

○ □ ★ △

These are the rules for using this language for three persons

A: ○ ⊂ □ or ★ or △
    ★ ⊂ ○ or △ or ★
    △ ⊂ ○ or □ or ★ or △
    □ ⊂ ○

B: ○ ⊂ □
    □ ⊂ ★ or □ or △
    ★ ⊂ ○ or △ or □
    △ ⊂ ○ or □ or ★ or △

C: ○ ⊂ ○
    □ ⊂ ○
    ★ ⊂ △
    △ ⊂ □
First, use the spectacles of the individualists: look at each person in isolation. Obviously, persons A and B are much more complex than person C, as they have much more freedom of choice. An individualistic theory would take information such as this and predict behavior, for example, that a conversation between A and B would more quickly produce the desired goal (all four shapes) than either A and C or B and C; that A and B would find conversations with each other more enjoyable, fulfilling, interesting, than either with C; and so on. All of these predictions can be shown false. Assuming that all conversations must start with O, the conversation between A (who speaks first) and B must go like this: O, O, O, □, O, □, O, □ . . . . It is boring, frustrating (because neither gets to exploit his/her complexity), and cannot achieve the desired goal. However, the conversation between A and C may take many forms, and can include all four shapes in a minimum of five turns. The implication of this demonstration is that the actual forms of conversation are a function of the conversants' rules for meaning and action, but not as a simple combination of individual characteristics. But is the relationship between individual characteristics and the form of interaction a more complicated combinatory principle? If so, some mathematical function should be derived that will describe that relation. The prospects for this procedure, however, are diminished by two additional demonstrations.

Notice that A and B are comparably complex (for example, they have the same number of options—11—in their four-rule systems). However, a conversation between B and C is virtually the same as between A and B. B and C must produce this sequence: O, O, □, O, □, O, □ . . . . From B's vantage, A and C are equally inept communicators, while A finds C much more liberating than B. Further, the pattern of communication is drastically altered if in a conversation between A and B, B starts with O, or A starts with anything other than O.

These demonstrations suffice to support the necessity of including the interpersonal system as an entity in a theory of communication. Even though persons are components of the interpersonal system, it has properties that are nonsummative.

The message system described in Figure 5.6 also permits refutation of the interactionists' claim that it is unimportant to "get inside the head of" persons. Assume that person A is wandering through the directorless theater and encounters B and C, initiating conversation with them each time by selecting O. Simply by inspecting the patterns of communication that result, any inferences about A—and particularly about B and C—are likely to be very wrong and counterproductive in an attempt to explain behavior. Further, simple descriptions of patterns are likely to be easy in conversations between A and B and B and C, but not between A and C.
We propose the construct "logical force" to describe "action-chains" (the term is Hall's 1977) that are created by the formation of an interpersonal rule system. Visualize each person as an organized cluster of constitutive and regulative rules, giving them the power to interpret other persons' acts and to translate those meanings into felt obligation to perform actions of their own. Obviously, two entities with such potential are likely to set each other off when they come into contact, and the pattern of acts is a function of the way their rules intermesh. This logical force is simultaneously facilitating and constraining. It is facilitating because it permits persons to participate easily in complex patterns of interpersonal interaction they would be unable to negotiate on the spot or would be debilitatingly tiring to negotiate. It is constraining because the action-chains in the logic may preclude desired patterns of interaction or obligate undesired patterns.

There is ample evidence of logical force in the various literatures of people watchers, although most reporters have lacked an equivalent concept and apparently have not seen how such a concept (if one existed) could fit into a scientific theory. Books such as Farb's Man's Rise to Civilization (1978) and White's The Concept of Cultural Systems (1975) are fully consistent with logical force, and—we believe—would profit from the inclusion of this term.

Boulding's analysis of social inventions is a rather obvious attempt to grapple with what we are calling logical force. Further, Boulding noted that a new way of doing research is necessary to study the development of action-claims in a society:

Social inventions often take place so softly and imperfectly that they are hardly noticed, and the history of social invention as a result still largely remains to be written. Who for instance invented the handshake? How did we change from a society in which almost every man went armed to a society in which we have achieved almost complete personal disarmament, and in which human relations are governed by conventions of politeness, by disarming methods of communication, and by largely nonviolent techniques of conflict? Most of all, how do changes take place in child rearing? (Boulding 1964, p. 13)

Other analyses amenable to reinterpretation as logical force include Minuchin's (1967) study of families in U.S. urban slums. From an observer's perspective, these families exhibit highly patterned and predictable behaviors. However, the members of these families are usually unaware of these patterns, and surprised and
dismayed by the recurrence of undesired elements in them. This appears a classic instance of a transpersonal logical force in the system that is unlike the rules of any of the individuals involved. Similarly, Walton's (1969) analysis of organizational conflict described interpersonal patterns caused by the interactive properties of several persons' rules, and his intervention strategy was to teach his clients to perceive these patterns and avoid them.

One need not stay immersed in scholarly literature for examples of logical force. The character Buddy in the "Dick Van Dyke Show" was a veteran comedian who—in our terms—had developed a complex and specialized system of constitutive rules so that any comment by any person at any time was interpreted as a straight line obligating a joke, and a wide enough array of regulative rules to enable him to make a joke when prompted by any straight line. The result was that all conversations with Buddy were punctuated as a series of jokes: his rules, as a component of an interpersonal system, produced a strong logical force making a particular pattern of communication very likely.

We amuse ourselves by imagining the communication that might occur when particular sets of rules are intermeshed. For example, Turkish young men engage in a competitive language game in which they exchange insults in rhyme; urban U.S. blacks have a similar game—the "dozens"—except that rhyme is optional and sexual and scatological humorous insults are obligatory; and Puritan ministers of the seventeenth century were against all forms of levity and insults. With just a bit of ethnographic and historical work, the rules of each of these groups can be written. The reader with a penchant for the absurd may now envision a conversation among representatives from these three groups.

The logics of interpersonal rule systems, as we will show in the research in subsequent chapters, are far from trivial. For example, the conduct of organized social life is possible only given certain logics. The Malagasy, a tribe living in Madagascar, have rules for giving and seeking information that differ markedly—as shown in Figure 5.7—from those around which the National Aeronautics and Space Agency is organized. The logics of communication in these two groups differ in some predictable ways. Consider the result if, by combination of catastrophe and affirmative action hiring regulations, the current staff of NASA were replaced by members of the Malagasy. At the very least, one would not expect the same quick dissemination of information that currently occurs.

To make the concept of the logical force in interpersonal systems more than simply a post hoc explanation, we will discuss it systematically in ways that culminate in a measurement model.
## FIGURE 5.7

A Comparison of Rules for Information Exchange among the Malagasy and NASA

### Malagasy Rules for Information

**Constitutive Rules**
- Information → only individually owned thing of value
- Having information → being rich
- Giving information away → foolish

### NASA Rules for Information

**Constitutive Rules**
- Information → only communally shared thing of value
- Having information → having prestige
- Giving information away → being important, cooperative; accepting prestige

### Regulative Rules

**Malagasy**
- Getting information → wise

**NASA**
- Getting information → wise

### Malagasy: Don’t Have Information

**Know that**
- Other has

**Permissible to**
- Ask for information

**Might**
- Give information

**Preferred to**
- Get information by oneself

**Become**
- Rich

### NASA: Don’t Have Information

**Know that**
- Legitimate

**Permissible to**
- Acquire information

**Might**
- Ask others to acquire information

**Preferred to**
- Ask other

**Become**
- Accept prestige

### Malagasy: Have Information

**Asked a direct question**
- Obligatory to avoid giving information

**Legitimate to**
- Not say irrelevant things

**Preferred to**
- Be uninformative at great length

**Show skill**
- Not be foolish, not be uninformative

### NASA: Have Information

**Asked a direct question**
- Obligatory to give information

**Legitimate to**
- Cooperate, accept prestige

**Preferred to**
- Give information

**Show skill**
- In minimal length message
Determinants of Logical Force

Logical force is created by the combination of rules for meaning and action. It exerts the force of perceived oughtness on the performance of particular acts. The configuration of logical force and its strength depend on the structure of rules in the interpersonal rule system. Four aspects of rule structure are of particular importance in determining the characteristics of logical force.

Degree of Temporal Extension

Our observations suggest considerable within and between subject variance in the temporal extension of the episode, contract, and life-script levels of meaning. A novice actor may guide his or her performance with only a static representation of the context and a strong focus on antecedent and consequent conditions. For example, a novice chess player knows that the context is a game of chess. He or she will tend to play one move at a time. If a piece is threatened (antecedent condition), the player acts to remove the threat (consequent). Experienced players represent the game as a strategy—that is, a sequence of reciprocal moves further punctuated into the subepisodes opening, middle game, and closing. Each act and each intended consequent are strongly influenced by their place in the extended sequence the player wishes to bring about.

The patterns of human action that exist in a marriage, a formal organization, or a nation may be extremely complex and take years or generations to emerge. Few persons have sufficient time, memory capacity, or data base to perceive patterns on this scale. As a result, it is an open question whether any one is acting at a given time with a sufficiently broad enough construal. However, research has specified a number of instances of inadequate temporal extension.

A very common example of asymmetry in temporal construal may be found in the well-rehearsed sales pitch companies prepare for their door-to-door salesmen: salesmen—but not the customer—know the temporal structure of the episode that is to occur. The salesman brings off the episode by producing behaviors that fit into the act rules of the customer that guide him to respond in ways that can be capitalized upon by the salesman. In one sales scenario, the salesman is instructed to be sure that both husband and wife are present in the room. Early in the conversation the salesman asks the husband, "Isn't it worth a few dollars a week to save your wife a lot of heavy work?" The author of the scenario assumes that when the husband is asked to affirm that his wife is worth a few dollars, unqualified affirmation is obligatory to avoid the wife perceiving her husband as unfeeling. The scenario also assumes the existence
of a rule that obliges the customer to act consistently so that when the salesman later shows the vacuum cleaner can be purchased for a few dollars a week and reminds the customer of his earlier affirmation, the purchase will be logically forced. A wise buyer, that is, one who construes episodically, would anticipate the ways the salesman might use responses to such questions, thus constructing a representation of the salesman’s episode and avoid being manipulated. When only one actor is able to operate with temporally extended rules, there results an asymmetry of power.

The degree of temporal extension is a criterion that applies to both regulative and constitutive rules.

**Complexity of Rule Structure**

The organization of social action is predicted upon the individual’s ability to make sophisticated sense of conditions both prior and subsequent to action. Delia and Clark’s (1977) study of children’s persuasive abilities showed that more complex constructions of antecedent conditions are related to more effective situation-specific selection of speech acts. Alvly (1975) studied communication strategies in a hypothetical situation in which a child’s ball hits a neighbor’s window and the child asks for the ball back. Figure 5.8 transforms Alvly’s work into our terms, showing both a simple and a complex construction of the situation. Notice that the simple example lacks consideration of the relational dimension of interpersonal meaning and focuses only on the content features of the antecedent situation and consequent. Adults seem to be able to perceive both content and relational meanings, and differentiate several dimensions of relational meaning, including hostile-friendly, status same-status different, formal-informal, intense-superficial, and topic important-topic unimportant (Wish, Deutsch, and Kaplan 1976).

At one extreme end of the continuum we would place rules that exhibit complex constructions of both content and relational meanings. At the opposite end we place rules that exhibit extreme insensitivity to the situation at hand. When individuals employ rules that tend toward social insensitivity to antecedent conditions, there will be an increased tendency for them to act in unexpected ways. Note the sequences of surprises that make this an unsatisfactory conversation.

**Neighbor:** (Showing anger) "Is this your ball?"

**Child:** (Not noting relational aspect of message) "Yes it is. Give it back, it’s mine."
Complex Construction

confrontation with adult

<table>
<thead>
<tr>
<th>CR = visual image</th>
<th>&quot;Is this ball yours?&quot;</th>
<th>anger</th>
</tr>
</thead>
<tbody>
<tr>
<td>sound of voice:</td>
<td></td>
<td>demand for confession</td>
</tr>
<tr>
<td>stance: leaning forward</td>
<td></td>
<td>threat</td>
</tr>
</tbody>
</table>

episode of getting ball back from adult

| RR = angry, threatening demand for confession | (oblig. (apologize)) (legit. (cry, ask for ball)) (legit. (look sweet and downcast)) (prohibited (demand)) | reduce adult's anger, get ball back |

Simple Construction

confrontation with adult

<table>
<thead>
<tr>
<th>CR = adult at doorway</th>
<th>&quot;Is this your ball?&quot;</th>
<th>request for information</th>
</tr>
</thead>
</table>

episode of getting ball back from adult

| RR = request for information about who owns the ball | (oblig. (say it's yours and ask for it back)) | get ball |

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163
Neighbor: (Interpreting child's act as impudent in this context) "Give it back? This ball hit my window. Do you know that?"

Child: (Noting only refusal to return ball) "I'll tell my Daddy if you won't give it back!"

Neighbor: (Reading child as impudent and now threatening) "Get out of my yard, kid!"

Prefigurative Logical Force

Prefigurative force is that part of logical force created by the cluster of variables represented by solid lines in Figure 5.4. These variables link a particular act to elements in the rule structure that are defined as existing prior to that act, and include the range of acts and the entailments of the act from the antecedent, episode, contract, life-script, and archetype. For example, Philipson's (1975) ethnography of Teamsterville indicates that "speaking like a man" in a blue-collar neighborhood in Chicago is subject to strong prefigurative logical force. When a man is having an argument in a bar (episode) and someone insults his wife (antecedent event), a real man (life-script) has no choice (range of acts) except to fight (act).

Prefigurative logical force is synonymous with the general usage of "I did that because of . . .," and consistent with those literatures that describe persons as controlled or determined by the events around them. When prefigurative logical force is high, people tend to act in ritualistic or habitual patterns.

Practical Logical Force

Practical force is that part of logical force created by the cluster of variables represented by the broken lines in Figure 5.4. These variables link a particular act to elements in the rule structure that are defined as existing subsequent to that act, and include the range of acts and the entailments from the act to the self, episode, contract, life-script, and archetype. Continuing the example from Philipson's (1975) study, for a man to fight when his wife has been insulted is a sure way to establish respect for one's manly prowess (consequent), end the argument (episode), affirm his identity (life-script), prove that his wife is respectable (contract), and perhaps complete a pattern that he perceives as correct or necessary (archetype).

Practical logical force is synonymous with the general usage of "I did that in order to . . .," and consistent with those literatures that describe persons as purposive agents, acting in service
to their intentions. When practical force is relatively weak in comparison with prefigurative force, persons are unable to achieve desired goals and persist in acts that entail undesired consequences.

Given the rules Philipsen described among patrons of Teamsterville bars, it is no wonder that fights are so frequent and/or insults to the wives of other men so rare: the logical force is so strong that the episode "fight" is easily triggered and then proceeds inexorably. This neat symmetry between prefigurative and practical forces does not always occur. The structure of many situations is that of feeling compelled to do something (prefigurative force) that precludes all the desirable consequents (practical force), or prohibited from doing something (prefigurative force) that would achieve desired consequents (practical force). Even more convoluted conditions occur when the variables within, such as prefigurative force, do not exert similar entailments; for example, the episode may obligate an act prohibited by the life-scripts.

The model in Figure 5.4 can be converted to an algorithm of social situations. Let each arrow be considered a variable ranging from +3 (obligation) through 0 (irrelevancy) to -3 (prohibition). By substituting all permutations of numbers for the arrows, the potential configurations of logical force are represented by the pattern of the strengths and directions of entailments on the act.

Toward the Measurement of Logical Force

Two means of measuring logical force have been developed, one of which uses computer simulation, the other interview/observation protocols for field research.

The primary advantages of computer simulation are control and computation ability. We constructed an artificial communication system in which messages took the form of colored shapes and meanings took the form of capital letters. The meaning of each message was specified by constitution rules (for example, red circle → Λ), and legitimate sequences of action were specified by regulative rules (for example, O ⊃ □ or Δ).

Consistent with the conceptualizations of persons and rule structure presented above, three interpersonal systems were modeled, which differed in complexity and symmetry (see Figure 5.9). In the first system, both persons were modeled as very simple (there was little equifinality or multifinality incorporated in their rules) and the degree of complexity in the interpersonal system was symmetrical. In the second system, both persons were modeled as having more complex constitutive rules, and the interpersonal system represented as fully symmetrical in structure but
Three Interpersonal Rule Systems for Conversing
In an Artificial Language

RULE SYSTEM 1: Noncomplex, symmetrical:

\[
\begin{array}{cccc}
& A & B & C & D \\
\hline
\text{Person 1} & R & B & A & \text{Y} \\
\text{Person 2} & R & B & A & \text{Y}
\end{array}
\]

\[
\begin{array}{l}
\text{Constitutive rules:} \\
\text{Regulative rules:} \\
\text{If } R \text{ then B} \\
\text{If } B \text{ then A or Y} \\
\text{If } A \text{ then Y or R} \\
\text{If } Y \text{ then R}
\end{array}
\]

RULE SYSTEM 2: Complex, asymmetrical in content of regulative rules:

\[
\begin{array}{cccc}
& A & B & C & D \\
\hline
\text{Person 1} & R & B & A & \text{Y} \\
\text{Person 2} & R & B & A & \text{Y}
\end{array}
\]

\[
\begin{array}{l}
\text{Constitutive rules:} \\
\text{Regulative rules:} \\
\text{If } R \text{ then B} \\
\text{If } B \text{ then A or Y} \\
\text{If } A \text{ then Y or R} \\
\text{If } Y \text{ then R}
\end{array}
\]

RULE SYSTEM 3: Asymmetrically complex; asymmetrical in content of regulative rules:

\[
\begin{array}{cccc}
& A & B & C & D \\
\hline
\text{Person 1} & R & B & A & \text{Y} \\
\text{Person 2} & R & B & A & \text{Y}
\end{array}
\]

\[
\begin{array}{l}
\text{Constitutive rules:} \\
\text{Regulative rules:} \\
\text{If } R \text{ then B} \\
\text{If } B \text{ then A or Y} \\
\text{If } A \text{ then Y or R} \\
\text{If } Y \text{ then R}
\end{array}
\]

\* The "vocabulary" of the artificial communication system consisted of colored shapes, here represented by R (red), B (black), G (green), and Y (yellow). In the game, these appeared as colors shaped appropriately.

\* Empty shapes indicate that subjects were given rules keyed to shape and ambiguous to color; color labels indicate that subjects were given rules keyed to color (depicted by an amorphous smear) and ambiguous to shape.

\* The vocabulary of the artificial communication system consisted of colored shapes, here represented by R (red), B (black), G (green), and Y (yellow). In the game, these appeared as colors shaped appropriately.

\* Empty shapes indicate that subjects were given rules keyed to shape and ambiguous to color; color labels indicate that subjects were given rules keyed to color (depicted by an amorphous smear) and ambiguous to shape.

Source: Cronen, Kaczka, Pearce, and Pawlik 1978.
asymmetrical in content (Person 1 was sensitive to colors, Person 2 to shapes). The third system was asymmetrical in both content and structure.

It is possible to derive a quantitative index of logical force in each of these systems. The concept of logical force describes the action-chains that can be performed given the intermeshed rules of two or more persons. One way of quantifying logical force is simply to count the number of different action-chains possible. The fewer the number of action-chains, the stronger the logical force constraining particular sequences of action. This relationship can be expressed in the formula: $LF = 1/N \text{ patterns}$ (100) where: $LF =$ logical force; $N =$ different sequences of messages or meanings; and the multiplier (100) is for convenience.

Cronen et al. (1978) modeled the interpersonal rule systems in APL in which each person was given the desired four-meaning sequence $ADBC$. The conversation was initiated with Person 1 producing the message "red circle." In each subsequent turn, each person interpreted the previous message and performed the next act necessary to produce the desired sequence if that act was legitimated by their constitutive and regulative rules. If the desired next act was not legitimated, then a random choice was made from the available messages.

Each simulation consisted of a string of 103 messages produced according to the rules and attempting to produce the desired sequence. Since patterns of meanings were examined in groups of four, there were 100 potential patterns in each game. The desired sequence was possible—and obtained—in simulated conversations produced by all three interpersonal systems. The actual number of nonrepetitive patterns may be inserted in the formula above as a measure of logical force within each system.

The logical force of system number 1 was 9.09 (11 possible patterns); number 2, 3.70 (27 possible patterns); and number 3, 1.96 and 1.61 (51 and 62 possible patterns for persons A and B, respectively). These differences are not particularly surprising, but the procedure for quantification is useful in comparing various interpersonal rule systems, and particularly for assessing the effect on logical force of particular differences in the structure of rules.

Further, comparisons of the relations between the formal properties of particular interpersonal systems and the phenomenological experiences of communication are instructive. Given the asymmetrical content and structure of system number 3, the amount of logical force for the persons involved was also asymmetrical. It is appropriate to translate these into phenomenological terms for persons in comparable situations. Person 2 was in fact freer than
Person 1, but surely did not feel so, since interacting with such a simple companion made the logical force in the interpersonal system stronger (that is, more constraining) than what would have been produced in interaction with a person equally as complex as him/herself. On the other hand, interacting with Person 2 reduced the logical force in Person 1's simple system, and made interaction either liberating or frightening for Person 1. (We think we discern in this the murky structure of many interpersonal relationships.)

Finally, it is instructive to compare the results of these computer simulations of logical force with the way human subjects performed in these artificial communication systems. Ten pairs of subjects each played two iterations of the game "coordination." They were given a deck of cards with colored shapes on them and the rules of one of the three systems described in Figure 5.9, and told to alternate messages in such a way as to produce the pattern ADBC. Although subjects were not allowed to see their partner's rules, were limited to a total of 12 plays, and were prohibited from conversing during the game, all dyads were able to produce the desired sequence. We interpret this as welcome evidence of higher cognitive functioning among our subjects: they were able to operate strategically within the logical force of the various systems. After each coordination game, subjects completed a series of questionnaires, the results of which provide a set of clues to the nature of their strategic play. The strongest relationship ($r = .774$) was between "perceived own competence" in playing the game and "perceived other's competence," the next strongest ($r = .541$) between "rule system" and "perceived unpredictability of the partner," and the third ($r = .354$) between "perceived latitude of choice" and "perceived unpredictability of the partner." This suggests—as our original assumptions asserted—that persons act by triangulating between their own internal factors (rule systems, latitude of choice, own competence) and social factors (unpredictability of partner, other's competence), such that neither of these is independent of the other (Peerece et al. 1980).

A second means of measuring logical force utilizes an interview protocol in which subjects describe a particular sequence of messages or meanings and then report the strength of the linkages among the components of the rules guiding their decision to choose each of their acts, and the valence of the various components within the rules. The configurations of linkages and valences have been shown to covary with communicators' perceptions of the episodes they participate in (Cronen, Pearce, and Snively 1979), and can be graphed as the structure of episodes (Harris, Cronen, and McNamee 1979). This procedure is described in some detail in Chapter 7.
THE FORMS OF COMMUNICATION AND THE
COORDINATED MANAGEMENT OF MEANING

The use of the phrase "the coordinated management of meaning" directs attention both to the characteristics of persons as processors of information and to interpersonal rule systems as the locus of action. Both of these are necessary for an explanation of the forms in which human communication occurs.

A model of communication is presented in Figure 5.10. In the model each person is represented by a circle, and the interpersonal system by the overlap of the two circles. Each person is depicted as alternatively producing messages according to his/her rules and the preceding message. In addition, each person continuously monitors the emerging sequence of messages, asking at least these questions: What are we doing? Who is controlling what we are doing? Do I like what we are doing? These questions can be answered with reference to three terms: coherence, control, and valence.

Coherence

Let coherence name the variable extent to which persons make sense of the developing sequence of messages. If an ethnographer or a friend were to ask each person what the other was doing, they might reply by identifying a culturally defined episode such as having coffee with, arguing about politics, swapping lies, and so on. However, one or both might indicate some uncertainty, saying something like: "I thought we were talking politics, but now I think she was trying to sell me insurance," or "I don't know—that conversation just didn't make any sense."

From the privileged vantage of the observer who can describe the meanings of both communicators, there can be at least four forms of coherence. First, mutual incoherence: as each monitors the continuing sequence of messages, neither can interpret it sensibly. Given the awesome power of persons to make meaning, mutual incoherence is rare, occurring most often in intercultural communication such as James Clavell created in his novel Shogun.

Second is unilateral coherence, where one person makes sense out of the continuing sequence of messages but the other does not. This frequently occurs in communication between normal adults and children, persons with mental problems, or persons who have had a mystical or religious experience. Unilateral coherence is often used deliberately. Potter (1971) playfully describes interpersonal
FIGURE 5.10

A Model of Communication

PERSON A

PERSON B
tactics by which one person may achieve coherence and deny it to others. Some educators and political and religious leaders deliberately use mystification as a technique for inducing loyalty to the cause. Whenever persons think they understand what the guru is saying, they say or do something to dispel the sense of coherence. Bateson (1972, p. xvii) described himself as mystifying his students.

... there was, almost every year, a vague complaint which usually came to me as a rumor. It was alleged that "Bateson knows something which he does not tell you," or "There's something behind what Bateson says, but he never says what it is."

Third, is coordination or symmetrical coherence. Note that communicators never have access to the other person's meanings. Because the interpersonal rule system has multiple cybernetic monitors (persons), none of which is systemwide, all participants must infer the state and function of the system by comparing their own meanings to the conjointly produced sequence of messages. It is very likely each may have a different interpretation about what is occurring, but the conversation is said to be coordinated if each thinks he/she can make sense of the sequence of messages, and these interpretations are robust enough to guide subsequent acts that can be accommodated by the interpretations.

Fourth is asymmetrical coherence. Although communicators cannot have access to other persons' meanings, they often act as if they did. Specifically, persons usually treat agreement with others as highly important, unwilling to let intrapersonal coherence suffice. By acting as if they knew other persons' meanings, some communicators utilize sophisticated strategies in which they deliberately induce coherence in the other, which involves an interpretation not the same as their own for the episode; that is, they mislead others into thinking they understand the situation when they do not. For example, politicians have long made an art form of appearing to give informative answers to questions while not revealing anything of how they think. The lore of courtship is replete with asymmetrically coherent conversations; it is only later that the misused suitor discovers the other person had deliberately perpetuated a false interpretation of the development of the relationship. Stanback and Pearce (1980) analyzed dissimulation as a conversational strategy used by low-statused persons in rigid social systems to achieve asymmetrical coherence. Table 5.1 contrasts asymmetrical coherence and three other coordination strategies described by Pearce (1976). Drawing explicitly from the dramatistic metaphor, Pearce (1976) described casting as what occurs when a
<table>
<thead>
<tr>
<th>Communicative Functions</th>
<th>Coordination Strategies</th>
<th>( \text{Casting} )</th>
<th>( \text{Mirroring (behavioral)} )</th>
<th>( \text{Mirroring (meanings)} )</th>
<th>( \text{Negotiation} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source of meaning</td>
<td></td>
<td>self</td>
<td>self</td>
<td>other</td>
<td>shared</td>
</tr>
<tr>
<td>Control</td>
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<td>self</td>
<td>other</td>
<td>other</td>
<td>mutual</td>
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<td>Coherence</td>
<td></td>
<td>asymmetrical</td>
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<td>mutual</td>
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<td>Valence</td>
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<td>positive or</td>
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<td>Example</td>
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<td>shucking</td>
<td>tomming</td>
<td>bargaining</td>
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Source: Stanback and Pearce, 1980.
person has a script and searches for persons willing and able to perform the various roles in it. A person casting will move from group to group proposing a form of communication and assigning roles until s/he discovers enough qualified and acquiescent persons to put on a performance. Mirroring occurs when persons want to be part of a cast so badly that they will accept any role in any play as long as they are included. A mirroring individual will affiliate with any group that offers him/her a part. Negotiation occurs when two or more persons are prepared to develop a script that may be unlike what either originally planned to enact. In this sense, improvisational theater consists of real-time negotiations.

There is a structural difference between asymmetrical coherence and the other coordination strategies. Casting, mirroring, and negotiation may be done sincerely, where sincere means both "being in reality what it appears to be," and "with calculated effect on the other." At least one person participating in asymmetrically coherent communication must maintain dual interpretations of the emerging episode, one that they identify as their own and one that they identify as believed by the other.

When persons begin contrasting their own and other’s interpretations, the prerequisites for coorientational states obtain, and a new degree of complexity is introduced where persons act in response to their perceptions of the other’s perceptions of the emerging episode as well as their own. The potential for confusion in such situations has been graphically demonstrated by Laing (1970).

Stamm and Pearce (1973) presented a process model of co-orientation that can be usefully integrated with the concept of logical force. Stamm and Pearce described coorientational states as the juxtaposition of a discrimination and an expectation to produce all permutations of predicted agreement/disagreement, confirmed/disconfirmed, and found that these states affected subsequent communication behavior. The expectation in coorientation is equivalent to the consequent condition of the regulative rule, with agreement understood to mean "other's next act will be one legitimated by my rules and subsumable under the definition of the emerging episode with which I have achieved coherence." If the other person's next act is interpretable as an extension of the emerging episode, the coorientational state "predicted agreement confirmed" occurs; if not, then "predicted agreement disconfirmed" occurs. In either case, the coorientational state is represented in Figure 5.11 by the triangular formation consisting of a broken arrow from other's act to the consequent of one's regulative rule for the preceding act; a solid arrow from other's act to the antecedent of one's regulative rule for the following act; and a curved, broken arrow from the consequent of the rule for one's preceding act and the antecedent of the rule for
Person A: \( [\text{antecedent event } \supset \text{ act}] \supset \text{ consequent event} \) \( [\text{antecedent event } \supset \text{ act}] \ldots * \)

Person B:

\( [\text{antecedent event } \supset \text{ act}] \supset \text{ consequent} \)

(time sequence \( \longrightarrow \))

*Solid arrows denote constitutive rules. Broken arrows denote the coorientational state of comparing the subsequent message to the anticipated consequent event and feed-forwarding the result.
one's next act. The broken, curved arrow represents feedforward, in which the juxtaposition of the discrimination and expectation informs the subsequent communicative acts.

Control

The term control has been central to the thinking of many communication theorists from Wiener (1950) to Miller and Steinberg (1975). For example, Miller (1979) recently argued that persons communicate in such a way as to control their environment so it is physically, socially, and aesthetically pleasing. We want to use control as a useful descriptor of communication, but in a somewhat different sense. Rather than using control as a description of the fact of affecting one's environment, we will use it as a function of a person's perception of his/her ability to affect the ongoing sequences of conjoint behaviors in which they participate.

There are two reasons for choosing against the traditional usage of control. First, it is nonfalsifiable. As the putative purpose of all communicators, and with the array of desirable consequences defined as including everything from physical to aesthetic satisfactions, any consequent of any act may be perceived by the theorist as a successful attempt to control the environment, and hence a confirming instance of the theory. This exercise is more a demonstration of the conceptual agility of the theorist than a discovery procedure for communication. Second, it masks important differences. By making control a variable rather than a stipulated constant, we are able to distinguish among communication sequences that are coherent but perceived out of the individual's control, such as learned helplessness (Seligman 1975); those that are coherent and controlled; those that are incoherent and uncontrolled, such as, a double bind; and those that are incoherent and controlled, such as coordinated avoidance (Carson 1969).

Three forms of control may be usefully distinguished. Mutual control describes communication in which the sequence is affected by the strategic action of both participants. This is the effect of the coordination strategy of negotiation (Pearce 1976). Unilateral control occurs when the form of the communication reflects the action of one person, with the other merely following along. Both the coordination strategies of mirroring and casting (Pearce 1976) are forms of unilateral control. Mutual lack of control describes those communicative sequences in which neither person feels able to affect the emerging episode. This is not an empty category: recall the demonstration showing that the intermeshed rules of two persons may produce a rigid logic unlike that of either person in
isolation. In these situations, persons may find themselves enacting what we have termed unwanted repetitive patterns (Cronen, Pearce, and Snively 1970). These conversational forms are coordinated in that they are mutually coherent, but mutually uncontrolled and mutually disliked.

Valence

Valence describes the person’s evaluation of the emerging episode. The measurement model of a regulative rule depicted in Figure 5.4 shows that valence is distributed through the configuration of elements and linkages rather than being a single summative term. This suggests that for each person, valence may vary from homogeneously negative through mixed to homogeneously positive, and that the dyad itself may be described as possessing any combination of these characteristics.

THE HUMAN CONDITION AND THE STRUCTURE OF EXPLANATION

The new idea of communication implies that communication studies are central to an understanding of the human condition. The definition of communication stipulates it as causal of the modes of human experience; it is the process by which persons collectively create and manage social reality. Further, the form of the theory required to account for communication illuminates the nature of the human condition. Individuals must be modeled as systems and as components within a structurally deficient interpersonal system of rules for meaning and action. These lines of analysis permit this statement: the human condition is that of being variably enmeshed in multiple systems, each with its own logic of meaning and action.

The relationship between communication and the systems in which it occurs is not simple. In one sense, communicative acts create the systems, and at the same time those systems contextualize and ontail communicative acts. This reciprocal causal relationship between forms of communication and social institutions raises venerable issues about the form of explanation and about the freedom of human action. These issues are worth wrestling with on their own account, of course, but our primary motivation for addressing them here is as a lost of the conceptualizations developed thus far. The result is a major extension of the theory (presented in Chapter 6).
The analysis of the structure of explanation and the human condition can be usefully grounded in Aristotle's concept of four types of causes: an efficient cause is what brings about some change; a final cause is the purpose of a thing; a material cause is that in which the change occurs; and a formal cause is the pattern or shape of what is changed. Positivists attempted to build a science only on efficient causation, and developed a rhetorically effective literature branding any one using a different causality as soft-minded or superstitious. Von Wright's (1971) somewhat interpretative history of the debate about the explanation of human action described this as the Galilean perspective, in which behaviors were conceived as mechanistic entities having something equivalent to mass and movement. Explanations consist of describing the efficient causes that affected mass and movement in regular ways. The Galilean perspective has long been opposed by what Wright called the Aristotelian, in which final causation is celebrated: persons are seen as active agents, living in an interpreted world of meanings rather than action. Explanations in the Aristotelian tradition follow the form of the practical syllogism in which particular acts are shown as instrumental in the accomplishment of a purpose.

The lines of argument between the Aristotelian and Galilean traditions have usually been expressed in antinomies such as reasons and causes as explanatory forms in the philosophy of science; determinism versus free will as philosophic stances; proactive versus reactive as concepts of human behavior; people as products versus producers of society in social philosophy; purposive versus caused in attributions of praise or blame; and so on. These antinomies have been treated as dichotomies, with persons expected to choose one set of polar positions. Such a choice is unproductive and unnecessary. It is possible to construct a theoretical apparatus sufficient to include the element of truth in both ends of these antinomies, and the result is an approach more consistent with the complexities of the human condition.

Harré's Copernican revolution in the philosophy of science and the gradual emergence of systems theory in biology and other disciplines set the stage for a theory that transcends these antinomies. The key move is identifying the entity per se rather than its behaviors as the proper unit of analysis. This redirection of inquiry reconstrues Aristotle's analysis of causality. Rather than treating reality as if it had four distinct and equal causes (as Aristotle) or only one type of cause (as did both Aristotelians and Galileans), three kinds of causation are postulated, with one subsuming the other two. Material and formal causation are considered the same thing, both descriptions of the entity as a structured,
enduring system. In this sense, material and formal causation are equivalent to a statement that logical force exists in a person, an interpersonal system, and so on. Efficient causes are identified as inputs to the system, which take the form of the interpretation of messages produced prior to the current time frame. Final causes are identified as one's own and other's current and subsequent actions, either outputs of the system or subsequent inputs. Efficient and final causes are subservient to the material/formal because the antecedent and consequent events must be interpreted according to the logic of the system. The model of communication in Figure 5.10 shows that persons only input messages, which are interpreted by their constitutive and regulative rules into meanings at various hierarchical levels, thus the entailments on an act are linked to interpretations of the antecedent and anticipated consequent events rather than to those events themselves. Within the logic of the system, efficient cause is measured as prefigurative logical force and is roughly equivalent to the various literatures dealing with conditioning, determinism, reactions, and so on. Final cause is measured as practical logical force and is roughly equivalent to the various literatures dealing with free will, purpose, proactions, and so on.

By subsuming efficient and final causes as special cases of a combined material/formal cause, it is possible to construct a science with many of the virtues of the Galilean tradition without absurd reductionism, and many of the virtues of the Aristotelian tradition without resorting to mysticism or positing ghosts in the machine. The trick is to model social action mechanistically, but as a complex enough machine so that it includes the possibility of both caused and purposive behavior. Our argument here will parallel in social contexts Powers's analysis of intrapersonal behavior. Powers's (1973, pp. ix-x) explicit intention was to propose a model of human behavior that would take "a step on the path back to a concept of man as autonomous, and away from the concept of man as automaton" without having "denied science." He argued scientifically that the cause of behavior is the structure of the human neural apparatus: "there is a mechanism in behavior—but it is not the mechanism the behaviorists have in mind, for it is capable of having inner purposes in the full humanistic sense." The mechanism we have presented, of course, is the variable logic of holonically structured interpersonal systems.

This conceptualization contravenes both sides of the reasons-versus-causes controversy. Winch (1958) and others have argued that since persons live in a world of self-defined meanings and act on the basis of reasons, there can be no mechanistic model of
human behavior and hence no social science in any legitimate usage of the term science. Powers (1973) argues to the contrary, that Winch's position only implies the necessity of a more complex model. On the other hand, Skinnor (1953) and others have argued that persons respond to the reinforcement contingencies in their environment, hence any talk of purposes is irrelevant and misleading. Powers disagrees, insisting that the ability to respond to reinforcement schedules—or to learn in any other way—is due to the structure of the system. Those theorists who have resisted the concept of purposive action have done so, he says, because they interpreted explanations based on purposes as appealing to "an unseen force that guides behavior" rather than a knowable structure of the system. They refuse to admit that "something inside the organism might be responsible for purposive behavior, despite the fact that organisms normally move only when and as their brains direct their muscles to make them move" (Powers 1973, p. 8).

We believe that the concept of logical force developed in this chapter is mechanistic enough to allow us to do science and complex enough to enable that science to deal with varied aspects of the human condition. The model of the logic of a particular system is sufficient to explain most aspects of reasons and causes. Persons sometimes act as if their behavior were the result of efficient causation alone; that is, they were controlled by their environment. Some subjects have reported (quite contrary to the actual facts) that they could not act other than the way they did (Cronen, Pearce, and Shavelly 1979). These instances can be explained as having high prefigurative and low practical force. At other times, persons report acting in service to their intentions or goal seeking. These instances can be explained as having low prefigurative but high practical force. Finally, persons report being confused, caught in binds, and conflicted. These experiences can be explained as having incompatible entailments within the logic.

However, the description of the logic of a system does not suffice to account for the array of human experiences because the structure of interpersonal systems is deficient. Well-formed systems have cybernetic monitors that are coterminous with the boundaries of the system. There is no such monitor in the interpersonal system. In fact, each person in the interpersonal system consists of a cybernetic monitor that extends only to some portion of the system. As shown in Figure 5.10, communication is inherently problematic because it is produced by a multihanded beast for whom coordination is a difficult accomplishment. Sequences of communication are performed by the interpersonal system as a whole, but the meanings of any given action or of a sequence of actions are defined by particular individuals who are components of the system.
The deficient structure of interpersonal systems may be described in two equivalent ways. From the perspective of an analyst of any given system, the locus of action in an interpersonal system is transpersonal, but the locus of meaning is intrapersonal. From the perspective of a theorist, persons are seen as variably enmeshed in multiple systems. The implications of variable and multiple enmeshment for our theory have not yet been addressed.

Multiple enmeshment implies that the model of communication in Figure 5.10 is a special case of the most simple form of communication. Persons do engage in dyadic communication at times, when the logic of the interpersonal system is comprised only of the rules the two of them bring to the situation, but such occasions are rare. Lovers may work very hard to arrange such situations, and experience them as euphorically "free" (that is, the prefigurative forces are remarkably consistent with the positively valenced consequents of practical force); and the ability to engage in conversations free of extraneous multiple enmeshments between lawyer and client, priest and penitent, and—sometimes—reporter and source, is recognized as legally privileged in contemporary jurisprudence. But these are the exceptions. Usually even conversation between two persons physically isolated from others is affected by the implicit presence of others, such as spouses, mutual friends, employers, and so on (cf. Caplow 1968). An accurate depiction of communication events would show each act at the nexus of several logics simultaneously, and these logics may be quite incompatible. For example, demanding a raise from one's employer may simultaneously invoke several contextualizations within a person—that of good employee, assertive person, breadwinner for the family, and considerate, understanding person—each of which impels the person differently. Further, the single act of demanding a raise becomes a part of several ongoing episodes—one with the employer, another with one's spouse, another with the other employees, and so on—in which the act may have different prefigurative and practical forces in each.

It does not require exceptional skill as a playwright to imagine situations in which particular acts are obligated by one set of rules and simultaneously prohibited by others, leading to highly desirable outcomes in one context and to disastrous ones in others. Playwrights have used these situations as the sources of dramatic complications from Oedipus Rex to Annie Hall.

The implication of multiple enmeshment for science, however, is to introduce complexity and possibly uncertainty into theory and research. Simple complexity presents little difficulty. If it is assumed that persons act on the basis of the algebraic sum of the entailments from the multiple systems in which they are enmeshed,
then measurement problems are increased but in principle human action could be predicted—or at least the extent to which behavior is predictable could be accurately described. Even organized complexity can be handled. Assume that persons function, as one research literature seriously proposes, as "intuitive mathematicians," assigning weights to the various systems in which they are enmeshed, such that an equivalently strong prefigurative logical force in one system has greater impact on the decision to act than that from another system, or such that practical force always predominates prefigurative force, and so on. In principle, the organization of the various systems can be measured and the relative prepotencies modeled mathematically. But if the organization of meaning is changeable, then an element of irreducible uncertainty is introduced.

There are two sources of change within the pattern of multiple enmeshments. First, perceptual change occurs in concepts just as it does in percepts. The familiar reversible images or ambiguous pictures demonstrate that the provision of certain judgmental anchors affects the perception of events, but this is not a deterministic process. With training or experience, a person can reverse the perception of, for example, the vase/profles picture at will. The phrase at will is significant, and we explain it as a function of learning: the person has learned to contextualize the picture in two different ways and can switch between them by exercising the cognitive ability to select among contexts. The same process can occur with the logical force of emerging episodes. Consider again the act of demanding a raise, and assume that the various logical forces are significantly contradictory. The person can act with good conscience by performing a cognitive act of recontextualizing the episode such that the logics impelling toward or away from the act are enhanced (such as, by looking at a picture of his/her family to make the contextualization breadwinner more salient, or by declining an invitation to an office party to make the contextualization coworker less salient). Having deliberately selected among logics, the person can explain his/her actions coherently, but what about the act of selecting among logics itself? Granted that this is an act of a higher level of abstraction than demanding a raise, it too occurs in the context of a logic. What are the entailments between this act and, for example, the life-script? Can the person switch at will among the multiple systems of this logic as well? If so, this creates the structure of an infinite regress or a strange loop, either of which poses great difficulty for doing science.

The second source of change is the same as variable enmeshment. Persons are not necessarily the prisoners of other persons or of the interpersonal rule systems of which they are component
parts. Interpersonal rule systems are structurally deficient, and in these deficiencies is the origin of human freedom, hope, and humor. In most situations, adults can terminate enmeshment in particular systems by disaffiliating or physically withdrawing from other persons and institutions, with consequent changes—sometimes surprisingly far-reaching—in the logical force of other systems in which they participate. But in any situation, persons may develop "a higher level of cognitive function" that extricates them from enmeshment in the logics of systems at lower levels of cognition.

Two major contemporary thinkers have remarked on this phenomenon of transcending the logical force of lower level concepts, using, of course, different vocabularies. Koestler wrestled with the ideas of consciousness and free will, concluding that "consciousness is not an all-or-nothing affair, but a matter of degrees" in which consciousness is a "mental" activity that may be transformed into a "mechanical" habit.

Thus consciousness may be described, somewhat perversely, as that special attribute of an activity which decreases in direct proportion to habit formation. The condensation of learning into habit is accompanied by a dimming of the lights of awareness... [On the other hand, the] sudden shift of the control of behavior from a lower to a higher level of the hierarchy... is the essence of decision-making and of the subjective experience of free will.

... Determinism fades away... In the upward direction, where on successively higher levels the constraints diminish, and the degrees of freedom increase, ad infinitum. At the same time, the nightmarish concept of predictability and predestination is swallowed up in the infinite regress... (Koestler 1978, pp. 232-39).

In his concept of the logical levels of learning, Bateson described the movement upward as a means of escaping the constraints of the lower levels. His argument parallels the discussion of learning to perceive a reversible figure as either of its meanings at one's own volition.

If Learning II is a learning of the contexts of Learning I, then Learning III should be a learning of the contexts of those contexts.

But [this] proposes a paradox. Learning III (i.e., learning about Learning II)... must lead to a greater flexibility in the premises acquired by the process of Learning II—a freedom from their bondage.
I once heard a Zen master state categorically: "To become accustomed to anything is a terrible thing."

But any freedom from the bondage of habit must also denote a profound redefinition of the self. If I stop at the level of Learning II, "I" am the aggregate of those characteristics which I call my "character." "I" am my habits of acting in context and shaping and perceiving the contexts in which I act. Selfhood is a product of aggregate of Learning II. To the degree that a man achieves Learning III, and learns to perceive and act in terms of the context of contexts, his "self" will take on a sort of irrelevance. The concept of "self" will no longer function as a nodal argument in the punctuation of experience (Bateson 1972, p. 304).

Functioning at the level of Learning III, a person may choose how to perceive him/herself in the context of enmeshment in multiple systems, including the cognitive function of defining one's self out of some systems, or as multiply enmeshed in various organizations of systems. In whatever extent persons employ these higher levels of cognition, a description of the logical force in any system or set of systems is not an adequate basis for explaining human communication.

The theory of the coordinated management of meaning proposes a logic of communication constituted by the content and structure of interpersonal rule systems. This logic is adequate to explain behavior within given systems, incorporating both reasons and causes into a single explanatory structure. As such, it represents an advance in the modes of explanation available in contemporary social science. However, the explication of the human condition—drawing both from the humanistic and scientific literatures—shows that the assumption of persons as enmeshed within the logic of a single interpersonal system is at best a simple special case. Can the theory account for the uncertainty inherent in variable enmeshment in multiple systems?

Yes. In the immediately preceding pages, we have deliberately allowed an equivocation with the term prediction. The still dominant positivist paradigm of social science has frequently indicated its willingness to stand or fall on the criterion of its ability to predict behaviors. We are not. Consistent with our philosophy of science, articulated in this chapter and in Chapter 4, we are concerned with a theory of humans communicating rather than with the communication done by humans. The difference in emphasis is crucial, because the substance of our theory consists of models and descriptions of persons, not of communicative event-objects.
The force of the analysis in this section is to show that models of humans communicating must include and account for higher levels of cognitive processing, and for variable enmeshment in multiple systems.
COMMUNICATION COMPETENCE

ABSTRACT

The description of persons as variably enmeshed in multiple systems poses a difficult problem for research and theory. Most contemporary literatures utilize research strategies that avoid or control multiple and variable enmeshment. Following Harris, we model competence as persons' ability to control the extent to which they are enmeshed in particular systems, thus making variable and multiple enmeshments parts of the theory and topics for study. The holonic relationship between persons and interpersonal systems necessitates a description of competence of both levels. A model of individual competence differentiates minimal, satisfactory, and optimal functioning as, respectively, being outside, inside, and beyond the logic of a system. A model of systemic competence differentiates random, open, and closed systems on the basis of logics that produce no patterns, novel patterns, and repetitive patterns. Studies of perceived competence and of socialized creativity are described that illustrate the concepts and support the theory.

INTRODUCTION

Communication competence has usually been studied from an evaluative perspective assessing individuals' abilities to perform like others in their age group (cf. Allen and Brown 1976) or to meet the requirements of particular situations (cf. Hymes 1972). Two assumptions underlie this approach to competence: social reality is sufficiently homogeneous and static that a researcher may describe a set of skills that are appropriate for particular age groups, social contexts, societies, and so on; and knowledge can usefully be expressed in the form of the means and variances of the measurements of variables, or, less formally, by descriptions of what usually
happens. Both of these assumptions are challenged by the new idea of communication, which implies a reciprocal causal relation between social situations and forms of communication, and by the development of a theory based on the new idea of communication, which models persons as variably enmeshed in multiple systems. The reciprocal causal relation necessitates a reanalysis of competence that includes the skills of creating as well as adapting to social situations, and the fact of variable enmeshment in multiple systems means the performance of a person cannot be sufficiently explained by an explication of the logic of any system or set of systems.

The force of these problems in explaining and evaluating social action has been felt by most theorists since midcentury. Although these problems have been variously described, much of the recent history of the disciplines that study humankind may be seen as efforts to avoid difficulties they present. Some have frankly renounced the traditional objectives of science, limiting themselves to the analysis of the logics of particular systems as a way of avoiding the problems of the creation of systems and of variable enmeshment in multiple systems. In philosophy, this movement can be seen in the abandonment of traditional topics and methods in favor of ordinary language analysis, accepting Wittgenstein's notion that doing philosophy consists of clarifying what (a corporate) "we" mean by what we say. In the social sciences, this move is paralleled by a cultural relativism, perhaps best exemplified by Boas (1940), in which the details of particular cultures may be described but not assimilated into any grand scheme or—as Benedict (1934) would express it—patterns of culture. Merton's (1968) call for the abandonment of grand theory in favor of theories of the middle range reflects a similar spirit, as does the introduction of ethnography (Garfinkel 1967), which documents the existence of human interpretive procedures without attempting to explain or predict these processes.

The contrasting tactic attempts to study human behavior in ways that avoid the problem of variable enmeshment in multiple systems. Those in what Wilson (1979) called the normative paradigm have limited themselves to situations in which the level of enmeshment is relatively constant and/or have ignored actors' meanings in favor of describing recurrent patterns of behavior across systems. Those with access to, for example, nationwide samples, frequently appeal to the law of large numbers and sophisticated sample stratification procedures that produce means with acceptable amounts of error variance. Others manipulate multiple enmeshment by cross-breaking for social class, economic level, gender, religious affiliation, birth order, and so on.
We are sympathetic with the rationale for both tactics, but we find their effects unacceptable, and have developed a new procedure. Rather than accepting the contingency among social systems, human action, and variable enmeshment in multiple systems as problems to be avoided, we have taken them as phenomena to be modeled. Following Harris (1979), the term competency describes the ability of a person to control the extent to which s/he is enmeshed in a system. Since communication consists of the process of cocreating and comanaging social reality, communication competence is the person’s ability to move within and among the various systems s/he is cocreating and comanaging.

This concept of communication competence differs in significant ways from those in the current literature. Competence is thought of as a relationship between the individual and a particular interpersonal system, both of which are considered holistic entities. This means that competence cannot be described as a set of traits possessed by the individual in isolation from the context of particular systems. Competence is relational, depending on both the characteristics of the person and the situation. Further, competence is multidimensional. Most current concepts of competence establish a continuum between those who do not or cannot perform as expected (incompetent) and those who can and do perform as required (competent). Harris (1979) conceptualizes the performance requirements imposed by a system as variable, and describes competence as an ancestral term for examining the relation of the individual and the system. The individual may be outside, inside, or beyond the system. This conceptualization produces an algorithm of individual and systemic characteristics, many permutations of which do not translate easily into simple evaluative terms.

The development of this concept of competence is grounded in socio/political/economic developments, particularly the advent of modernity. Since individual competence is in relation to the characteristics of the social system, the argument must compare the requirements of competence in a variety of systems.

A HISTORICAL/CULTURAL PERSPECTIVE

Modernity is discontinuous from previous societies, just as the development of civilization was discontinuous from hunter-gatherer society. Boulding (1964) cited two cultural changes that have been more revolutionary than any others in human history: the development of cities, which made inevitable the social inventions of economic specialization, social stratification, and abstract
social institutions; and the discovery of individualism coupled with technological capability, with all that portends for religion, the arts, science, and the good life. The second cultural revolution is still continuing, and it is far from clear what it will finally produce. However, the implications of the new cultural revolution for normal human functioning are vast. Morris (1948, p. 25) noted:

When existing social institutions become insecure . . . some react by making funny faces; some by assuming death's grimaces. The cows of old wisdom are brought in from the fields and are milked for all they can give. Crowds begin to gather around the stalls of the prophets to hear that the last age of the world is at hand, or that the first hour of a new dawn has come. . . .

Without adopting the shrill tones of self-styled prophets of doom or hope, it is possible to assess some dimensions of the effects of the continuing revolution, and to show that they directly affect the requirements of communication competence.

Every society imposes a set of performance demands on those who would participate in it. The Pygmies of the Itura Forest do not treat as real people those who cannot walk in the forest. Similarly, the Bantu villagers living at the edge of the forest treat the Pygmy men as adults only if they have participated in the village initiation rites (Turnbull 1961). The technological sophistication of modern society makes an attitude toward and proficiency with machinery unknown in previous centuries an irreducible minimal requirement of effective participation.

It is in the area of meanings, rather than artifacts and behaviors, where modern society is most demanding. Without overstatement, normal participation in the multiple logics of modern society requires the exercise of volition and cognitive ability that were characteristic only of artists and philosophers in traditional society. The rationale behind this rather bold statement involves a discussion of the relation between self and the larger social system in various kinds of cultures. Figure 6.1 summarizes the performance demands of primitive, traditional, and modern societies.

In the primitive societies of hunter-gatherer bands, the self typically was totally fused with the system. Regardless of the controversy surrounding Jaynes's (1976) claims about the origin of consciousness and the difficulties associated with Arendt's (1978) historical study of willing, it is clear that the nature of the identity of the self as distinct from society was not an issue in primitive society. A person in primitive society
FIGURE 6.1
Performance Demands in Three Types of Societies

<table>
<thead>
<tr>
<th>Type of Society</th>
<th>Relation between Self and System</th>
<th>Ratio of Logics Employed</th>
<th>Exemplar</th>
</tr>
</thead>
</table>
| Primitive       | [sacred order]
|                 | [self/system]
|                 | [acts/events]                | analogic > digital      | the use of masks in rituals |
|                 | [sacred order]
|                 | [social system]
|                 | [self]
|                 | [acts/events]                | analogic = digital       | the ethics of knowing one's place |
| Traditional     | appears to be:                |
|                 | [self]
|                 | [system]
|                 | [acts/events]                | analogic < digital       | Promethean pride or existential despair |
| Modern          | actually is:                  |
|                 | [etc.]
|                 | [self_b]
|                 | [system_2]
|                 | [self_a]
|                 | [system_1]                   | a new type of logic      |                      |
sees himself as real only to the extent that he ceases to be himself (for a modern observer) and is satisfied with imitating and repeating the gestures of another. In other words, he sees himself as real, i.e., as "truly himself," only, and precisely, insofar as he ceases to be so (Ellade 1963, p. 34).

A number of practices indicate that the modern differentiation between self and system would be absurd in this cultural logic. For example, Campbell's (1959a) description of the function of the mask in ritual makes sense only if the Aristotelian principle of identity (a thing is either A or not-A), which he considered to be a law of thought, is not applied. Anecdotes of cross-cultural contact are replete with examples of the inability of primitives to accept Western concepts of personal identity. A featherless biped who is suddenly encountered and cannot be identified with any tribal group, cannot be human and hence is fair game for the communal stew pot.

As shown in Figure 6.1, the patterns of thought in primitive society indicate the utilization of a different structure of thought than that prevalent in scholarly circles in modern society. There are doubtless many systems or logics of thought that—irrespective of the content to which they are applied—utilize distinctive and differentiable patterns of relationships among the entities thought about. Under the guise of many labels, two such types of logics have been repeatedly described. Sayre contrasted classification and recognition.

Classification is a process, something which takes up one's time, which one might do reluctantly, unwillingly, or enthusiastically, which can be done with more or less success, done very well or very poorly. Recognition, in sharp contrast, is not time-consuming. A person may spend a long while looking before recognition occurs, but when it occurs it is "instantaneous." When recognition occurs, it is not an act which would be said to be performed either reluctantly or enthusiastically, compliantly or under protest. Moreover, the notion of recognition being unsuccessful, or having been done very poorly, seems to make no sense at all (Sayre 1963, p. 17).

Koestler's contrast between abstractive and spotlight memory is similar:
... abstractive memory generalizes and schematizes, while spotlight memory particularizes and concretizes—which is a much more primitive method of storing information.

Nobody, not even computer designers, thinks all of the time in terms of abstractive hierarchies.

... abstractive memory, operating through multiple interlocking hierarchies, strips down the input to bare essentials according to each hierarchy's criteria of relevance. Recalling the experience requires dressing it up again ... added to this are "spotlight" memories of vivid details which may include fragments of eidetic imagery, and carry a strong emotional charge (Koestler 1978, pp. 53-54).

We will characterize these two forms of logics as analogic (roughly comparable to spotlight memory and recognition) and digital (roughly comparable to abstractive and classification) codes, consistent with the usage by Watzlawick, Beavin, and Jackson (1967) and others.

Clearly, the members of primitive society use both analogic and digital types of logic, but the analogic mode predominates. Issues that come naturally to the mind in a digital mode are either never raised or are socially defined as illegitimate. The culture provides powerful and engrossing tools of analogic thinking in its mythology and rituals, but few tools of digital thinking (such as, a written language or mathematics).

In traditional societies—larger, with specialization and social stratification—the fusion of self and system is broken, but in an unequivocal manner: the system hierarchically contextualizes the self (cf. Pfeiffer 1976). The society is hierarchically ordered with each higher level having fewer entities, each with greater power and range of control. The source of self in traditional societies is one's place in the social structure, and the overriding ethic is to know one's place and act accordingly. The relationship between freedom and law in the medieval period in Europe was just the opposite of the modern usage.

What men feared and resented in serfdom was not its subordination, but its arbitrariness. The hatred of that which was governed, not by rule, but by will, went very deep in the Middle Ages. ... The supremacy of will was itself an evil, whether the will was one's own or another's. The higher one rose towards liberty, the more the area of action was covered by law, the less it was subject to will ... to the medieval mind the con-
ception of mere freedom was colourless, almost meaningless (Southern 1953, pp. 107-08).

Many of the peasants' revolts in medieval Europe were explicitly not against the stratification of the feudal system, but rather attempts to force their betters to act according to the requirements of their place; not against kings but to make, for example, King John of England, act like a good king.

Most traditional societies have developed powerful apparatuses that augment digital codes of thinking: a written language that freezes thought and facilitates abstractions; mathematics that, to minds like that of Pythagoras, suggests that reality itself is digitally organized; and the hieratic structure of society itself, which provides a model of distinct classes. In Figure 6.1, traditional societies are depicted as employing digital and analogic modes of thinking to an equal extent. Of course, there are no precise measurements underlying this model, but it makes the point that the concerns of this type of society include many of those compatible with digital rather than/in addition to analogic thinking. Innis (1972) and McLuhan (1964) have, in our judgment, rather overstated the case that the mode of communication relied upon by a culture biases its organization and self-definition. However, there is some merit in the argument, particularly when the form of communication has strong affinities for one of the types of thinking.

Modern society is characterized by powerful apparatuses that have made digital thinking the predominant form of cultural logic. These apparatuses include the printing press and even more sophisticated means of creating printed documents, computers and portable calculators, sophisticated techniques of logic and mathematics, and the popularization of the techniques of scientific research. McLuhan's (1964) argument that print is a privatizing media that caused the development of individualism in Western thought is an intriguing—and untestable—hypothesis. However, from whatever sources, radical, desacralizing humanism characterized the transition from traditional to modern society, and individualism became the hallmark of fully modern society. The medieval concern with the great chain of being that extended from God at the apex to the individual at the base was first supplanted by "man is the measure of all things," and then by the particular "a man... (cf. Campbell 1968).

Eliade (1958a, p. 9) characterized modern society as detached from the sacred, or that which transcends individuals and humankind. By becoming a purely historical being, modern humans are freed to be creative but denied the freedom not to make history by their actions (Eliade 1958b, p. xviii). Some attribute the
realization that humankind is estranged from the whole of the cosmos to Voltaire and the French philosophers (Durant and Durant 1965), and others to Marx, whose economic philosophy "ended an epoch in man's history that might be called that of historical unconsciousness. It gave man a sense of the social dynamic and stimulated a conscious concern with it" (Brzezinski 1976, p. 83). Regardless of the source, "in the contemporary mind . . . the collective and the single [individual] are pitched against each other as decisive magnitudes, and . . . the fact of modern anxiety derives from this situation" (Rogin 1969, p. 20).

The relationship between the individual and the larger social group has the properties of a strange loop. As shown in Figure 6.1, modern society presents itself with the individual self contextualizing the society that then contextualizes the performance of particular acts or episodes. The most explicit articulation of this position was by Mead (1934), who differentiated the subjective, active, perceiving "I" from the objective, socially defined, perceived "me." The me is the object of the subjective 1, but each self-reflexive level of I may be a me to an I at the next higher level. There is no "I-less me" initiating a self-reflexive spiral. Using a mode of thinking in which the digital predominates, this is an insuperable problem: "no information-processing system can embody within itself an up-to-date representation of itself, including that representation" (Koestler 1978, p. 239).

Koestler's statement, of course, is the Theorem of Recursive Wonder that we explicitly denied in Chapter 4, citing the development of logics that includes autonomous operators. The persons in modernizing societies, however, have not had this logic at their disposal. Rather, they have been presented with the complex of attitudes and institutions that creates privitization and simultaneously taught/given the powerful tools of digital thinking, which is incapable of handling it. The result has been to make competence a problem that is normal in modern society but cannot be solved using the normal resources of that society.

Since the problem could not be solved, modern persons have accommodated it in one of three ways. Some have simply been insensitive to it and proceeded as if it did not exist. Recall the wording of the Theorem of Extensional Wonder: It takes conceptual tools of sufficient strength to discover recursive wonder. Those who have confronted the self-reflexive spiral have responded in one of two ways depending on the relative complexity of the self and the system they inhabit. For those whose self is more complex than the social system in which they live, the system seems repressive; they feel constrained by an inferior and static society. The American Transcendentalists clearly felt this way. Emerson said,
"society everywhere is in conspiracy against the manhood of every one of its members ... who would be a man, must be a nonconformist." Thoreau's concept of the state is similar: "There will never be a really free and enlightened State until the State comes to recognize the individual as a higher and independent power, from which all its own power and authority are derived, and threatens him accordingly." Alexander the Great's lament that there are no more worlds to conquer clearly expresses the feeling of a self limited by society. Alexander's condition is not quite that of Everyman in modern society, but it is certainly not rare. FCC Commissioner Newton Minnow's celebrated description of American television as "the vast wasteland" contains the contempt of a complex self for a restricted system. Elia Kazan's novel, The Arrangement, describes a person who has mastered his professional world and then found it stultifying. In Graham Greene's novel, A Burnt-Out Case, success is described as the "mutilation of the normal man," producing a listless, alienated cynicism that at end can produce only a laugh at the absurdity of it all.

If the self is less complex than the social order, the person will feel lost, out of control, submerged by events and the expectations of others. This feeling is expressed by the continental existentialists. Kafka's The Trial describes a person caught up in a system of jurisprudence he does not understand; everything that happens to him is a surprise and he is helpless. Sartre's Nausea and Camus's The Stranger make much the same point. The counterculture of the 1950s was self-described as having been "heat" by the system, and the 1970s were marked by millions of affluent, coddled teenagers who regularly used drugs because they felt the need to relax.

Because of the self-reflexive spiral, modern society imposes a paradoxical performance demand on its members: be unique, like everybody else. The paradox becomes quite apparent when individuals try to be unique, because the definition of uniqueness is controlled by other people. An appropriately ironic symbol for modern society is a piano bar filled with pudgy, middle-aged executives in identical suits with interchangeable briefcases singing in unison "I did it my way." The image is no less ironic if populated by tanned singles in leisure suits, or any of the other desperately homogeneous groups within pluralistic society. Because the locus of action is interpersonal, the most unique of acts attempted by the individual may be denied by the interpretive and contextualizing responses of others or coopted by their imitating the acts and thus invalidating them as unique. Further, the very act of defining oneself in contrast with the group reverses the sequence of contextualization.
Those who recognize the paradox have a real problem in sustaining an interest in the game because—within a predominantly digital logic—there is no way to win. The game of "Simon says" is spoiled when one knows that the leader has available the unobeyable command "Simon says, 'Don't do what Simon says.'" Most adults cannot fully enjoy tic-tac-toe (naughts and crosses) because the outcome of the game is determined by the first two (or three) moves, and skilled opponents cannot win unless one makes a mistake.

To live effectively in a society that imposes this paradoxical demand requires the development of a new logical form. Varela's (1975) calculus of self-indication provides a formal apparatus for closing down the self-reflexive spiral, but the essential move had been anticipated by the shamans who used myth as both live and dead metaphors simultaneously, and by the most insightful of artists and philosophers.

Plainly, the analytic and existential tendencies were fused in pre-Socratic philosophy—and in Socrates and Plato.

The difference is partly one of temperament. One tendency is rooted in gregariousness; a social game for brilliant minds. The other is born of solitude and the intensity which counts it. And each suspects the other, often with a strong dose of contempt.

Between these extremes, philosophy is lost... the great philosopher does not merely excel in two genres; he masters two talents which is death to split.

Great philosophy lives in the tension between these extremes. Kierkegaard and G. E. Moore are each only half a Socrates (Kaufman 1961, pp. 31-32).

A good portion of Arthur Koestler's intellectual life was devoted to the analysis of artistic and scientific creativity. Like Kaufman, he stressed the necessity to integrate the polarities of analogic and digital modes of thought.

With due respect to Shakespeare's "All the world's a stage," one might say that the ordinary mortal's life is played on two alternating stages, situated on two different levels—let us call them the trivial plane and the tragic plane of existence. Most of the time we hustle about on the trivial plane; but on some special occasions, when confronted with death or engulfed in the oceanic feeling, we seem to fall through a stage-trap or manhole and are transferred to the tragic or
absolute plane. Then all at once our daily routines appear as shallow, trifling vanities. But once safely back on the trivial plane we dismiss the experiences of the other as phantasms of overstrung nerves.

The highest form of human creativity is the endeavor to bridge the gap between the two planes. Both the artist and the scientist are gifted—or cursed—with the faculty of perceiving the trivial events of everyday experience sub specie aeternitatis, in the light of eternity; and conversely to express the absolute in human terms, to reflect it in a concrete image. . . . By bridging the gap between the planes, the cosmic mystery becomes humanized . . . while his humdrum experiences are transformed, surrounded by a halo of mystery and wonder . . . By living on both planes at once, the creative artist or scientist is able to catch an occasional glimpse of eternity looking through the window of time. Whether it is a medieval stained-glass window or Newton's formula of universal gravity, is a matter of temperament and taste (Koestler 1978, pp. 145-46).

At first, we represented the cognitive style required by modern society as shown in Figure 6.2. This symbolism describes a self that is identified with its participation in an open-ended set of systems. This identification is an analogic process similar to the primitive nonclassificatory fusion of self and systems, but differs by an explicit recognition of participation in multiple systems and an openness to new systems. The series of contextualized systems denotes the operation of a sophisticated digital mode of thinking sufficient to describe and differentiate the logic of multiple systems.

However, we came to believe that the mode of cognition required by the paradoxical demands of modern society differs in kind from that appropriate for traditional society, and thus the utilization of the same symbolic forms is a dangerous distortion. The differences between traditional thinking and the kind required for coping with the paradoxical injunctions of modern society are remarkably similar to the contrasts between "B-cognition" and "D-cognition" (Maslow 1970a), but Varela's (1976) calculus of self-indication provides a sophisticated formal system permitting rigorous extension and proof. The symbolism "self ⊆ systems₁-n" may be expressed as "the self consciously identifies itself with its enmeshment in systems₁-n" and thus is consistent with the reciprocal causal relationship between forms of individual actions and the properties of systems and with the condition of variable enmeshment in multiple systems.
This survey of the social history of competence has focused on the demands placed on individuals to perform successfully within various societies, and culminated in a description of a formal representation of the type of cognition required by modern society. This line of argument does not imply that all persons are equally competent with particular societies. Rather, it shows that competence is of particular importance and difficulty in modern society. The following section presents a model useful for describing the various extents to which persons can control their enmeshment in particular systems, and the characteristics of systems that facilitate and impede the control of enmeshment.

A MODEL OF INDIVIDUAL COMPETENCE

Harris (1979) developed a model consisting of three ideal types of the relationship between the individual and the system. As depicted in Figure 6.3, the levels represent a person outside the system who cannot get in, a person inside the system who cannot get out, and a person beyond the system who can be inside or outside by his/her own choice.

The three levels or ideal types of competence can be illustrated with reference to writing a sentence. Consider a person who has learned to spell correctly every word in the English language, but knows no grammar. In terms of writing a sentence, the person is minimally competent: s/he can string a series of correctly spelled words but cannot predict whether it will comprise a grammatical sentence or recognize it as such. A person who has learned both spelling and sentential grammar is satisfactorily competent: s/he can make informed and strategic choices in the
FIGURE 6.3

A Model of Communication Competence

MINIMAL COMPETENCE:

SATISFACTORY COMPETENCE:

OPTIMAL COMPETENCE:

Where $\bigcirc =$ the social system
$X =$ the person
sequential selection of words to produce grammatically correct sentences. However, a person who has learned spelling, sentential grammar, and the rules for structuring paragraphs can choose which form of sentence to use, and in some cases may—like e. e. cummings or James Joyce—deliberately violate rules of spelling or sentential grammar in order to make a more powerful paragraph or completed document. Functioning at this level involves optimal competence.

Minimal Competence

Consistent with the holonic organization of systems (Koestler 1978), individuals are components of interpersonal rule systems. However, the interpersonal system is not necessarily a conducive field in which they may live and work effectively. It is possible for persons to cocreate (or better, co-compose) an interpersonal system that has a logic they cannot neither comprehend nor manage, and in which they cannot be creative. The communicative activities of minimally competent persons usually do not produce mutually coherent, coordinated episodes, and when they do, this result is fortuitous. The minimally competent person cannot predict or explain why his/her actions result in coherent episodes.

The structural characteristics of intrapersonal rule systems that produce minimal competence are yet to be determined empirically, but minimal competence is likely, first, when a person's cognitive system is significantly less complex than that of the interpersonal system, resulting in his/her inability to make appropriate distinctions. This occurs whenever a neophyte joins a group of experts and cannot differentiate among the array of phenomena. His/her verbal communication appears to the experts clumsy, heavy-handed, and full of irrelevancies. Second, minimal competence occurs when a person has a restrictively limited ability to contextualize, either hierarchically or temporally. If a person cannot perceive an act as a synecdoche of an episode or project the likely consequences of an act through a series of turns, the ultimate sequence of acts will be a surprise. Based on our attempts to teach this material to undergraduate populations, we believe that there are large individual differences in these abilities. Third, if a person is unwilling and/or unable to perceive the interpersonal system as a whole, which includes perceiving and taking into account the rule structure of the other person, s/he will be minimally competent.

There are ample examples of minimal competence, including the three persons whose rules are modeled in Figure 5.9. In some
dyadic combinations the persons are unable to exercise the degree of flexibility built into the system, and when in other pairings they are able to produce a wide array of message sequences, they merit little praise as their success is the unanticipated, fortuitous juxtaposition of their own and the other's attributes. They are minimally competent because they cannot contextualize hierarchically or temporally, and have no degrees of freedom at the higher levels of abstraction. They could become satisfactorily competent by the simple expedient of writing a rule at the episodic level permitting them to choose which conversant would initiate the conversation with a freely chosen symbol. This would allow them to produce all of the array of sequences possible within the system as comprised by the juxtaposition of their rule structures.

Persons who are mildly or socially retarded may be usefully described as minimally competent: the normal pace of events is too swift for them to follow, they are frequently surprised by what seem predictable outcomes of action-chains, and they cannot make appropriate differentiations among the varieties of interpersonal relationships. In common parlance among elementary and junior high students, the "little moron" jokes contain an extensive catalog of the perils and tribulations of minimally competent persons. Abbott and Costello's classic routine, "Who's on First," clearly illustrates minimal competence. Poor Costello cannot track Abbott's shifts from using "who" and "what" as proper names and as interrogative pronouns.

Modern society's performance demands are very high, and those who cannot match them are minimally competent. (The same individuals might well have satisfactory or optimal competence in some other society.) In Figure 6.1, those individuals depicted as being less complex than the social system are minimally competent.

Satisfactory Competence

When persons are able to move effectively within the logic of the system, they are functioning at the level of satisfactory competence. The satisfactorily competent individual is able to produce coherent episodes with other comparably competent persons. S/he is able to interpret the implications of particular messages in context (Hommelveldt 1974), align meanings and actions with others (Hewitt and Stokes 1975), take the other's perspective (Delia 1975), and probably feels that s/he should adapt to the requirements of situations and other people.

Satisfactory competence enables persons to exploit the potential of the logic of a system, but there are sufficient differences in
the ability to use the logic of a system for personal or institutional purposes to warrant subdividing satisfactory competence into two types: normal and clever.

**Normal Satisfactory Competence**

This describes persons who can fit in well with a group, who are undistinguished by either moral deviance or task achievement. Normals are, of course, the realization of the group norms.

Normal satisfactory competence is the topic of a large literature addressed to a juvenile market. The recurrent plot line is that of a young person who aspires to be member of a group and who, by dint of hard work and belatedly discovered natural talent, achieves full acceptance into the group. There are a host of these books, primarily dealing with sports or the military, with Crane's *The Red Badge of Courage* as the most acclaimed example and Forester's *Hornblower* series the best.

**Clever Satisfactory Competence**

This describes persons who do not think or act beyond the limits of the logic of the system but can move with unusual effectiveness and originality within a system. Perhaps the best characterization of cleverness is this description of a successful football coach: "He's smart enough to figure out how to win games but dumb enough to think that it is important." A large genre of popular literature celebrates the clever satisfactorily competent individual. Ian Fleming's James Bond is always able to find some improbable means of extricating himself from perilous situations, but never asked whether his job or the game was worth it, since such a question would identify the boundaries of the logic of the system and imperil the legitimacy of all the meanings and acts within it.

Alister MacLean's protagonists in *Force 10 from Navarone* and other adventure stories are similarly oblivious to the boundaries of the system while adept at maneuvering within it. Perhaps the clearest celebration of cleverness is the "nose speech" in *Cyrano de Bergerac*.

Valvert, a French dandy who had been offended by Cyrano's boastfulness, decided to challenge him to a duel. Taking the obvious opportunity, Valvert insulted Cyrano's nose.

**VALVERT**

Observe, I myself will proceed to put him in his place.

(He walks up to Cyrano, who has been watching him, and stands there, looking him over with an affected air.)
Ah...your nose...hem!...
Your nose is...rather large!

(Cravenly)

Cyrano

RATHER.

(With a grin)

Valvert

OH WELL—

To this point Cyrano has acted as if he were minimally competent, unable to understand that he has been challenged to a duel. However, he proceeds to demonstrate that he is actually clever, and critiques Valvert for delivering his challenge clumsily. Not only did he correctly perceive that this was a challenge to a duel, he knew many ways of enacting the episode more eloquently—an important consideration in a society that celebrated felicitous verbal expression.

(Coolly)

Cyrano

Is that all?

Valvert

(Turns away with a shrug.)

Well, of course—

Cyrano

Ah, no, young sir!

You are too simple. Why, you might have said—
Oh, a great many things! Mon dieu, why waste
Your opportunity? For example, thus:—

Aggressive: I, sir, if that nose were mine,
I'd have it amputated—on the spot!

Friendly: How do you drink with such a nose?
You ought to have a cup made specially.

Descriptive: 'Tis a rock—a crag—a cape—
A cape? say rather, a peninsula!

Inquisitive: What is that receptacle—
A razor-case or a portfolio?

Kindly: Ah, do you love the little birds
So much that when they come and sing to you
You give them this to perch on? Insolent:
Sir, when you smoke, the neighbors must suppose
Your chimney is on fire. Caution: Take care—
A weight like that might make you top-heavy.

Thoughtful: Somebody fetch my parasol—
Those delicate colors fade so in the sun!

Pedantic: Does not Aristophanes
Mention a mythologic monster called
Hippocampelephantocamelos?
Surely we have here the original!
FAMILIAR: Well, old torchlight! Illeg your hat
Over that chandelier—it hurts my eyes.
ELOQUENT: When it blows, the typhoon howls,
and the clouds darken. DRAMATIC: When it bleeds—
The Red Seal ENTERPRISING: What a sign
For some perfumer! LYRIC: Hark—the horn
of Roland calls to summon Charlemagne!—
SIMPLE: When do they unveil the monument?
RESPECTFUL: Sir, I recognize in you
A man of parts, a man of prominence—
RUSTIC: I'ley? What? Call that a nose? Na na—
I be no fool like what you think I be—
That there's a blue cucumber! MILITARY:
Point against cavalry! PRACTICAL: Why not
A lottery with this for the grand prize?
Or—parodying Faustus in the play—
"Was this the nose that launched a thousand ships
And burned the topless towers of Illum?"
These, my dear sir, are things you might have said
Had you some tinge of letters, or of wit
To color your discourse. But wit—not so,
You never had an atom—and of letters,
You need but three to write you down—an Ass.
Moreover—if you had the invention, here
Before these folks to make a jest of me—
Be sure you would not then articulate
The twentieth part of half a syllable
Of the beginning! For I say these things
Lightly enough myself, about myself,
But I allow none else to utter them.

DE GUICHE

(Tries to lead away the amazed VALVERT.)
Vicomte—come.

VALVERT

(choking)

Oh—These arrogant grand airs!—
A clown who—look at him—not even gloves!
No ribbons—no lace—no buckles on his shoes—

CYRANO

I carry my adornments on my soul.

Later in the action, Cyrano played on his knowledge of the ritual
slap with a glove as a challenge to a duel.
CYRANO
But I have no gloves!  A pity too!
I had one—the last one of an old pair—
And lost that. Very careless of me. Some
gentleman offered me an impertinence.
I left it—in his face.

This elicited a howl of vilifications.

VALVERT
Dolt, bumpkin, fool.
Insolent puppy, jobbernowl!

Which Cyrano purposively misunderstood as a self-introduction!

CYRANO
(Removes his hat and bows.)
Ah, yes?
And I—Cyrano-Savien-Hercule
De Bergerac! (Rostand 1959, pp. 30-32)

A triumphant demonstration of cleverness, but note that at no time does Cyrano question the morality or desirability of dueling as a form of social interaction and would probably find such a question seriously out of bounds since it would place the context in which he strains for a noble self-image in jeopardy. The scene progresses to the point where Cyrano stabs Valvert with his sword—exactly the same resolution as would have occurred if Cyrano had had only normal satisfactory competence. Cyrano used his cleverness only to add insult to injury, not to question whether giving injury was necessary or desirable.

The Disappearance of Satisfactory Competence

Most of the theoretical attempts to describe competence identify satisfactory competence as the ideal, and minimal competence as a problem requiring, for example, national standards in the schools. Further, society itself contains many institutions that encourage satisfactory competence. There are strict penalties for deviating from legitimate forms of life and rewards for clever conformity. Goffman (1963) observed that the fundamental maxim in contemporary American society is "fit in," and Berger described modern persons as desperately trying to do just that.
The social sciences present us not so much with man the slave as with man the clown. The precariousness of personal identity in society is to be seen the result not so much of iron bondage but of the dramatic necessities of the stage... We want to be part of the game and thus we accept, assimilate, and fervently believe its regulations (Berger 1961, p. 85).

In the process of trying to conform to the performance demands of modern society, however, persons have become more Catholic than the Pope because those performance demands are paradoxical. Goffman's assessment of the fundamental maxim is only half right: it is "be unique, so you can fit in." The privatization of self, expressed in a thousand ways ranging from an emphasis on independent thinking and personal responsibility in political and ethical decision making to a societal celebration of what is new, innovative, and different within consensual bounds, comprises a self-reflexive paradoxical injunction.

If the structure of modern society is paradoxical, then satisfactory competence is impossible. Many people do not perceive the paradox—their tools for analysis are too limited—and thus act as if they are satisfactorily competent. In fact, they are, by definition, minimally competent because they do not understand the logic of the system. To be sure, many persons can act out their entire lives without discovering that they are minimally competent if they are able to shield themselves from exposure to some elements in the system. However, as we have seen all too often, the ability of these people to live effectively is vulnerable to many normal aspects of modern society, including geographic movement, technological obsolescence, and contact with dissimilar cultures. On the other hand, those people who perceive the paradoxical structure of modern society are thereby extricated from enmeshment in it, given the characteristics Harris (1979) described as optimal competence. This level of competence is not represented in current theories of competence, but we think it important. Given the argument that satisfactory competence is impossible in modern society, optimal competence is the only alternative to minimal competence.

Optimal Competence

Optimal competence describes persons who are able to control their enmeshment within a system. An optimally competent person can choose whether to fit in to a particular system or to be unique. It is useful to distinguish two forms of optimal competence.
Allenated Optimal Competence

The ability to perceive the boundaries of a system is not without consequences. Sometimes the ability to see a system as bounded alienates the person from spontaneous participation in the system. The individual is able to critique the logic of a system, fully aware of its faults, but feels inexorably outside the system and unable to live in it comfortably. The person has the ability to be normal or clever, but finds either unsatisfying.

Many of Graham Greene's protagonists are alienated in this sense. In *A Burnt-Out Case*, Query is a world-famous architect who could continue a lucrative career but finds it meaningless. The rhetoric of contemporary political protest reeks of those who find fault with some aspect of the logic of the system—arguing that the use of energy, international relations, and so on, and so forth, is absurd—but without the ability to find a way of handling their perspectives with equanimity.

Nietzsche's announcement of the arrival of the "Overman" is a penetrating and provocative description of the development of competence. Zarathustra's speech on the three metamorphoses of the spirit describes what we have labeled normal satisfactory competence as the camel, clever satisfactory competence as the lion, and alienated optimal competence as the child. In each of its metamorphoses, the spirit has to contend with a different difficult task, the nature of which reveals the strength of that form. The camel is a beast of burden, which renounces ego and is reverent. Its strength is its ability to accept the command "Thou shalt," and to conform to the performance demands of a system, even when these require self-sacrifice. The lion has the power to achieve freedom from the demands of the system. Its strength is to say "a sacred 'No' even to duty." The child is characterized by the statement "I will" and has the power to say "a sacred 'Yes.'" In the form of a child "the spirit now wills his own will, and he who had been lost to the world now conquers his own world" (Kaufman 1954, p. 139).

Nietzsche's writings are not easily interpreted, but they comprise both a description and illustration of alienated optimal competence second only to a biography of Nietzsche's life. He clearly understood the paradox of his cultural tradition, but could not either create a new culture or live comfortably with the paradox. Wilson's (1956) *The Outsider* is a compendium of literary and historical studies of alienated optimal competent persons who, like a character in one of Shaw's plays, must deny that they feel "at home in the world."
Transcending Optimal Competence

Transcending Individuals are able to see all systems as bounded logics, and to enmesh themselves in any or several systems even though they are well aware of the faults of each. In contrast to alienated persons who have the ability to act fully within the logic of a system but are prevented from doing so by their inability to forget or substitute analogic processes for the digital classifications of self and system, transcending individuals are able to live comfortably within particular systems while simultaneously seeing themselves as out of the system. For example, both an alienated and a transcending person may perceive the enactment of a cultural ritual as phony, unnecessary, and perhaps undesirable, but the transcending person may well choose to sustain his/her participation, perhaps with an appreciation of its comic elements, while the alienated person would feel compelled to withdraw or will suffer pangs of self-contempt for participation. The difference between these two may also be seen in their attitude toward their history. The alienated person feels contempt for the social system from which s/he exited in becoming optimally competent; the transcending person not only can appreciate both the virtues and faults of the system in which s/he was once satisfactorily competent, but s/he also may elect to return to it and live satisfactorily within it.

An anecdote is told of a man who studied Zen as a way of achieving sufficient self-mastery to quit smoking. After completing a year without a cigarette, he visited his Zen teacher, thanking him for helping him become free of the habit. The teacher lit a cigarette and ordered his former student to smoke it. He refused, saying "I worked too hard to quit smoking. I'm not going to start again!" The teacher then said, "Until you can either smoke or not smoke, you are not free of smoking." This concept of freedom is that of transcendence, and contrasts sharply with the procedure used by Alcoholics Anonymous, whose goal is alienation. AA insists that its members enhance a self-concept of being an alcoholic whose first drink will signal a relapse into recurring drunkeness.

There is no extensive genre of literature celebrating transcendence, probably because the pattern of thought necessary for this level of competence, although consistent with the demands of modern society, exceeds that provided by or sanctioned by modern society. The ability to perceive oneself as defined by the product of the self's activity of deliberately controlling one's enmeshment in multiple systems is paradoxical in traditional Western logic. The simple moralisms inherited from traditional societies are inadequate to guide variable enmeshment in multiple systems.
Perhaps the best description of transcending optimal competence is that of Buddhist enlightenment, as expressed in this story:

"Master, what is the nature of enlightenment?" he was asked.
"A bowl full of snow," he replied.

This demonstrates the Western need to explain the inexplicable. Using the characteristic Western tool of a metalanguage (Copi 1971, pp. 108-09), we interpret the response as saying, "Any answer I give to that question, including this one, is wrong because the logic of language inevitably distorts reality. Further, the more I try to use language in an adequate way, the more harm I do because then the distortion is hidden and may be forgotten. Thus the best answer I can give is one that is obviously wrong, because while it is no more wrong than any other, it calls attention to its wrongness."

Maslow studied healthy persons, those defined as having positive attributes of health rather than just the absence of pathologies. He found two types of healthy persons: nontranscending self-actualizers or the merely healthy, comparable to our category of clever satisfactory competent, and transcending self-actualizers (Maslow 1971, p. 283). More than any other Western psychologist, Maslow labored to understand transcendence, which he defined as "the very highest and most inclusive or holistic levels of human consciousness, behaving and relating, as ends rather than as means, to oneself, to significant others, to human beings in general, to other species, to nature, and to the cosmos" (Maslow 1971, p. 279). Among the attributes of transcendence are these:

In a very specific sense . . . the transcendent self-actualizing man, is the universal man. He is a member of the human species. He is rooted in a particular culture but he rises above that culture and can be said to be independent of it in various ways and to look down upon it from a height . . . I have written about the resistance to encurtation of the self-actualizing person. One can examine one's own culture in which one is rooted in a detached and objective way of a certain kind . . . simultaneously experiencing and of self-observing one's own experience in a kind of critical or editorial or detached and removed way so that one can criticize it, approve or disapprove of it and assume control, and, therefore, the possibility of changing it exists. One's attitude toward one's culture, the parts of it which one has consciously accepted, is quite
different from the unthinking and blind, unaware, unconscious total identification with one's culture in a non-discriminating way (Maslow 1971, pp. 270-71).

In this and other characterizations of transcendence, Maslow relies heavily on antinomies. Using digital thinking, these descriptions sound vague or mystical, but the mystery is removed when an autonomous logic is used, and such persons may be modeled as controlling the extent of their enmeshment in multiple systems.

Wilson (1956) characterizes all outsiders as recognizing the limits of the systems they inhabit, but responding in two opposing ways. Some give an "ultimate no," signifying their alienation, others give an "ultimate yes," evidencing their transcendence. Wilson found far more examples of the alienated than of the transcendent, probably because of the sources to which he limited himself. Productive, happy, transcendent persons would not be proportionally represented among the black literature or art of the twentieth century.

A Caveat

This model of competence may easily be misunderstood if the philosophy of science we are using is not remembered. We are not proposing that specific individuals may be usefully labeled with the terms of the model; the individual is at once too small and too large a unit of analysis. The logic of individual rule systems is episode-dependent, and may vary in complexity from one episode to another, and the logic of interpersonal rule systems differs in complexity. Since all persons are enmeshed to some extent in multiple systems, and since competence involves the interface between an individual and a system, particular individuals are probably minimally competent in some areas of their social life, they act as if they were satisfactorily competent in others, and they may be optimally competent in still other areas.

Some personal characteristics probably exist that make particular individuals likely to have a certain level of competence across systems. For example, a person with very good empathic abilities and very poor analytic abilities will likely act as if s/he is satisfactorily competent in a wide range of systems. A person with extraordinarily strong profigurative forces entailing the performance of specific acts will likely be minimally competent in most systems. We like to think that a person who has formally studied the problems of self-reflexivity, autonomous logics, and the array of ways of being human is likely to be optimally competent.
However, the competence level of persons in any given interpersonal system or in any given domain or episode of a particular interpersonal system is an empirically answerable question.

A Comparison of Competence Levels

Harris (1979) developed a set of measurement scales for perceived competence. This task required identifying forms of behavior consistent with each competence level on a series of communication tactics, and thus the items on those scales illustrate the levels of competence.

Ingratiation consists of doing something beneficial to the other person in order to obligate that person to do something beneficial in return. A minimally competent person does not know how to assess relative value and may well do something with a value that is much greater or much smaller than the response s/he requests from the other. Regardless of the direction of the error, this violates the norm of reciprocity. A satisfactorily competent person can assess values and does something with a value equivalent to that expected from the other. An optimally competent person does (or can do) something with an inequivalent value without causing problems with reciprocity, or s/he can select a mode of negotiation other than reciprocity.

Altercasting consists of offering the other a role in the relationship. A minimally competent person offers an ambiguous and unattractive role, a satisfactorily competent person offers a clear and appropriate role, and an optimally competent person offers a role that permits the other to be creative and purposive without the offer appearing ambiguous or disinvolved.

Meaning management describes the way a person can manipulate the logic of a system, including the ability to take the perspective of the other. Minimal competence consists of misunderstanding the other, satisfactory competence consists of understanding the other, and optimal competence consists of having the choice of understanding or of deliberately misunderstanding the other in order to solve a problem or complete a task.

Play reflects the ability to detach oneself sufficiently from one's performance to experiment or to perceive it simultaneously from several perspectives. Minimally competent persons do not know when to play and cannot control it; they play as the result of unpredictable changes in perspective; Satisfactorily competent persons play when it is socially approved, and optimally competent persons play when they choose.
These contrasts clearly show that the levels of competence are not unidimensional. Optimal competence is not simply more of something than satisfactory competence. Harris (1979) developed triple-anchored scales for measuring perceived competence that function as useful models for the concept as well as measuring devices. One such scale taps the person's perceived ability to predict what is going on in the conversation. The middle of the scale (denoting satisfactory competence) states, "I can predict exactly how this episode will go." If the person feels that s/he has less predictability, the minimal competent response provided states, "I can't anticipate what the other will do or say next." However, if the respondent feels that s/he can do more than predict, the optimal competent response provided states, "I can predict how the episode will go. I can also experiment with new strategies without causing confusion." A close analysis of this scale shows that the terms more and less are not polar opposites. Less refers to a quantitative difference in predictability, and more to the presence of an additional variable. This subtle but important difference is the distinguishing characteristic between Harris's competence model, which is a part of the theory of the coordinated management of meaning, and those by Hymes, Wiemann, and others.

The theoretical choice that leads to dissimilar models concerns the ontological referent of the concept of rule. Most rules theorists define rules as existing somehow as a transpersonal entity whose substance is the consensus by a group. A criterial attribute of a rule in this perspective is that it is known and perceived as in force by all members of a group. This concept, as Harris (1974b) argued convincingly, produces a number of methodological problems. In addition, it produces the conceptual problem of being unable to distinguish among behaviors produced by a lack of predictability and the presence of the ability to experiment with ways of doing the episode without causing confusion.

An optimally competent person experimenting with a novel way to do the episode "leave taking" may perform precisely the same act as a minimally competent person, and this act may deviate from the normal way of enacting the episode. Wiemann's (1977) approach to competence is based more on the properties of statistical distributions than on a model of humankind. He would observe N instances of the enactment of an episode and assume that competence is what is performed most often in nondisrupted or positively evaluated performances. Allen and Brown's (1976) summary of the literature is similar. People are assessed as competent if they perform the types of actions most persons at their age perform. This exclusive reliance on the statistics of central tendencies or
averages enthralls these conceptualizations of communication competence to satisfactory competence, with two deleterious effects. First, the difference between optimal and minimal competence becomes a source of error variance, placing an unspecifiable upper limit on the ability of these approaches to describe human functioning. Second, if the paradoxical nature of modern society has made satisfactory competence impossible, these approaches become dysfunctional for their ostensible goal of providing standards for assessment and educational programs. Those identified as competent are those who act as if they are satisfactorily competent, including but not differentiating between those whose experience/analytical faculties are too weak to perceive the limitations of normal acts and those who choose to act normally when they could act in a variety of ways. Optimal competent persons are not identified by the research, and optimal competence is not produced by those training programs.

FORMS OF INTERPERSONAL SYSTEMS

The holonic relationship between intra- and interpersonal systems has important implications for both individual competence and the structure of social contexts in which communication occurs. The characteristics of interpersonal systems are determined by the structure of the intrapersonal systems that comprise them, but this relationship is often nonsummative. The demonstration in Figure 5.6 shows that persons may comprise a system whose logic is either more or less complex than their own, and of which they may have variable knowledge. Harris (1979) developed a taxonomy of three types of interpersonal systems based on the characteristics of their logics: open, closed, and random.

The characteristics of the logic of a system depend on that system's boundaries. Consistent with our analysis of social action as requiring a dual emphasis on the intrapersonal and interpersonal unity of analysis, the boundaries of a system may be defined in two ways. Phenomenologically, the system extends to those persons the actor takes into account, those whose actions s/he perceives as relevant to him/her and whom s/he expects to respond to his/her own actions. Objectively, the boundaries of the system may be defined as including all those persons whose actions affect the person and who respond to the actions of any given person. Several difficulties adhere to each type of definition, including the fact that the phenomenological and objective definitions are likely to differ. Persons inside the phenomenological system may well not take the actor into account, and persons outside the phenomenological
system may respond to the actor in ways that are important components of the logic of the interpersonal system. Even the objective definition is problematic. At some level of analysis, no person is an island and all human actions are interrelated. However, this argument is more philosophical than relevant to the measurement problems of assessing the boundaries of particular systems. There probably is a logical force between Charlemagne's military victories and the writing of this book, but it is not strong enough, or differentiated enough, to explain the sequence of chapters we have used. In most instances, it is possible to define useful (not true) boundaries of the system by observing the array of persons whose behaviors affect a person and who are affected by the acts of that person. In the discussion of types of systems, this objective definition of systems boundaries will be assumed.

Closed Systems

Closed systems are those in which the logic is static, not open to negotiation or change. Within a closed system, it is easy to feel satisfactorily competent, and closed systems are produced by two or more persons who are acting satisfactorily competently. In the ideal form of a closed system, each person knows the logic of the system and feels that it should not or cannot change. They will perceive others who conform to the logic of the system as attractive or desirable communicative partners, and perceive those who deviate from the logic as having made a mistake or as having malicious intentions.

Note that a closed system does not necessarily include a logic with no flexibility. Harré and Secord (1973) described three types of episodes—rituals, games, and enigmatic—which seem at first glance illustrative of the three types of systems, but a closer analysis shows that the fit is not exact. The defining characteristic of a closed system is that whatever episodes are legitimate are not negotiable: a closed system may obligate enigmatic episodes or games as well as rituals. The deviant act is not that of choosing among alternative actions, but of choosing outside the limits of the array legitimated by the logic.

Random Systems

A random system is characterized by a logic that produces incoherent sequences rather than patterns. Enigmatic episodes are likely to occur in random systems, and the sequence of episodes is
likely to be enigmatic. Without predictability, sequential episodes may vary from rituals, to games, to being enigmatic, and so on. Random systems are comprised by minimally competent persons who do not understand the full logic of the system, who cannot predict the others' responses, and cannot differentiate between actions that conform to and deviate from the logic of the interpersonal system. For example, a system in which there is no accurate way to decide who will respond to an act and who will be oblivious to it is a random system. One such situation occurs when two persons are conducting a conversation in the presence of several others who may decide to involve themselves or to drop out of the conversation at any time. This is the experience of a graduate student in an oral defense of a dissertation who is asked a series of questions by one member of the examining committee in the presence of several other faculty members whose daydreams may at any time change to keen analytic attention. The audience for the answer may be one other person or several. In this situation the student cannot define the boundaries of the system, but the logic of the system depends on where the boundaries are.

Open Systems

An open system is characterized by a logic that recognizes the inevitability of change or provides a mechanism for inducing change. Such a logic has the properties of a strange loop in that it contains a description of itself within itself. The content of an open system is inherently unstable, and this instability is the only stable thing about it. Open systems are comprised by optimally competent persons who can understand the logic of their system and experiment with it. The difference between alienated and transcending optimally competent persons is determined by the manner in which they handle the self-recursivity in open systems.

A Caveat

The taxonomy of systems presented here are ideal types, and should be applied to particular systems as, at best, temporarily useful descriptors, with all the caution required in using the model of individual competence. The type of system in which a person is enmeshed changes if the boundaries change, and these are notoriously flexible. They change as the person alters his/her definition of relevant others and as others involve themselves with the person. This is the painful lesson learned by persons in developing countries
or who experience upward social mobility. Consider the evidence that increased education is the best single predictor of civil unrest or revolution in developing countries, and that marriages are one of the most frequent casualties of persons who achieve the perennial dreams of fame and fortune. The logic of the interpersonal system of a married couple changes as they change from relatively private individuals to public property, even though their intrapersonal systems remain the same. The objectively determined boundaries of their system have been extended and what was, perhaps, a closed system may well become random. Education in a developing country, if it is effective, broadens the horizon of students, but that changes the logic of their systems, by definition in traditional societies, from closed to open. Alienated optimal competence seems a common result. The same phenomenon occurs in ethics. Moral principles that are useful in private relationships are inappropriate or counterproductive when the system includes large numbers of people with different interests. Kindness at the moment to the person present is often cruelty to many others subsequently.

The difficulties in defining the boundaries of a system are reflections of systemic dynamics. Longitudinal descriptions of particular systems may well be served better by treating the three systems types as variables rather than static forms, and by discussing those events that open a system to some degree and for some time, or close a system, or randomize a system. The heuristic value of this concept seems important in considering individual competence and the form of social reality. If the structures of systems change through time, the competence level of an individual changes as well. A person satisfactorily competent in a closed system becomes minimally competent when the other engages in an act that opens the system. A person who is optimally competent does something—we are not sure what—to his/her own competence when s/he closes a system.

There are many directions in which to research the concept of competence presented in this chapter, some of which were imbedded in the presentation of the models above. The discovery and explication of literary exemplars is more than a casual exercise; it reflects a testing of ideas against the most eloquent available expressions of the social and intellectual milieu. However, the documentation of instances of our conceptual categories and the description of the isomorphism of previously unIntegrated scholarly and analytic literatures do not satisfy the demands of scientific knowledge. There are many contingent (such as, "if—then") statements that emanate from the concept, the accuracy of which requires empirical research. For example, the claim that particular combinations of intrapersonal competencies produce particular forms of interpersonal
systems begs naturalistic and experimental research. What happens when persons of dissimilar competencies form interpersonal systems? Will minimally competent and satisfactorily competent persons combine to produce random or closed systems? Under what conditions does the combination of competencies facilitate the performance capacities of all persons involved?

Harris has developed a line of research focusing on perceived competence. Her argument is that the form of system that is produced depends not only on the competence level of the individuals who comprise it, but also on the level of competence each perceives the other to possess. For example, a person who perceives another as satisfactorily competent will interpret any deviation from the normal ways of enacting an episode as a mistake to be corrected, producing a system whose logic is closed but with temporary fits of randomness. In the same situation, if the person had perceived the other as optimally competent, the deviation would be interpreted as a strategy for change, producing a system whose logic is open. Similarly, if one person in a system perceives the other as minimally competent, this is the death knell of coordination. The system will be random because the person expects the other to act unpredictably.

A STUDY OF PERCEIVED COMPETENCE

Harris, Cronen, and Lesch (1980) tested this reasoning in a study that asked subjects to evaluate the performance of a participant in a written dialogue ostensibly occurring during the first meeting of two people. An initial interaction was chosen because this is a common episode and because it seems to be a closed or ritualistic pattern. The content is limited to nonintimate demographic information that both participants are expected to disclose reciprocally. Berger and Calabrese (1975) found that the conversations in initial interactions are very stereotyped and repetitive across episodes.

In this study, a script of typical initial interaction was manipulated to portray one participant as displaying various levels of competence. One part of the manipulation involved the sequence of actions, the other the use of aligning actions.

Stokes and Lewitt (1976) proposed the concept of aligning actions as a way of understanding how persons reduce the problematic relationship between a particular message and the unfolding line of action being produced by two or more people. Aligning actions are forms of mainly verbal conduct with which individuals sustain the flow of joint action by bringing particular acts into line with others in the sequence, and indicate the relationship between
the present conduct and established cultural patterns that stand as preexisting comparisons to the current performance. This concept is easily adapted to the model of individual competence. Satisfactory competence is indicated by the use of actions that signal the initiation of an established social pattern and the adjustment of one message to another in conformance with that pattern. Minimal competence is associated with the failure of conversants to align to the same pattern and/or failure to indicate verbally the adjustment of one message to another. The segments of conversation below represent the same conversation with and without satisfactory level aligning actions.

**Satisfactory Alignment:**

Lee: Are you from around here?
Pat: No. I'm from New York, are you?
Lee: Yes. I'm a native. You're pretty far from home. I have a son at Penn State. We go through New York when we visit. . . .

**No Alignment:**

Lee: Are you from around here?
Pat: I'm from New York.
Lee: I'm a native. I have a son at Penn State.

The underlined words and phrases in the satisfactory aligning condition function specifically to acknowledge the previous message or invite a particular kind of response. In the no aligning (NA) condition, connecting words and phrases that explicitly locate each message among others are removed. Optimal competence is associated with aligning actions that signal attempts to create an extranormative pattern or initiate a metacommunication episode concurrent with the culturally normative pattern. In a concurrent metacommunication episode, actors employ what Goffman (1959) described as role distance from the culturally preestablished pattern by commenting on their own performance and on the pattern they are enacting. For example:

Lee: Ili. My name is Lee. What's yours?
Pat: Ili, Lee. Pat. I think your next question is supposed to be "Are you from around here?"
Lee: "Are you from around here?" or something like that (laugh).
Pat: Oh, what an "Interesting" question. . . .

Harris, Cronen, and Lesch described aligning actions that initiate and maintain established patterns as satisfactory aligning, and
aligning actions that orient actors to a concurrent meta-episode or justify a rule-deviating behavior as meta-aligning.

The transcript was also manipulated by changing the sequence of messages. A normal initial interaction lasting only a few minutes includes only information that is at a low level of intimacy. One version of the transcript was fully normative, and designated no movement. A second version conformed to the norms for direction of change in the intimacy level of the content, but violated the norms for the rate of change. This transcript depicted the participants as quickly escalating the intimacy of their discussion from low to high intimacy. Third, a version of the transcript was prepared that violated normal expectations for both rate and direction of change. The participants were depicted as moving quickly from high to low intimacy.

The combination of these manipulations of the transcript produced a 3 x 3 design. The episode of initial interaction between Pat and Lee (these names were deliberately chosen because they are sexually ambiguous) was presented in which Pat used no alignment, satisfactory alignment, and meta-alignment in each of three sequences of content: no movement, low to high intimacy, and high to low intimacy. These manipulations were hypothesized to affect these dependent variables: Pat's perceived competence, the perceived enmeshment of Pat in the episode, the valence of the episode, Pat's social attractiveness, and the amount of uncertainty reduced by the conservation by perceptions of Pat's stable and transient characteristics.

One hundred and eighty undergraduates in communication courses at the University of Massachusetts read one of the nine forms of the dialogue and completed a set of 20 Likert-type scales in which we asked them to describe Pat. As shown in Table 6.1, these scales had acceptable but not outstanding reliabilities both in a separate pretest and in a post hoc reliability check of the data from the study itself. The results of the data analysis are summarized in Table 6.2. The amounts of variance accounted for by the independent variables are presented in Table 6.3.

Both the sequence of intimate information and the use of aligning actions affected perceived communication competence. In the fully normative no movement condition, Pat was perceived as more competent than in the high to low condition, which violated norms for both rate and direction of change. However, the most dramatic effect was the use of aligning actions. When Pat was depicted as using meta-aligning, s/he was perceived as significantly more competent than when using satisfactory aligning, and when using satisfactory aligning significantly, more competent than when using no aligning. As shown in Table 6.3, the variance accounted
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</tr>
<tr>
<td>This episode is one Person 1 very much desires to have occur. Person 1 enjoys participating in this episode very much.</td>
<td>.35</td>
<td>.33</td>
<td></td>
</tr>
<tr>
<td><strong>Emotionment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doing this episode over and over seems out of Person 1’s control; it just seems to happen. Person 1 feels stuck in this episode. This situation seems to act out of hand for Person 1.</td>
<td>.80</td>
<td>.78</td>
<td></td>
</tr>
<tr>
<td><strong>Social Attraction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would be pleased to have Person 1 as a friend.</td>
<td>.82</td>
<td>.75</td>
<td></td>
</tr>
<tr>
<td>I think it would be difficult to meet and talk to Person 1. I could never establish a personal friendship with Person 1. Person 1 is offensive to me. Person 1 just wouldn’t fit into my circle of friends.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Uncertainty—Transient States</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How well can you predict Person 1’s behavior? How well can you predict Person 1’s emotional states? How well do you understand Person 1’s feelings? How well do you understand Person 1’s judgments?</td>
<td>.79</td>
<td>.82</td>
<td></td>
</tr>
<tr>
<td><strong>Uncertainty—Stable Characteristics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How well do you know Person 1’s interests? How well can you predict Person 1’s attitudes/values? How well do you know Person 1’s likes/dislikes?</td>
<td>.91</td>
<td>.90</td>
<td></td>
</tr>
</tbody>
</table>

*The items in the first three groups were followed by 9-interval Likert-type responses ranging from "strongly agree" to "strongly disagree"; the items in the last three groups were followed by 7-interval Likert-type responses from "extremely well" to "not at all." Subjects were informed that "Pat" was "Person 1."

Source: Harris, Cronen, and Lisch, 1980.


### TABLE 6.2

Summary of Data in a Study of Perceived Competence*

<table>
<thead>
<tr>
<th>Category</th>
<th>No Aligning</th>
<th>Satisfactory Aligning</th>
<th>Meta Aligning</th>
<th>Main Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perceived Communication Competence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No movement</td>
<td>5.050</td>
<td>4.075</td>
<td>2.525</td>
<td>3.883&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Low to high intimacy</td>
<td>4.925</td>
<td>4.975</td>
<td>4.310</td>
<td>4.566&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>High to low intimacy</td>
<td>6.150</td>
<td>4.775</td>
<td>3.274</td>
<td>4.982&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Main effects</td>
<td>5.375&lt;sup&gt;a&lt;/sup&gt;</td>
<td>4.442&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3.608&lt;sup&gt;c&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td><strong>Perceived Enmeshment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No movement</td>
<td>4.100</td>
<td>5.175</td>
<td>7.250</td>
<td>5.508</td>
</tr>
<tr>
<td>Low to high intimacy</td>
<td>3.750</td>
<td>6.000</td>
<td>6.976</td>
<td>6.271&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>High to low intimacy</td>
<td>3.750</td>
<td>5.750</td>
<td>6.290</td>
<td>5.246&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Main effects</td>
<td>4.550&lt;sup&gt;a&lt;/sup&gt;</td>
<td>5.642&lt;sup&gt;b&lt;/sup&gt;</td>
<td>6.850&lt;sup&gt;c&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td><strong>Episode Valence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No movement</td>
<td>6.875</td>
<td>4.825</td>
<td>3.300</td>
<td>5.000</td>
</tr>
<tr>
<td>Low to high intimacy</td>
<td>4.925</td>
<td>4.375</td>
<td>3.357</td>
<td>4.205</td>
</tr>
<tr>
<td>High to low intimacy</td>
<td>6.175</td>
<td>3.850</td>
<td>3.158</td>
<td>4.415</td>
</tr>
<tr>
<td>Main effects</td>
<td>5.992&lt;sup&gt;a&lt;/sup&gt;</td>
<td>4.350&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3.275&lt;sup&gt;c&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td><strong>Social Attraction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No movement</td>
<td>4.786</td>
<td>3.538</td>
<td>3.163</td>
<td>3.829</td>
</tr>
<tr>
<td>Low to high intimacy</td>
<td>4.750</td>
<td>3.575</td>
<td>3.500</td>
<td>3.934</td>
</tr>
<tr>
<td>High to low intimacy</td>
<td>4.875</td>
<td>4.138</td>
<td>3.776</td>
<td>4.271</td>
</tr>
<tr>
<td>Main effects</td>
<td>4.804&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3.750&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3.475&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td><strong>Uncertainty-Transient States</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No movement</td>
<td>5.067</td>
<td>3.866</td>
<td>3.783</td>
<td>4.239</td>
</tr>
<tr>
<td>Low to high intimacy</td>
<td>4.267</td>
<td>4.250</td>
<td>3.952</td>
<td>4.153</td>
</tr>
<tr>
<td>High to low intimacy</td>
<td>4.066</td>
<td>4.017</td>
<td>3.983</td>
<td>4.023</td>
</tr>
<tr>
<td>Main effects</td>
<td>4.467</td>
<td>4.044</td>
<td>3.906</td>
<td></td>
</tr>
<tr>
<td><strong>Uncertainty-Stable Characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No movement</td>
<td>4.417</td>
<td>4.117</td>
<td>3.467</td>
<td>4.000</td>
</tr>
<tr>
<td>Low to high intimacy</td>
<td>3.417</td>
<td>3.700</td>
<td>3.778</td>
<td>3.634</td>
</tr>
<tr>
<td>High to low intimacy</td>
<td>4.317</td>
<td>3.917</td>
<td>4.193</td>
<td>4.141</td>
</tr>
<tr>
<td>Main effects</td>
<td>4.050</td>
<td>3.911</td>
<td>3.807</td>
<td></td>
</tr>
</tbody>
</table>

*Main effects with different superscripts differ significantly (p < .05) as determined by the Neumann–Keuls procedure. Lower scores indicate higher perceived competence, greater enmeshment, positive valence, greater attraction, and less uncertain. Tabular values are means.

Source: Harris, Cronen, and Lesch, 1980.
for by aligning actions is three times that accounted for by information sequencing.

TABLE 6.3

Variance in Perceived Competence Accounted for by Aligning Actions and Information Sequencing

<table>
<thead>
<tr>
<th>Competence</th>
<th>Enmeshment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aligning</td>
<td>Aligning</td>
</tr>
<tr>
<td>Information sequencing</td>
<td>Information sequencing</td>
</tr>
<tr>
<td>Social Attraction</td>
<td>Uncertainty-Transient States</td>
</tr>
<tr>
<td>Aligning</td>
<td>Aligning</td>
</tr>
<tr>
<td>Valence</td>
<td>Uncertainty-Stable Characteristics</td>
</tr>
<tr>
<td>Aligning</td>
<td>Information sequencing</td>
</tr>
</tbody>
</table>

Power of the Main Design*

<table>
<thead>
<tr>
<th></th>
<th>For Small Effect</th>
<th>For Moderate Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Size .10)</td>
<td>(Size .20)</td>
</tr>
<tr>
<td>Main effects</td>
<td>.21</td>
<td>.86</td>
</tr>
<tr>
<td>Interactive effects</td>
<td>.09</td>
<td>.38</td>
</tr>
</tbody>
</table>

* a = .05, in a 3 x 3 fully randomized ANOVA design, N = 180.

Source: Harris, Cronen, and Lisch, 1980.

Pat's perceived enmeshment in the episode was affected by both information sequencing and the use of aligning actions, and again aligning actions accounted for much more of the variance than sequencing. Pat was described as least enmeshed in the no alignment condition.

Pat was perceived as enjoying the no alignment conversation significantly less than the satisfactory aligning version, and the satisfactory aligning condition significantly less than the meta-aligning condition. Information sequencing had no significant effect.

Pat was perceived as most socially attractive in the meta-aligning condition, and least socially attractive in the no aligning condition. Information sequencing had no significant effect.

Neither the use of aligning actions nor of information sequencing affected uncertainty reduction about Pat's stable or transient characteristics.
These results give striking support to the rationale behind the models of individual competence and forms of systems. Pat was perceived as most free—less enmeshed—as a function of perceived competence rather than adherence to the norms. Pat opened up the closed logic of the initial interaction episode to some extent by violating the norms, but opened it more by the use of aligning actions regardless of rule conformity or violation. Further, Pat's attractiveness as a communication partner and perceived enjoyment of the episode was a function of his/her use of aligning actions, which symtomize levels of competence.

These data also have implications for the underlying conceptualization that differentiates the theory of the coordinated management of meaning from other theories. For example, Berger and Calabrese (1975) developed a theory that describes persons as seeking to reduce their certainty about others, which occurs when the other is observed to behave normatively. The less uncertainty among persons, the greater the social attraction among them.

Following this reasoning, the persons who are most attractive and about whom there is least uncertainty are those who conform best to the social norms. In this study, those characteristics describe the no movement, satisfactory alignment condition. As shown in Table 6.4, planned comparisons were made between this condition and the three meta-alignment conditions. In the no movement conditions, Pat was perceived as more competent, less enmeshed, and enjoying the episode more when s/he used meta-alignment than when s/he used satisfactory alignment. Further, s/he was perceived as less enmeshed in the meta-alignment, low to high movement condition, and to enjoy the episode more in all movement conditions with meta-alignment.

At the least, Berger and Calabrese's (1975) theory is not supported by these data. The fact that the manipulations did not affect uncertainty reduction but did affect perceived competence, attractiveness, and episode valence undercuts the relationships among variables hypothesized by Berger and Calabrese. More directly, the pattern of results confirms the analysis of the relationship between the individual and society we have presented throughout this chapter. The subjects in this study perceived as most attractive a conversant who reduced his/her enmeshment in the episode by using alignments and by violating normal expectations. In no case was the most normal no movement satisfactory alignment condition preferred in comparison with any meta-alignment condition. In the formation of interpersonal relationships in modern society, the others' competence and freedom from enmeshment in episodes is important; in these data, much more important than uncertainty reduction. Of course, this comprises a strange loop: if persons are to be socially accepted—to fit in—they must be unique.
**TABLE 6.4**

Planned Comparisons Testing Two Theories of Social Reality

<table>
<thead>
<tr>
<th>Condition Contrasted with No Movement/ Satisfactory Alignment</th>
<th>Dependent Measures*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Perceived Communication Competence</td>
</tr>
<tr>
<td>Meta-alignment/ no movement</td>
<td>p &lt; .05</td>
</tr>
<tr>
<td>Meta-alignment/ low to high</td>
<td>n.s.</td>
</tr>
<tr>
<td>Meta-alignment/ high to low</td>
<td>n.s.</td>
</tr>
</tbody>
</table>

*Critical differences for t were 1.77 for perceived competence; 1.23 for enmeshment; 1.24 for valence; and .95 for attraction. The abbreviation n.s. denotes a non-significant difference. All tests were two-tailed, with a = .05.*
A STUDY OF SOCIALIZED CREATIVITY

The preceding study examined the effects of various levels of individual performance in enacting a common episode that normally has a closed logic. In a companion study, Harris (1979) selected two episodes whose logic often takes different forms, manipulated transcripts of hypothetical instances of those episodes to produce the characteristics of open, closed, and random systems, and assessed the observers’ perception of the performers.

All three system types were produced in both an advice-giving episode, in which the target person was asked for advice about future plans by a friend, and in a conflict episode, in which a parent and child confront the issue of the child’s arrival at home after the established curfew. The system states were manipulated by re-writing the dialogue to alter the degree, proportion, and consistency of the constraints for maintaining the existing definition of meanings and of the interpersonal relationship.

The random episodes represented a logic containing few constraints for maintaining the preexisting definition of relationship meanings or communicative acts, little basis for adaptation to other persons, and resulting in inaccurate perspective taking. In terms of the communicative functions described in Figure 5.11, these episodes were designed to be mutually incoherent, perceived out of control, and negatively valenced by the participants.

The dialogue in closed episodes represented a logic containing numerous constraints to maintain the preexisting definition of the relationship, meanings, and acts, enabling role-appropriate adaptation to each other, such as, child to father), and resulting in accurate perspective taking. Both characters express confidence in knowing how to proceed in the episode. These episodes were designed to have the functions of mutual coherence, perceived mutual control, and were positively valenced.

The open episodes were simulated by dialogues that evidence a logic facilitating renegotiation of the preexisting meanings and patterns. Each participant was depicted as redefining his/her relationship and the meanings of particular actions to achieve a mutually coherent but newly created episode. The communicative functions described in Table 5.1 do not distinguish open from closed episodes well. Both are (or may be) mutually coherent, with control perceived as mutual, and with positive valence. An additional function may be postulated: locus of meaning. As shown in Table 6.5, the locus of meaning is unknown or undetermined in a random logic, is outside a closed system either in temporally prior events or hierarchically superordinate meanings, and is within an open system. The experience of participating in a random
system is that of suddenly shifting among frames for interpreting events. Participating in a closed system is characterized by the Levantine motto "as above, so below" (cf. Chapter 2) or the traditionalists' credo "we have always done it this way." Participating in an open system is symbolized by the question "Where do we go from here?" and by Sartre's sad No Exit.

### TABLE 6.5

<table>
<thead>
<tr>
<th>Communicative Functions</th>
<th>Random Systems</th>
<th>Closed Systems</th>
<th>Open Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coherence</td>
<td>lacking</td>
<td>mutual</td>
<td>mutual</td>
</tr>
<tr>
<td>Valence</td>
<td>?</td>
<td>varies</td>
<td>varies</td>
</tr>
<tr>
<td>Control</td>
<td>lacking</td>
<td>appears mutual; actually neither has control</td>
<td>mutual</td>
</tr>
<tr>
<td>Locus of meaning</td>
<td>unknown or absent</td>
<td>outside the interpersonal system</td>
<td>within the interpersonal system</td>
</tr>
</tbody>
</table>

The operationalization of the concept of system types is a difficult task. Harris wrote dialogue for both episodes that conformed to these characteristics of open, closed, and random systems and gave them to five expert judges (all knowledgeable about the theory of coordinated management of meaning), asking them to characterize each of the six dialogues as one type of system. There was 100 percent agreement among the judges.

The multidimensionality of the concept of communication competence makes assessment of participants difficult. Harris's general hypothesis was that participants in the three forms of episodes would be perceived differently by subjects reading the dialogues. However, the difference between open and closed episodes is not the same as between closed and random or between open and random, making linear measures of subjects' perceptions problematic. The
solution Harris chose was to select several measures that differentiated among different types of system. Specifically, social competence consists of the extent to which a person has been well socialized and can perform adequately in the given episode, and was measured by the three items shown in Table 6.6. Creative competence consists of the extent to which a person deviates from the normal way of enacting a given episode. Harris hypothesized that subjects would perceive participants in the closed episodes as having greater social competence than those in the random system, but less than those in the open system. However, participants in the open episode would be perceived as having greater creative competence than those in either closed or random episodes, which were not expected to differ.

Two other variables were predicted to be affected by the form of the logic in the episodes. Subjects were expected to be perceived as more enmeshed in the random and closed episodes than the open, and to find the closed episode more valenced than the random, but less highly valenced than the open. As shown in Table 6.6, the content of the participants' performance was also evaluated, and these scores were used as a covariate to control for a contamination of content, permitting a test of the effects of the form of logic.

The hypothesis about social competence was supported. As shown in Table 6.7, subjects perceived participants in closed systems as more socially competent than those in random systems and less than those in open systems. Further, the effect of system structure (27 percent of the variance accounted for) was much greater than for the topic of the episode (4 percent) or the perceived justification of the content of what the participant said (17 percent).

The hypothesis about creative competence was also supported. As shown in Table 6.7, subjects perceived the participants in open systems as significantly more creative than those in either random or closed episodes. Again, the structure of the logic of the system was the most powerful explanation of the results, accounting for 38 percent of the variance as compared to 3 percent for the topic of the episodes, and 6.8 percent for the subjects' approval of the content of the episodes.

Subjects' perception of the extent to which the participants were enmeshed in the episode varied considerably. As predicted, there were significant differences among all forms of episodes, with the open system least enmeshing and the random system most enmeshing (see Table 6.7). The structure of the logic of the system accounted for 45 percent of the variance, the topic of the episode 1 percent, and the subjects' perception of the content of the conversation 51 percent.
### TABLE 6.6

Items for Ancova Outcome Variables and Covariate

<table>
<thead>
<tr>
<th>Social Competence</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Person 1 is as good at handling this episode as most people would be. Person 1 understands what Person 2 meant during this episode. Person 1 is able to judge quite correctly the meaning Person 2 wants to convey.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Creative Competence</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Person 1 and Person 2 do this episode quite differently than most people. Person 1 helps Person 2 act creatively in unconventional but useful ways. Person 2 probably thinks Person 1 is creative in this situation.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enmeshment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Doing this episode over and over again probably seemed out of control for Person 1. It just seemed to happen. Person 1 probably felt stuck in this episode. This situation seemed to get out of hand for Person 1.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Valence</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>This episode is probably one that Person 1 very much desires to have occur. Person 1 probably enjoys participating in this episode very much.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Content Justification (covariate)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>In saying the things s/he did in this episode, Person 1 was:</td>
<td></td>
</tr>
<tr>
<td>justified—unjustified</td>
<td></td>
</tr>
<tr>
<td>right—wrong</td>
<td></td>
</tr>
<tr>
<td>reasonable—unreasonable</td>
<td></td>
</tr>
<tr>
<td>defensible—indefensible</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** All items were followed by a nine-point strongly to strongly disagree scale.
### Table 6.7

**Summary of Data in a Study of Socialized Creativity**

1. **Adjusted Means for Social Competence**

<table>
<thead>
<tr>
<th></th>
<th>Random System</th>
<th>Closed System</th>
<th>Open System</th>
<th>Main Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advice episode</td>
<td>5.91</td>
<td>3.51</td>
<td>1.44</td>
<td>3.62</td>
</tr>
<tr>
<td>Conflict episode</td>
<td>4.32</td>
<td>2.93</td>
<td>1.54</td>
<td>2.79</td>
</tr>
<tr>
<td>Main effects</td>
<td>5.11</td>
<td>3.22</td>
<td>1.48</td>
<td></td>
</tr>
</tbody>
</table>

Lower scores reflect increased competence. There was a significant main effect for episode type ($p < .001$), system state ($p < .001$), and the covariate ($p < .001$). The interaction was not significant.

2. **Adjusted Means for Creative Competence**

<table>
<thead>
<tr>
<th></th>
<th>Random System</th>
<th>Closed System</th>
<th>Open System</th>
<th>Main Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advice episode</td>
<td>6.73</td>
<td>6.24</td>
<td>3.73</td>
<td>5.58</td>
</tr>
<tr>
<td>Conflict episode</td>
<td>6.20</td>
<td>5.88</td>
<td>2.45</td>
<td>4.87</td>
</tr>
<tr>
<td>Main effects</td>
<td>6.50</td>
<td>6.09</td>
<td>3.08</td>
<td></td>
</tr>
</tbody>
</table>

Lower scores indicate increased competence. There was a significant main effect for episode type ($p < .01$), system state ($p < .001$), and the covariate ($p < .001$). The interaction was not significant.

3. **Adjusted Means for Episode Valence**

<table>
<thead>
<tr>
<th></th>
<th>Random System</th>
<th>Closed System</th>
<th>Open System</th>
<th>Main Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advice episode</td>
<td>5.6</td>
<td>3.6</td>
<td>0.04</td>
<td>3.08</td>
</tr>
<tr>
<td>Conflict episode</td>
<td>6.13</td>
<td>6.24</td>
<td>3.49</td>
<td>5.28</td>
</tr>
<tr>
<td>Main effects</td>
<td>5.87</td>
<td>4.92</td>
<td>1.76</td>
<td></td>
</tr>
</tbody>
</table>

Lower scores indicate higher valence. There was a significant main effect for episode type ($p < .001$), system state ($p < .001$), and the interaction effect ($p < .01$). The covariate was not significant.

4. **Adjusted Means for Enmeshment**

<table>
<thead>
<tr>
<th></th>
<th>Random System</th>
<th>Closed System</th>
<th>Open System</th>
<th>Main Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advice episode</td>
<td>2.14</td>
<td>3.71</td>
<td>7.04</td>
<td>4.29</td>
</tr>
<tr>
<td>Conflict episode</td>
<td>3.13</td>
<td>4.66</td>
<td>7.49</td>
<td>5.09</td>
</tr>
<tr>
<td>Main effects</td>
<td>2.63</td>
<td>4.8</td>
<td>7.25</td>
<td></td>
</tr>
</tbody>
</table>

Lower scores reflect increased enmeshment. There was a significant main effect for episode type ($p < .02$), system state ($p < .001$), and the covariate ($p < .001$). The interaction effect was not significant.

**Source:** Harris, 1979.
Subjects perceived the participants' valence of the episode in a manner resembling but not exactly as predicted. The open form of both the advice and conflict episodes was perceived as having a higher valence than the other forms of each type of episode, but—obviously, in retrospect—the closed and open forms of conflict were not described as enjoyable, as were closed and open forms of advice. Still, the structure of the logic accounted for 32 percent of the variance, the topic 13 percent, and the interaction effect only 3 percent. The covariate had no significant effect.

These results comprise strong evidence that persons in a modern society—as represented by the university undergraduates in Harris's study—can discriminate between two kinds of deviations from the normal way of enacting particular episodes, reflecting the difference between a random and an open logic. Further, while they value social competence (such as, the ability to fit in), they value creative competence more (such as, the ability to be unique in useful ways).

This evidence has implications for models of competence and an understanding of the social reality of modern society. Obviously, any model of competence that is significantly less complex than the perceptions of ordinary members of the culture has difficulty as a descriptive device on which to base assessment and training. However, this seems to be precisely the case with current approaches to competence that tacitly assume that the logic of social episodes is closed, and do not distinguish between those who are involuntarily outside the system and those who are deliberately beyond the system. In modern society, a socialized creativity seems to exist; persons are expected to perform creatively in order to be perceived as well socialized. The combination of high scores on both social competence and creative competence (cf. Table 6.7) clearly expresses the paradoxical injunction we use to summarize modern society: "Be unique, so that you can fit in."

Finally, the results of this study support the basic strategy of the theory of the coordinated management of meaning, which is to explain the human condition as a reciprocal relation between forms of communicative action and the structure of interpersonal systems that comprise interpersonal systems. At the beginning of this chapter, we addressed the problems for explaining the human condition that are posed by the phenomena of variable enmeshment in multiple systems, each with its own logic of meaning and action. The solution we proposed was to model the extent of enmeshment rather than try to avoid it. Harris's models of individual communication competence and of types of systems are consistent with our theory of the holonic organization of active systems, and the research reported in this chapter strongly supports the argument that
both the characteristics of the individual and of the system affect
the way that persons are perceived. Further, the results support
our contention that the structure of modern society has the charac-
teristics of a strange loop, which imposes what seem from a
historical perspective extraordinarily difficult performance de-
mands on the participants in modern society. This suggests that
competence is a theme of particular importance both for theorists
and for practitioners of the human condition in modern society.
THE STRUCTURE OF SOCIAL REALITY: TEN STUDIES

ABSTRACT

The theory of the coordinated management of meaning claims to stand between the evocative metaphor of the undirected play and the conduct of research that has the traditional scientific virtues. Ten studies are reported that demonstrate the ability to make the concepts of this theory empirically measurable and the results of which inform the theory.

INTRODUCTION

The metaphor of the human condition that informs the theory of the coordinated management of meaning differs substantially from that on which most research in the social sciences in this century has been based—as those researchers have been quick to tell us (cf. Chapter 1). The propositions of the theory, which convert the live metaphor into a more literal description of communication and human functioning, pose real problems for research. When we began the development of the theory, we believed that valid research protocols could be developed but could not envision what form they would take. The purposes of this chapter are concatenated. The larger purpose is to report the results of an array of studies that were informed by the theory, the findings of which test, extend, and support particular aspects of the theory. A subsidiary purpose is to demonstrate that it is possible to do rigorous research consistent with our theory and to display a number of the research protocols we have developed.

Although this is an unavoidable oversimplification, normal social scientists may be described as defining variables they think exist (for example, Machiavellianism, attitudes, prosocial behavior,
learned helplessness, the risky shift in group decision making, and so on) and seeking general, lawlike relationships among them. The problem is to cut beneath the error variance to find the real relationships among variables. Laboratory researchers do this by random assignment to treatment conditions of relatively homogeneous subjects, and field-survey researchers accomplish the same goal by measuring socioeconomic status and other variables, and using cross-breaks in the data analysis. The research protocols developed by clever satisfactorily competent researchers are marvels of ingenuity, persistence, and rigor. However, a number of alienated optimally competent researchers have critiqued this system, questioning whether variables are really real, whether subjects respond to demand characteristics, whether the results of research change the relationship among variables, and so on. Such persons usually set themselves up as critics of research rather than proponents of alternative paradigms (for example, Gergen 1978).

We have clearly placed ourselves outside the system of traditional science by adopting a metaphor that implies the meaning of any act depends upon the interpretive procedures of the individual, that those intrapersonal interpretive procedures have different structures in different topical domains, and that the action by the subject creates, in ways the subject often cannot anticipate, changes in intrapersonal and interpersonal reality. It is interesting to use the conceptual apparatus presented in Chapter 6 to analyze this situation. To the extent we deviate from orthodox assumptions, we are perceived as either optimally or minimally competent. Those who perceive us as minimally competent—as ignorantly erring—will act toward us in ways that create a random system; those who perceive us as optimally competent—as deviating by choice in order to accomplish a goal—will act in ways that create an open system. Those who see us are attempting to construct an alternative system will shift perspectives and evaluate us in terms of our ability to develop a program of research consistent with the logic created by the assumptions of that system.

The crucial difference between the way we do research and that of "normal" social science is the consequent of the selection of the object of study. As discussed in Chapter 4, this leads to a radical reinterpretation of what counts as data and what data count as (cf. Pearce, Cronen, and Harris 1980). Specifically, rather than study variables consisting of the distribution of particular attributes through a population or the incidence of a particular behavior, we study the characteristics of intrapersonal and interpersonal rule systems in relation to the actions they perform. Our definition of communication as the process of creating and managing social reality orients this research to the reciprocal causal rela-
tionship between the actions people perform and the world view in
which they define themselves as living.

Social reality is what people believe that people believe. This
definition, although cryptic, emphasizes two important points: the
locus of social reality is in the heads of individuals, and it has the
peculiar attribute of being perceived as shared by others.

Social reality differs from reality as the meaning of a thing
differs from the thing itself. While there can be little doubt that the
physical environment and the technology and economy that are de-
veloped in response to it exert strong morphogenic forces on the
human condition (Harris 1968), it is also apparent that socially
sanctioned interpretations of the brute facts of experience are mor-
phogenic for society as a whole and for individual experience.
Geertz (1957, p. 33) went so far as to define culture as "the or-
dered system of symbols and meanings through which human beings
interpret their experience and guide their actions."

Two observations initiate the inquiry into social reality.
First, persons perceive and treat their interpretations of things as
if those interpretations are real. The physical reality of sound vi-
brations is less important in explaining a person's subsequent re-
sponse than the fact that that person interpreted the message as an
insult. Throughout human history, persons have lived and killed
for their interpretation of meanings, symbols, and institutional
facts. Second, humans have a pronounced proclivity to construct
social reality. There have been many attempts to define humankind
by its unique attribute: homo sapiens, homo faber, homo ludens,
homo tempestuous, and so on. Perhaps a more useful effort would
be to coin a Latin phrase describing humans as the species that in-
vents meanings and then treats them as if they were real.

The specification of social reality as real in the analysis of
the human condition consists of a significant shift in object and pro-
cedures of scientific inquiry. Since the sixth century B.C. Ionian
philosophers, a central assumption in Western thought is that be-
neath the diversity, change, and imperfections of the world of sen-
sory perceptions, lies an ordered, permanent, and perfect reality.
The goal of the several forms of Western intellectual inquiry—in-
cluding contemporary social science—has been to penetrate through
the appearances to discover and describe the order that lies beyond
them (cf. Pearce, Cronen, and Harris 1980). The intellectual revo-
lution in this century described in Chapter 3 has seriously under-
mined this venerable assumption and the research programs that
are based on it. The newer view, described in Chapter 4, is that
the organizing principles of reality are very different from what had
been thought and not nearly so monolithic in their effect. As we de-
scribed the human condition in Chapters 5 and 6, by their very
nature persons create reality by interpreting events and performing acts. They do this in the context of interpersonal systems that are structurally deficient, lacking a superordinate cybernetic monitor, and in which they are variably enmeshed in multiple system. At the least, social reality cannot be assumed to be orderly. The study of social reality from this perspective focuses on the extent and form of order in the social reality of particular systems, on the means by which order is achieved or obstructed, and on the consequences of disorder.

SIMULATED CONVERSATIONS

The use of simulation as a research procedure always requires justification. At best, it can present an argument by analogy; at worst, it generates what appear to be relevant data but are aspects of an unrealistic social setting invented by the researcher. In general, the virtues of simulation are those of controlling extraneous variables and manipulating events not normally under the experimenters' control. As with the protagonists in Greek dramas, these virtues may themselves prove to be the fatal flaw: simulations sacrifice at least some degree of verisimilitude. If it can be shown that the loss of verisimilitude is not pernicious, simulation is a viable research strategy. If the phenomena being studied are difficult to approach in any other way, simulation is a preferred procedure.

The systemic nature of persons and interpersonal interaction makes simulation uniquely appropriate. The value of any single variable—or the content of particular rules—provides little information in a study based on our theory. Explanation and predictive power comes from the configuration of the individuals' rules, and applies to the pattern of sequential actions. Rapoport and Chammah (1970) said that games used as simulations provide purified prototypes of objects of study that meet these criteria: there is a sequence of acts; the outcome or value of each person's move depends both on his/her choice and that made by the other player; players are in a position to make and execute plans based on the consequences of their moves; and players have available alternatives from which to choose. These characteristics constitute a good description of conversations.

We developed Coordination, a two-person, pure coordination, limited information game that is played in a manner simulating conversation. The game consists of an artificial language in which the lexical units are colored shapes on index cards and the grammar includes constitutive rules that describe the meanings—in this case,
alphabetical symbols—of the colored shapes, and regulative rules that describe the possible sequences of lexical units. The grammars were identical to those reproduced as Figure 5.9. By manipulating the structure of each person's rules and of the configuration of both persons' rules, we were able to measure the logical force in conversations as shown by the results of computer simulation. Those given the rules for game 1 had a potential array of 11 different sequences of meanings, which is equivalent to a logical force of 9.09. Those given the rules for game 2 had a potential array of 27 different four-turn sequences and thus a logical force of 3.70. Game 3 was unusual in that the players differed in their interpretations of particular lexical units. Since sequences were defined at the level of meanings rather than colored shapes, the logical force for the player identified as Person 1 was 1.96, and for Person 2, 1.61 (Cronen, Kaczka, Pearce, and Pawlik 1978).

The game Coordination is played by two persons, each of whom has three sets of materials. First, a deck of index cards, each of which contains a colored shape. These cards provide the vocabulary of the language. When the game is played, each player alternates in selecting a card from his/her deck and placing it on the table between them adjacent to the card played previously by the other participant. The decks of colored shapes were redundant enough to permit multiple use of any given colored shapes.

Second, each participant received a booklet describing the game, giving him/her specific instructions about how to play it, and presenting a worked example.

Third, each player received a score sheet that contained the rules s/he was to follow in playing the game. Since s/he did not have access to the rules given to the other opponent, Coordination is technically described as a limited information game. The score sheet also specified a particular sequence of meanings (for example, ADBC) s/he and the other person were to produce. Subjects were informed that they were competing against other dyads and the only way they could do well was by cooperating with the other player. If they achieved the desired sequence, they would be awarded five points; any sequence of four meanings other than the desired one would result in a score of minus two points. These features gave the game the characteristics technically described as a game of pure coordination. Finally, the score sheet provided a form in which each player recorded each card that was played, its meaning according to his/her rules, and—when s/he selected a card—the card s/he expected his/her partner to play next. This part of the score sheet provided a record of the game for the experimenters and ensured that the players were paying attention to each other's moves.
The game consisted of a maximum of 12 turns. After the game was completed, subjects were given a questionnaire asking them to describe themselves, their partner, and the way they had played the game.

In the first study of simulated conversations (Pearce, Cronen, Johnson, Jones, and Raymond 1980), we were primarily interested in the relationship among several aspects of social reality and the ability of subjects to coordinate their conversation. We operationally defined coordination for these purposes with a double negative: the absence of unpredictability, measured by the strength to which they disagreed with the Likert-type scale item "my partner's choices were very unpredictable." We reasoned that the ability to coordinate with someone is not the same as the ability to predict what s/he will do at any given time, but does involve the ability to specify a range of acts within which the other's choice will fall. Similar to Keesing's (1971) description of the goal of ethnographies, subjects who coordinate well should be able to avoid being unpleasantly surprised by the other rather than specifying in advance exactly what the other will do.

The aspects of social reality we explored included the version of the game played, subjects' perceived latitude of choice, subjects' role-taking ability, and subjects' sex. The first three of these comprise two objective and one subjective descriptions of the structure of the preexisting social reality as expressed in the subjects' rule systems. The version of the game played is an objective description of the interpersonal rule system, of which the experimenters—by virtue of the simulation protocol—had perfect knowledge and control. Subjects' perceived latitude of choice was measured by their responses to a seven-interval Likert-type scale of the statement, "The rules allowed me to make choices," and was understood as a description of the freedom they felt. Interestingly, the correlation between game—which controlled how many choices subjects really had—and their perception of the latitude of choice was virtually nonexistent, \( r = .021 \), indicating that subjects' summary perceptions of the structure of social reality are not particularly keen. Subjects' role-taking ability was measured after the game by having subjects write the rules they thought their partner had been following. These descriptions of their partners' rules were then compared to the rules actually assigned to the partner by two expert judges. The judges achieved a 100 percent interrater reliability using a three-point coding system in which "1" indicated the subject was unable to write the partner's rules, "2" indicated the rules written by the subject did not reflect the similarity or difference between the subjects' own rules and those of the partner in either content or structure, and "3" indicated the subject accurately de-
scribed the other's rules. The accuracy of role taking was understood to be a measure of the subject's ability to act as if s/he were a cybernetic monitor superordinate to the whole interpersonal system. Variations in this ability should affect the form of communication and the subsequent structure of social reality. Role-taking ability was not closely related to the other two measures of the structure of social reality: \( r = .131 \) with game, and \( r = .160 \) with latitude of choice. We had no theoretical reason to include sex as a descriptor of social reality, but knew we would be asked why we did not include it if we did not, and that certain respondents would hypothesize that all the results would be different if males and females were separated. All dyads who played the game were of the same sex (four teams of males, six of females). Sex was correlated with latitude of choice at \( r = .096 \), and role-taking ability at \( r = .126 \).

Data were analyzed by stepwise regression to test this hypothesis:

The ability to coordinate is a function of the rules of the interpersonal system created by the game played, perceived latitude of choice, role-taking ability, and sex.

As shown in Table 7.1, sex was the least \( (r = -.188) \) and only non-significant \( (F = 2.064, p = .16) \) function of coordination. The combination of the other three variables accounted for 47 percent of the variance in perceived unpredictability of the partner, with each measure of social reality contributing a significant \( (p < .05) \) amount of explanatory power. The most objective measure of social reality—game—was by far the most powerful predictor of coordination, accounting for 29 percent of the variance. Latitude of choice added an additional 11.7 percent and role-taking ability 6.1 percent.

In addition to coordination, we were interested in discovering the factors that affect revisions of social reality. In this instance, we defined social reality as subjects' perceptions of their own competence, measured by a seven-interval Likert-type scale of responses to the statement "I was extremely competent in playing the game"; subjects' perceptions of the other's competence, measured by a seven-interval Likert-type scale of responses to the statement "My partner was extremely competent in playing the game"; and subjects' tendency to blame the game itself for difficulties in coordination, measured by a seven-interval Likert-type scale of responses to the statement "Any problems we had were due to the rules." We entered each of these variables as the dependent measure in a multiple regression equation. As shown in Tables 7.2 and 7.3, subjects'
perceptions of their own competence and their perceptions of their partner's competence were closely related, overshadowing any other relationship. There were no significant explanations of the tendency to blame the rules for difficulties in coordination: the full seven-variable stepwise regression accounted for only 4.8 percent of the variance.

**TABLE 7.1**

Correlates of Partner's Unpredictability In a Simulated Conversation

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable</th>
<th>F</th>
<th>p</th>
<th>Multiple R</th>
<th>Simple R</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Game</td>
<td>15.686</td>
<td>.003</td>
<td>.541</td>
<td>-.541</td>
<td>-.439</td>
</tr>
<tr>
<td>2</td>
<td>Choice latitude</td>
<td>7.376</td>
<td>.010</td>
<td>.640</td>
<td>.354</td>
<td>.384</td>
</tr>
<tr>
<td>3</td>
<td>Role taking</td>
<td>4.183</td>
<td>.048</td>
<td>.686</td>
<td>.368</td>
<td>.244</td>
</tr>
<tr>
<td>4</td>
<td>Sex</td>
<td>2.064</td>
<td>.160</td>
<td>.708</td>
<td>-.188</td>
<td>-.212</td>
</tr>
</tbody>
</table>

**R = Regression.**

**Source:** Pearce, Cronen, Johnson, Jones, and Raymond, 1979.

Single-item scales were used in this study because of the lengthy procedure. A test-retest reliability procedure using an independent sample from the same population, n = 21, produced reliabilities ranging from a low of .78 to a high of .86. Since these scores are fairly high, and since unreliability would increase the chances for a conservative Type II error rather than a Type I, we considered these scales adequate.

A second study of simulated conversations (Johnson 1979) differed in some interesting ways from the one described above. One set of changes was designed to correct for potentially confounding characteristics of the Pearce, Cronen, Johnson, Jones, and Raymond (1980) study. Game 1 was deleted. A proportionate number of the 18 male and 28 female subjects were assigned—in same-sex dyads—to game 2 or 3 (as shown in Figure 5.9). Subjects played only one game, rather than two. The subjects assigned the rules for Person 1 and Person 2 in each game were tallied separately, and compared within as well as between games. The game was lengthened to 16 turns, and the dependent variables were measured after both the eighth and sixteenth turns.
### TABLE 7.2

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable</th>
<th>F</th>
<th>p</th>
<th>Multiple R</th>
<th>Simple R</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Other's competence</td>
<td>57.045</td>
<td>.0005</td>
<td>.775</td>
<td>.775</td>
<td>.855</td>
</tr>
<tr>
<td>2</td>
<td>Choice latitude</td>
<td>3.659</td>
<td>.064</td>
<td>.798</td>
<td>-.019</td>
<td>-.192</td>
</tr>
<tr>
<td>3</td>
<td>Game</td>
<td>1.404</td>
<td>.244</td>
<td>.806</td>
<td>.094</td>
<td>.142</td>
</tr>
<tr>
<td>4</td>
<td>Blaming rules</td>
<td>1.606</td>
<td>.213</td>
<td>.816</td>
<td>-.097</td>
<td>.130</td>
</tr>
<tr>
<td>5</td>
<td>Role taking</td>
<td>.080</td>
<td>.779</td>
<td>.816</td>
<td>-.340</td>
<td>.021</td>
</tr>
<tr>
<td>6</td>
<td>Partner unpredictable</td>
<td>.016</td>
<td>.900</td>
<td>.816</td>
<td>-.072</td>
<td>.021</td>
</tr>
<tr>
<td>7</td>
<td>Sex</td>
<td>.013</td>
<td>.910</td>
<td>.816</td>
<td>.121</td>
<td>.013</td>
</tr>
</tbody>
</table>

Source: Pearce, Cronen, Johnson, Jones, and Raymond, 1979.

### TABLE 7.3

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable</th>
<th>F</th>
<th>p</th>
<th>Multiple R</th>
<th>Simple R</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Own competence</td>
<td>57.045</td>
<td>.001</td>
<td>.775</td>
<td>.775</td>
<td>.763</td>
</tr>
<tr>
<td>2</td>
<td>Choice latitude</td>
<td>5.602</td>
<td>.023</td>
<td>.808</td>
<td>.214</td>
<td>.200</td>
</tr>
<tr>
<td>3</td>
<td>Blaming rules</td>
<td>3.572</td>
<td>.067</td>
<td>.827</td>
<td>-.283</td>
<td>-.207</td>
</tr>
<tr>
<td>4</td>
<td>Game</td>
<td>1.589</td>
<td>.216</td>
<td>.835</td>
<td>-.033</td>
<td>-.134</td>
</tr>
<tr>
<td>5</td>
<td>Role taking</td>
<td>.217</td>
<td>.644</td>
<td>.837</td>
<td>-.002</td>
<td>-.053</td>
</tr>
<tr>
<td>6</td>
<td>Sex</td>
<td>.245</td>
<td>.624</td>
<td>.838</td>
<td>.091</td>
<td>.051</td>
</tr>
</tbody>
</table>

Source: Pearce, Cronen, Johnson, Jones, and Raymond, 1979.
In addition, several new variables were added. Coordination was operationally defined by two subjective measures, perceived coordination and the absence of unpredictability, and objectively as the score achieved by the dyad. Perceived control was measured by responses to two items: "success at coordinating choices in this game is primarily due to luck, not skill," and "any problems we had were due to the rules we had to work with, not our playing ability." Perceived success was measured by responses to three items: "My partner and I coordinated our choices well," "My partner's choices were extremely unpredictable," and "This game is extremely easy."

The first hypothesis predicted that subjects playing game 2 would achieve higher scores than those playing game 3, in which the players' rules were asymmetrical in both content and structure. The expected effect occurred, but the size of the effect was smaller than anticipated, so Johnson conducted a post hoc analysis by stepwise multiple regression of the variables correlated with score. After the eighth turn—the midpoint of the game—score was closely related to perceived coordination, the absence of unpredictability of the partner, and the perceived competence of the partner. Game made the least contribution to explaining score. However, after the sixteenth turn, other's competence and game were the primary correlates of score, with the absence of unpredictability and coordination as the fourth and sixth predictors, respectively. Whatever else may be said about these findings, they indicate that continued experience with the game changes the relationships among variables (see Tables 7.4 and 7.5).

### TABLE 7.4

Correlates of Score at the Midpoint of a Simulated Conversation

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable</th>
<th>F</th>
<th>p</th>
<th>Multiple R</th>
<th>Simple R</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Coordination</td>
<td>45.875</td>
<td>.000</td>
<td>.714</td>
<td>.714</td>
<td>.292</td>
</tr>
<tr>
<td>2</td>
<td>Unpredictable</td>
<td>15.471</td>
<td>.000</td>
<td>.800</td>
<td>-.706</td>
<td>-.436</td>
</tr>
<tr>
<td></td>
<td>partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Other's</td>
<td>4.643</td>
<td>.037</td>
<td>.822</td>
<td>.626</td>
<td>.273</td>
</tr>
<tr>
<td></td>
<td>competence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Role taking</td>
<td>2.619</td>
<td>.113</td>
<td>.834</td>
<td>.419</td>
<td>.170</td>
</tr>
<tr>
<td>5</td>
<td>Perceived luck</td>
<td>.684</td>
<td>.413</td>
<td>.837</td>
<td>-.111</td>
<td>.090</td>
</tr>
<tr>
<td>6</td>
<td>Game</td>
<td>.752</td>
<td>.391</td>
<td>.840</td>
<td>-.353</td>
<td>.090</td>
</tr>
</tbody>
</table>

Source: Johnson, 1979.
TABLE 7.5

Correlates of Score at the End of a Simulated Conversation

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable</th>
<th>F</th>
<th>p</th>
<th>Multiple R</th>
<th>Simple R</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Other's</td>
<td>35.763</td>
<td>.000</td>
<td>.670</td>
<td>.670</td>
<td>.469</td>
</tr>
<tr>
<td></td>
<td>competence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Game</td>
<td>11.526</td>
<td>.001</td>
<td>.752</td>
<td>-.353</td>
<td>-.336</td>
</tr>
<tr>
<td>3</td>
<td>Role taking</td>
<td>3.739</td>
<td>.060</td>
<td>.775</td>
<td>.419</td>
<td>.229</td>
</tr>
<tr>
<td>4</td>
<td>Partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>unpredictable</td>
<td>1.324</td>
<td>.257</td>
<td>.783</td>
<td>-.275</td>
<td>-.081</td>
</tr>
<tr>
<td>5</td>
<td>Perceived luck</td>
<td>1.157</td>
<td>.293</td>
<td>.790</td>
<td>-.018</td>
<td>.136</td>
</tr>
<tr>
<td>6</td>
<td>Coordination</td>
<td>1.216</td>
<td>.277</td>
<td>.797</td>
<td>.500</td>
<td>.155</td>
</tr>
</tbody>
</table>

Source: Johnson, 1979.

A similar finding occurred in the analysis of the perceived unpredictability of the partner. After the eighth turn, those who played game 2 perceived their partners as less unpredictable than those given the rules of game 3. If measures taken both after the eighth and sixteenth turns were summed, this effect remains, but this obscures the fact that there is no difference after the eighth trial. We interpret this as an indication of the limits of the effect of the manipulation of the rules in games 1 and 2: after eight turns, the effect has been submerged by other factors.

As expected, participants given the rules for Person 2 perceived themselves as having a greater latitude of choice than those in the role of Person 1. As shown in Tables 7.6 and 7.7, perceived latitude of choice was affected by the participants' sex as well as by their assignment to roles within the games. Since there were an equal number of females assigned to each role, this may indicate some characteristic gender-oriented difference in responding to given configurations of logical force.

These studies demonstrate the potential of conversational simulation as a method to study many topics that have long been a part of communication theory and research. Its particular value is that it focuses clearly on the structure of conversation and social reality rather than on specific conversational behaviors. As Miller (1978) recently warned, the content of behavioral sequences and the normative force for performing particular behaviors vary widely across persons and situations, and there is little utility in simply
### TABLE 7.6

Correlates of Perceived Choice at the Midpoint of a Simulated Conversation

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable</th>
<th>F</th>
<th>p</th>
<th>Multiple R</th>
<th>Simple R</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Person</td>
<td>7.296</td>
<td>.01</td>
<td>.377</td>
<td>.377</td>
<td>.462</td>
</tr>
<tr>
<td>2</td>
<td>Sex</td>
<td>5.815</td>
<td>.02</td>
<td>.494</td>
<td>-.320</td>
<td>-.200</td>
</tr>
<tr>
<td>3</td>
<td>Game is easy</td>
<td>2.801</td>
<td>.102</td>
<td>.540</td>
<td>-.226</td>
<td>-.430</td>
</tr>
<tr>
<td>4</td>
<td>Partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>unpredictable</td>
<td>6.198</td>
<td>.017</td>
<td>.620</td>
<td>-.221</td>
<td>-.315</td>
</tr>
<tr>
<td>5</td>
<td>Perceived luck</td>
<td>3.288</td>
<td>.077</td>
<td>.657</td>
<td>-.148</td>
<td>-.175</td>
</tr>
<tr>
<td>6</td>
<td>Own competence</td>
<td>1.209</td>
<td>.278</td>
<td>.670</td>
<td>.100</td>
<td>.383</td>
</tr>
<tr>
<td>7</td>
<td>Rules are bad</td>
<td>2.004</td>
<td>.165</td>
<td>.690</td>
<td>-.117</td>
<td>-.221</td>
</tr>
</tbody>
</table>

### TABLE 7.7

Correlates of Perceived Choice at the End of a Simulated Conversation

<table>
<thead>
<tr>
<th>Step</th>
<th>Variable</th>
<th>F</th>
<th>p</th>
<th>Multiple R</th>
<th>Simple R</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sex</td>
<td>9.841</td>
<td>.003</td>
<td>.428</td>
<td>-.427</td>
<td>-.353</td>
</tr>
<tr>
<td>2</td>
<td>Person</td>
<td>6.638</td>
<td>.013</td>
<td>.540</td>
<td>.331</td>
<td>.378</td>
</tr>
<tr>
<td>3</td>
<td>Coordination</td>
<td>4.381</td>
<td>.042</td>
<td>.600</td>
<td>.368</td>
<td>.385</td>
</tr>
<tr>
<td>4</td>
<td>Other's competence</td>
<td>8.493</td>
<td>.006</td>
<td>.685</td>
<td>-.034</td>
<td>-.355</td>
</tr>
<tr>
<td>5</td>
<td>Game</td>
<td>1.974</td>
<td>.168</td>
<td>.703</td>
<td>-.242</td>
<td>-.169</td>
</tr>
<tr>
<td>6</td>
<td>Partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>unpredictable</td>
<td>.808</td>
<td>.374</td>
<td>.710</td>
<td>-.224</td>
<td>-.194</td>
</tr>
<tr>
<td>7</td>
<td>Internal-external</td>
<td>.603</td>
<td>.442</td>
<td>.715</td>
<td>.140</td>
<td>.167</td>
</tr>
</tbody>
</table>
listing rules, even if cross-tabulated by person, time, and place. However, the structure of rules is more stable, underlying many diverse domains of topics, types of situations, and identities of persons. The theory of the coordinated management of meaning suggests that there should be regularities between the structure of social reality and the forms of communication, and the game Coordination permits these relationships to be tested directly.

The results of these studies may be summarized in six statements, which we understand to be the first approximation of a theory of the relationship between the structure of social reality and the form of conversation. The test of the hypothesis shows that manipulation of rule structure in the interpersonal system directly affected subjects' ability to produce the desired sequence and to avoid being surprised by the other's behavior. Highest degrees of coordination occurred in game 1 (lowly complex, symmetrical content) where logical force was greatest, and least coordination occurred in game 3 (asymmetrical complexity, asymmetrical content) in which logical force was lowest. Since the symmetrical structure, asymmetrical content of game 2 permitted a middle range of coordination, these conclusions are warranted:

1. The degree of isomorphism between individuals' rules affects their ability to coordinate, at least in early stages of conversations.
2. The ability to coordinate is affected by increasing complexity and asymmetricity in both content and structure, but asymmetricity of structure exerts the most powerful effect.

A close inspection of the logical forces produced by the various forms of the game led to a serendipitous conceptualization. The real logical force was created by the interpersonal intermeshing of both persons' rule systems, and was calculated by the computer simulation as expressed in the formula described above. However, the logical force as perceived by the actors in some cases differed considerably from what really existed. For example, in game 1 the subjects had little latitude of choice, but the choices available to them led easily to a coordinated enactment of the desired pattern; in game 3 the latitude for choice differed between players. This differentiation between real and perceived logical force makes expectable and interpretable the nonsignificant relation between perceived latitude of choice and version of the game. In a study of unwanted repetitive patterns, the subjective feeling of loss of control (enmeshment) was significantly related to the desirability of the other's subsequent acts. These findings show that prefigurative logical force
alone is inadequate to account for actors' phenomenological responses to particular conversations. Practical force—the constraints placed on choices within the logic by anticipated consequents—must also be taken into consideration. These general conclusions seem warranted:

3. The relation between amount of logical force and perceived loss of control is not linear.

4. Feelings of loss of control are a function of a conflict between prefigurative and practical logical forces.

The high correlation between the unpredictability of the others (for example, inability to coordinate) and the subjects' perception of their own latitude of choices raises interesting questions about the relation between freedom and optimal forms of communication. In the versions of the game where logical force was low, subjects felt little compulsion to act in particular ways, but also had little ability to predict the other's responses. This finding is the complement of the close (inverse) relation between role-taking ability and the other's unpredictability. This seems a reasonable speculation:

5. Optimal forms of communication have a curvilinear relation to amount of logical force. If logical force is too low, coordination is precluded because anything is legitimate and nothing is significant; if it is high, then ritualistic coordination is easy but any variation is difficult.

The high correlations between perceptions of own and others' competence support the idea that subsequent forms of the social order are affected by patterns of communication. This finding is consistent with the symbolic interactionist position that the self originates in social interaction, and indicates that it is unlikely that a person will perceive him/herself competent unless he/she has other persons perceived competent with whom to interact successfully.

An intriguing pattern of results concerns the locus of blame for coordination problems. The tendency to blame rules was marginally related to other's competence, but not to own competence, even though own and other's competence were closely related. This raises the interesting question of the conditions in which persons blame external situations or the other person for problems, and in which they metacommunicate to discover the logic of their conversation. Further, latitude of choice was inversely related to own competence, and positively related to other's competence, suggesting a self-deprecating double standard in which subjects rewarded their partner for doing well in a simple game with few choices, but not themselves. This conclusion is suggested:
6. There is an inverse relationship between perceived own competence and amount of logical force, a direct relationship between perceived other's competence and perceived own competence, and a direct relationship between ability to coordinate and perceived other's competence.

ANTISOCIAL LOGICS: THE RULES OF FIGHTS, IMPOTENCE, AND VIOLENCE

The value of research based on simulated conversations depends on the extent to which the rules given to subjects resemble—at least in the most significant aspects—the rules persons actually follow. The sets of rules that comprised the three versions of the game Coordination were based on extensive literature reviews, but remained a construction from our imagination. Before exploiting the technique of simulation further, we thought it wise to study the patterns of rules that exist in contemporary culture.

The most striking result of this research is the demonstration of patterned disorder. Formal, Aristotelian logic provides a system of thought purporting to identify fallacies and precludes several types of erroneous relations among statements. The logics of interpersonal rule systems do not perform this function for the behavior and meanings of communicators. To the contrary, the juxtaposition of intrapersonal rule systems seems more likely than not to produce patterns of disorder that make coordinated communication problematic. In some instances, this disorder produces quite undesirable and sometimes destructive patterns of interpersonal behavior.

Despite the heading of this section, it was not our purpose to concentrate on the least palatable drags of human sociation. We were, frankly, surprised at how easy it was to locate dysfunctional—or less than optimal—patterns of social interaction. Our original assumption had been that while many relationships are troublesome, persons are purposive enough and amply self-interested to avoid conspicuously detrimental relationships and seek out those that enhanced their selves or at the very least had a benign effect. We discovered, however, that enmeshment in a relationship or recurrent episode had little relation to the valence or—to our eyes—healthfulness of that social object. We have been impressed by the adaptability of humankind, and view that adaptability as simultaneously the primary survival characteristic of the species and the primary cause of human misery. Just as persons can adapt to a wide range of temperatures, humidities, and altitudes, so they can adapt to an incredible array of social realitites. This adaptability accounts for
the toughness of persons in continuing to function in catastrophic and inhumane situations, but it also accounts for the curious convolutions of logics of meaning and action that are expressed as warped or twisted personalities. In our judgment, prolonged exposure to convoluted logics is more damaging than the traumatic event so popular as an explanation with psychoanalysts. To be successful in interaction with particular persons or within particular organizations may well require a person to develop an antisocial and unhealthy pattern of meanings and actions. We have suggested—only half in jest—that such persons or institutions be required to post signs such as, "Warning: Interacting with this person has been determined by the Surgeon General to be hazardous to your mental health."

Unwanted Repetitive Patterns

This study began with an attempt to understand recurring fights between two members of the faculty in our department (Cronen, Pearce, and Snively 1979). Professional responsibilities obligated these persons to discuss a variety of topics pertaining to the administration of the department. Privately, they each professed a sincere desire to communicate with the other efficiently, amiably, and productively. However, their discussions quickly turned into extended, hostile, and ego-scarring duels ("quips, at twenty paces"). From the perspective of our theory, the recurrence of such an undesired episode appeared as a problem needing explanation.

The first phase of the study was an intensive analysis of the event itself. Five characteristics of the verbal fight seemed important. First, the verbal fight consisted of a sequence of alternatively produced messages that extended through time. The meaning of each message was importantly contextualized in a sequence that was bounded by perceived starting and stopping points (comparable to Watzlawick, Beavin, and Jackson's [1967] notion of punctuation), and included a unique, recognizable pattern of messages. That is, the sequence was not a chaotic or enigmatic one in which participants wondered what to do next. Rather, the participants reported that they knew precisely what their next act must be and the resulting pattern was recognizable to the extent that afterward one participant expressed the feeling "Damn, we did it again!"

Second, the verbal fight was recurrent. We probably would not have noticed the pattern if it had not been depressingly familiar. In fact, given certain minimal initial conditions (the identity of the communicators, the fact of a controversial topic, and the closing of an office door), the denouement was fully predictable. The implicit
theories of the secretaries and even some faculty were sufficiently powerful to impel them to avoid the area when the principals assembled.

Third, the pattern was stable across topics. The sequence of speech acts at the relational level of meaning seemed exactly the same regardless of the content meanings. (That is, the configuration was topologically the same: some fights were compressed and others elongated, some focused and others far-ranging.) Similar to Koestler's (1978, pp. 38, 45) description of holonic organization, there seemed to be a set of inflexible rules primarily at the relational level that governed the structure of the interaction, and a set of more flexible rules permitting discretionary strategy within these constraints.

Fourth, the verbal fight was unwanted. This characteristic was ascertained by indirect observation and by interviewing the participants both alone and together.

Fifth, the participants were well aware of the existence of their recurrent duels, but could not avoid them except by the clumsy expedient of refusing to talk to each other about particular topics. One participant could describe the pattern, the other could in addition provide a rich interpretation of the causes for the sequence of speech acts, but both felt enmeshed in the pattern.

In the next phase of the study, we asked whether this phenomenon was unique to these participants. A review of literature and causal inquiry of our acquaintances quickly indicated that enmeshment in unwanted repetitive patterns is depressingly common (cf. Sullivan 1953; Watzlawick, Beavin, and Jackson 1967; Walton 1969; Minuchen 1974; and virtually any nonpartisan history text).

Having established the existence of the phenomenon and its generality, we turned to the task of explaining the necessity. Given the fact that unwanted repetitive patterns (URPs) occur, why do they? From the theory of the coordinated management of meaning, we argued that persons' intrapersonal rule systems could be modeled in such a way that the juxtaposition of them would create strong logical force obligating the precise patterns of speech acts observed in the verbal fights. Using the measurement model of regulative rules presented in Figure 5.4, we reasoned that unwanted repetitive patterns would occur when both interactants' rules have these characteristics: strong antecedent-to-act linkages; narrow range of alternative speech acts; weak act-to-consequent linkages (a condition we called functional autonomy in deference to Allport's description of it); strong life-script-to-act linkages; and negative valence for consequents. Two persons with this rule structure have a high potential for feeling obligated (by antecedents and life-scripts) to perform specific acts (because of the narrow range), regardless of the con-
sequences (functional autonomy), and then to regret the episode (negative valence for consequents).

One way of testing the theory is to use it to make predictions of this sort and then to conduct empirical tests to see if these linkages in fact exist, and, if so, if they have the hypothesized structure. The cleanest test would have been to measure persons' rule structures and observe them in various interpersonal systems. The theory would be strongly supported if URPs occurred most frequently when both interactants had the hypothesized rule structures, less frequently when only one had the hypothesized rule structure, and seldom or never when neither interactant met the stipulated characteristics. We did not perform this test because we did not have the resources to manipulate interactions among persons whose rules had been previously measured to observe and analyze the interactions between as many subjects as this design would require.

We did the next best thing. Reasoning that the primary phenomenological concomitant of participating in unwanted repetitive patterns—by definition—is felt enmeshment, we posited the hypothesized rule structures for URPs in this regression formula:

\[
\text{perceived enmeshment} = \bar{X} A \times R \times F_{w1} + \bar{X} \text{ ACT-LS}_{w2} + \bar{X} D_{w3}
\]

where

\[
\bar{X} A \times R \times F = \text{mean value of the products of act-antecedent linkage strength X range of alternative acts X degree of functional autonomy across the episode}
\]

\[
\bar{X} \text{ ACT-LS} = \text{mean value of act-life-script linkage strengths across the episode}
\]

\[
\bar{X} D = \text{mean desirability of consequent acts across the episode}
\]

\[
w = \text{empirically determined weight}
\]

Several aspects of this formula require explanation. First, note that the linkages among episode and relationship and other variables in Figure 5.4 are omitted. The definitional description of a URP is that the episode is an unwanted consequence of particular rule structures rather than an objective the actor strives to achieve. This implies that the construal of the episode per se exerts no force constraining the selection of speech acts, and thus the variable was deleted from this formula although it might be appropriate in studies of other types of episodes. Relationship was
we did this study. Data about these linkages would have been very informative.

Second, the variables A, R, and F are represented by a single score derived from a multiplicative function. These variables are treated this way because they are conceptually intercorrelated, thus precluding their additive relation as separate variables in a regression equation, but they are not isomorphic, thus necessitating their differentiation within the equation. Specifically, range (R) was expected to be somewhat correlated with the strength of the antecedent-to-act (A) linkage because the existence of many alternative acts logically precludes an obligatory relationship between the antecedent condition and some one specific act to be performed. Similarly, functional autonomy (F) was expected to be somewhat intercorrelated with both range and antecedent-to-act linkage. If there is a strong felt linkage of antecedent condition to one specific act, the individual is precluded from considering how best to articulate his/her choice of action to the purpose of bringing about a certain consequent. While these variables are intercorrelated, it cannot be assumed that they are fully isomorphic. It is possible to have a small range of alternatives—perhaps only one—and still feel little obligation to perform that act under the antecedent condition: increased range qualifies and diffuses the force exerted by the antecedent condition. Although functional autonomy may be produced by the combination of strong antecedent-act linkage and reduced range, functional autonomy can still be present when range is large if the individual does not articulate a choice among consequents. Thus, functional autonomy can modify the antecedent-act linkage by heightening its importance for the choice of action. Therefore, relationships among antecedent-act linkage, range, and functional autonomy are such that an additive function would not maximally capture their mutually interactive nature. The modifying effects of range and functional autonomy can be better captured by expressing their relationship as a multiplicative function such that their joint product produces a single score, which we symbolize: A x R x F.

Act-life-script linkage (ACT-LS) and desirability of consequent acts (D) were assumed to be additive effects.

A second formula was developed to predict the valence of episodes as perceived by a participant. The second formula differs from the first only in the direction of relationships. Whereas perceived enmeshment in URPs was predicted to have a positive correlation with the A x R x F factor and a negative correlation with the desirability of observed consequent acts, episode valence was predicted to be negatively correlated with A x R x F and, of course, positively correlated with the desirability of consequent acts. Both
perceived enmeshment in URPs and episode valence were predicted to have significant positive correlations with the strength of act-life-script linkage.

In final form, the hypothesis specified a particular structure of regulative rules as the origin of a logic that creates URPs, the primary phenomenological correlate of which is perceived enmeshment. To test the hypothesis, we interviewed 30 undergraduate students enrolled in communication courses at the University of Massachusetts. The subjects were asked to describe a recent conversation in which they were a participant. The interviewer guided the subjects' recall of conversations to report by using prompts. The interviewer recorded the conversation on a standard form including both each statement and its speech act meaning as described by the subject. After describing the conversations, subjects were provided a booklet containing scales 1, 2, 5, 6, 7, and 8 shown in Figure 7.1, plus a number of filler scales. The interviewer filled in the blank spaces so as to particularize the scales to the subject's own reported conversation. Scales 1 through 6 were successively applied to each of the subject's speech acts. The dependent measures were assessed by administering scales 12, 13, and 14 either before or after all other scales on a random basis. Test-retest reliabilities of these single item scales ranged from .68 to .89. Table 7.8 reports results for the regression of the three independent variables on the dependent perceived control. Each variable made a statistically significant contribution to the variance accounted for. The A x R x F variable accounted for slightly over 30 percent of the variance, desirability of consequents accounted for 14 percent of the variance, and the act-life-script variable accounted for an additional 7.5 percent of the variance. The three-factor model accounted for over 51 percent of the total variance. Since all relationships were in the predicted direction, the data support the hypothesis. Table 7.9 reports results for the regression of three independent variables on the dependent variable valence of episode. While all three variables showed significant independent effects, and all simple effects were in the predicted direction, only consequent valence accounted for an appreciable amount of the variance (26 percent).

These data provide support for the central contention that the characteristics of an episode are functions of the rule structures that conversants employ. Moreover, the data are consistent with our predictions about the structural features of rules that produce the feeling of enmeshment in unwanted repetitive patterns, and with the formula that specifies the relationships among the variables.
FIGURE 7.1

Scales Used in a Study of Unwanted Repetitive Patterns

<table>
<thead>
<tr>
<th>Functional Autonomy</th>
<th>1. Speech act ______ was what I wanted to say and what the other person would do next would not change my need to do it.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly agree ______________ Strongly disagree</td>
</tr>
<tr>
<td>Antecedent-Act</td>
<td>2. Speech act ______________ seemed to require me to respond with act ______________</td>
</tr>
<tr>
<td></td>
<td>Strongly agree ______________ Strongly disagree</td>
</tr>
<tr>
<td>Episode-Act</td>
<td>3. The episode ______________ seemed to require me to respond with act ______________</td>
</tr>
<tr>
<td></td>
<td>Strongly agree ______________ Strongly disagree</td>
</tr>
<tr>
<td>Master Contract-Act</td>
<td>4. It was very important to us—to my sense of who we are—that I perform this act.</td>
</tr>
<tr>
<td></td>
<td>Strongly agree ______________ Strongly disagree</td>
</tr>
<tr>
<td>Life-script-Act</td>
<td>5. Doing speech act ______________ closely reflected who I am and what a person like me must do.</td>
</tr>
<tr>
<td></td>
<td>Strongly agree ______________ Strongly disagree</td>
</tr>
<tr>
<td>Range of Alternative Speech Acts</td>
<td>6. What other speech acts could you have performed that would be legitimate in the situation? None. This act was obligatory or the only one I could think of,</td>
</tr>
<tr>
<td></td>
<td>______________ ______________ ______________ ______________ ______________ ______________ ______________ ______________ ______________</td>
</tr>
<tr>
<td></td>
<td>Cross out any of the above that you would not really use.</td>
</tr>
</tbody>
</table>
Figure 7.1, continued

<table>
<thead>
<tr>
<th>Act-Consequence</th>
<th>7. I performed speech act _________ in order to bring about a particular response.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consequence-Valence</td>
<td>Strongly agree -------------- Strongly disagree</td>
</tr>
<tr>
<td>Consequence-Life-script</td>
<td>8. The response to my act was very desirable.</td>
</tr>
<tr>
<td>Consequence-Master Contract</td>
<td>Strongly agree -------------- Strongly disagree</td>
</tr>
<tr>
<td>Consequence-Other's Life-script</td>
<td>9. Getting this response helps me become the person I want to be.</td>
</tr>
<tr>
<td>Predictability Scale for Post hoc Validity Check</td>
<td>Strongly agree -------------- Strongly disagree</td>
</tr>
<tr>
<td>Episode Valence</td>
<td>10. Engaging in this exchange helps me develop the kind of relationship I'd like to have.</td>
</tr>
<tr>
<td>Perceived Enmeshment in URP</td>
<td>11. Engaging in this exchange helps other become the person s/he wants to be.</td>
</tr>
<tr>
<td>Predictability</td>
<td>12. I could predict with great certainty that my act ______ would get the response ______.</td>
</tr>
<tr>
<td>Perceived Enmeshment</td>
<td>13. The episode ______ is one that I very much desire to have occur.</td>
</tr>
<tr>
<td>Strongly agree -------------- Strongly disagree</td>
<td></td>
</tr>
<tr>
<td>14. Doing this episode over and over again seems out of my control, it just seems to happen.</td>
<td></td>
</tr>
<tr>
<td>Strongly Agree -------------- Strongly Disagree</td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 7.8

Correlates of Perceived Enmeshment in an Episode

<table>
<thead>
<tr>
<th>Variable</th>
<th>Step 1 A x R x F</th>
<th>Step 2 Consequent Valence</th>
<th>Step 3 Act-Lifescript Linkage</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>12.96488</td>
<td>7.33825</td>
<td>4.36011</td>
</tr>
<tr>
<td>Significance</td>
<td>.001</td>
<td>.011</td>
<td>.046</td>
</tr>
<tr>
<td>Multiple R</td>
<td>.54932</td>
<td>.66540</td>
<td>.71961</td>
</tr>
<tr>
<td>R Square</td>
<td>.30176</td>
<td>.44276</td>
<td>.51784</td>
</tr>
<tr>
<td>Simple R</td>
<td>.54932</td>
<td>-.49325</td>
<td>.13761</td>
</tr>
<tr>
<td>Beta</td>
<td>.44583</td>
<td>.47330</td>
<td>.28689</td>
</tr>
<tr>
<td>Overall F</td>
<td>12.96488</td>
<td>11.52114</td>
<td>10.02407</td>
</tr>
<tr>
<td>Significance</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
</tr>
</tbody>
</table>


### TABLE 7.9

Correlates of Episode Valence

<table>
<thead>
<tr>
<th>Variable</th>
<th>Step 1 Consequent Valence</th>
<th>Step 2 Act-Lifescript Linkage</th>
<th>Step 3 A x R x F</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>10.63542</td>
<td>3.47902</td>
<td>2.29325</td>
</tr>
<tr>
<td>Significance</td>
<td>.003</td>
<td>.072</td>
<td>.141</td>
</tr>
<tr>
<td>Multiple R</td>
<td>.51159</td>
<td>.58379</td>
<td>.62507</td>
</tr>
<tr>
<td>R Square</td>
<td>.26173</td>
<td>.34081</td>
<td>.39071</td>
</tr>
<tr>
<td>Simple R</td>
<td>.51159</td>
<td>.41870</td>
<td>-.32325</td>
</tr>
<tr>
<td>Beta</td>
<td>.316344</td>
<td>.309607</td>
<td>.216291</td>
</tr>
<tr>
<td>Overall F</td>
<td>10.63542</td>
<td>7.49664</td>
<td>5.98505</td>
</tr>
<tr>
<td>Significance</td>
<td>.003</td>
<td>.002</td>
<td>.003</td>
</tr>
</tbody>
</table>

Perhaps the primary weakness of this research design is the questionable fit between the actual structural characteristics of an episode as determined by our interview procedures and participants' own perception of the episode. In simulated conversations using the game Coordination, subjects' perceptions of their latitude of choice often differed significantly from—and varied independently of—the actual logic of the interpersonal system. The cases of the two subjects who were eliminated from the study because of their "eureka" experiences during the interview indicate that these subjects' perceptions of the logical force of the episodes in which they participated were not isomorphic with that elicited by our interview protocol. One subject claimed that she never had any recurrent conversation that she found undesirable because she was always in control. To help the researchers, she offered to report a successful conversation in which she had achieved her purposes. After working through our scales for three speech acts, she pushed back her chair and said, astonished, "I'm not really in control of this—why, every time someone performs an act like that, I feel obligated to respond in one way. They control me as much as I control them!"

As a methodological problem, subjects' inaccurate perception of the logical force in particular episodes or relationships is inherent and not solvable. It is inherent because of the structural defects of the interpersonal system—each person can monitor only a part of the system—and because individuals do not usually perceive themselves totally or completely accurately. Although we cannot solve the problem, we can live with it. Guided by appropriate measurement models, a researcher is actually in a better position than subjects to describe the logic of interpersonal systems. Perhaps it is significant that both eureka experiences consisted of revisions of the holistic perception on the basis of the answers to the interview questions rather than vice versa. This indicates the possibility of triangulating among the subjects' perceptions, the logic of the system as measured by the interview, and analyses of the forms of behavior in which the subjects participate. Further, the results of this study indicate that the problem, while inherent in principle and demonstrably extant in some instances, does not necessarily preclude research of the kind reported here. To whatever extent persons who were in URPs failed to feel enmeshed, that would appear as unaccounted for variance. We conclude that the results are conservative, and still quite substantial.

Happily, not every recurrent episode is undesired. If the procedure used here is valid—describing a pattern and hypothesizing the structure of rules that would make it necessary—then the way is clear to develop a theory of episode types. Consider the three functions of communication described in Chapter 5: control,
valence, and coherence. It is in principle possible to devise a three-dimensional matrix in which the various forms of each of these functions comprise the marginal values, and a set of hypotheses about the strengths of the linkages of rules occupies each of the cells. Thus far, such a model had been beyond the reach of our intellectual energies, and we have confined ourselves to the identification of some of the most common recurrent episodes:

Enigmatic episodes (cf. Harré and Secord 1973), in which actors know that some pattern is in process but do not know how to act and/or how to interpret it (such as a Protestant at a bar mitzvah);

Positive spirals (cf. Wilmot 1975), in which each act by one person elicits a more extreme and more desirable response from the other (for example, a mutual seduction);

Alienating sequences (cf. Riesman 1950), in which the person knows what is happening and how to act, but those acts seem inconsistent with the individual's self-concept (such as a gifted professional football player who considers football as brutal and crude and thinks of himself as a pianist);

Perfunctory rituals (cf. Harré and Secord 1973), in which the rules that govern the sequence of events leave little or no latitude for strategic variation, and the episode as a whole has little intrinsic meaning to the person (for example, phatic communion such as a greeting exchange);

Value expressive rituals (cf. Campbell 1959a, in which the sequence of events is fully scripted, but the episode has deep significance for the individual (such as a religious ceremony); and

Coordinated conversation (cf. Pearce and Brantham 1978), in which each participant perceives a developing pattern and feels s/he can affect its form with each successive statement, and the emerging pattern is under the plastic control of both persons (for example, a skilled interview in which both respondent and interrogator are able to direct a continuously coherent sequence of messages toward or away from particular topics).

Table 7.10 includes the hypothesized strengths of the linkage of rules that would explain and predict the occurrence of these forms of communication.

Social Impotence and Violence

Violence is a common phenomenon that, like charity, begins at home. "Each year in the U.S., at least 6 million men, women,
TABLE 7.10
A Theory of Rule Structures and Types of Episodes

<table>
<thead>
<tr>
<th>Structural Variables</th>
<th>Episode Types</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Value</td>
</tr>
<tr>
<td></td>
<td>Enigmatic</td>
</tr>
<tr>
<td></td>
<td>Episode</td>
</tr>
<tr>
<td>Antecedent-speech act linkage</td>
<td>Very</td>
</tr>
<tr>
<td></td>
<td>weak</td>
</tr>
<tr>
<td>Episode-speech act linkage</td>
<td>Very</td>
</tr>
<tr>
<td></td>
<td>weak</td>
</tr>
<tr>
<td>Life-script-speech act linkage</td>
<td>Very</td>
</tr>
<tr>
<td></td>
<td>weak</td>
</tr>
<tr>
<td>Speech act-consequent linkage</td>
<td>Very</td>
</tr>
<tr>
<td></td>
<td>weak</td>
</tr>
<tr>
<td>Range of alternative speech acts</td>
<td>Unknown</td>
</tr>
<tr>
<td></td>
<td>narrow</td>
</tr>
<tr>
<td>Consequent valence</td>
<td>Negative</td>
</tr>
<tr>
<td>Episode valence</td>
<td>Negative</td>
</tr>
</tbody>
</table>

*Actors do not intend the maintenance of episode and may only be aware of the episodic punctuation post hoc as in the gloss "Oh, darn, we did it again."
and children are victims of severe physical attacks at the hands of their spouses or parents" (Straus, Gelles, and Steinmetz 1980). In fact, people are more likely to be physically abused by members of their own family than by anyone else (Gelles 1974). For many reasons, this phenomenon constitutes a problem for explanation.

Someone once said that violence is the first resort of the unimaginative. Harriss (1980a) developed a research program around the contrary premise that violence is a characteristic act by powerless, or socially impotent, persons. Harriss argued that power is social. The construction of social reality and the enactment of episodes require the coordinated actions of two or more persons. Unilateral action may be strong (May 1972, p. 35), but the locus of power lies in the ability of two or more persons to coordinate their actions (cf. Carson 1969). A powerful action is one that elicits a desired response from other persons. As such, a necessary but not sufficient condition of social power is that the person act purposefully, or in accordance with practical force. For example, an apology may be made in order to elicit acceptance from the other. However, it is possible to act purposefully but to be powerless because the other does not respond as intended. An individual may apologize and be rebuked, may seek advice and be insulted, may speak intimately and be ignored, or may defer to the other and be accused of insincerity. These are exemplars of powerful acts that have failed.

Social impotence describes a person who acts in accordance with prefigurative rather than practical forces, who reacts to antecedents without considering consequences. Acting in this way precludes social power because the actor is unable within the logic of his/her system to make choices, reach conclusions, make decisions, set goals or know when goals have been achieved, or coordinate with others.

As G. H. Mead said of the self, social power is given by others, not taken by an individual. A powerful person is one who is responded to by others in the way s/he desires, a powerless person is one who acts purposively but does not elicit desired responses, and a socially impotent person is one who acts reactively rather than contingent on expected responses. The crucial distinction between powerlessness and impotence is the opportunity for interpersonal negotiation. A person whose purposive acts have failed may certainly monitor the responses of others and use any of a wide array of negotiation strategies to elicit more desirable responses. A person acting in response to prefigurative forces, however, must repeat the obligatory actions regardless of the other’s response.

To say that power is social, however, does not imply that the individual is at the mercy of the other, since power results from
the combination of each person's acts. It is appropriate to describe interpersonal systems as more or less powerful. A dyad whose logic permits each person to engage in a wide variety of purposeful acts that will elicit the desired response from the other is very powerful; a dyad whose logic limits the array of purposes that can be achieved within the system is weaker.

This conceptualization suggests an intriguing rethinking of the several exchange theory interpretations of relational development, particularly Foa and Foa's (1969) concept of interpersonal resources. Specifically, rather than assuming that particular categories of resources—such as affection—exist and vary in amount among relationships, this approach suggests that the extent to which individuals act purposively—that is, with reference to resources—and the content of their intentions vary. The most important information about dyads may well be the range of purposes they reciprocally fulfill, which is neatly precluded when the theorist decides a priori that a certain range of resources exists within a relationship.

Within a dyad, it is possible to describe the strength of a particular person or action. Recall the discussion of felicity conditions in Chapter 3. One way of thinking about an individual's strength is in terms of his/her ability to produce the felicity conditions for the desired response to his/her purposeful acts. A person who is wealthy, for example, may establish the felicity conditions for the other's act of accepting a promise of repayment of a loan more easily than someone who is penurious. A physically strong person may establish the felicity conditions of the other's submission to a threat of violence more easily than someone who is apparently weak.

Violence is a unique form of communicative event. Searle (1969) differentiated between brute facts and institutional facts roughly on the grounds that the former exist regardless of being known, while the latter do not. Virtually all of the facts of social interaction are institutional in this sense. The speech act one has performed does not exist unless the other person defines it as existing; one is powerless to perform "compliment" to persons who cannot perceive themselves as complimented. However, violent acts, although their meaning must be interpreted, are much more brutish than symbolic acts. They have a direct physical effect on the other person that is impossible to deny and difficult to institutionalize in a way that deprives the perpetrator's power.

There are some situations in which violent acts are defined as acceptable forms of expression. Football players, boxers, and so forth, must define a punch in the nose as part of a day's work, just as carpenters must accept a pounded thumb as normal. In these contexts, individuals may use violence purposively and powerfully. In the eighteenth-century British navy, bosuns commanded the
seamen under their charge with about equal amounts of verbal instructions and physical violence. However, violence also occurs where it is neither expected nor considered appropriate. Because violence is brutish, it may be used when all other attempts to act powerfully have failed. Since violence is at best a clumsy attempt at social power, it too is likely to fail as an attempt toward social power. A syndrome may develop in which violence becomes obligated by prefigurative forces rather than one strategy among many in practical force. When this happens, persons feel forced to use acts they define as inappropriate, making all options open to them undesirable, precluding purposive action and thwarting interpersonal coordination.

This dismal picture has support in several literatures. In his Letter to the Romans, Paul laments about the good that he would do, but does not, and the evil that he would not do, but does. The study by Cronen, Pearce, and Snively (1979) found high enmeshment in undesired patterns to be characteristic of persons whose behaviors are reactionary. Testimony from many spouse or child abusers contains references to feelings of helplessness, despair, and self-recrimination.

Harris noted the irony that performing violent acts that are not legitimated may be an expression of powerlessness but leads to social impotence. Intrapersonally, the person may perceive him/herself as desperate and ineffectual in achieving desired consequences. Interpersonally, the use of violence may initiate any of several patterns of behavior that decrease the possibility of social power.

Reasoning that socially impotent performances can lead to or contain unwanted physical violence, while socially powerful performances inhibit unwanted physical violence by successfully coordinating interaction, Harris conducted two case studies that tested this hypothesis: the ratio of reactive to purposive performance is greater in violent episodes than in comparable nonviolent episodes.

Two graduate students of the University of New Hampshire were interviewed in three stages. First, the subjects described two episodes, one of which included violence. One subject had been the aggressor, the other the victim of the violent act. The other episode was as much like the first as possible but without violence. Second, the subjects recorded the script of each episode, and the meanings they had for each act (see Table 7.11). Third, subjects were asked questions about the strength of the linkages among the components of the rules for each act, using scales similar to those in Figure 7.1. Five items were averaged as the measurement of prefigurative force, and five for practical force. All scale items were completed for each act that the subject performed in the episode.
TABLE 7.11
A Violent Episode Enacted by Sisters

<table>
<thead>
<tr>
<th>Script</th>
<th>Speech Acts</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) L Puts on Cathy's shoes after she's gone.</td>
<td>1) Imitation of sister</td>
</tr>
<tr>
<td>(2) C &quot;She's been at it again&quot; to mother. &quot;Wouldn't it be nice for her to have her own room.&quot;</td>
<td>2) Rejection</td>
</tr>
<tr>
<td>(3) L &quot;Yes it would.&quot;</td>
<td>3) Acquiescence</td>
</tr>
<tr>
<td>(4) C &quot;When will you learn to leave other people's things alone?&quot;</td>
<td>4) Reprimand</td>
</tr>
<tr>
<td>(5) L Silence</td>
<td>5) Acknowledgment</td>
</tr>
<tr>
<td>(6) C &quot;I hope you learned your lesson.&quot;</td>
<td>6) Dismissal</td>
</tr>
<tr>
<td>(7) L &quot;Maybe I don't want to.&quot;</td>
<td>7) Defending position</td>
</tr>
<tr>
<td>(8) C &quot;Can't talk to you. You don't want to listen.&quot;</td>
<td>8) Frustration and defense</td>
</tr>
<tr>
<td>(9) L Sigh</td>
<td>9) Exasperation</td>
</tr>
<tr>
<td>(10) C Leaves, slamming door.</td>
<td>10) Show of anger</td>
</tr>
<tr>
<td>(11) L Try on jewelry and shoes.</td>
<td>11) Imitation of sister</td>
</tr>
<tr>
<td>(12) C Walks in unexpectedly.</td>
<td>12) Surprise discovery</td>
</tr>
<tr>
<td>(13) L Ankles weaken, shoes fall off.</td>
<td>13) Shocked reaction</td>
</tr>
<tr>
<td>(14) C &quot;That's a good way to break my shoes. What are you doing in here?&quot;</td>
<td>14) Accusation of breaking shoes and invading</td>
</tr>
<tr>
<td>(15) L Stare.</td>
<td>15) Shocked reaction</td>
</tr>
<tr>
<td>(16) C Walks toward Laura, sees jewelry, slaps Laura.</td>
<td>16) Show of anger, slap</td>
</tr>
<tr>
<td>(17) L Cried and removed jewelry saying &quot;It's ugly anyway.&quot;</td>
<td>17) Uncontrolled reaction, denial of being in wrong, criticize her.</td>
</tr>
<tr>
<td>(18) C &quot;If it's so ugly why do you play with it?&quot;</td>
<td>18) Sarcasm</td>
</tr>
<tr>
<td>(19) L Runs out.</td>
<td>19) Denial of occurrence</td>
</tr>
<tr>
<td>(20) C Puts things in their place and says &quot;She's been at it again&quot; to mother.</td>
<td>20) Putting things back under her control and denial of occurrence, reports to mother.</td>
</tr>
</tbody>
</table>
The relative amounts of prefigurative and practical forces in both violent and nonviolent episodes are graphed in Figures 7.3 and 7.4. The differences between the strength of each force within and between episodes were tested by a Wilcoxon matched-pairs, signed-ranks test. As expected, both the victim and the aggressor acted in accordance with prefigurative rather than practical forces in the violent episode, and the relative strength of prefigurative force was stronger in the violent than in the nonviolent episode.

In addition to this quantitative test of the hypothesis, Harris described the subjects’ interpretation of the episodes and analyzed them qualitatively, serendipitously discovering that the logic of the episode immediately prior to the violent acts was perceived as paradoxical, thus depriving the aggressor of any alternative that was perceived as even potentially powerful. The discussion of an individual’s strength focused on the ability to enact the felicity conditions of the desired response by the other. The discovery of paradox in these episodes suggests social impotence may be created when one person places another in a logic that denies the felicity conditions for the acts s/he desires to follow on his/her own.

One subject, Ron, described two episodes in which his younger brother Don threw temper tantrums. Ron perceived himself as forced in the dominant role in these episodes because Don would not take responsibility for his complaints or vulgar behavior during fits of temper. Don's message was the demand "dominate me," which is paradoxical because it cannot be obeyed at one level of meaning without violating it at another. Ron felt simultaneously obligated to decelerate the intensity of the episode and to decelerate his authority over his brother, and these were mutually exclusive. The violent act was, in his logic, the only way out of this frustrating condition of impotence. In the nonviolent episode, which occurred some years later, the paradox was not present because Ron's own logic had changed. He no longer felt obligated to save face or prove himself when challenged. When Don acted temperamentally, Ron was free to act purposively: he simply withdrew from the situation. It is a measure of the utility of Harris's conceptualizations that Ron's withdrawal from a fght is shown to be a more powerful interpersonal act than giving his brother a slap across the face. It succeeded in releasing him from the undesired dominant position in the relationship.

A similar structure existed in the other case study. Laura "requested" increased intimacy and trust from her older sister by trespassing on Cathy's privacy by wearing her jewelry without permission or by looking through her photo album after being told that it was private. In the ensuing episode, Laura perceived herself as impotent, and these perceptions initiated a debilitating logic. At
FIGURE 7.2
Logical Forces in Violent and Nonviolent Episodes between Brothers

Violent Episode

Nonviolent Episode

$\bar{x} = 5.7$

$\bar{x} = 1.69$

$\bar{x} = 4.16$

$\bar{x} = 6.09$
FIGURE 7.3
Logical Forces in Violent and Nonviolent Episodes between Sisters
several points, Laura would simply sigh, remain silent, or cry, all of which were undesirable behaviors to which she could see no alternative. It is probable that Cathy perceived these acts as indicative of Laura's incompetence and immaturity. The slap across the face she gave may well have expressed her own frustration at the paradox formed by the demand "treat me as a respected friend," which was made by means of unfriendly and nonrespectable acts. This interpretation is supported by the results of the second, non-violent episode in which Laura again proposed redefining the relationship as more friendly by performing an unfriendly act of trespassing. This time, however, Laura's acts were purposive, strongly and positively related to a particular response (item 8 in Figure 7.1), to her self-concept (item 5), and the kind of relationship she wanted (item 4). Prior to the trespass, she had asked to have a room of her own rather than continue sharing one with Cathy. Perhaps because Cathy perceived Laura as assuming some responsibility for the relationship and thus making negotiation possible, she was released from the social impotence of the first episode.

The use of this retrospective case study technique has several inherent problems, which Harris addressed aggressively. It is difficult for a researcher to have confidence that subjects are responding as they did at the time the episode actually took place rather than as they would now. The episodes involved in these case studies were originally experienced a number of years ago, so they certainly posed this reporting problem. To verify the success with which past logics were elicited subjects were asked, in a subsequent interview, to evaluate their success in recalling their past feelings, perceptions, and emotions. All subjects reported that they felt very successful in their recollection of the flavor of the episodes and of their ability to put themselves in their own historical past and respond to questions and measurement scales accordingly. Laura remarked that she had little choice in responding historically accurately because the memory of the episodes brought with it the emotions she had experienced during the original enactments. She was, in fact, surprised to find herself becoming angry and frustrated even during her description to the researcher. Although it is impossible to achieve complete certainty that the original logics were captured, these verifications from subjects lend strong support to that claim.

The researcher's interpretation was also presented to the subjects for their assessment of its accuracy. This was done after the data had been analyzed and subjects' interpretations had been explained in terms of the theory of coordinated management of meaning. The researcher explained the purpose of each of the scale items, then presented her analysis of their logics in the violent and
nonviolent episodes. The subjects accepted the researcher's analysis as accurate and useful to them in understanding their relationships with their respective siblings.

It was feared that subjects might either reject out of hand or accept totally any meta-interpretation provided to them. To test this possibility the researcher provided two theoretical explanations to one of the subjects (Laura). The subject was then requested to select one or both explanations as the best interpretation of her situation. The theoretical position based on the coordinated management of meaning was selected as the more accurate. Thus, there is evidence to suggest that some subjects can usefully discriminate among theoretical interpretations of their own logics, thereby providing one form of validity for the theory itself.

THE CONVOLUTED LOGICS OF INTIMATE RELATIONS

Recognition of the need to adopt a transpersonal unit of analysis in the social sciences has developed only relatively recently. In the first part of this century, behaviorism in experimental psychology and the Freudian influence in clinical psychology imposed an individualistic orientation in theory and research that was not incompatible with the summaries by nation and demographic strata done by quantitatively oriented sociologists and political scientists. The individualistic perspective was countered by symbolic interactionism in sociology and, later, interpersonal perspectives in personality theory and clinical psychology, which focused attention on patterns of interpersonal relationships. These first attempts to model interpersonal relationships seem simplistic in retrospect. Leary (1957) proposed the interpersonal reflex as an explanatory model. Carson (1969) summarized two decades of research as supporting a two-dimensional model of relational meanings (friendly-hostile, dominant-submission) in which sequential acts have one of only three relationships between them (complementary, noncomplementary, and anticomplementary). Lederer and Jackson (1968) identified only four types of marriages, and conversation analysts (Millar and Rogers 1976) described sequential patterns in episodes by the configuration of only one type of meaning, namely, dominance, expressed as permutations of one-up, one-across, and one-down.

These attempts seem to be predicated on the assumption that interpersonal relations are basically orderly, and that this order can be revealed by applying an appropriate analytical schema. The theory of the coordinated management of meaning does not make the assumption of underlying order. Rather, the structural deficiencies
of interpersonal rule systems make communication inherently problematic, and social reality is more liable to be disordered than not. Part of the problem is that rules of two or more people may not mesh, preventing coordination. However, this problem is exacerbated by the fact that no participant in the system can act rationally based on information about the whole system. Our studies of the logics of intimate systems have revealed a surprising degree of contortion.

A Paradoxical Family Logic

The purpose of this study was to describe the communication processes by which a particular family creates and manages its social reality (Harris 1980b). The procedure was to identify its logic of meaning and action. Although the family selected for study was, by design, a normally functioning family (that is, no one in the family was in therapy and thus the family could be considered as managing its own social reality without the assistance of an external intermediary), its logic was curiously contorted. A particular form of communication was built into its logic as a recurrent episode, and was simultaneously identified by the couple as their greatest problem and greatest strength. In terms of the model of hierarchical meanings presented in Figure 5.1, this family's logic may be described as including paradoxical premises in both the life-script and relationship levels.

Harris contacted many families for an initial screening interview. Her first intention was to select a healthy family that could be contrasted with those usually described in the literature, most of which are first seen in therapy. The Flynns were chosen because they possessed good interpersonal communication skills, ability to metacommunicate, perspective taking, validation, and self-disclosure or open communication. Ray and Donna were articulate, open, and proud of their ability to talk about their relationship to each other and to the interviewer. These characteristics proved not only a criterion of a healthy family, but also necessary for the methodology of this study.

Following the conceptualization of the interpersonal system as the intermeshing of intrapersonal rule systems, Harris first interviewed Donna and Ray separately, then together. The individual interviews were initiated with these open-ended requests: "Trace your own personal development within your family of origin," and "Trace the development of your relationship." The rather lengthy discussions between subject and interviewer were audiotaped and subsequently cast into the model of regulative and constitutive rules.
Ray and Donna both stated that a pattern of cyclical conflict is their most pressing problem, and that the sources of the conflict are their personalities, which are believed to be unchangeable. Further, each believes s/he should validate the personality of the other. The content of the conflict often involves physical demonstrations of affection in the classic nag/withdraw syndrome described by Watzlawick, Beavin, and Jackson (1967). Ray said, "Her complaint is that I don't give her enough attention. My complaint is that she nags too much. She says she nags 'cause she's not touched enough. I say, 'How can I touch someone who's always nagging and yelling'?"

The paradoxical structure of the Flynn's family logic is revealed by comparing the content of their shared and unshared constitutive rules.

CR
Ray→unnecessary and awkward
1 Daily hugging,
Donna→necessary for reducing
kissing, touching
tension and showing love
Ray→things to be ignored
CR
Daily conflicts
2 and tensions
Donna→undesirable things to be confronted
undesirable personality
CR
Nagging and withdrawing→Ray
3 and Donna→flaws that are inherent
undesirable personality
and unchangeable
flaws that are inherent
and unchangeable
CR
Personality flaws→Ray
4 and Donna→part of our real selves
and therefore must be validated

The Flynn's continued explicit validation of their unchangeable behaviors has solidified their belief that nagging and lack of physical attention are indeed personality flaws that must be tolerated. They have institutionalized the belief "we can't change." However, when the Flynn's self-disclose to one another concerning the undesirability of their behaviors, they punctuate the conflict episode that one's behavior is perceived as causing the unwanted behavior of the other. This agreed upon punctuation of events has institutionalized a second belief that "we must change." Consequently, the Flynn's open,
honest, accurate communication has produced a paradoxical rule: we can't change and we must change.

The juxtaposition of these rules creates a problem for coordinated communication. The conjoint interviews focused on the way in which the Flynn’s handle the nagging/withdrawing pattern. Well aware of the cyclical conflicts and adept at metacommunication, the Flynn’s have punctuated (in Watzlawick, Beavin, and Jackson’s 1967 sense) the nag/withdraw pattern not only at the level of cause-effect, but also in a way that includes several perspectives on themselves as well as perceptions of the other. They have institutionalized a confrontation episode that is intended to eliminate the nagging/withdraw behaviors, and also relieves tensions that accumulate between confrontations. Further, the long, emotional, and exasperating confrontation episode symbolizes to them their reciprocal commitment to each other. They feel that other couples, not so committed, would not participate in such a grueling episode to solve their relational problems.

The regulative rule that guides their performance of the confrontation episode may be stated in this way. Regulative Rule1: When daily tensions become intolerable, then it is obligatory to confront the conflict in order to relieve tensions, eliminate undesirable behaviors, and reinforce commitment to the relationship. The third consequent may be expressed as a shared constitutive rule at the master contract level of the hierarchy. Constitutive Rule2: When conflict occurs, engaging in agonizing confrontation episodes counts as evidence of love and commitment. This constitutive rule is then a part of the paradoxical regulative rule at the relationship level.

RR2 In this relationship, it is obligatory to engage in nagging/withdraw conflict in order to bring about the confrontation episode that is necessary to demonstrate love and commitment.

The confrontation episode includes their most significant symbols of love, but this cannot occur unless daily tensions become unbearable. At the least, the paradoxical rules at the relational and life-script level have produced a logic in which the successful management of social reality is difficult.

To explore the communicative processes by which the Flynn’s cocreate and comanage their social reality, Harris studied the performance of the confrontation episode. Ray and Donna each wrote a list of the behaviors that count as nagging and withdrawing. The lists are highly similar and the Flynn’s read each other’s lists and agreed that the other was correct. Next, Ray and Donna each wrote a description of the confrontation episode, as shown in Tables 7.12 and 7.13.
Mrs. Flynn's Description of the Confrontation Episode

The episode might come up in the middle of another episode or at the end of another.

The episode will unfold as follows:

<table>
<thead>
<tr>
<th>Episode begins with</th>
<th>Content</th>
<th>Construed Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>He may make some remark about my personality.</td>
<td>Long period of excessive nagging on my part (one day or one week). No attempt on his part to be loving or understanding. I bring situation to a head with confrontation.</td>
</tr>
</tbody>
</table>

| Episode develops into | Lengthy discussion, concession from me. | Emotional on my part. Sympathy and understanding on Ray's part. Agonizing. |

<table>
<thead>
<tr>
<th>Episode ends with</th>
<th>A verbalization about our feelings for each other.</th>
<th>Reflects on vicious cycle of our problem (one behavior feeding another).</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acceptance of each other's basic personality. Discuss ways to help each other modify (me) or intensify (Ray).</td>
<td>Constructive discussion.</td>
</tr>
<tr>
<td></td>
<td>Love making sometimes.</td>
<td></td>
</tr>
</tbody>
</table>

269
TABLE 7.13
Mr. Flynn's Description of the Confrontation Episode

The episode might occur in the middle of another episode.
The episode will unfold as follows:

<table>
<thead>
<tr>
<th>Content</th>
<th>Construed Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Episode begins with</strong></td>
<td><strong>Content</strong></td>
</tr>
<tr>
<td>She: &quot;You did a lousy job on the dishes.&quot;</td>
<td>Nagging: She is angry or disappointed with me.</td>
</tr>
<tr>
<td><strong>Episode develops into</strong></td>
<td><strong>Content</strong></td>
</tr>
<tr>
<td>Me: &quot;I can't stand much more complaining. Why can't you give me a little room for me to do things in my way?&quot;</td>
<td>I get angry. I generalize about her nagging personality and its effect on our relationship.</td>
</tr>
<tr>
<td>She: &quot;I'm always taken for granted around here. You never touch me or let me know you love me in a physical way. If you did, I wouldn't be so demanding.&quot;</td>
<td>She answers.</td>
</tr>
<tr>
<td><strong>Episode ends with</strong></td>
<td><strong>Content</strong></td>
</tr>
<tr>
<td>Me: &quot;I haven't been very loving because you're always nagging.&quot;</td>
<td>I'm defensive for awhile. I admit reason for behavior.</td>
</tr>
<tr>
<td></td>
<td>We discuss differences in our personalities. We agree to be more aware of each other's needs. We tell each other how much we really love each other.</td>
</tr>
<tr>
<td></td>
<td>We make love.</td>
</tr>
</tbody>
</table>
The Flynn's style for managing conflict consists of daily avoidance until the conflict becomes unbearable, at which time a familiar episode is initiated to eliminate the conflict. This management episode occurs about three to four times a year and lasts several hours. The antecedent condition for engaging in their confrontation is a complaint concerning their undesirable behaviors. When a joint decision to confront the whole series of conflict episodes is reached, the Flynn's wait until evening, "send the kids to watch T.V.," and go to their bedroom for several hours of accusations, apologies, defensiveness, support, emotional displays, concessions, acceptance, and constructive discussion. It frequently ends with love making and promises of less nagging and more attention. Apparently the conflict and confrontation episodes are well-learned rituals in this family. The only disagreement pertains to who actually initiates the confrontation; each claimed that s/he was responsible for initiating the conflict when "the tension becomes unbearable." A role-playing session was employed in order to assess the consistency between their written scripts and their reenactment of the actual confrontation. It was hypothesized that disagreements concerning how the episode begins would result in difficulty in the enactment of the initial antecedent condition.

It was at this point in the procedure that the Flynn's ability and willingness to expose themselves and their relationship proved invaluable. When requested to reenact their confrontation in front of an observer and a tape recorder, they proceeded with enthusiasm. As predicted, they could not decide exactly who was responsible for the initial act. They bypassed the antecedent condition and enacted a scene that represented the rest of their confrontation. They played their respective roles without having read the other's description of the episode, but their role-playing went so smoothly they appeared to be reading from the same script. This further confirmed, with the one exception cited above, that their logic and their communication patterns are consistent with one another. The disagreement that emerged again in the role-playing session was a signal that either an integral component in their logic was missing from this analysis or there was some inconsistency related to the disagreement. A self-critique session was devised in order to explore these possibilities more fully.

This critique session was loosely structured to allow the Flynn's to analyze their own method of meaning management. Even though the Flynn's agree about the antecedent condition for the confrontation episode—it occurs when the tension tolerance threshold is reached—each partner has a different threshold for tolerating tensions. They both perceive Donna as intolerant and Ray as very tolerant. Donna's threshold is thus legitimately lower than Ray's due to their acknowl-
edged personality traits. The ambiguity concerning how the confrontation begins lies in the fact that each partner thinks his/her own tolerance level initiates the confrontation.

Ray: Finally you will intensify your nagging. I will decide I've had enough of this.
Donna: Yeah. But you would never bring it up. I think it would continue to go on unless I eventually brought it to a head.

Each takes credit for initiating the confrontation. Tension must reach, then surpass, Donna's threshold before it precipitates Ray's sense of obligation to engage in the episode.

Further probing into the Flynns' analysis of their relationship revealed a third apparent paradox, which prohibited them from reaching any of their goals efficiently, frequently, or to their satisfaction. The paradox was discovered in previously unarticulated constitutive rules:

Ray CR: In the context of conflict, Donna's attempt to confront the conflict counts as nagging.
Donna CR: In the context of conflict, Ray's refusal to confront the conflict counts as withdrawing.

A joint relationship rule emerges:

In this relationship, attempts to confront and refusals to confront count as hostile behaviors that obligate reciprocal hostile behaviors (that is, nagging and withdrawing).

Thus there are two episodes being described here. One is a conflict episode in which two recurrent forms of hostile behaviors obligate the enactment of each other, creating a closed cycle with no beginning nor ending. The second episode is a confrontation in which the goal is to eliminate the conflict—a meta-episode. A paradox exists at the episodic level where the conflict episode, which is cyclical and hostile in nature, is embedded within its metaconfrontation episode, which is goal oriented and friendly in nature. Specifically, the episode for eliminating the nagging and withdrawing cycle contains the nagging and withdrawing cycle. This paradox, stated formally might be: All actions in this friendly episode are hostile.

Their inability to agree about who starts the confrontation may be related to these confounded episodes. It is usually impossible to know whether a specific act of, for example, nagging,
counts as undesirable behavior that obligates the complementary undesirable behavior, or whether it counts as a signal that the tension threshold has been reached. This is further confounded by the fact that Donna's lower tolerance level legitimates her efforts to confront sooner and more often, reinforcing her "bitchiness" and Ray's lack of attention.

The Flynn's self-analysis session, itself an illustration of the intensity and diligence of their management style, finally revealed a single speech act that obligates their confrontation—Donna's crying. This is one behavior that does not count as nagging but serves as a symbol that the necessary tension level has been reached. Ray responds with either a suggestion to confront or displays willingness to confront. This interact—"cry-suggest"—obligates the confrontation, at which time plans are made to have a long talk that evening.

This third paradox exists in all attempts to confront conflict except one. It, combined with the two others cited above—"we must/we can't change," and undesirable behaviors must be demonstrated in order to show commitment—reveals a convoluted logic, summarized in Figure 7.4. Perhaps the most important observation is that Ray and Donna live comfortably and easily within this logic. We suspect that the Flynn's are not atypical in having developed a paradoxical logic. Rather, we believe the clarity and noncontradiction in formal logical systems are unreasonable and inaccurate models of interpersonal rule systems, and that the assumption that there is an order underlying the surface of human actions is pernicious. This study generated a great sense of understanding of the social reality of the Flynn's by assuming that social reality was not orderly, and exploring the consequences of disorder.

Coordination without Agreement

Several theoretical attempts to understand interpersonal relationships stress the importance of consensual understanding of rules, attributing successful coordination to agreement about meanings, evaluations, and procedures. Cushman and Whiting (1972) overtly appeal to consensuality in explaining communication, and Goffman (1963) and Illare and Secord (1973) implicitly make the same assumption. A study of the logic of episodes in intimate relationships did not support this assumption. In fact, the success of one relationship depends on an episode the successful enactment of which requires a carefully patterned misunderstanding (Harris, Cronen, and McNamee 1979).

Two couples were selected for study on the basis of unstructured telephone interviews, in which they demonstrated willingness
FIGURE 7.4

The Flynns' Paradoxical Logic

All Meanings in This Open Relationship Are Closed

Life-script

Donna - Intolerant; Ray - Undemonstrative
We must change/we can't change.
We are committed to our open, loving relationship.

Management Episode

All acts in this friendly episode are hostile.

Episode

Must demonstrate undesirable behavior in order to demonstrate love.

Speech Acts

Nagging/withdraw
and ability to talk freely about their relationship. Both couples participated in an additional unstructured interview, in which they described themselves and their relationship, and a series of structured interviews, in which they described and analyzed the dialogues in their typical episodes. Part of the analysis consisted of responding to the scales measuring prefigurative and practical forces (see Figure 7.1).

Dave and Jan are in their early twenties, and have lived together for three years. Dave, an undergraduate from an upper-middle-class New England family, described himself as "flexible," intelligent," and "not dominant." He rejects any controlling or dominating role in the relationship. He also mentioned that short-term results are very important to him as opposed to long-term results. When talking about their relationship, Dave described Jan and himself as "a couple of wishy-washy people" who have no distinct division of responsibilities. "I guess in some relationships the men perform some decision-making tasks and the women perform others. We don't have any clear-cut distinctions of power."

Jan, who grew up in a lower-middle-class urban environment, described herself as a "lazy person." She said, "I don't like being lazy but because I'm lazy the only thing I can do is acknowledge it." She also defined herself as "not very assertive," "contrary," and "self-critical." She feels that the most difficult thing for her to do is to force herself into goal-oriented action. She described their relationship as one in which he sets the rules a lot of the time. It takes a lot of work from me, but he pushes me around a lot to make me do something . . . in order to get me to stop taking everything on myself. So, he really does it for a positive reason . . . he encourages me to do lots of things to become more independent and in touch with my own power.

They both characterize the relationship as one in which neither Jan nor Dave holds the decision-making role. When interviewed, they admitted this as the cause of unfinished and unmade decisions. At the same time, they distinguish between episodes where this lack of decisiveness is either irrelevant or harmful to their relationship. As Dave pointed out, "Sometimes it [Jan's inability to act] just doesn't seem to bother me a whole lot." However, Jan is lazy and needs a push, and Dave hates to be dominant or in control.

Two episodes were selected that seemed to reflect their underlying dilemma: How can Dave push Jan without being dominant?
Both episodes were called typical and recurrent by both Jan and Dave. The job episode concerns Dave's efforts to get Jan to seek a job. In the letter-writing episode, Dave attempts to get Jan to work on their correspondence. The subjects' descriptions of these episodes are shown in Tables 7.14 and 7.15.

In the job episode, Dave and Jan deal with the central problem of getting Jan to take assertive action. The episode involves Jan's efforts to find a job. The couple believes that economic realities require her additional income so that they can continue to live together. They must pay rent, buy food, and so forth. Of course, Jan would need to have income if she and Dave split up, but the couple sees the economic situation as a relationship problem. The importance of the episode goes beyond the particular problem of Jan's employment. Both see this episode as reflecting the fundamental problem in their relationship: Dave's search for a nondominant role, and Jan's life-script that requires a dominant other to impel her to assertive action. Dave expressed the importance of the job-seeking episode when he told the interviewer, "What we're really fighting is the dependency thing," which is "a much bigger issue than finding a job."

This episode depicts a convoluted interpersonal logic. In essence, Jan's intrapersonal logic takes the simple form of an invitation to Dave: "Make me assertive." This invitation is similar in structure to the "be spontaneous" paradox Watzlawick (1976) has discussed. From Dave's perspective this invitation forces him to perform undesirable acts in order to achieve a desired goal. For example, the ultimatum is interpreted as a dominant act but a necessary one for making Jan less dependent. Dave's logic then takes the simple form of a response to her invitation: "In order to make you my equal, I must be dominant."

This episode culminates in act 17, where Dave gives explicit instructions for what Jan should do. Jan interprets this as an ultimatum that spurs her to action, and this is just what Jan wants. Jan told the interviewer that she will reinitiate the episode later if she does not get what, in her constitutive rules, counts as an ultimatum. For Dave, however, act 17 counts as a backing down. "I'm telling her everything will be O.K., what's past doesn't matter, she can just start out fresh tomorrow." Thus Dave believes he is acting to move out of the dominating position by this act; he is no longer holding Jan's inactivity over her head. Her act 18, wherein she agrees to go out tomorrow, confirms Dave's impression that he has equalized the relationship. The result of this particular enactment, we subsequently learned, was that Jan did in fact interview for a job the next day and was hired. The lack of agreement on the meaning of 17 is precisely how this couple succeeded in spite of a convoluted logic.
### TABLE 7.14

**Dave and Jan's Job Episode**

**Episode:** Discussion of getting a job.  
**Time and place:** End of work week, as Dave comes in the door.

<table>
<thead>
<tr>
<th>Act</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dave: Did you go to CETA today?</td>
</tr>
<tr>
<td>2</td>
<td>Jan: No.</td>
</tr>
<tr>
<td>3</td>
<td>D (Silence)</td>
</tr>
<tr>
<td>4</td>
<td>J I called and there wasn't anything in today.</td>
</tr>
<tr>
<td>5</td>
<td>D Did you leave the house?</td>
</tr>
<tr>
<td>6</td>
<td>J I fed the cats.</td>
</tr>
<tr>
<td>7</td>
<td>D You should have gone to Northampton. You're never going to get a job by laying around. The only way to do it is to start.</td>
</tr>
<tr>
<td>8</td>
<td>J I know, I know. ...</td>
</tr>
<tr>
<td>9</td>
<td>D Well, why aren't you doing anything about it?</td>
</tr>
<tr>
<td>10</td>
<td>J (Silence)</td>
</tr>
<tr>
<td>11</td>
<td>D You have to do something about it. You're just being lazy. It can't go on like this.</td>
</tr>
<tr>
<td>12</td>
<td>J (Silence)</td>
</tr>
<tr>
<td>13</td>
<td>D Look. We have to get $200 for May rent; we're already overdue on the phone bill. I don't know where we'll get May food money. ...</td>
</tr>
<tr>
<td>14</td>
<td>J I know.</td>
</tr>
<tr>
<td>15</td>
<td>D So why didn't you go to Northampton?</td>
</tr>
<tr>
<td>16</td>
<td>J I was up and ready at nine, but I just couldn't do it.</td>
</tr>
<tr>
<td>17</td>
<td>D Well, you're getting up at eight o'clock and we're leaving the house at nine.</td>
</tr>
<tr>
<td>18</td>
<td>J All right,</td>
</tr>
</tbody>
</table>
### TABLE 7.15

Dave and Jan's Letter-writing Episode

<table>
<thead>
<tr>
<th>Act</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dave: We have to write to Justin; he'll be out of school soon and we'll never find him then.</td>
</tr>
<tr>
<td>2</td>
<td>Jan: I know and we want to get our stuff from him.</td>
</tr>
<tr>
<td>3</td>
<td>D So let's just sit down, now, and get it done.</td>
</tr>
<tr>
<td>4</td>
<td>J I want to write to him, but I just don't feel like it right now.</td>
</tr>
<tr>
<td>5</td>
<td>D But you never feel like writing letters when I ask you. Since you can't plan it, just force yourself to do it.</td>
</tr>
<tr>
<td>6</td>
<td>J I can never write letters like that, it wouldn't be any good.</td>
</tr>
<tr>
<td>7</td>
<td>D But we really should get it done. It'll only take a while.</td>
</tr>
<tr>
<td>8</td>
<td>J I just can't write if I don't feel like it.</td>
</tr>
<tr>
<td>9</td>
<td>D But it seems like you never feel like it. If we just do it now, it'll be finished.</td>
</tr>
<tr>
<td>10</td>
<td>J It won't work. I'm just not in the mood to write.</td>
</tr>
<tr>
<td>(telephone)</td>
<td>Rrrrring.</td>
</tr>
<tr>
<td>11</td>
<td>D Yeah, but you'll get into it once you start doing it. &quot;Hello.&quot;</td>
</tr>
<tr>
<td>12</td>
<td>J (I lead nod) OK.</td>
</tr>
</tbody>
</table>
The letter-writing episode contrasts with the job episode because throughout the task of dialogue the conversants understand each other very well—yet the letter does not get written. In the job episode, Dave and Jan understood each other quite well except at the crucial seventeenth and eighteenth acts.

To test whether this difference is important, the meaning of the episodes from inside and outside was determined. A coding form was developed for these and other episodes that focuses judges' attention on pressure and types of resistance to pressure in close personal relationships. Each of Jan and Dave's episodes was given to a panel of six naive coders who categorized each interact. Inter-coder reliability was .83. Of the nine interacts coded for the job episode, five were coded by our judges as "pressing for action—resisting pressure," and three were coded as "pressing for action—giving in to pressure." For the letter-writing episode, three of the six interacts were coded as "pressing for action—resisting pressure," and three as "pressing for action—giving in to pressure." Clearly, the naive coders thought the patterns in the two episodes looked similar.

However, while the six judges coded act 17 with 100 percent agreement, Dave and Jan interpreted its meaning quite differently, and it is that difference that allows them to live within their confounded logic. The judges unanimously coded 18 as "giving in to pressure," but this misses the vital nuance of meaning that both Jan and Dave assign to it. To the participants, act 18 indicates Jan's acceptance of a more equal, more dominant role in their relationship through a commitment to action.

While judges coded the dialogues as very similar, an empirical investigation of Jan and Dave's intrapersonal logics in the two episodes gives a very different picture. A mean was computed for both actors' scores on each of the scales measuring linkages among rule components. The results for Jan and Dave's letter-writing and job episodes were combined with data on some of their other episodes and data on the episode obtained from another couple, Rob and Ann. Combining information from five episodes described by two couples, a nonparametric cluster analysis of individuals' rule structures was performed. A grid was constructed with each individual's performance in a particular episode forming the rows, and variables of rule structure forming columns. Spearman rank-order correlations were then computed between all pairs of episodes across the variables. The resulting correlation matrix was then factored by means of McQuitty's (1961) procedure.

The episodes break down into two highly discrete clusters (see Table 7.16). Cluster number one, which contains Dave's rules for the job-hunting episode, is typified by higher functional autonomy
scores, lower scores for ability to present the self and cast the other, and stronger connections among speech acts and life-scripts and desired consequence. Notice also that both Dave and Jan's intrapersonal logics for the letter-writing episode fall into the second cluster, but their logics for the job episode are in different clusters. Clearly, the episodes that look similar to observers mask very different interpersonal logics.

TABLE 7.16

Cluster Analysis of Dave and Jan's Episodes

<table>
<thead>
<tr>
<th>Cluster I</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Dave</td>
<td>Job Episode(^a)</td>
</tr>
<tr>
<td>7. Dave</td>
<td>Eating Out Episode</td>
</tr>
<tr>
<td>8. Jan</td>
<td>Eating Out Episode</td>
</tr>
<tr>
<td>9. Rob</td>
<td>Buying Gifts</td>
</tr>
<tr>
<td>Cluster II</td>
<td></td>
</tr>
<tr>
<td>2. Jan</td>
<td>Job Episode</td>
</tr>
<tr>
<td>3. Dave</td>
<td>Creative Writing</td>
</tr>
<tr>
<td>4. Jan</td>
<td>Creative Writing</td>
</tr>
<tr>
<td>5. Dave</td>
<td>Letter Writing</td>
</tr>
<tr>
<td>6. Jan</td>
<td>Letter Writing</td>
</tr>
<tr>
<td>10. Ann</td>
<td>Buying Gifts</td>
</tr>
</tbody>
</table>

\(^a\)The correlation between Dave's and Jan's Job Episode is .23, 
\(^b\)All correlations are Spearman rank order.

The mean scores for Jan and Dave's rule linkages are graphed in Figure 7.5. The Mann-Whitney U test was used to compare Jan and Dave's scores on the rule structure variables for each episode. In the job episode, three significant differences emerged. Across the episode Dave's scores for act-consequent linkage are significantly lower than Jan's (U = 12.5, p < .05). Jan's life-script-act linkages are significantly higher than Dave's (U = 10.5, p < .025), while her life-script-act desired consequents linkages are significantly lower than Dave's (U = 12, p < .05).

These results support the conclusion that Jan is incorrect in her perception that Dave purposively gives her a kick into action
FIGURE 7.5
Logical Forces in Dave and Jan's Job Episode

Dave: Prefigurative Force

Jan: Prefigurative Force

Dave: Practical Force

Jan: Practical Force

--- life-script--speech act linkage
--- master contract--speech act linkage
--- antecedent act--speech act linkage
--- consequence--life-script linkage
--- consequence valence
--- episode--speech act linkage

ACT NUMBER

STRENGTH

ACT NUMBER

STRENGTH
when he knows she needs it. It is Jan who is operating more pur-
positively, adjusting her acts to a conception of the response she
wants from Dave. Jan's speech acts, together with Dave's concep-
tion of the episode, set up a pattern of prefigurative forces that
channelize his action. Indeed, Dave's most functionally autonomous
acts are those that lead up to and include the ultimatum or kick Jan
wants him to give her. Consistent with the qualitative data, Dave's
life-script-to-act linkages are significantly lower than Jan's. He
wishes to avoid the dominant role, while Jan's life-script requires
her to use Dave to correct her laziness. The quantitative findings
are also consistent with Jan's claim that she is innately lazy and
that nothing can change this. The desired consequent-life-script
linkages for Jan are much weaker than Dave's. Jan's life-script
entails certain actions, but the consequences she desires from those
actions do not alter her life-script.

In the letter-writing episode, three significant differences
again emerged. Jan's episode-to-act linkages are significantly low-
er than Dave's (U = 2, p < .05), indicating that she feels her acts to
be less strongly prefigured by the episodic context than does Dave.
This is in marked contrast to Jan's episode-to-act linkage scores
in the job episode. In the letter-writing episode, Jan's master
contract-act linkage and her life-script-act linkage are significan-
tly weaker than Dave's (U = 4.5, p < .05 and U = 4, p < .05, re-
spectively). Thus in the letter-writing episode, Dave and Jan do not
significantly differ in the practical forces of their rules, but do dif-
er in the strength of certain prefigurative forces. Yet in the job
episode they differ in the strength of practical forces. The nature
of the data does not permit a significance test that compares an ac-
tor's rule structures across the two episodes. However, examina-
tion of means indicated a stronger act-to-master contract linkage
for Dave and Jan in the job episode as compared to the letter-writing
episode. The consequences of action seem to have much weaker im-
plications for Jan's life-script in the job episode for reasons already
discussed. Jan also seems to perceive her actions as more strongly
prefigured by her life-script in the job episode than in the letter-
writing episode. These differences are consistent with the conten-
tion of both Dave and Jan that the letter-writing episode is trivial in
comparison to the job episode, and that the episodes are very dif-
erent in spite of the fact they look similar in external characteris-
tics.

In the job episode, Jan acts purposively by acting lazy, forcing
Dave into a dominant position while Dave acts passively by refusing
to act dominant. The resulting episode is a jointly coordinated one
in which each act logically follows the preceding one. These acts
and adjoining, compatible, but different interpretations fit in a
coordinated episode of cross-purposes. It is jointly controlled in that its enactment requires the cooperative effort of each participant to misinterpret appropriately.

Because the episode is coordinated does not, however, mean it is in all respects desirable. There is no resolution of Dave's confounded logic, which we have stated as "I must make you assertive." Dave's actions must, of course, perpetuate Jan's system. He must take the dominant position because his sense of self and master contract require him to initiate these role-dominant episodes, and Jan deliberately creates conditions that entail Dave's initiation of these episodes. Dave wants a nondominant, symmetrical relationship with Jan, but the logic created by the conjoining of their rules perpetuates the current situation. A lack of mutual understanding is precisely what makes coordination possible in this paradoxical situation. The power relationships between Jan and Dave are much more complex and qualitatively different than either of them realizes. They do not see that Jan has the power to initiate episodes in which Dave feels forced to dominate her. Jan purposefully draws Dave into a logic that serves her needs, though she does not realize how her sought-after ultimatum has meaning for Dave.

INSTITUTIONAL LOGIC: THE STUDY OF ORGANIZATIONS

The disorder in the social reality of organizations is legendary. Military organizations have drawn the most vicious appraisals: "There are three ways of doing things: the right way, the wrong way, and the Navy way!"; and "What do you think of Army Intelligence?" "I think it's a contradiction in terms." However, civilian organizations such as university administrations and business or charity organizations have comparably convoluted logics.

There is no shortage of attempts to describe the components of formal organizations and to prescribe particular solutions, including the communication audit, organizational development, human relations training, management by objectives, management by results, and so forth. The theory of the coordinated management of meaning suggests an alternative to each of these, namely, a description of the logic of the interpersonal system as the intermeshing of the rule structures of the members.

Sex and Promotability

O'Brien (1978) found that she could identify the archetype of an organization by means of a structured interview that elicited
members' perceptions of the most and least important characteristics of the organization. In a New England business organization, she found a high consensus among middle managers about which behaviors were rewarded by making the actor perceived as promotable, and which were punished by making the actor perceived as un promotable. However, these rules differed if the actor were male or female; they were applied differently by males and females, and they were applied differently in task and social episodes.

There was an interesting difference in the consequences of violating the consensual rules in task and social episodes. A violation of a rule, for example, the rule for how one should accept an assignment, would result in very negative consequences, but conforming to the rule brought few rewards as conforming seemed a minimal expectation of employment. On the other hand, violating the rules for social episodes, such as about topics for conversation at lunch, would bring few consequences, but conforming to it would bring significant rewards. O'Brien found that the managers in this organization differentiated good team members (who were not promotable) and fast trackers (who were expected to move up the corporate ladder quickly). They expected fast trackers to act in a rule-consistent manner in both social and task episodes, but good team members to act in a rule-inconsistent manner in the social episode. Invisibly to new employees, social episodes functioned as tests for subordinates, and their behavior in these ostensibly casual situations determined their personnel evaluations and their careers.

Females were penalized more than men for rule-inconsistent behavior and rewarded more for rule-consistent behavior. However, the consensuality of rules for women was much less than for men. There were no actions women could perform that would be generally perceived as rule conforming. Further, males expressed an unwillingness to work with females, but not males, who violated episodic rules.

These results present a bleak prospect for women hoping to be promoted in the company studied. They have no line of action that would be consensually perceived as rule conforming, and face greater consequences for violating rules than do males.

Bedlam

Harris and Cronen (1979) studied the social reality of the faculty in a social science department at a state university. The results identified several types of convoluted logic that allowed them to explain observed forms of behavior, to predict the evaluations of and responses to particular forms of behavior, and to
predict forms of episodes that were desired by members of the faculty but would not occur.

An organization exists as an entity to the extent that a group of persons perceive themselves as a collective we. The social reality of the organization consists of the agreement among these persons about the characteristics of the we. Harris and Cronen assumed that whatever the content of these beliefs, the agreement between what various members think and what each thinks the others think is not likely to be very close. The differences comprise disorder in the logic of meaning and action, the implications of which are important in understanding the forms of behavior that occur in the organization.

Ten persons, half of the faculty, participated in two interviews. The first was a standard construct-elicitation procedure, in which subjects were asked to describe the department as it is unique, similar to other departments, at its best, and at its worst. Subjects were then asked to identify the opposite of each of these descriptors. The pairs of descriptors were understood to be the constructs used by the faculty to perceive the department.

The organizational image was determined by identifying the degree of consensuality in the constructs used by the faculty. Two judges, who were graduate students in the department being studied, organized 75 percent of the 116 elicited constructs under ten categories by a card-sort procedure.

In the second phase of the study, subjects rated the importance of each construct as a definition of the department on a scale from one (extremely important) to ten (extremely unimportant). All mean ratings were high (no respondent ranked any construct below the midrange point of five) and the variances were low, indicating that the construct-elicitation procedure succeeded in identifying a highly consensual organizational image.

In this phase of the study subjects completed a questionnaire, the items of which consisted of the ten constructs converted to nine-interval, bipolar adjectival scales. Subjects completed each scale by indicating four types of information: their own belief and their perception of other faculty members' belief in the actual and optimal condition of the department. As shown in Table 7.17 the patterns of agreement differed considerably on various constructs.

Finally, subjects were asked to indicate on the nine-interval, bipolar adjectival scales all of the intervals they perceived as legitimate positions about the state of the department, and all of those they perceived as rejected. This procedure consists of a modification of the social judgment theorists contribution to scaling, and was interpreted as an analog to the deontic operators in regulative and constitutive rules. As shown in Table 7.18 the latitudes of acceptance and rejection and the residual differed appreciably among four constructs.
<table>
<thead>
<tr>
<th>Image Constructs</th>
<th>What Members Think Others Believe</th>
<th>What Members Themselves Believe</th>
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<tr>
<td></td>
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<td>Actual State</td>
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<td>Scientific-Humanistic/Critical</td>
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<td>5.0&lt;sup&gt;a&lt;/sup&gt;</td>
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<tr>
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<td>2.7&lt;sup&gt;a&lt;/sup&gt;</td>
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<tr>
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<td>3.2&lt;sup&gt;a&lt;/sup&gt;</td>
<td>6.2&lt;sup&gt;ac&lt;/sup&gt;</td>
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<tr>
<td>Service-Substance</td>
<td>6.5&lt;sup&gt;ab&lt;/sup&gt;</td>
<td>7.5</td>
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Note: Means with different superscripts in the same row differ significantly (p < .05).

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<tr>
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The responses to the bipolar adjectival scales provide the information necessary to write the constitutive and regulative rules of the organization. Unlike other exercises of this type (for example, Ilawes 1976), this procedure enabled us to describe the extent and infer the implications of disorder in the social reality.

On the scientific-historical/critical construct, the faculty members believe that the department is where it ideally should be, but they (erroneously) think they disagree about the actual and ideal state of the department. Further, their errors about others' perceptions of actual and ideal states are in opposite directions. They believe others perceive the department as slightly more humanistic/critical than they themselves believe it to be, but they perceive others as wanting the department to be very much more scientific than it is or than they want it to be.

This structure of social reality produces regulative rules that lead to self-perpetuating misperception. For example, a young faculty member cognizant of an eventual tenure decision might well construct this regulative rule: In any professional activity, it is obligatory to emphasize scientific activity and prohibited to emphasize historical/critical work, so that you will be perceived as contributing to what others believe is the optimal state of the department. The feedback from behavior resulting from this rule is likely to confirm it. Members of the tenure review committee who are minimally competent (and who imitate others' behavior) or satisfactorily competent (and who are system dependent) will give him/her positive feedback, thus strengthening the rule. Optimally competent reviewers, who suggest research programs or courses that might transcend the polarities of this construct, are likely to be perceived as naive or untrustworthy by nonoptimally competent members of the department. Assuming that the latter can muster requisite votes to defeat any proposal that runs contrary to the conventional wisdom of the department, this pattern of misperception may be perpetuated indefinitely. Further, this structure of social reality leads to the development of conservative cliques designed to resist the expected political attempts to move the department toward an extreme scientific position. When no such move is proposed, or when those perceived as scientologists are discomfited, these groups congratulate themselves for their victory and pledge continued resistance to a nonexistent enemy.

There is no problem with interpersonal agreement on the community of scholars—backbiting/fragmented group construct. Members agree that a community is preferable, but differ considerably from the actual group of backbiters. The problem lies in the residuals shown in Table 7.18. The organization has developed no regulative rules for handling conflict, so anything goes. The or-
ganization will probably not be able to move toward its ideal of increased harmony unless there is a consensus on altering the regulative rules that permit destructive behavior. But this is precisely the problem: any attempt to negotiate new rules is likely to initiate a new round of hostile behavior. As a result: (1) any ambiguous behavior—for example, a sincere attempt to unite the faculty around a shared activity such as a colloquium—will likely be interpreted as a novel or elaborate way to bite back; (2) it will be impossible to execute ambitious plans for the department, since if anything goes, one cannot anticipate patterned responses; and (3) forms of hostile behaviors will occur that make the definition of the department as fragmented as a self-fulfilling prophecy.

The large residuals are important in understanding the politically powerful—powerless construct. Members of the faculty have been convinced that they have very little political power within the university, and that most other members do not realize just how powerless they are. Further, while few behaviors are rejected, few are legitimate; the residual rate for this construct exceeds all others. We interpret this as indicating the problem that occurs when an outside force—the university administration—defines what counts as powerful but does not provide the tactics or resources for the department to achieve power. A social reality structured in this way poses a serious problem for any faculty member who initiates activity designed to increase the department's power. S/he is likely to be allowed to do virtually anything without opposition, but will be subjected to the counsel of despair and find it difficult to enlist the aid of others.

Perhaps the most frustrating aspects of the disordered logic of this organization is revealed in the service-theoretical substance construct. Members agree that the ideal position is near the midpoint, and they agree that is where the department actually is, but each believes that s/he is a minority of one because all others prefer an extreme emphasis on substance. As a result, faculty members mix service with substance, but do it unobtrusively. Since members do not think it appropriate to ask others to join them in service projects, this adds to the feeling of fragmentation. Since everyone is perceived to prefer substance, one form of criticism that can be leveled against one's colleagues is that s/he does too much service.

The fact that women sometimes get promoted in business organizations and that the faculty in the department we studied are productive and sometimes even laugh together, says something important about humankind, but we are not sure what, or whether we should be glad or sad.
THE CHANGE OF SOCIAL REALITIES

Organizations do not consist only of definitions of the collective we. As many research projects and most of human history show, groups of people usually structure some procedure for enforcing collective judgments about who is in and who is out of the group and how members should act.

If group norms had no natural enemies, human society would settle into self-perpetuating traditions, and the primary survival skill would be identifying and conforming to the prescriptions for one's role in the social order. However, as Toynbee's histories attest, sometimes the seeds of change are sown in the founding of a society, sometimes change is forced on a society, and sometimes change is achieved by great effort, but the fact of change has been ubiquitous.

In recent centuries, since the Europeans turned the oceans into highways and infected the world with the syndrome of attitudes and institutions of modernity, change has become a constant and disturbing feature of life. Modern society is inherently volatile. Contact with modernity crumbled the venerable traditional societies of Asia and the Middle East, and at the same time it has raised a succession of generations of revolutionaries. Modernization and revolution provide an unparalleled and largely untapped area for the study of the change of social realities.

The Counterculture

At the time of this writing, many groups define themselves by being different from, against, or in rebellion to some social reality identified as the established order. In Marxist movements, this has generated some interesting semantics, as repressive governments with total control over a country describe themselves as revolutionary, and Marxist philosophers agonize over the possibilities of a continuing revolution. The issue is a real one. Once the oppressor has been overthrown, the revolution must now create a social reality that stands on its own assumptive bases rather than simply as a counterpoint to some other base. This seems to be the more difficult task. Internationally, successful revolutions seem to need the services of a foreign devil to provide a focal point for the social reality, a role the United States often has been forced to play.

In the United States, the counter culture consists of persons who reject the established values and institutions and form groups that will create an alternative social reality. One such counterculture is the Artroom Corridor people, a self-defined group of nine female and eight male students in a northeastern high school, all of whom are between 14 and 18 years old. Siegel (1979) observed and
to talk about their social reality. The self-image of the Artroom Corridor people includes two components, one of which is an explicit rejection of various aspects of their culture. They "are not really into being in school, we are aware of other things we could be doing." They claim to know "what's happening in the system [school] and we don't like it." They disagree with both curricular and behavioral demands imposed by the school, but—interested in art and music—stay in school because they see a diploma as necessary to "break into the field." They are not close to their parents, and claim to be unable to express themselves at home because "parents don't understand." Parents are perceived as expecting them to act "responsibly," something they find difficult to do. When parents "start getting on your case," this counts as nagging regardless of its motivation. Parental advice is perceived as biased and inconsiderate of the children's feelings. Since all authority figures give unwanted advice, these teenagers are careful to suppress any genuine feelings at home.

The group serves as a rather obvious substitute for familial intimacy. The primary goal of the group is maintaining their interpersonal relationships, and the procedures for doing this include sharing, open-mindedness, and mutual supportiveness. They proudly described themselves as "really open as a group, into sharing, there is a lot of support for each other and a strong sense of unity."

Siegell was interested in the extent to which the countercultural group resembled in structure and function, if not in content, the establishment they disdained. He first attempted to locate rules for meaning and action that comprised a logic of action. This proved an easy task. He asked members of the group to identify the ways in which their group was similar to and different from other social groups, then observed their behavior pertaining to these differences. Not only did the constitutive and regulative rules comprise a logic (as shown in Figure 7.6, but the desired consequence of most of the rules is—monotonously but seductively—to maintain the group membership. Siegell reports that for awhile he was so enmeshed in the logic he could not analyze it.

The next task was to determine if the logic of this social reality was importantly different from the revolted-against culture. The members clearly thought so. They believed they had created new social rules that constituted a worthwhile social system, and located it near the ideal on a continuum between sharing and selfishness/self-absorption/not giving. In fact, they created a novel descriptive term for themselves. Well aware of, and unhappy about, the fact that they were perceived negatively because they cut class, stayed high quite often, and did not accept responsibility, they described themselves as misguided youths in distinction to
FIGURE 7.6

The Social Reality of a High School Counterculture

Artroom Corridor Constitutive Rules

1. Distinguishing group from other groups

   ➢ everyone is a friend
   ➢ members support each other
   ➢ members are able to self-disclose

2. Distinguishing group from other groups

   ➢ willing to accept new ideas
   ➢ allow members to disagree

Artroom Corridor Regulative Rules

1. A member needs to self-disclose a problem

   ➢ obligatory to listen and be supportive

2. A member wants to express new ideas

   ➢ obligatory to accept without judging

3. A member has done something wrong

   ➢ obligatory to admit the mistake honestly

Source: Siegel 1979.
juvenile delinquents, for whom they had considerable scorn. However, Siegel found reason to believe the new social reality of this counterculture was similar in several significant ways to the culture they rejected. Specifically, their social reality included a confounded logic that utilized group pressures to stifle individuality and augment enmeshment in and conformity to the group, and legitimized condemnation of persons who did not share the group's norms. The condemnation of outsiders indicates that this counterculture has substituted new content but retained the structure of the social reality against which they are protesting. All members of the group feel drug and alcohol laws are unfair, so they feel it is legitimate to break these laws and support each other in doing so. For this reason, they reject the label juvenile delinquent in favor of the semi-serious misguided youth. They call teenage groups who vandalize property or commit senseless crimes juvenile delinquents. The new social reality is marked by a different content of its social ethics, not by the absence of a social ethic or the imposition of condemnation for those who violate its precepts (cf. Figure 7.7).

The confounded logic involves the concept of openness, which is important to the group. The consensual group image stipulates that all members are intimate friends, and that any member can be "really open" to all others. However, this is not the case. Each person has an inner circle of friends with whom s/he talks intimately. If that small group is not present, then the person will not self-disclose. Further, despite the definition of the group as supportive, members only talk about personal problems after a chemically augmented high. According to one member, "getting high is a big focus of the group," caused by insecure feelings and provides an escape "from both systems." Finally, the value placed on supportiveness masks a strong normative pressure for conformity. Members are supposed to be able to act individually and be supported by others. However, if one member acts in such a way as to upset or offend another, the group requires that s/he cease.

Siegel's purpose was not to debunk or criticize the social reality of this countercultural group, and his study should not be so understood. Rather, it reminds us that all logics of social realities are human-made, and all have problems. The enthusiasm of reformers, the sincere zeal of revolutionaries, and the good intentions of the creators of social realities do not guarantee that the new system will be as humane as the old one.

Transitions

The theory of the coordinated management of meaning depicts persons as living within a precarious social reality. Each person
FIGURE 7.7
Contradictory Elements in the Social Reality of a High School Counterculture

1. Self-disclosure

The group describes itself as following the rule:

\[
\text{A member has a heavy personal problem} \quad \Rightarrow \quad \text{obligatory to self-disclose to anyone in the group} \quad \Rightarrow \quad \text{relieve problem}
\]

The group actually follows the rule:

\[
\text{A member has a heavy personal problem} \quad \Rightarrow \quad \text{prohibited to self-disclose to immature group members} \quad \Rightarrow \quad \text{relieve problem}
\]

\[
\text{legitimate to keep problems to oneself}
\]

2. Evaluativeness

The group endorses these constitutive rules:

\[
\text{when persons act unconventionally} \quad \Rightarrow \quad \text{accepting them, understanding them} \quad \text{openmindedness}
\]

\[
\text{when interacting within the group} \quad \Rightarrow \quad \text{openmindedness important}
\]

However, the group's regulative rules differ as a function of context:

\[
\text{if a group member acts like a jerk} \quad \Rightarrow \quad \text{prohibited to judge or condemn obligatory to confront and explain} \quad \Rightarrow \quad \text{maintain group solidarity}
\]

\[
\text{if someone outside the group acts like a jerk} \quad \Rightarrow \quad \text{legitimate to condemn} \quad \Rightarrow \quad \text{maintain group solidarity}
\]
is a component of many interpersonal systems, none of which is fully known to the individual, and all of which are co-created and co-managed by others. The process of coordinating one's own meanings and actions with others is inherently problematic and to some extent quixotic; the success of any pattern of meaning or action is temporary. There are three sources of change within the interpersonal system that seem inherent: changes within each individual as a function of maturation through the life cycle; the changes in interpersonal relationships as a function of their own history; and the changes in the availability of others with whom to interact as a function of mortality, economic and geographic mobility, and so forth.

Since there are no feasible ways of preventing the operation of these sources of change, persons must cope with a continual series of life transitions. The criterion for success or health is not the absence of transition, but the skills with which the person copes with the stresses attendant to transition.

The precariousness of social reality is usually, but not always, perceived as a negative condition, and many people experience great difficulty in coping with changes. A concern for these people is particularly appropriate in modern society because the attitudes, institutions, and technology of modernity simultaneously increase the incidence of transitions and remove many societal supports for persons experiencing transitions.

Traditional and primitive societies provided rites of passage (von Gennup 1960) in which the individual participated in a socially sanctioned period of adjustment, after which s/he adopted a new but clearly defined role in a relatively static society that replaced the old, equally clearly defined role. The rite of passage itself symbolized the change of roles both to the individual and to the rest of the social group, who then provided consistent reinforcement for the new role. Graduation ceremonies, marriage rituals, and funerals are the faint echoes of rites of passage in modern society. In modern society, the rate of change is high, the external trappings of roles have been diminished (for example, clothes and ornaments serve cosmetic rather than informative functions, cf. Lofland 1973), and the society is so pluralistic that no one can expect consistent reinforcement for any role, and there is an ethic of individualism. These factors combine to throw the individual in modern society on his/her own resources in coping with an unprecedented number of transitions without the benefit of cultural mores.

In recent decades, the often debilitating effects of inadequately coped with transitions have been recognized, and a veritable industry of bureaucratic services for persons in particular types of transitions has developed. There are two problems with these agencies: their definition of the problems precludes their understanding them, and they provide too little, too late.
The individual is considered the first line of defense in coping with transitions, with societal help available only after the individual has demonstrably failed to cope successfully. "By and large, Americans expect and are expected to be able to meet most stresses independently, 'on their own', and others will be called upon only under conditions of real emergency. Moreover, the number of persons on whom one may legitimately call is fairly restricted" (Sechrest and Wallace 1967, p. 577). The timing of societal support dictates its nature as remedial rather than preventive, and as an attempt to repair debilitating responses to transition rather than develop positively healthful coping strategies.

The structure of the current programs that attempt to aid failed copers is in part a result of the definition of the problem as a series of content-specific transitions rather than of coping with transition per se. As a result, the research and theory deal with the topics of retirement, divorce, bereavements, midlife crises, relational decay, and so forth, rather than themes relevant to all transitions. Most persons experience many different types of transitions, but with comparatively few repetitions of particular transitions, giving rise to two scenarios. First, research and theory could be directed to provide post hoc therapy to those who cope poorly with each type of transition, in the full realization that doing so provides little or no help for the individual in coping with any other type of change in his/her social reality. Second, research and theory could be directed to provide individuals with the skills required for coping with transition per se, with transfer value to all forms of changes in the social reality. Stated this way, the second scenario is obviously preferable if feasible, and there's the rub. The second scenario is non sequitur from the ontological and epistemic assumptions of most forms of social science, and if it were thought of, would appear unlikely. However, the concept of persons as holonic components of interpersonal systems described by a logic of meaning and action makes the second scenario blatantly obvious.

A person's social reality may be described as his/her repertoire of episodes, or those things that s/he can envision him/herself doing. A transition can be described structurally as a disruption of that repertoire of episodes, for example, by removing some episodes, including new ones, or changing the meaning or valence of others. This definition suggests a structural taxonomy of coping strategies independent of the specific content of the transition. Internalization is coping by simply accepting the disruption in the repertoire of episodes and living within the new social reality. Substitution occurs when a person recruits and trains persons to enact episodes that had been deleted from the repertoire. Replacement
occurs when a person learns and adds to his/her repertoire a new set of episodes with meanings dissimilar to those that had existed before the transition. Substitution is a strategy of masking the effects of change by recreating the old repertoire of episodes, internalization is a passive acceptance of the consequence of the change, and replacement is an active process of coping with the effects of change by making purposive additional changes.

Boynot and Pearce (1978) studied a group of wives of officers assigned to the submarine service. These men alternate between relatively long periods at home (three to six months) and relatively long periods at sea (three to six months). This produces a series of changes in their wives' interpersonal systems as a function of the availability of their spouses for social interaction, in their roles in the home relative to other family members, and in their role in the community as a part of a couple or as an ambiguous person, neither single nor available in a couple.

We chose Navy wives because there is a well-described pattern of stress associated with this life-style and because veterans of this cyclical transition could be considered experienced and successful copers. We hoped to identify patterns in successful coping strategies.

Isay (1968) described the "submariners' wives syndrome" in terms of four phases in the social-emotional adjustments necessitated by patrol schedules. Several weeks before her husband is to leave, a woman is likely to dread his departure, blame the Navy for her distress, and wish he were not going. As the departure nears, she may feel personally inadequate and that she will be unable to cope alone. During this phase, depression and psychosomatic illnesses are common. The third state is detachment, in which she adjusts to her aloneness. Her husband's return at the end of patrol creates the problem of intrusion, as she must reshuffle her life to accommodate his presence and adjust to his role as husband and father. Well aware of this syndrome and concerned about the effects of marital unhappiness on the retirement of personnel, the Navy has provided a range of services. However, these are of limited utility. Most psychological counseling functions remedially rather than preventively, and other programs are almost exclusively family oriented, irrelevant, or dysfunctional for the growing number of women who have elected a career. The desired effect of naval activities is to increase the enmeshment of the families of its personnel.

Thirty wives of naval officers stationed at the New London Naval Base in Groton, Connecticut, were selected from a roster of officers' families on the basis of four criteria. First, all subjects had experienced at least two deployments (periods of sea duty) by
their husbands. Second, all subjects' husbands were attached to FBM submarines, which maintain a regular duty cycle. Each FBM submarine has two crews, one of which is on shore duty while the other is at sea for a period of three-and-a-half months. Third, subjects were systematically selected to stratify husband's rank. Since the social prestige among wives is largely based on husbands' rank, we ultimately included the wives of eight commanders, six lieutenant commanders, eight lieutenants, and eight lieutenants J.G. Finally, subjects were selected such that 15 were in the husband-home and 15 in the husband-away phase of the cycle.

Each subject was given a self-administered questionnaire designed to measure coping strategies and personal adjustment. The questionnaire solicited information considered to be a description of subjects' repertoire of episodes: an organized list of the activities characteristically engaged in with significant others. For both the husband-home and husband-away conditions, subjects listed and ranked in order of importance as many as five persons whom they would miss the most if they were not available. Subjects then described on color-coded cards (indicating whether they occurred when their husband was home or away) as many as three episodes (characteristic activities) they enacted with each significant other in each condition. (The maximum number of cards was 30, with no more than 15 of each color.)

Subjects then performed an unforced card sort in which they piled and labeled those cards that (regardless of color) described episodes that had similar meanings for them. These piles were combined, again on the basis of the subjects' perception of their similarity, until no more than four stacks were obtained.

The card sort provided information about the subjects' repertoire of episodes and about their coping strategies. By stacking cards and merging stacks, the dimensional structure of their interpersonal life space was obtained. An inspection of the colors in each stack provided a measurement of the three coping strategies described above. Internalization was defined as occurring if a stack had only husband-home (green) cards. This pattern indicated that a distinguishable part of the subject's concept of self was simply terminated by her husband's departure, and that the disruption in the repertoire of episodes was handled internally. The strategy of substitution was defined as producing a stack of mixed colors. Using this strategy, a woman would participate in similar episodes (although perhaps with different people) regardless of her husband's presence. Replacement was defined as producing a stack with only husband-away (blue) cards. A woman using this strategy would develop a part of her interpersonal repertoire that was enacted only when her husband was at sea.
Subjects described their marital happiness, perception of self as a "good Navy wife," happiness as a Navy wife, and happiness with their husband. Each of these was measured on a one-item scale on which judgmental anchors were established by having subjects first place "the happiest person you know" and "the most unhappy person you know" on the continuum between "perfectly happy" and "awfully unhappy." Each item was scored by counting the number of spaces between the one identified as representing themselves and the one identified as representing the most unhappy person they knew. Since the scale had seven spaces, potential scores ranged from one (if they described themselves as six spaces more unhappy than the unhappiest person they knew) to 13 (six spaces more happy than the unhappiest person they knew). Obtained scores for perception of own marital happiness ranged from six (as unhappy as any known) to 12 (very much happier than the unhappiest known) with a mean of 10.44. Obtained scores for perception of self as a good Navy wife ranged from eight to 13, with a mean of ten. The subjects described their happiness as a Navy wife as ranging from seven to 13, with a mean of 9.86, and their happiness with their husbands from one to 13, with a mean of 10.03.

Finally, subjects were asked if their responses had "adequately described the way you deal with the adjustments to your husband being away on patrol and to his return home." Twenty-seven of the 30 subjects wrote in the space provided. A content analysis of these responses was performed by a panel of three judges.

One objective of this study was to determine how a group of practiced copers handled a regularly scheduled transition. This question was answered by analysis of the subjects' card sorts and by content analysis of their responses to the open-ended item on the questionnaire.

Using the definitions of internalization, substitution, and replacement given above, each subject had one coping strategy for each stack of cards. In all, 116 instances of coping were obtained (two subjects' original card sorts used only three stacks, one subject's original sort used only two). Substitution was used far more than the other coping strategies (n = 86), with internalization (n = 20) being used twice as often as replacement (n = 10).

This definitional scheme was unsatisfactory for two reasons: it ignored the relative number of blue and green cards in each stack, and it produced multiple scores for each individual. These deficiencies were handled by deriving a score S based on the summation model:

\[ S = p_1w_1 + p_2w_2 + p_3w_3 + p_4w_4 \]
where \( p_1 \) is the proportion of husband-home (green) cards to the total number of cards in the \( i^{th} \) stack, and \( w_1 \) is a weighting of the importance of the \( i^{th} \) stack compared to the others. The weighting was empirically derived, post hoc for each subject, as the product of the proportion of the total number of cards used by the subject that were in the \( i^{th} \) stack and of the adjusted mean rank of the persons in the significant other list of the questionnaire who were identified as episodic enactants in the \( i^{th} \) stack. The adjustment to the mean rank consisted of subtracting the score from six so that persons who were ranked as most important would contribute a greater weighting than those ranked as least important.

The value of \( S \) represents a description of the subjects' coping strategies across their repertoire of episodes, with each differentiated area weighted by the relative importance of each stack of cards. The strategy of internalization (in which the proportion of husband-home cards in a stack was high) produced high values, substitution produced moderate values, and replacement produced low values. The obtained range of \( S \) scores was relatively small (1.06 to 2.62) due to the preponderance of substitution as the coping strategy most frequently used by these subjects.

The results of the content analysis of subjects' description of their coping strategies indicated that replacement was underrepresented in the card-sort procedure. Of the 27 subjects who responded to this item, 13 described private, nonsocial activities they performed only or primarily when their husband was at sea, including reading, sewing, crafts, and work. Because the episode elicitation tapped only episodes tied to persons, these did not appear in the card sort.

Seven subjects offered advice about how these recurrent transitions can be best handled. Several of these emphasized the necessity for mental preparation: "If you don't plan for the inevitable, it's going to come up very suddenly and catch you unprepared," and "You have to accept the fact that patrol is coming—it's going to tear up a well-ordered family life." Another subject described the adjustment to her husband's return: "You must also learn to relinquish some of the absolute and total independence you sustained while alone."

To determine if there were systematic relationships between various coping strategies and the success with which the person negotiated the transition, the \( S \) values were correlated with marital happiness, perception of self as a good Navy wife, happiness as a Navy wife, and happiness with husband. None of these correlations was particularly high.

A hypothesis grounded in these data suggests a curvilinear relationship between \( S \) values and various indexes of satisfaction. It
may be assumed that these subjects were not only practiced but also successful copers. All had been through at least two cycles of sea duty and were still married, able to function, and had not caused their husbands to leave the Navy. Further, only 11 expressed any negative reactions to the transition. It was observed that they used substitutions predominantly (although this may have been exaggerated by our procedure). Finally, substitution produces midrange values of S, replacement and internalization extreme scores. From this, we infer the hypothesis of a curvilinear relationship between S and indexes of successful coping, such that the highest values of success are obtained with midrange scores of S. However, an inspection of scatterplots indicated that the obtained values of S were too restricted to make a post hoc test of this hypothesis useful with these data.

CONCLUSION

At the least, the studies described in this chapter demonstrate that empirical research can be conducted consistent with the assumption of the theory of the coordinated management of meaning. The results of that research support the basic conceptualizations of humankind and social action underlying the theory, and provide specific information about forms of social reality.

The forms of knowledge produced by this research are distinctive. The results do not sum into laws purporting to describe the general and necessary relationships among variables. Rather, they provide information both more abstract and more specific than such laws. At high levels of abstraction, continued studies of various social realities lead to empirically grounded laws of form that describe necessary relations among configurations of rule structures, strengths, and forms of logical force, and the size of the array of patterns of acts that can occur. These laws of form comprise an algorithm of possible social realities, and provide a basis for predicting and explaining the components of any given social reality, assuming the persons within it do not change the logic of the system or reduce their enmeshment in it.

The rigor of the laws of form provide a useful backdrop against which the human condition can be assessed. The rather substantial qualifications applied to the predictive and explanatory power of the laws of form indicate the nature of human powers. The form of social reality is subject to several sorts of change. Persons can change the structure and content of their rules as a function of leaning, choice, or simple perversity, with consequences for the interpersonal system; persons perform acts that become part of reality,
inevitably altering the history of the system; and persons may de-
liberately control or involuntarily vary the extent of their enmesh-
ment in the system.

The theory contains the conceptual apparatus for explaining
and a rationale for studying particular events in which the logic
changes or individuals evade the logic of a system. In one sense,
a description of what most people do or what generally happens is
the least useful form of knowledge about the human condition.
Studies that illuminate particular instances demonstrate the powers
rather than the proclivities of persons. In this sense, case studies
are more informative than surveys, and the research informed by
the theory functions in a manner analogous to the Ilebrew prophets
who loudly condemned their whole nation of monumental sins.
Ileschel argued that the Ilebrews were not notoriously evil and cer-
tainly not worse than their contemporaries, but insisted that the
prophets' denunciations were not intended as actuarial accounts.
"In terms of statistics the prophets' statements are grossly inaccu-
rate. Yet their concern is not with facts, but with the meaning of
facts. The significance of human deeds, the true image of man's
existence, cannot be expressed by statistics" (Ileschel 1962, p. 14).
However, statistics may be used to illuminate the significance of
human deeds, particularly as they show the capacity of persons col-
lectively to create and manage the social reality in the multiple sys-
tems of meaning and order in which they are variably enmeshed.
PART III
IMPLICATIONS
COMMUNICATION AND
THE HUMAN CONDITION

ABSTRACT

The new idea of communication informs the development of the theory of the coordinated management of meaning, which is a distinctive metaphor of the human condition. One implication of this metaphor is the rapprochement of descriptive/predictive science and ethics. This theory of the human condition permits questions to be raised about the characteristics of persons and societies that facilitate human surviving and thriving. Healthy individuals are described as optimally competent within their intrapersonal rule system, and healthy societies are defined as those that facilitate the development of healthy individuals. The survival skills for healthy individuals are discussed, and three commandments for healthy societies are presented.

INTRODUCTION

The new idea that communication is a form of action by which persons collectively create and manage social reality places communication at the core of human wonder about humankind. Communication is the link between the particular social reality persons inhabit and the human condition of being variably enmeshed in multiple systems, each with its own logic of meaning and order.

The crucial element of the new idea is that of focusing on communication as socially morphogenic actions rather than as a more or less accurate description of the objective, impersonal order that stands behind the diversity of experience. Whatever order exists is created by communication, and usually there are conspicuous and ominous elements of disorder in any social reality.

The implications of the new idea for human functioning and theory are more significant than initially apparent. Human actions
are inherently recursive as they create the context that contextualizes them. For example, the meaning of p in the word cup is determined by the context of the other letters, but those letters would be differently interpreted if the speller had added the letter b instead of p, or d, or t, or e. The cu of cub is not the same as the cu of cue. The act of producing the last letter creates a word, not just lengthens a string of letters. Similarly, the episodes and relationships that comprise social reality are created by the actor and then comprise the reality in which the actor and his/her acts are contextualized.

Recursiveness poses a problem for actors and for theorists because it invalidates the traditional modes of discovery and verification. In Western culture, some propositions have been assumed as true descriptions of the natural or divine order, and scientists, ethicists, and ordinary persons could orient themselves to those propositions through faith or knowledge. The function of theory was to free persons from the illusion of affirming false propositions and living at variance with reality. But this program fails if there is no transcendent order, and the order that actually exists is created by the actions of the person. The implications of recursiveness for traditional modes of thought explain why it has been so badly treated. It has been celebrated as a problem to be solved by more Promethean philosophers, dispeptically disallowed by more rigorous mathematiciologists, and lamented by those who have lost their nerve for epistemology and metaphysics.

In Part II we presented a theory consistent with the new idea of communication, which models recursivity as a vital part of the human condition. This theory leads to a distinctive ancestral term for inquiry, the coordinated management of meaning, a new concept of the necessity in social interaction (logical force), and a unique concept of communicator competence. In addition, we described 15 studies based on this theory that demonstrate it is possible to translate the dramatistic metaphor into measurable variables, and the results of which provide interesting information about the relation between persons and social reality.

Recall the argument that metaphors and myths are not usefully considered true or false, but still are important and efficacious. The theory presented in this book does not emerge ex nihilo; it is a formulation and extension of ideas that have been developed in the social, political, and economic history of the last century, as well as in the more cerebral domains of art, literature, and social science. As such, it is one expression of the metaphor or myth of contemporary society, taking its place beside Picasso’s art, Dadaism, existentialism, and so on, each with its own evocative powers and utilities. We think the particular value of our theory
lies in its ability to inform rigorous research and conceptual algorithms that have the traditional scientific virtues without reintroducing the limited, dead metaphors that informed the early scientists.

The power of myths and metaphors derives from their being used simultaneously as both live and dead, as a literal description of the society's vision and as a poignant reminder that beyond what can be seen lies much more. What is the effect of the metaphor of the undirected play and the myth of logical forces in holonic systems?

The primary effect is freedom from the illusion that one may be freed from illusion. The various apostles of enlightenment reviewed in Chapter 1 disagreed sharply about the content of their descriptions of reality, but unanimously affirmed the existence of a set of doctrines that, if believed, could spare one from continued error. This theory claims that social reality is created, and thus there are many fundamentally contradictory social realities, that any given social reality may be disordered in a variety of ways, and that all social realities are in a constant state of recreation with each successive act and thus liable to change. As a result, programs of research that describe the content or structure of social realities should be expected to be inconsistent. For example, if televised violence affects children viewers, then the effect of their initial viewing will change them such that the effects of subsequent viewing will not be the same. Unless such effects are additive—a suspiciously simple model—a repeated measures design or a design featuring random assignment to conditions should be expected to show no main effects. Rather than showing causal relations among variables, such studies serve the useful but limited functions of providing information about themselves to the inhabitants of these realities and creating a public history of the various ways of being human (cf. Gergen 1973). The more substantive function of research programs is to describe the processes of the creation and management of social reality per se, leaving the content of the meanings as an empirically answerable question. For example, one may test the hypothesis that there are relationships between particular structures of rule systems and responses to televised violence, then measure the rule structures of particular persons and test the predictions. The limiting value of this research is that some forms of rule structure reduce the predictability of the individual, as optimally competent persons may choose to act in any of several ways. The ability to specify the degree to which a person is enmeshed in the social system of, for instance, television watching, is far from a trivial accomplishment.
SURVIVING AND THRIVING IN SELF-REFLEXIVE SOCIAL REALITY

The mores and institutions of society, like the instincts and emotions of the human organism, are not well suited for a disillusioned populace in a self-reflexive social reality. The performance demands of a self-reflexive social reality are unlike those that shaped the skills and values most persons in this society developed through their social heritage. The statistics of human misery, aberration, and rage attest to the fact that many persons have not been able to meet the minimal requirements of society, much less to thrive in it.

The focus on human actions inexorably entails a concern with ethics. This completes the full circuit of positions about the relation between facts and values. The Levantine tradition was primarily ethical, to the extent that even the assessment of truth claims was subordinated to the ethical injunction "be obedient." With the diminished appeal of monolithic, metaphysical systems of thought, recent wisdom has differentiated sharply between truth claims and value statements, arguing that they have virtually nothing in common. This separation of ethics from the more objective domains of human inquiry makes sense if knowledge is the representation of reality; it does not make sense if knowledge is a description of the processes by which reality is created and managed. If persons have the capacity to create any of several realities, a description of the choices the person makes, the reasons for those choices, and their consequences are virtually indistinguishable from ethics.

Maslow (1971) argued that there are only two great questions facing any society, and that both are ethical: How can healthy persons be developed? How can a healthy society be developed? Noting the interdependence between individual and society, Maslow recognized that these are actually two faces of the same problem. The theory of the coordinated management of meaning proposes a conceptual and empirical basis for describing the relationship between individual and society, and can inform an inquiry into the nature of individual and societal health and the means by which they can be attained.

Skills for Thriving in Recursive Society

The human capacity to adapt to the environment means that persons can survive even in physically and psychologically deleterious situations, although they may show the scars of painful accommodation. Thriving, however, is another matter. Maslow (1971) defined health as a positive attribute, not just the absence of
illness. What constitutes personal healthfulness in a recursive society, and how can it be attained?

Healthy individuals are optimally competent with respect to their own intrapersonal rule system. These individuals' rules include the autonomous logical operator at the highest level of abstraction, permitting them to see themselves simultaneously as autonomous, the creator of their own selves, the volitional cause of their own actions, and as variably enmeshed in multiple systems, the logical force of which creates the social reality in which they live. The configuration of rule structures that differentiate healthy from merely surviving persons is a matter for empirical study, but surely includes unusual complexity. Persons of equivalent health may be diametrically opposed on the issues of the day, and may even differ in their selection of an active or contemplative lifestyle (Bellah 1978), but they will be similar in their ability to describe the parameters of their own rule systems, to take responsibility for them, and to locate them among alternatives.

Healthy persons are not always successful according to the institutionalized reward systems of particular societies (cf. Maslow 1968, pp. 115-25). Some interpersonal rule systems reward fanaticism, the inability to identify others' meanings as legitimate, the inability to take responsibility for one's own actions, and so on. This poignant statement was attributed to a survivor of a Nazi concentration camp: "The best of us did not survive." Healthy persons thrive by being able to control their enmeshment in their own system of rules for meaning and action, and thus by being able to choose how much value to place on institutional rewards. Even if they are not successful according to contemporary mores, they are under their own control.

This definition of thriving is obviously contrary to the common sense within any given society in that it stipulates the ability to think and act in extranormative ways as the criterion of health. However, this context-independent definition is necessitated by the fact that satisfactory competence (such as, acting according to common sense) is precluded in modern society. If society is in fact recursive, then those who do not realize the recursivity are by definition minimally competent, and those who do realize it are optimally competent. There are four responses available to persons who discover the recursivity of their society.

Increase Enmeshment

They may attempt to deny the fact of recursiveness or avoid its consequences by increasing their enmeshment in the system. This may take the form of avoiding information from outside their peer group, enhancing belief in traditional religious or political
positions, or attributing malicious motives or psychological illness to those who deal with self-reflexivity. The results of this strategy are the symptoms of minimal competence.

Create a Better System

Those who encounter the recursivity of the system in which they are enmeshed often overestimate the extent to which they can control the content and structure of systems, and set out to create utopias in which they can be satisfactorily competent. The Fabians are clear examples of this utopian dream: "an elect of supermen would be the harbingers of a future of unlimited wisdom and unlimited power . . . [the] saints do not save sinners, they liberate themselves" (MacKenzie and MacKenzie 1977, p. 402). Shaw described himself and the other Fabians as "missionaries among the savages, superior people despairing of human frailty and folly," and Olivier said "this world is no place for a gentleman" (MacKenzie and MacKenzie 1977, pp. 409, 410). Unfortunately, the success rate of utopias is not high. The attempt to create a system in which one may be satisfactorily competent is paradoxical.

Reject Enmeshment of Any Kind

One of the most common responses by young persons to the discovery of recursivity is a feeling of having been tricked and trapped, coupled with a determination to avoid enmeshment in any system. Brzezinski characterized contemporary social and political revolutionaries as rejecting the content of traditional systems, but instead of replacing them with alternative and preferable systems (as the American and French revolutionaries did and as the Fabians attempted to do), they substitute "ecstasy and action in the service of an abstract concept of revolution." Abbie Hoffman said "action is the only reality; not only reality but morality as well," and Daniel Cohn-Bendit, "violence is happiness" (Brzezinski 1974, p. 95). The problem with this response to recursivity is that whatever action one performs creates a reality in which one may become enmeshed: This comprises alienated optimal competence, and apparently offers only the choice between chaos and intolerable enmeshment.

... the sick mind continues to infinity, creating groups then dispersing them again, heaping up diverse similarities, destroying those that seem clearest, splitting up things that are identical, superimposing different criteria, frenziedly beginning all over again, becoming
more and more disturbed, and teetering finally on the brink of anxiety (Foucault 1970, p. xviii).

Playful Wonder

The healthy response to the discovery of recursivity is to accept the fact that one is simultaneously enmeshed in and estranged from particular systems, that one is both trapped in or caused by the logic of the system and inextricably outside that logic with the power to control one's enmeshment and to affect the system. In some cases, this optimal competence is accompanied by the experience of awe and joy. Berger described ecstasy as "breaking through the routine, everyday, taken-for-granted course of our life." He warned, "society functions to prevent this breakthrough," but freedom requires "a measure of seeing through the fictitiousness of society" (Berger 1961, pp. 96, 99).

In Chapter 1 we utilized Hofstadter's description of recursivity as a strange loop, but the argument that both actors and theorists may use a logic containing autonomous operators indicates that not all recursivity is strange. The boxed statement, "All statements in this box are false," is the common example of venal recursiveness, but can be shown to be a limited example from which sweeping conclusions should not be drawn. The boxed statement, "All statements in this box are true," is just as recursive as the false statement but—to a well-enculturated Westerner—does not share its strangeness. It may be described as a charmed loop: recursive but not problematic. Further, it is possible to show that the strangeness of recursive statements depends on the context in which they are framed. From the perspective of a Buddhist who believes that all propositions distort reality and are false, the boxed statement, "All statements in this box are false," is unproblematic, but "All statements in this box are true" is objectionable.

The ability to convert strange loops into charmed loops is the key to thriving in a recursive society, allowing one to confront recursivity without the dizzying sense of convoluted meanings or the frustrating inability to be either free or enmeshed. Three skills seem necessary components of this ability. First, healthy persons must be skilled in creating or choosing among their own meanings, particularly at the higher levels of abstraction that contextualize others. For example, confronted with statements on boxes about statements in boxes, both the Western rationalistic and Buddhist systems of thought make one type of statement strange and another charmed. Optimally competent persons may choose between these conceptual contexts, in so doing selecting the problem they prefer to cope with, or they may affirm both, saying in effect that rationalism and Buddhism are two conceptual contexts that similarly make
some recursive statements strange but differ in which recursive statements become problematical.

Second, healthy persons must be skilled in believing their own meanings. In most societies, the meanings that emanate from an individual are derogated in contrast with those ostensibly of divine origin or those shared by most persons in the group. This value judgment, of course, is a powerful technique for making people fit in. In modern society, the paradoxical demand is that persons must be unique so that they can fit in. The way in which this recursively can be charmed is by accepting one's own meanings as real, and choosing whether to fit in or not.

Third, healthy persons must be skilled in choosing their referent groups, which may be quite dissimilar to their peer groups. The basis of this skill is the observation that while the locus of meaning is intrapersonal, the locus of action is interpersonal. For a person to perform coherent and highly valenced episodes, coordination with other people is necessary. Often, however, one's peer group—or those persons with whom one is in temporal and geographic contact—do not comprise an interpersonal system in which those episodes are possible. In the most extreme case, the person must be able to create a referent group, perhaps including persons long dead, yet unborn, or who live far away.

Persons who thrive in a recursive society will exhibit the characteristics of optimal competence. They are able to create and choose among meanings, particularly at high levels of abstraction. They have a sense of being "unstuck in time," of being a contemporary in a variety of cultures and historical eras. They are relatively unpredictable to others, but highly predictable to themselves.

Characteristics of a Healthy Society

A healthy society facilitates the development of individuals who are optimally competent within their own systems of rules for meaning and order. An unhealthy society does not facilitate this development, and a sick society makes problems for those who move toward personal health.

The taxonomy of systems in Chapter 6 is useful in describing the structure of healthy societies. A closed system facilitates satisfactory competence, and may be characterized by the injunction, "Be thou enmeshed." A random system facilitates minimal competence, and may be characterized by the protestation, "There's no system here." An open system facilitates optimal competence and may be characterized by the caution, "Whatever you think or do there is another, probably better way." We amused ourselves by formulating
three commandments that describe the characteristics of an open society that facilitates the development of healthy individuals.

First, thou shalt not say, "I have no other system before me." A healthy system facilitates persons in distancing them from their own rules, perhaps by showing them that they are enmeshed in multiple systems and by training them to see themselves from many perspectives. This characteristic runs counter to the more prevalent social institutions of xenophobia, ethnocentricism, dogmatism, and jingoism.

... each of the tens or hundreds of thousands of societies which have existed side by side in the world or succeeded one another since man's first appearance, has claimed that it contains the essence of all meaning and dignity of which human society is capable. ... (Levi-Strauss 1966, p. 249).

In the healthy society, persons are valued and their contributions to differing social realities are celebrated, and one's own reality is understood as one among many, valued for what it is but neither subject to nor the source of an evangelical monism. Cox described such a society as the "secular city":

Separate world-views present the occasion not for mutual destruction but for fashioning a societal framework within which such variance can be encouraged and nourished. ... Authentic secularity demands that no world-view, no tradition, no ideology be allowed to become the officially enforced world-view beside which no others are tolerated (Cox 1965, p. 65).

Second, human genius is manifested in both the elaboration and transcendence of social systems. This commandment inveighs against one-sided development, whether inside or outside any particular system. Healthy systems should provide mirrors for persons by which they can learn their own rules and those of other persons, and inculcate the development of analytical tools that will enable rigorous exploration of the details of particular social realities. Much of the research in social sciences serves this function. However, elaborating the logic of a given system is unhealthily narcissistic unless it is coupled with techniques for simultaneously transcending the system.

Third, it is the duty of every system to provide the means for its own transcendence. Any system that does not point beyond itself is not healthy. The development of mores and institutions
that lead to transcendence embraces rather than attempts to avoid the recursiveness in society. Bertolt Brecht's concept of epic theater functions in precisely this way. In The Good Woman of Setzuan and other plays, Brecht leaves the trappings of the theater in full view of the audience, defamiliarizing the action deliberately to place the audience outside the play, and portrays a convoluted social system in which the audience but not the actors can be optimally competent (Stanback 1979). In a healthy recursive society, a number of institutions should function to reduce enmeshment in the system, forcing individuals to develop the ability to charm strange loops.

THE PROSPECT FOR WONDER

In Chapter 1 we proposed two theorems about wonder. The first claimed that any sufficiently powerful program of extensional wonder will become recursive. The second claimed that recursive wonder is inherently limited. During the course of this book, we first disagreed with the second theorem, then proposed a theory containing a way of doing recursive wonder with the laudable virtues traditionally claimed for science. We are now prepared to state the third theorem of wonder: Any sufficiently powerful program of recursive wonder will enable the wonderer to transcend the logic of the system being studied.

The theory presented here informs a science that focuses on human action, describing the processes by which persons create and manage social reality and the effects of order and disorder on social reality. This form of science is an open system facilitating the development of persons who are optimally competent with respect to their own metatheoretical assumptions, scientific procedures, and the content of their beliefs. This augurs well for the prospects for wonder. Becker (1975, p. xix), in this instance at least, is a kindred spirit:

I have reached far beyond my competence and have probably secured for good a reputation for flamboyant gestures. But the times still crowd me and give me no rest, and I see no way to avoid ambitious synthetic attempts; either we get some kind of grip on the accumulation of thought or we continue to wallow helplessly, to starve amidst plenty. So I gamble with science and write, but the game seems to me very serious and necessary.
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NAME INDEX

Abbott, Bud, 200
Albert, Ethel, 35
Alexander the Great, 194
Allen, Ron A., 185, 211
Alvy, K. T., 162
Arendt, Hannah, 188
Argyle, Michael, 135, 137, 144
Aquinas, Thomas, 53-56, 104, 109
Aristotle, 43-44, 108
Aron, Raymond, 81
Austin, J. L., 78, 132
Ayer, Alfred Jules, 75
Bach, J. S., 2
Bailey, Robert, 63
Bainton, Roland, 53
Bateson, Gregory, 9, 80, 84-85, 104, 128, 144, 153, 171, 183
Becker, Ernest, 6, 314
Bellah, Robert, 42, 309
Benedict, Ruth, 186
Berger, Charles, 216, 222
Berger, Peter, 7, 11, 12, 205, 311
Berne, Eric, 134
Bjettenson, Henry, 49, 50, 53, 54, 55
Biddle, Bruce, 122
Black, Max, 112
Blumer, Jay, 150
Boas, Franz, 186
Boydling, Kenneth E., 158
Boynton, Kathleen Reardon, 297
Brecht, Bertolt, 314
Brissett, Dennis, 122
Bronowski, Jacob, 92, 108, 112
Brown, G. Spencer, 108, 109, 140
Bruner, Jerome, 124, 144
Brzezinski, Zbigniew, 15, 193, 310
Buber, Martin, 151
Buddha, 36-37, 149
Burke, Kenneth, 121
Burtt, Edwin Arthur, 74
Calder, Nigel, 10, 124
Camus, Albert, 194
Caplow, Theodore, 180
Carnap, Rudolph, 71, 72, 92
Carson, Robert, 133, 175, 257, 265
Chaffee, Steven, 150
Clavell, James, 169
Cohn-Bendit, Daniel, 310
Confucius, 36
Conner, W. T., 47
Constantine, 51
Copl, Irving M., 68, 69, 208
Costello, Lou, 200
Cox, Harvey, 313
Crane, D., 92
Crane, Stephen, 201
Cronen, Vernon E., 95, 130, 132, 167, 168, 176, 179, 235, 246, 259
Cummings, e. e., 199
Cushman, Donald P., 95, 139, 273
Della, Jesse, 127, 162
Devons, Ely, 10
Donohue, William, 83, 122
Douglas, Jack D., 80
Dulany, Don, 126
Duncan, Hugh Dalziel, 82, 121
Durant, Will, 36, 37, 58, 193
Einstein, Albert, 18, 95
Ellade, Mircea, 32, 190, 192

335
<table>
<thead>
<tr>
<th>Name</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emerson, Ralph Waldo</td>
<td>193-94</td>
</tr>
<tr>
<td>Epictetus</td>
<td>149</td>
</tr>
<tr>
<td>Epimeneses</td>
<td>2</td>
</tr>
<tr>
<td>Escher, E. M.</td>
<td>2</td>
</tr>
<tr>
<td>Farb, Peter</td>
<td>63-84, 127, 158</td>
</tr>
<tr>
<td>Fleming, Ian</td>
<td>201</td>
</tr>
<tr>
<td>Foa, Uriel</td>
<td>258</td>
</tr>
<tr>
<td>Foucault, Michel</td>
<td>11, 310-11</td>
</tr>
<tr>
<td>Frake, C. O.</td>
<td>33, 135</td>
</tr>
<tr>
<td>Frege, Gottlob</td>
<td>66-67, 72, 74</td>
</tr>
<tr>
<td>Freud, Sigmund</td>
<td>17, 79</td>
</tr>
<tr>
<td>Fromm, Erich</td>
<td>17</td>
</tr>
<tr>
<td>Galileo</td>
<td>57</td>
</tr>
<tr>
<td>Garfinkel, Harold</td>
<td>80, 135, 186</td>
</tr>
<tr>
<td>Geertz, Clifford</td>
<td>233</td>
</tr>
<tr>
<td>Gelles, Richard J.</td>
<td>257</td>
</tr>
<tr>
<td>Gergen, Kenneth</td>
<td>76, 105, 151, 232, 307</td>
</tr>
<tr>
<td>Gerth, H. II.</td>
<td>76, 83</td>
</tr>
<tr>
<td>Gödel, Kurt</td>
<td>2, 7, 70, 72</td>
</tr>
<tr>
<td>Goffman, Erving</td>
<td>121, 204-05, 217, 273</td>
</tr>
<tr>
<td>Greene, Graham</td>
<td>194, 206</td>
</tr>
<tr>
<td>Grice, H. P.</td>
<td>135, 153</td>
</tr>
<tr>
<td>Gumpercz, John H.</td>
<td>134</td>
</tr>
<tr>
<td>Hall, Edward T.</td>
<td>36, 122, 158</td>
</tr>
<tr>
<td>Hanson, Norwood</td>
<td>3</td>
</tr>
<tr>
<td>Harré, Rom</td>
<td>11, 19, 74, 92, 96, 97, 98, 100, 146, 177, 213, 255, 273</td>
</tr>
<tr>
<td>Harris, Linda M.</td>
<td>132, 168, 187, 197, 205, 210, 211, 212, 216, 224, 257, 259, 266, 273, 284</td>
</tr>
<tr>
<td>Harris, Marvin</td>
<td>3, 211, 233</td>
</tr>
<tr>
<td>Hatch, Edwin</td>
<td>48</td>
</tr>
<tr>
<td>Hawes, Len C.</td>
<td>288</td>
</tr>
<tr>
<td>Heschel, Abraham J.</td>
<td>302</td>
</tr>
<tr>
<td>Hewitt, John P.</td>
<td>200</td>
</tr>
<tr>
<td>Hoffman, Abbie</td>
<td>310</td>
</tr>
<tr>
<td>Hofstadter, Douglas</td>
<td>2, 20, 311</td>
</tr>
<tr>
<td>Hofland, Carl</td>
<td>149-50</td>
</tr>
<tr>
<td>Howe, Richard</td>
<td>104</td>
</tr>
<tr>
<td>Hulzinga, Johan</td>
<td>55</td>
</tr>
<tr>
<td>Ilume, David</td>
<td>66, 92, 93</td>
</tr>
<tr>
<td>Hymes, Del</td>
<td>185</td>
</tr>
<tr>
<td>Innis, Harold</td>
<td>192</td>
</tr>
<tr>
<td>Ionesco, E.</td>
<td>137</td>
</tr>
<tr>
<td>Jaynes, Julian</td>
<td>188</td>
</tr>
<tr>
<td>Johnson, Kenneth M.</td>
<td>238</td>
</tr>
<tr>
<td>Jones, W. T.</td>
<td>65, 66</td>
</tr>
<tr>
<td>Joyce, James</td>
<td>199</td>
</tr>
<tr>
<td>Jung, Carl</td>
<td>79</td>
</tr>
<tr>
<td>Justin, 49, 50</td>
<td></td>
</tr>
<tr>
<td>Kafka, Franz</td>
<td>194</td>
</tr>
<tr>
<td>Kang, Kyung-wha</td>
<td>37</td>
</tr>
<tr>
<td>Kant, Immanuel</td>
<td>1, 65-66, 67</td>
</tr>
<tr>
<td>Kaufman, Walter</td>
<td>36, 195</td>
</tr>
<tr>
<td>Kazan, Ella</td>
<td>194</td>
</tr>
<tr>
<td>Keenan, E. O.</td>
<td>87</td>
</tr>
<tr>
<td>Keesing, Roger M.</td>
<td>134, 236</td>
</tr>
<tr>
<td>Kelley, George</td>
<td>110</td>
</tr>
<tr>
<td>Kennedy, George</td>
<td>42</td>
</tr>
<tr>
<td>Klapper, Joseph</td>
<td>27</td>
</tr>
<tr>
<td>Koch, Sigmund</td>
<td>125</td>
</tr>
<tr>
<td>Koestler, Arthur</td>
<td>1, 10, 11, 16, 74, 100-01, 106, 126, 144, 182, 190-91, 193, 199 247</td>
</tr>
<tr>
<td>Kuhn, Thomas</td>
<td>92, 107</td>
</tr>
<tr>
<td>Laing, R. D.</td>
<td>173</td>
</tr>
<tr>
<td>Langer, Susanne K.</td>
<td>5</td>
</tr>
<tr>
<td>Lao-Tze</td>
<td>39-40</td>
</tr>
<tr>
<td>Laszlo, Erwin</td>
<td>70, 96</td>
</tr>
<tr>
<td>Leary, Timothy</td>
<td>265</td>
</tr>
<tr>
<td>Lederer, W. J.</td>
<td>265</td>
</tr>
<tr>
<td>Levi-Strauss, Claude</td>
<td>32, 313</td>
</tr>
<tr>
<td>Locke, John</td>
<td>66</td>
</tr>
<tr>
<td>Loftland, Lyn II.</td>
<td>295</td>
</tr>
<tr>
<td>Luther, Martin</td>
<td>52-53, 69</td>
</tr>
<tr>
<td>MacCormac, Earl R.</td>
<td>112, 113</td>
</tr>
<tr>
<td>MacKenzie, Norman</td>
<td>310</td>
</tr>
<tr>
<td>MacLean, Allister</td>
<td>201</td>
</tr>
<tr>
<td>Maler, N. R. F.</td>
<td>144</td>
</tr>
</tbody>
</table>
Malinowski, Bronislaw, 34, 77-78, 101, 146
Marx, Karl, 16
Maslow, Abraham, 1, 48, 151, 196, 208, 209, 308, 309
Matson, Floyd, 3, 8, 151
May, Rollo, 257
McClure, M. T., 15, 65
McCroskey, James, 37
McLuhan, Marshall, 192
Mead, George Herbert, 81, 193, 257
Merton, Robert K., 186
Mill, John Stuart, 59, 60
Millar, Frank E., 265
Miller, George A., 104
Miller, Gerald R., 123, 175, 241
Miller, James G., 96, 175
Minnow, Newton, 194
Minuchin, Salvador, 133, 158, 247
Moos, H. R., 144
Morris, Charles, 5, 188
Morrison, James C., 67, 77

Nagel, Ernest, 70
Newcomb, Theodore, 150
Newton, Isaac, 16, 94, 96
Nietzsche, Frederick, 206
Niven, Larry, 94
Nofsinger, Robert E., Jr., 128, 135, 153

O'Brien, Charlene E., 283
Orne, Robert, 125

Parkinson, C. Northcote, 42
Pearce, W. Barnett, 92, 100, 112, 128, 130, 132, 135, 168, 171, 175, 232, 236, 255
Penman, Robin, 144
Pfeiffer, John E., 4, 26, 33, 191
Philipsen, Gerry, 164, 165
Plato, 42-44
Pliny the Younger, 49

Polanyi, Michael, 106, 113
Potter, Stephen, 169
Powers, William T., 107, 127, 178-79
Price, D. J. deS., 92
Protagoras, 149
Rapoport, Anatol, 234
Raush, Harold, 144
Regin, Derle, 6, 8, 116, 193
Reynolds, Paul David, 105
Rheinlander, Philip, 6, 107, 124
Riesman, David, 255
Rogers, Carl, 151
Rogers, Everett, 151
Rommetveit, Ragar, 135, 144, 200
Rosenthal, Robert, 107
Ross, Ralph, 34, 80, 82
Rostand, Edmond, 201-04
Russell, Bertrand, 38, 68-70, 104, 109

Sampson, Edward, 11
Sartre, Jean-Paul, 194
Sayre, Kenneth, 190
Schelling, Thomas C., 133
Schlenker, Barry, 108
Schramm, Wilbur, 27, 149
Searle, John, 14, 78, 82, 100, 113, 132, 133
Seligman, Martin, 175
Shank, Robert, 135, 136
Shaw, George Bernard, 310
Siegel, Steven, 291
Skinner, B. F., 179
Southern, R. W., 192
Stamm, Keith R., 180
Stanback, Marsha II., 171, 314
Steich, Ernie G., 144, 153
Steinfatt, Thomas, 152
Stokes, Randall, 216
Stotland, E., 127
Straus, Murray, 257
Sullivan, Harry Stack, 136, 247