The Production of REALITY

Essays and Readings on Social Interaction

7th Edition

JODI O'BRIEN

The Production of Reality

Seventh Edition

For Khalil. And for Sabina, who dreamed you into being.

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PREFACE TO THE SEVENTH EDITION

In my class syllabus for a course in social psychology, I make this statement:

> The main goal of this course is that you understand how we become social creatures and how, through our everyday interactions with one another, we make and remake ourselves and our social worlds. One important implication of the ideas covered in this course is that if we understand how it is that we participate in the construction of our own realities, then we can take a more active and purposeful approach toward making this the sort of world in which we want to live.

The Production of Reality was initially compiled to provide students with a social psychology text that was useful and relevant to their everyday lives. One thing that you will probably learn in your sojourn through higher education, if you haven't already, is that there are many voices, many points of view, and many ways of learning and knowing. Diversity and complexity are hallmarks of life. Our social universe is continually expanding, and, as it expands, so too does our stockpile of knowledge. Even more profound is the fact that the more we learn about our social universe, the more it changes shape. How do we make sense of this shifting and complexity? This is one of the most significant questions of our time.

Sociologists and social psychologists have been exploring patterns of human social behavior for more than a century. As sociologists, we know a great deal about patterns—how to look for them, how to read them, and how to interpret the consequences. In particular, sociologists have a lot to contribute regarding structured relations of power. *Structured* is the operative word in this phrase. Sociologists and social psychologists know a great deal about structure and the ways in which it matters in everyday life. To make sense of our own lives, we need an understanding of the underlying patterns and material conditions that make up the particular cultural milieu in which we live. Racism, for example, is a persistent problem in U.S. society and is rooted in the structure of our culture and institutions. The tools for understanding and potentially eradicating racism can be forged through an understanding of *why* and *how* people, even self-professed antiracists, are stuck in a social groove that produces patterns of racism. These grooves, or ruts, are what sociologists mean when we talk about social patterns and social structures.

The Logic of the Book

This book is organized as a combination of essays and readings. The essays introduce relevant themes and concepts and raise questions intended to awaken you to the

mysteries of human social life. These essays constitute the theoretical logic of the book. The readings have been selected to illustrate and elaborate various aspects of social interaction that are described in the essays. The readings span several decades and represent many different voices and points of view. Some of the readings are considered sociological classics, and the language and examples used by the authors of these older pieces may seem outdated and even offensive. I encourage you to read these selections as a form of social history, as well as social theory. In other words, ask yourself what it was that was different about the times in which these authors wrote. Can you be critical and still comprehend why the ideas might have been groundbreaking at the time they were written? The contemporary readings include research studies, narrative essays, and some fiction. It is likely that different readings will resonate for different readers. As you read these diverse selections, consider why it is that certain types of writing and particular themes seem more or less appealing to you. What does your own response as a reader indicate about your social biography?

New Emphases for the Seventh Edition

The Production of Reality is about human behavior, or social psychology. The intent in each edition has been to ground social psychology in the experiences of students and to provide an understanding of the forces that shape our feelings, thoughts, and actions. In recent years, inquiries into the relationship between the body, brain, and behavior have become popular. Old questions, such as *Is behavior determined mostly by nature or by biology?* have resurfaced. New research into the nature/nurture binary offers some promising new directions for understanding human experience. At the same time, some of this research reflects troubling histories of racism, sexism, and other social hierarchies that, historically, have been justified through "laws of nature" arguments. This edition includes a sharper focus on the nature/nurture research trend.

Many Questions, Your Own Answers

The general intent of this book is to immerse you in the puzzles and issues of contemporary social psychology and to provide a framework for constructing your own understanding of the social world. Toward this end, many questions are posed, and you are invited to reflect on them in light of the concepts and theories presented in the book. As you will discover in reading this text, there are no absolute or final answers to the most important human questions. This is because we are constantly creating new ways of understanding ourselves and our social worlds. Through our ability to think and communicate, we are expanding our social universe. The material in this text is intended to provide you with a framework for understanding this creative social-psychological process (as well as for avoiding some of the pitfalls that appear when we fail to recognize our own involvement in the process). It can be useful to approach this material as a set of building blocks that you can assemble and reassemble to construct a framework for making sense of your own life.

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The creation of any product is always a collective enterprise. There are many who have helped to shape this book. The members of the SAGE production staff continue to be creative, helpful, and encouraging allies in my efforts to push beyond the boundaries of the traditional textbook. Thanks especially to Jeff Lasser, Tiara Beatty, Astha Jaiswal, and Will DeRooy for shepherding this book along so expertly.

My commitment to bridging the gap between teaching and scholarship has been fostered by role models such as Hubert (Tad) Blalock, Howard Becker, Fred Campbell, Karen Cook, and Judy Howard. Over the course of my career, my commitment has been continuously renewed through interactions with colleagues who struggle valiantly in the quest to provide relevant and useful knowledge for students. I am repeatedly impressed with the dedication of these teacher-scholars. I am also tremendously grateful for the insightful and constructive comments from current and past reviewers of this book.

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Much of my thinking as it developed in this book is the result of generous conversations with students. I thank them for sharing their passions and insights and for trusting me to learn with them.

Steve Rutter, the founder of Pine Forge Press and the person responsible for the original version of this book, is a true visionary in the field of textbook production. I am honored to have his friendship. Thanks especially to my good buddy Val Jenness for always reminding me that laughter really is the best medicine. As always, thanks to Ron Obvious just for being there. To my cherished partner in life, love, and family, Sabina Neem, thank you for constantly reminding me to lean back.

Jodi O'Brien

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PART I

INTRODUCTION

What Is Real?

Jodi O'Brien

In his book *The Te of Piglet*, Benjamin Hoff (1992) recounts the following narratives, based on the writings of Chinese Taoist philosophers:

> A man noticed that his axe was missing. Then he saw the neighbor's son pass by. The boy looked like a thief, walked like a thief, behaved like a thief. Later that day, the man found his axe where he had left it the day before. The next time he saw the neighbor's son, the boy looked, walked, and behaved like an honest, ordinary boy.
>
> A man dug a well by the side of the road. For years afterward, grateful travelers talked of the Wonderful Well. But one night, a man fell into it and drowned. After that, people avoided the Dreadful Well. Later it was discovered that the victim was a drunken thief who had left the road to avoid being captured by the night patrol—only to fall into the Justice-Dispensing Well. (p. 172)

What sort of reality do these tales illustrate? Does the essence of the neighbor boy or the nature of the well change? Or do people's perceptions change? Consider occasions when your perceptions of someone or something may have been influenced by your own momentary experiences. Is it possible that reality depends on how you look at something? How much does your point of view depend on your own interests?

Consider further: A group of employees from a local business gathers every night after work to share drinks and conversation. They express dissatisfaction with the conditions of their job and the unethical behavior of their employer. Several of them recall occasions of being mistreated or harassed. As the evening progresses, they become emboldened by this sharing of experience and some of them even threaten to confront the boss. The next day, life resumes as usual at work. The employees all go about their jobs with competence. In the presence of the boss, everyone is quiet and respectful. The status quo prevails. Think about the difference between these people's late-night and workday activities. What is the source of the disparity between the behaviors in each setting? Are these people being any more or less truthful in either situation? Why do we often remain silent in the face of injustice? What compels people to actively speak out and talk back to power?

People's reactions to the world depend on how they define the situation. The definition of the situation can differ from moment to moment, depending on what the person is inclined to see. Someone's actions may appear perfectly reasonable in one situation and completely unreasonable in another. Indeed,

a great deal of human behavior appears unreasonable and illogical if viewed out of context.

In 1956, anthropologist Horace Miner published a study of a peculiar people of North America called the Nacirema. Miner was especially interested in the culture's obsession with a daily body ritual that was typically performed in secret and required a special room or "shrine" and substantial medicines and potions:

> While each family has at least one such shrine, the rituals associated with it are not family ceremonies but are private and secret. The rites are normally only discussed with children, and then only during the period when they are being initiated into these mysteries. I was able, however, to establish sufficient rapport with the natives to examine these shrines and to have the rituals described to me.
>
> The focal point of the shrine is a box or chest which is built into the wall. In this chest are kept the many charms and magical potions without which no native believes he could live. These preparations are secured from a variety of specialized practitioners. The most powerful of these are the medicine men, whose assistance must be rewarded with substantial gifts. However, the medicine men do not provide the curative potions for their clients, but decide what the ingredients should be and then write them down in an ancient and secret language. This writing is understood only by the medicine men and by the herbalists who, for another gift, provide the required charm.
>
> . . . . Beneath the charm-box is a small font. Each day every member of the family, in succession, enters the shrine room, bows his head before the charm-box, mingles different sorts of holy water in the font, and proceeds with a brief rite of ablution. The holy waters are secured from the Water Temple of the community, where the priests conduct elaborate ceremonies to make the liquid ritually pure. (pp. 503–504)

Miner was particularly fascinated with the "mouth rituals" of the Nacirema. He notes:

> In the hierarchy of magical practitioners, and below the medicine men in prestige, are specialists whose designation is best translated "holy-mouth-men." The Nacirema have an almost pathological horror of and fascination with the mouth, the condition of which is believed to have a supernatural influence on all social relationships. Were it not for the rituals of the mouth, they believe that their teeth would fall out, their gums bleed, their jaws shrink, their friends desert them, and their lovers reject them. They also believe that a strong relationship exists between oral and moral characteristics. For example, there is a ritual

ablution of the mouth for children which is supposed to improve their moral fiber.

The daily body ritual performed by everyone includes a mouth-rite. Despite the fact that these people are so punctilious about care of the mouth, this rite involves a practice which strikes the uninitiated stranger as revolting. It was reported to me that the ritual consists of inserting a small bundle of [bristles] into the mouth, along with certain magical powders, and then moving the bundle in a highly formalized series of gestures. (p. 504)

The astute reader eventually realizes that Nacirema is "American" spelled backward and that the odd rituals that Miner is describing are everyday bathroom practices such as teeth brushing. (How many of us have been threatened with that moral enhancing "ritual ablution of the mouth" for children, otherwise known as having your mouth washed out with soap?)

Miner's intent is to parody the tendency to think of our own practices and beliefs as natural and normal and the routines of other groups and cultures as peculiar and perhaps even revolting. Even the language we use to describe everyday cultural patterns reflects a familiarity that we often take for granted. "Mouth-rite" and "holy-mouth-men" convey very different impressions than "teeth-brushing" and "dentist." We are *embedded* in our own cultural beliefs and practices to such an extent that it's often difficult to see how arbitrary or bizarre these practices might seem from the outside. This book is a social psychological exploration of this cultural embeddedness (what will later be referred to as cultural "mindlessness") and its consequences for understanding ourselves and others.

Social psychology is the study of the relationship between the individual and the rules and patterns that constitute society. Most sociologists and psychologists agree that human behavior is shaped to some extent by physiological, biological, neurological, and even metaphysical processes that are beyond the scope of social psychology. However, social psychologists emphasize that the majority of the activities people engage in and encounter in others on a day-to-day basis constitute *social* behavior—behavior that is both influenced by and expressed through social interaction. Some of the questions that social psychologists ask are these:

- How does a person become "socialized"?
- What are the implications of human socialization for the transmission of culture?
- How does human action contribute to the production and reproduction of cultural and social institutions?

Underlying these questions is another: How do we know things? The attempt to answer this question is called *epistemology*.

How Do We Know? *Epistemology*

It is the theory that determines what we can observe.

—Albert Einstein

How do we "know" things? How do we discover "truth"? *Epistemology* is the study of how we know things. Different groups and cultures have different ways of determining truth: faith, tradition, and science are some examples. Science is a dominant way of knowing in contemporary Western societies. Can the methods of science uncover the "real" truth? Sociologist Earl Babbie (1986) suggests that "truth" is a matter of agreement based on shared rules of what is real. This holds for scientific claims of truth as well as for superstitious beliefs. According to Babbie, everyone, even scientists, interpret information based on preexisting ideas. This subjectivity is a fact of human experience. Scientists deal with their own subjectivity by creating rules for observation and by using explicit theoretical starting points. In other words, there is no "objective" truth; truth is a matter of "intersubjective" agreement about what is being observed and how to observe it.

For example, for a long time, scientists believed in a universal "truth" and sought the underlying natural patterns that would reveal this truth. The metaphor that guided their inquiries was that of a watch or clock: They saw the universe as a grand watch ticking merrily away. The scientist's job was to take it apart piece by piece in order to figure out how this amazing machine worked. It's probably no historical accident that this perspective developed alongside the rise of industrial mechanization in the 18th and 19th centuries.

In the 20th century, however, physicists, including Werner Heisenberg and Albert Einstein, began to question the possibility of a universal, objective "truth." They observed that different experiments designed to address the same question yielded different results depending on how the question was asked. For example, when light was hypothesized to be composed of waves, the experiments produced a pattern that suggested it was waves. But when light was hypothesized to be made up of particles, the tests revealed a pattern of particles. Was it possible that light was both wave and particle, both energy and matter, at the same time? Heisenberg concluded that the experimental process itself interacts with reality, that there is no completely objective stance from which to view truth (Biggs & Peat, 1984). That is, scientists shape the outcome to some extent by their interaction with the phenomenon. Even scientific interpretations are based on preexisting perspectives and grounded in particular cultures of inquiry with rules for what to observe and how to make sense of it.

"Realness"

All cultural beliefs and practices include rules about what is "real" and what is "not real." These rules are often taken for granted, and usually we follow them without being aware of them. These rules are not necessarily based on logic or sensory

perception. The study of culture and behavior involves figuring out these rules and making them explicit. This book is about how human beings learn and conform to cultural rules of reality in various situations. These rules enable us to organize and to make sense of our experiences and to share our understanding with others.

When people interact with one another, they do so according to shared cultural rules. The result of this interaction is a set of meaningful patterns that we think of as society. It is important to note that these rules are constructed by human beings and that they are meaningful only within a specific social context. In other words, behavior is contextually meaningful. Taken out of context, many behaviors appear contradictory, silly, or even immoral. For instance, how is it that you know to modulate your voice to a whisper in certain spaces; how is it that you know the difference between when to hug and when to shake hands in a social situation? Why is "making fun of someone" funny in some settings and cruel in others? Where do we draw the line—or, more importantly, how do we know what the line is? How do people know what to expect and what to do in different contexts, especially in situations that may appear contradictory? How do we learn the rules, lines, and boundaries of reality? The ability to distinguish between contexts and to behave in accordance with social expectations is a defining feature of humanness. It is also the main subject of this book.

Well-trained social scientists understand that social reality is constantly shifting; they know that we impose cultural rules and work collectively to maintain these rules, which gives them the appearance of permanence and "naturalness." Social scientists also strive to become disciplined observers of cultural life by continuously questioning and examining taken-for-granted beliefs that bias or limit our perspectives: in other words, we try to practice what we preach.

Reality Is Achieved Through Symbolic Interaction

The production of meaningful realities occurs through human interaction. In other words, we *practice* social reality every time we interact with others. Human culture is achieved through interactions among individuals who share highly complex, richly nuanced definitions of themselves and the situations in which they participate. We *learn* to be human, and our learning depends on and is achieved through interactions with other humans. The basis for meaningful human behavior is in our capacity for language—not just definitions and grammar, but also metaphor. Consider, for example, a computer that is directed to translate the sentence "The spirit is willing but the flesh is weak" into Russian. The computer has the necessary vocabulary and grammar to make this translation, but it translates the phrase as "The vodka is good but the meat is rotten." The computer provides a literal translation, but the translation does not convey the intended meaning of the phrase (Scheff, 1990). One of the most remarkable aspects of human behavior is our ability to learn, share, and create nuanced, metaphorical meaning. This nuanced comprehension is what enables us to engage in very complex behavior and to know the difference between various

cultural rules and contexts—for instance, the difference between a "holy-mouth-man" and a "dentist."

The focus in this book is on how we learn these cultural rules and the ways in which we practice them through our everyday interactions. According to many social psychologists, these interactions form the basis of human existence. The aim is to demonstrate how humans learn to participate in culture and ultimately to produce and reproduce themselves and their various cultures. We will explore a number of questions: What cognitive and emotive capacities are necessary for people to be able to engage in meaningful social interaction? How is social behavior affected by a disruption of these processes? How do interactional dynamics shape our behavior and our sense of who we are and what we can do? How do these processes contribute to the production of culture? How is it possible that, through our own behavior, we may be perpetuating cultural systems that we oppose ideologically (e.g., racism)? The general aim is to explore the social foundations of mind, self, and culture. The framework for this exploration is a theoretical perspective known as symbolic interactionism.

Symbolic Interactionism

There are several forms of social psychology. This book is written according to a subfield of social psychology known as *symbolic interactionism*. Each of the many approaches to the study of human social behavior has strengths and limitations, and I encourage you to become familiar with them. Through many years of teaching and study, I have come to appreciate symbolic interactionism as a perspective that offers one of the most useful frameworks for understanding human behavior in a social context. In other words, this perspective provides excellent tools for understanding the complexity of our own behavior.

For instance, have you ever wondered why you feel so strongly about something in one situation and completely different in another, or why your self-esteem seems to blossom in some circumstances and shrivel in others? The symbolic interactionist perspective provides the tools for understanding how we can simultaneously have what seems to be a stable personality and also be constantly shifting in our experiences, values, and points of view. At the social level, symbolic interactionism provides a framework for understanding how society can also seem to be both stable and constantly in flux. Most importantly, this perspective invites us to wake up to the ways in which we ourselves create and perpetuate social routines that may or may not be good for us. In short, symbolic interactionism portrays humans as active co-creators in both individual and social experience. To the extent that we can become aware of these processes, we will be better equipped to participate in our own liberation.

Three points are noteworthy regarding symbolic interactionism in contrast to other social-psychological perspectives:

1. Symbolic interactionism gives primacy to the social situation over individual psychology. In other words, behavior is assumed to be organized primarily in response to social factors.

2. The focus of study is on observable behavior, but the cause of this behavior is assumed to be nonobservable processes of individual interpretation. In other words, behavior is based on subjective interpretation of the social environment instead of being a direct response to objective stimuli.
3. Symbolic interactionism uses *interpretive* methodologies. The researcher attempts to take the perspective of the subject and to interpret the context in which the behavior takes place. In other words, the researcher tries to "look over the shoulder" of the subject or group of interest. The methods used to gather information about human relations include fieldwork, interviews, and participant observation. The aim is to understand how humans see and enact their own beliefs and ideals and to trace the implications of these beliefs and actions.

The organization of this book is intended to provide you with a tool kit for understanding self and society. These tools or topics include language and self-awareness, symbolic communication and socialization, self-development, interaction with others, and the production of social life. I use the metaphor of *production* to illustrate that social life is something we create together. The first basic tenet of symbolic interactionism is that society is socially constructed. What this means is that, through our engagement with others, we are constantly generating cultural meaning and rules. Each section of this book will explore one or more aspects of this process.

Conclusion: So, What's Real?

What is reality anyway? Nothin' but a collective hunch.

—Jane Wagner (1986),
The Search for Signs of Intelligent Life in the Universe

According to the symbolic interactionist perspective, truth and reality are determined by the context in which they are practiced. Does this mean that anything goes? Far from it. Reality may differ across social groups, but within each group, a taken-for-granted system of knowledge establishes boundaries about what is real, true, and right. A central line of inquiry in symbolic interactionism is uncovering what these boundaries consist of and how groups and cultures produce and reproduce their systems of knowledge through their interactions. For instance, symbolic interactionists have noted that people in modern Western cultures act as if their reality is based on a "natural" truth (things are the way they are because nature intended them to be that way). Other cultures might have a faith-based reality (things are the way they are because a transcendent god intends them to be that way). These realities include complex, culturally specific rules for how one can know things. Thus, people in one society may

believe in the existence of germs that cause illness. They may invest considerable resources to develop the technology necessary to "see" and "control" these germs. In another culture, people may invest similar resources to perfect ceremonies and rituals to "see" and "communicate with" the spirits that control health and well-being.

Cultural rules about what is real are often contradictory, as well. It is fascinating to observe human behavior and culture to see the ways in which seemingly contradictory systems of reality exist side by side. For instance, in the United States, systems of rationality and Christianity often coexist, despite some apparent conflicts. Even so, contradictory belief systems have rules for navigating the contradictions. For example, it is considered normal for the president of the United States to use phrases such as "one nation under God" in speeches. But if the president were to claim a leadership philosophy based on "visions" received from God, people might question the president's ability. Similarly, citing your religious beliefs as a basis for not dating someone is considered reasonable, but these same beliefs are unacceptable as a reason for not paying taxes. Knowing which cultural rules apply in specific contexts is considered "common sense" or "what everybody knows."

In place of the question "What is real?" try asking: "What are some of the beliefs and practices that make up commonsense realities? What are the implications and consequences of these realities? How do different realities depict the world and the place of humans in it?" These questions remind us to scrutinize our own rules of interaction and their implications for self and society. To do so, we must step out of our cultural embeddedness and make the "taken for granted" explicit. One of the major strengths of the symbolic interactionist perspective is that it encourages us to see how we ourselves are authors and actors in the human story and, ideally, to take responsibility for the scripts we produce and the parts we play.

At the same time, this perspective also teaches us the tenacity of cultural rules for shaping individual lives and for creating and recreating differences and hierarchies among people. Beliefs and practices about power, authority, and morality may be cultural in origin, but they are real in their consequences. Paradoxically, those who hold the most cultural power are sometimes the least aware of their privilege or the ways in which taken-for-granted interactional practices work to their favor. For example, employers are much less likely than employees to be aware of unfair working conditions. The status quo prevails, not because employees are cowardly or content with unjust conditions but because conventional workplace beliefs and practices are likely to result in punishment (e.g., dismissal from the job) if they speak up. Typically, employers are socialized to perceive such action as "insubordinate" and are trained to "reduce conflict" by getting rid of "troublemakers." Symbolic interactionism provides a perspective for analyzing the larger cultural context that gives rise to and supports these sorts of beliefs and practices and for understanding how, even when we're theoretically opposed to such practices, we may end up reinforcing them through our behavior.

Organization of the Book

The basic components for understanding self and society are *symbols, the social self, interaction*, and *social patterns*. The materials in this book are organized to present a picture of society as the product of human interactions, based on the use of shared social symbols that are incorporated into human conduct through cognitive-emotive processes. In other words, self-development is a process of learning cultural scripts for who we can be, what we can do, and what is important and desirable. These scripts reflect a preexisting social structure. As we learn them and engage in interactions with one another, we enact, reproduce, and potentially change this structure.

Part I introduces some of these basic components and explores the general idea of socially constructed realities.

In Part II, the focus is on the ways our thoughts and feelings reflect cultural learning and values as well as distinct, private, personal experiences. For symbolic interactionists, the key to this puzzle is the *symbol*, an abstract representation of something that may or may not exist in a tangible form. For example, *table* is the symbolic representation of a class of objects constructed from hard substances and designed to serve certain purposes. *Guilt* symbolizes a feeling that you are probably familiar with, but it has no actual, physical referent. Complex combinations of symbols used for communication are known as *language*. Through language, humans are able to identify meaningful symbols, understand cultural expectations, and incorporate these expectations into conscious, reflexive behavior. Language is the encyclopedia and the map of human culture. Also, it is through language that humans generate, preserve, and alter social structure.

The focus of Part III is the process of socialization, or the way in which humans learn social rules and routines and cultural values. One of the questions that drives the discussion in this section is how different people with relatively similar backgrounds and experiences come to have different ideas and expectations and to behave in different ways. The concept of *reference groups* provides a useful and intriguing answer to this question and illustrates the ways in which people organize and evaluate their own behavior in terms of the expectations of specific groups or their ideas of groups.

The focus of Part IV is the social self. The first emphasis is on the way in which we learn, through our capacity for language, to recognize our own actions as aspects of an entity we call "self." The second emphasis is on the interactional or social aspects of self development: Through our interactions with others, we learn to attach meaning to our own behavior, feelings, and thoughts and to assemble this meaning into a coherent pattern that becomes a stable self. This section also explores some of the ways in which our self-image is shaped and influenced by our social contexts, including history and computer-mediated environments.

The topic of Part V is social interaction. Social relationships, such as love and power, are given meaning and come to life when they are acted out by members

of a social group. These patterns are discernible in the encounters of everyday life, such as conversations. Basic interaction requires people to project an image of what part they wish to play, what part they want others to play, and how they intend to define the situation. For an interaction to proceed smoothly, the actors must agree on a definition of the situation and perform it together. Even arguments, as we will discuss, hold to a particular definition of the situation ("this is a fight") and follow specific rules of interaction. In addition to defining situations, people negotiate how they will define themselves and others.

The social construction of reality is the focus of Part VI. In this section, we begin to synthesize ideas and concepts from the previous sections to develop a theory of the production and reproduction of social realities. The key point of this section is that realities are social constructs that exist through shared expectations about how the world is organized. These realities are quite fragile, because they depend on the participation of people who are socialized to comprehend and perform patterns and rituals that follow highly structured (but often unrecognized) rules of interaction. Ironically, these implicit rules can be made explicit by violating them and forcing interaction to a confused halt. We discuss several "violations" as a way of demonstrating how to "see" the rules of interaction. An important question in this section is why certain patterns of reality endure so well, given that they are based on such fragile dynamics.

The epilogue is an essay on the implications of this material for living a meaningful life. Once we wake up to the mindless patterns of everyday routine, how do we practice staying awake and remain connected to ourselves and others in a meaningful, liberated way? And how do we grapple with multiple perspectives and contradictions? Social life is dynamic and complex, and our understanding of who we are and of what is meaningful is forged by our wrestling with everyday contradictions.

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The Nature of Humanness

Jodi O'Brien

Who are you? What are you? What makes you human? How do you explain your various tastes, preferences, ideals, and beliefs? Various branches of the social and natural sciences have different perspectives on the nature of humanness. There are also a variety of theological perspectives on what it means to be human. Each of these perspectives focuses on different aspects of the human experience—for example, our physical ability to use tools thanks to an opposable thumb, or our ability to communicate, or our ability to conceive of and orient ourselves toward the existence of a higher being.

Recent developments in the fields of biotechnology, genetic engineering, and neurology, as well as computer-mediated communications, also contribute to conversations about the nature of humanness. Current debates about stem-cell research; genetic social engineering; and the "realness" of online, computer-mediated relationships indicate that our definitions of humanness are always in flux. For instance, what are the implications of artificial limbs and organs or cloning on how we understand humanness in relationship to the body? How do we determine the realness of human relationships that are conducted entirely through electronic social media? The rules for deciding what is human and who is "real" shift and change in response to contemporary social, cultural, and technological developments. One persistent debate is whether human behavior is shaped primarily by biology or social environment: the nature/nurture debate.

Nature vs. Nurture—A False Binary

You may have participated in conversations in which people argue about whether certain behaviors are determined primarily by your genetic makeup or your cultural environment. Those who take a social constructionist perspective argue that humans are born "blank slates" and that society "writes on us," thereby forming our impressions and experiences. The sociobiological perspective holds that we have certain predetermined traits that exist as part of our biogenetic makeup. Each of these perspectives has been employed politically throughout recent history to make the case for social hierarchies such as intelligence and race (the idea that people from specific racial backgrounds are naturally smarter), eugenics (certain people, by nature of their biology, are not fully human), criminal behavior, mental illness, and gender and sexual deviance.

As an undergraduate student, I studied biology with considerable enthusiasm. One of the first things we learned in our biology courses was this dictum: Nature doesn't determine, nature hints. The theories that we studied as budding biologists instructed us to think of the human organism in relation to its material and

environmental surroundings. For instance, an infant born with a genetic propensity for great height may not actually grow to above average, or even normal, height if fed a very poor diet. Height is a function of both nature and nurture. The Human Genome Project, which charted the DNA territory of humans, was a vast undertaking. Yet many of the scientists involved have reminded us that just because we can now map genetic combinations, it does not necessarily mean that we understand how the genes actually operate and shape the complexity of human life. Again, they remind us of the dictum: Nature only hints. For instance, genetic researchers have identified several genes, each of which can cause some form of Parkinson's disease. However, the likelihood that the disease will manifest actively in persons who carry one of these genes is less than 50%. So, what factors influence the likelihood that someone carrying the gene will develop the disease? Geneticists have been among the most consistent in saying that the rest of the story involves a complex interaction of environmental factors, which may include diet, health patterns, stress, and other cultural-material influences.

Thoughtful, well-trained biological and genetic scientists tend to agree that human behavior is a *complex combination* of nature and nurture. Nature and nurture are not opposing positions in a debate that can be settled rhetorically. They are interrelated processes that, together, constitute human behavior.

The Case of Gender

Biologist Anne Fausto-Sterling is an expert on gender development. One of several cutting-edge scientists leading the way in integrating biological and sociocultural theories of human behavior, she describes the relationship between nature and nurture as a "dynamic system." As she remarks on her website:

> I believe that both sex and gender are in part social constructs. But they take place in the body, and so are simultaneously biological. Dynamic systems theories link the social—which impinges on the developing body—to the body itself. Cultural experience has physiological effects.

In other words, we are not merely blank slates; we have bodies, and we experience the world through our bodies. At the same time, our bodies do not arrive preformed; rather, the body "acquires nervous, muscular and emotional responses as a result of a give and take with its physical, emotional and cultural experiences."

Think, for instance, of the simple case of wearing high-heeled shoes. The musculature and gait of people who regularly wear high-heeled shoes will develop accordingly. Although a bit trite, this example illustrates the dynamic between social behavior and the experience of our bodies. More sophisticated research looks at the ways in which repeated cultural experiences form neural networks that shape our perceptions and emotional responses. For example, from the

moment they are born, infants are exposed to cultural gender expectations: They are dressed in particular colors and fabrics, offered gender-specific toys, and, perhaps most notably, encouraged when they behave in ways that are consistent with cultural gender rules. Much of this cultural coaching is unconscious but so pervasive that even the most gender-aware parents have difficultly avoiding culturally imposed gender expectations. As an experiment, spend a day doing something very minor that is gender-atypical for you; for instance, sit with your legs spread wide apart or cross your legs (depending on your usual behavior), and pay attention to how you feel in your body.

Fausto-Sterling is especially interested in gender variance. In her research, she takes note of the many variations that exist among individuals who are trying to fit into a system that offers only two gender choices (female and male). Biologically, there is ample evidence that people vary along a spectrum: There are variations on chromosomal structures (rather than the presumed XY and XX, there are at least five documented variations—do you know what your chromosomal structure is, or do you just assume it matches the gender you consider yourself to be?), some individuals have sex characteristics that resemble both female and male (inter-sex), and a significant segment of the population uses reproductive technology to achieve pregnancy (something presumed to be entirely natural). In other words, from a biological perspective, nature may be hinting that the penis/vagina gender binary we assume to be natural (as rooted in reproductive propensity) is actually insufficient to account for the full range of natural possibilities. For Fausto-Sterling, sex and gender are best conceptualized as points in a multidimensional space.

Imagine you had a box of blocks with at least five shapes, and you were required to sort them all into two piles. What would you do? Most likely you'd find a particular characteristic and use that as your sorting rule. Perhaps some of the shapes look more round to you, while others seem squarish. You can sort them into two piles of roundish and squarish, but you will still see the variation within each pile. For instance, where did you decide to place the star-shaped block? Over time, and the more you emphasize the binary you've created, the more you will come to see it that way (and to overlook the variation within each category). You may even forget that you originally determined this categorical scheme yourself and come to see it as something "natural." This illustration is overly simplistic but provides some insight into the fascinating and richly complicated connections between bodies and social processes. Researchers in fields such as biology, evolutionary psychology, evolutionary linguistics, and neurology are increasingly exploring the dynamic interplay between the physical body and the cultural scripts that we use to understand, guide, and direct our bodies. This is a new frontier, with much yet to be discovered. For our purposes, here are several noteworthy points from the work of Fausto-Sterling and other researchers in these areas:

- We experience the world through our bodies.
- But we use cultural categories to classify and make sense of bodies (including classifications such as gender and race).

- These categories do not necessarily represent the full variation that exists in nature.
- Our bodies are not entirely preformed; they develop in relation to socio-developmental categories, processes, and experiences.

In this society, we are born into a culture that immediately (traditionally) groups infants into genders according to specific gender rules, including these: There are only two, they are fixed for life, and you have to have one. For many people, the relationship between body-experience-identity will be more or less congruent, and they will have no reason to question their assigned gender category. But others may experience *contradictory embodiment* (I don't feel like the boy I'm supposed to be just because I have a penis) or *contradictory identity-experience* (I don't feel comfortable doing the girl things I'm supposed to want to do). There are several variations on the possibility of contradictory body-experience-identity, but we're usually not aware of the variation because of the social forces that work to erase variation and reinforce the binary. For instance, in the case of intersex infants, well-intentioned parents and medical practitioners typically determine that the child will be raised female or male, and a doctor performs surgery to make the body conform to the binary choice. In other words, the variation is surgically "corrected."

To return to our original question, are these variations best explained by nature or nurture? The answer is both. Gendered bodies reflect cultural categories that may be based on a limited binary—there is more variation than we are aware of, because we shoehorn people into one of two categories, and, for the most part, people learn to fit. Many people develop into comfortable representations of the expected gender rules; others do not. Recently, with wider recognition of transgender and gender queer experiences, this has begun to change. As cultural scripts shift in recognition of this variation, we might expect to see more of the multidimensionality that constitutes the body-experience-identity. Much of this will depend on the social ability to stretch beyond binary thinking and not simply explain the variation away as an abnormality.

Historically in the United States, people whose experiences did not line up with expected gender categories struggled to make sense of themselves and their feelings. When they did not conform to the expected categories, they were considered "deviant." For many years, the legal system reinforced this gender binary classification by punishing people who did not wear the right clothing (until the 1970s, gender nonconformity, including cross-dressing, was a punishable offense in several states). Another social system, medicine, reinforced the legal system by labeling gender nonconformity as a mental illness (gender dysphoria). According to medical practitioners, people who didn't feel they belonged to their assigned gender category could receive treatment (in the form of hormones and surgery) only if they followed a particular medical protocol that involved successfully "passing" as the other gender for at least a year.

This example demonstrates that the nature/nurture debate is a false dichotomy and redirects attention to the ways in which social categories are used to classify and give meaning to bodies. Social systems such as education, law, religion, and medicine give legitimacy to these categories by drawing attention to "deviance" and reinforcing conformity. One of the paradoxes of the gender case is that the *social system of science* uses the logic of "nature" to justify social classifications and hierarchies. People who do not "fit" are "abnormal" (and have historically been turned over to systems of medicine for "treatment"). This is what social theorist Michel Foucault refers to as *truth regime*. In the case of gender, a social classification scheme is reinforced using the language and authority of science.

"Nature or nurture?" is the wrong question both scientifically and socially. Genuine scientific curiosity and observation lead us to recognize that classifying bodies by a sex/gender binary is a social activity and that there is clearly more variation than the binary allows for. Rather than ask "Is this nature or nurture?" a social constructivist approach can operate in tandem with biological research in exploring the range and implications of contradictory embodiment within social systems that conflate the "commonsense" presumption of a gender binary with "natural order" and use systems such as medicine and law to support the "naturalness" of this binary.

A Sociobiological Zeitgeist?

This is an exciting time to be studying human behavior, and social psychologists have much to learn from emerging studies in biology, neurology, and other fields. Many sociologists and psychologists have embraced the turn toward biological explanations of human behavior. The challenge is to avoid falling back into the "truth trap" of the question "Is it nature or nurture?" The nature/nurture debate is based on a false dichotomy that separates bodies from culture and/or neglects the existence of embodied experience. Fields of study that aim to integrate these perspectives are likely to be the most useful and informative in the near future. Social constructionist perspectives (which include symbolic interactionism) contribute to these studies by focusing on the following:

- How we use social categories to make sense of our bodies, feelings, and experiences (see Parts III and IV, on social identities)
- How we use these social categories and scripts to organize our interactions with others (see Part V, on social interaction)
- How we reinforce these categories through patterns of language and interaction (see Parts V and VI)
- The systems and perspectives we use to give legitimacy to certain behaviors and practices over others (see Part VI, on the production of reality)

Thoughtful students of human behavior recognize the need to integrate biological and social studies. Social constructivists are recognizing the need to adapt the "blank slate" metaphor and to *embody* human social experience. Significant new research demonstrates the links between cells and molecules (systems biology), the development of motor skills in infants (developmental psychology), and the development of neural pathways or networks that enable routine (largely mindless) behavior (neurology). These studies contribute to a richer understanding of language development and the corresponding ability to engage in social identification and routines without prior direct experience (e.g., vicarious learning and socialization). They also help us understand deeply entrenched social prejudices, such as unconscious bias (e.g., racist and sexist behavior even when we don't intend it).

There is a common misunderstanding that if reality is socially constructed, then we can simply change reality. Symbolic interactionism is the study of deeply ingrained, typically mindless social beliefs and practices that shape our behavior in certain, predictable patterns. Our embodied experiences reflect neural networks, physiological development, and hormonal processes. How we recognize and make sense of these experiences is a social process. And the meaning we give to our experiences further shapes our neurological and physiological development. It's a dynamic process, and one of the lessons of social psychology is that, for the most part, we are largely unaware of any of these processes and how they affect our everyday lives.

By way of conclusion, here are a few examples of integrated research programs that are leading to new insights about human behavior. One particularly influential line of research that combines these perspectives is the study of teenagers and social development, especially with regard to crime. Studies in neurology indicate that the areas of the brain associated with the judgment necessary to fully engage in expected social behavior are not completely developed in teenagers, which leads to excessively poor decisions in certain situations, especially in the company of other youth. At the same time, researchers are asking what types of social circumstances facilitate the development and exercise of better judgment. This approach holds promise for more comprehensive ways of working with youth, especially those caught up in the juvenile justice system.

Another example is the expanding understanding of forms of autism. For many years, autism was viewed as a devastating curse that isolated the afflicted individual from society. From a social development perspective, individuals with autism were unable to participate in social life because they were unresponsive to the environmental cues and patterns that are taken for granted as a basis of normality. Eventually, delineations were made that classified individuals on an *autism spectrum* depending on how responsive they were to the social environment. From this perspective, some individuals were perceived as high-functioning and given more opportunities for social engagement, which resulted in increased social functioning. More recently, and due in part to input from those diagnosed with autism, there has been a major shift in the labeling of autism as a disability.

Instead, many now recognize autism as an alternative form of neurological processes. *Neuroatypicality* is an emerging idea that suggests that different people's brains operate in different ways. The new language of neuroatypicality reflects changing social perceptions that are linked to new ways of understanding the brain and human development. An integrated neuro-social approach provides new insights into brain functioning and invites us to question what we consider "typical" or "normal" human social interaction.

Similarly, research in evolutionary psychology explores the roots of hate. Psychologist James Waller and his colleagues have suggested the idea of *universal reasoning circuits* to explain the persistence, among human societies, of forming groups of insiders and outsiders and constructing elaborate systems of hate regarding the "other." Social psychologists are well aware of the insider/outsider phenomenon, but the underlying reasons for the tenacity of xenophobia are not well understood. Integrated sociobiological research of the sort that Waller uses may help us better understand entrenched racism and its unconscious roots.

Another example comes from evolutionary linguistics. One of the questions that has long interested linguists and social psychologists—not to mention anyone who wants a web posting to go viral—is why some ideas, tunes, images, and so on get lodged in the collective mindset. In Reading 2, Michael Flaherty and Cosima Rughiniş catalog memes that have emerged during the coronavirus pandemic. Why do some memes find root in the collective conscious and spread, while others don't? Social constructionists study how it is that certain ideas and belief systems take hold and persist even in the face of considerable contradictory evidence (see Part VI). The material in this book focuses primarily on the social influences on human development and behavior. However, a full understanding of the richness of human life involves knowledge of both the physical and the cultural aspects of our experiences. For that matter, we should probably consider spiritual knowledge as well. As you develop your understanding of social psychology, keep in mind that it's one aspect of a much larger puzzle. Try to formulate questions that take into account the connections between nature and nurture rather than falsely separate them.

The study of social psychology through the perspective of symbolic interactionism will enable you to understand both the significance and the entrenchment of the cultural patterns that shape our lives and our choices.

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Reality as a Collective Hunch

Reading Questions

1. As you read the articles in this section, think of examples of cultural rules that you take for granted and assume to be fixed in nature.
2. What does it mean to say that cultural rules are arbitrary?
3. Consider your relationship to time. Do you think people's daily rhythms have been altered by the invention of digital clocks that carve time into units of seconds versus analog clocks that signal only, say, quarter hours? What about people who organize time in terms of the sun only?
4. Spend a day thinking of yourself as an anthropologist from Mars. What do you see when you look at your world from the perspective of an outsider?
5. Do you think you have to be similar to members of a culture to understand them (e.g., do you have to be a priest to understand a culture of priests)? Or is it possible to devise methods that would enable you to "put yourself in another's shoes" or "look over their shoulder" to gain insight into their worldviews and experiences?

Reality as a Collective Hunch

1

Our Permanently Plastic Brains

Gina Rippon

(2019)

One of the most important innovations in brain science in the last 30 years or so is the understanding of just how plastic or moldable our brains are, not only in the early years of development but throughout our lives, reflecting our experiences and the things we do and, paradoxically, the things we don't do.

This is a big change from our early understanding of how our brain developed, which was based on the notion that there were fixed, predetermined patterns of growth and change that unrolled over set time periods, with major deviations arising only via relatively extreme events during these periods.

The discovery of lifelong "experience-dependent neuroplasticity" has drawn attention to the crucial role that the outside world—the lives we live, the jobs we do, the sports we play— will have on our brains. Whereas we used to wonder whether our brains were more a product of "nature" or "nurture," we now realize that the "nature" of our brains is entangled with the brain-changing "nurture" provided by our life experiences.

The most famous example of neuroplasticity is the London taxi-driver studies carried out by University College London neuroscientist Eleanor Maguire and her team. Maguire showed that four years of "doing the Knowledge," the extensive training for taxi drivers that requires memorizing different routes through the 25,000 or so London streets within a six-mile radius of Charing Cross station (and is necessary to qualify for a taxi license), resulted in gray-matter increases in the posterior part of each successful trainee's hippocampus, the part of the brain that underpins spatial cognition and memory. This wasn't because the aspiring cabbies already had bigger hippocampi (Maguire tracked both trainees and retired taxi drivers and mapped increases in the former and decreases in the latter) or because they were having to navigate complex driving routes (bus drivers with fixed routes didn't show the same effect). Maguire also looked at trainees who failed the course and found that they did not show the hippocampal changes that characterized their successful colleagues. There appeared to be a cost to this brain-changing expertise; successful taxi drivers were significantly worse on other tests of spatial memory. However, retired taxi drivers, while showing a return to "normal" gray-matter volume in their hippocampi (and declines in their previous London-specific navigational skills), displayed improved levels of performance in ordinary spatial memory. So this group of studies shows both the ebb and flow of brain plasticity, with shifts in the allocation of brain resources coming and going in the context of acquiring, using, and losing a particular skill.

Understanding neuroplasticity also has implications for understanding individual differences in what might seem to be everyday skills. The taxi-driver studies could be taken as a measure of the plasticity of the brain, but "the Knowledge"

is a highly specialized skill acquired from scratch in adulthood. What about more routine skills? Why are some people better at these than others? Is this reflected in brain activation patterns? Can you improve these kinds of skills, and does this change the brain?

There is certainly evidence that more experience with activities related to certain skills can both improve your performance and change your brain. In 2005, psychologists Melissa Terlecki and Nora Newcombe showed that computer and video-game usage was a powerful predictor of certain spatial skills. It also explained most of the gender differences that had been reported for this particular skill—there was a much higher level of computer use and video-game playing among the male participants, and it appeared to be this that was driving their better spatial skills.

It seems this kind of behavioral plasticity is reflected in structural brain changes as well. In 2009, psychologist Richard Haier and colleagues measured structural and functional brain images in a group of girls before and after a three-month stint of playing *Tetris* for, on average, one and a half hours a week. Compared to a matched group who didn't play *Tetris*, the girls' brains showed enlargement in cortical areas associated with visuospatial processing. There were also changes in the *Tetris*-induced bloodflow measures. In a different study, 30 minutes a day of playing *Super Mario 64* over a period of 2 months also proved to be a brain-changing experience, with increases in gray-matter volume in the hippocampus, as well as the frontal areas of the brain. Interestingly, such brain and performance changes are not task-specific. One study showed that 18 hours of origami training improved mental rotation performance and changed the brain correlates associated with it.

Recognizing lifelong brain plasticity and the role of external factors such as experience and training means that we will need to revisit past certainties about fixed, hardwired, biologically determined differences. Understanding any kind of differences between the brains of different people means we will need to know more than what sex or age they are; we will need to consider what kind of lifetime experiences are embedded in these brains.

This state of lifelong neuroplasticity offers a much more optimistic view of our brains' futures. But it can also offer insights into what is happening to our brains in the present—how our brains can and will be changed by what they encounter in our world, how our brains can get diverted and derailed. Knowing more about how our brains engage with the world means we have to pay much more attention to what is in that world.

Your Brain as a Predictive Satnav

The plastic and changeable nature of our brains suggests that they are not just rather passive (though hugely efficient) information processors but instead are constantly reacting and adjusting according to the huge swathes of information that are fired at them every day—we now think of the brain as a proactive guidance system, continuously generating predictions as to what might be coming next in our worlds (known in the business as "establishing a prior"). Our brains monitor the fit between these predictions and the real outcome, passing back error messages so that the prior is updated, and we're guided safely through the unremitting streams of information with which we are constantly bombarded. The core aim of this system is to minimize "prediction error" by speedily and continuously generating and updating priors based on the normal course of events. These will draw on pretty minimal amounts of information to estimate the next step and ensure no surprises, efficiently reducing the need for cognitively wasteful rechecking or "overthinking." In the light of feedback about a mismatch, a quick reconstruction of a new prior will follow. So, our brain navigates us through the world via a combination of predictive-texting-like skills and high-end satnav guidance.

If you ever visit Hanoi, you'll see a traffic-based version of predictive coding at work. The roads are filled with what seems like a never-ending, never-stopping stream of motor scooters, packed wheel to wheel across the width of the road. On my first visit there, I hovered hopelessly on the pavement, waiting for the gap that never came. At last, a tiny old Vietnamese lady took pity on me, took me by the arm and signed for me to come with her, adding instructions to "NOT STOP." Fixing a glare on a spot on the other side, she led me into the stream of scooters and steadily walked through. The scooters smoothly swirled round us and we made it across. It was later explained to me that the "NOT STOP" is the crucial ingredient—the scooter drivers appear to have an uncanny instinct of knowing just where in their path you are likely to be as they approach you (establishing their prior) and adjust their trajectories to steer round you accordingly. If you stop, you aren't where they expect you to be and you become an instant "prediction error"—with bruising and undignified consequences.

It is claimed that our brain's "predictive coding" power is not only applied to the most basic sights and sounds and movements but also allows us to engage with higher-level processes such as language, art, music, and humor, as well as the often hidden rules of social engagement, underpinning our ability to predict the actions and intentions of other people and interpret their behavior accordingly. The guidelines we employ are extracted from our outside world, the "data in" side of things, and used to generate rules to determine the next most likely outcome in life's rich pattern, what behaviors are associated with what facial or verbal expressions, what intention is being flagged up by what action. The rules that are extracted can range from "this kind of smell usually results in finding something good to eat" to "that kind of facial expression usually means that someone is happy" or to even more abstract and hard-to-define rules of social engagement, such as understanding turn-taking in conversations.

Most of the time, of course, our brains are indeed hyperefficient—their best guesses, with just the right amount of precision behind them, almost always provide the winning ticket. But the fact that the system is not infallible is revealed by phenomena such as visual illusions, where we might see a triangle where there isn't one, just because a particular configuration of shapes is normally associated with the presence of a triangle. The system can be tricked by "misdirecting" the establishment of priors. If the brain is busy with solving a very specific problem, it can overlook information that tells it that something else is going on at the same time and miss this key prediction error. Our attention to what is going on around us can be very, very selective, and we can easily miss something that is in plain sight but unexpected.

But sometimes the speedy shortcuts can let us down more seriously. The brain's templates or "guide images" can be over-general, lumping several varieties of information into a single category in order to cut down on the amount that has to be scrutinized and sorted, especially if that is what is on offer in the outside world. Our brains are, in fact, the ultimate stereotypers, sometimes drawing very rapid conclusions based on very little data or based on strong expectations, arising from personal past experience or from the cultural norms and expectations of our surroundings. In a 2015 opinion for *The New York Times*, psychologists Lisa Feldman Barrett and Jolie Wormwood described the phenomenon of "affective realism," where your feelings and expectation affect the prediction process and your perception. You, quite literally, see things differently. Barrett and Wormwood used the example of newly released statistics on shootings of unarmed individuals by police, where officers, in the context of challenging a suspect, had misidentified a mobile phone, wallet, or other object in the suspect's hand as a gun. The authors also

reported studies in which a neutral face, when viewed in parallel with a subliminally presented scowling face, was perceived as less trustworthy, unattractive, and more likely to commit a crime. So external data and expectations can divert and distract our otherwise helpful predictive guidance system. Stereotypes can and do change how we see the world.

It is also the case that the system may not distort what is happening in the outside world but may, all too accurately, exactly reflect it. In 2016, Microsoft launched a chatbot named Tay, based on an interactive conversation-understanding program, which was to be trained online to engage in "casual and playful conversation" by interacting with Twitter users. Within 16 hours, Tay had to be shut down: starting off tweeting about how "humans are super cool," it quickly became a "sexist, racist asshole" thanks to the multiple prejudice-laden tweets that were being input. Although some of Tay's responses were just imitations, there was evidence of general rules being extracted from common themes, resulting in statements that had never specifically been made, such as "feminism is a cult," which Tay had "learned" by putting together what it knew about the characteristics of cults with the statements it was receiving about feminism.

The process behind this experiment is modeled on a system of training computers called "deep learning." Computers are programmed to extract patterns from information and to "self-train," to achieve ever more nuanced representations of the outside world, rather than be programmed to carry out specific tasks. This is at the heart of today's developments in computer-based artificial intelligence and has parallels in contemporary models of how the brain learns. And, just as poor old Tay found out, if the world our brains are getting their data from is sexist, racist, or rude, then the priors that guide our experience of the world may well be the same.

In terms of trying to understanding the emergence of sex differences and the role of brain-environment interactions, neuroscientists have been fascinated to see that one of the problems that these deep learning systems are having is that if the data being input are intrinsically biased, then this is the rule that the system will learn. If a system is trying to generate a rule associated with images of kitchens, it will link these to women because that is what it finds in the outside world it is exploring. When one computer program was asked to complete the statement "*Man* is to *computer programmer* as *woman* is to *X*," it supplied the response "homemaker." Similarly, a request to characterize business leaders or CEOs produced lists and images of white men. A recent study showed that simply inputting language data into a system that was learning to recognize images not only revealed significant gender bias, but also magnified it. So while in actuality "cooking" might be more likely to involve women than men 33% of the time, the computer model cheerily learning to tag images of cooking might label it as a female activity up to 68% of the time, due to the imbalance on the web of examples of who "did" cooking.

The researchers "training" this model checked out other language examples from the internet that might be input into such learning systems and discovered that 45% of verbs and 37% of objects showed some kind of gender bias of more than two to one; that is, it was twice as likely that certain verbs or certain objects would be associated with one gender rather than another. They then went on to show how you could constrain the model to more accurately reflect the bias. They made no comment as to its existence in the first place (although they did call their paper "Men Also Like Shopping").

So, in today's understanding of the brain, we are appreciating more and more that what our brain does with our world very much

depends on the information it has extracted from that world, and the rules it has generated for us are based on this information. To establish its priors, our brain will act like an eager "deep learning" system. If the information it soaks up is biased in some way, perhaps based on prejudice and stereotypes, then it is not hard to see what the outcome might be. Just like the outcomes of overreliance on a misinformed satnav, we may find ourselves steered down unsuitable pathways or taking unnecessary detours (or we may even give up the journey altogether).

The key issue here is that how our brains determine the way in which we respond to our world, and how that world responds to us, is much more entangled with that world than we used to think. Brain differences (and their consequences) will be as much determined by what is encountered in the world as by any genetic blueprint or hormonal marinade, so understanding these differences (and their consequences) will necessitate a close look at what is going on outside our heads as well as inside.

Another shift in focus in the 21st century has been on what aspects of human behavior we neuroscientists are trying to explain. Much of the speculation about the evolution of the human brain has concentrated on the emergence of high-level cognitive skills (such as language, mathematics, abstract reasoning, and the planning and execution of complex tasks) and how these contributed to the success of *Homo sapiens*. But there is an increasing focus on the idea that human success is actually based on the fact that we have learned to live and work cooperatively, to decode the invisible social rules that are signaled by facial expression and body language or that just appear to be understood by "in-group" members. We need to understand which people our group includes and how we should behave in order to be accepted by that group. We also need to spot those who are *not* group members and why. We need to read our fellow human beings' minds and understand their beliefs, intentions, hopes, and wishes; see things from their perspective and predict how this might make them behave; and adjust our own behaviors to encompass, or perhaps thwart, the goals of others.

Exploring how and when we humans use our brains to become social beings has led to a new branch of cognitive neuroscience—social cognitive neuroscience—and a new model of the brain: the "social brain." Social cognitive neuroscientists explore the neural real estate behind our drive to be a member of the many social and cultural networks that surround us and, further, show how the entanglement of our brains with these networks will come to shape our brains themselves.

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2

What Do Memes Tell Us About Self and Time During the Pandemic?*

Michael G. Flaherty and Cosima Rughiniș

(2021)

"I want a haircut" has become a rallying sign for people demanding a relaxation of social distancing rules, and it has become a prompt for ridicule among people worried about the pandemic death toll. What's in a haircut? We are sociologists who study the self and time. During the weeks of social distancing, we have examined online coronavirus memes in an effort to map how this crisis has modified our experience of time and our presentation of self.

The missing haircut is just the tip of the iceberg in the recent predicament of the quarantined self. Disorderly hair signals disrupted schedules and stressed relationships, going on long enough for hair and despair to grow. A haircut stands for a fresh beginning, a hopeful return to the way things were.

In his influential book *The Presentation of Self in Everyday Life* (1959), sociologist Erving Goffman argued that the self is something akin to a theatrical performance in social interaction, not an immutable aspect of personality. Persistent disruption and mingling of our frontstage and backstage encounters undermine the integrity of our self-presentations. According to Goffman, we are constantly staging our identity for the sake of multiple audiences because, in one way or another, we depend on their validation. This identity upkeep unfolds in time and requires a certain sequence of preparation, acting, and audience reception. If temporal order is upset, selves are disrupted, and the ensuing embarrassment can be comic or tragic, depending upon what is at stake (see, e.g., *Saturday Night Live's* sketch on the pandemic, "New Normal"). In the theater of social interaction, our identities are defined by these performances. Thus, we have a vital interest in the presentation of self. We ourselves assess the efficacy of these performances, along with lovers, colleagues, or strangers in the metro. Apparently minor troubles in self-maintenance acquire existential connotations if they lead to humiliation or other interactional fiascoes.

Daily life confronts each of us with myriad opportunities for success or failure in our presentation of self. With so much at stake, social interaction becomes an information game as individuals and groups engage in impression

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management. The stakes were high before the pandemic, but COVID-19 wreaks havoc on our performances, though not for all alike. Upkeep of personal appearance suffers. Our clothing (i.e., costume) is often shabby, unclean, and in disarray. Zoom and Google Meet audiences have unprecedented access to what were backstage areas. The visible things in our homes and offices (i.e., props) reveal intended and unintended aspects of our identities. As Goffman put it, instead of giving information, we end up giving it off.

Social interaction depends on temporal coordination. Shared means of reckoning time (via clocks, calendars, and schedules) enable us to go to school, meet with colleagues, visit the dentist, and have dinner with our family, in concert with others. Thus, a crucial aspect of social interaction consists of our efforts to manage temporal coordination and temporal experience, what sociologist Michael G. Flaherty calls "time work." We alter or customize our own experience of time or that of others. We are doing time work when we attempt to make the duration of an interval seem longer or shorter than it really is, when we choose to increase or decrease the frequency of a particular activity, when we modify the sequence of our conduct, when we decide the timing for an event, and when we "make" time for something or "steal" time from someone.

The presentation of self and our time work are profoundly interwoven. Our claims to being a good person are discredited if we are late, if we take too long, if we are abrupt, and if we do something too frequently or not frequently enough. Yet the coronavirus and social distancing have disrupted our calendars, have upended our finely tuned synchronization, have distorted our perception of time, and, in this process, have created a lot of trouble for our staging of ourselves.

Online memes give us an opportunity to notice these changing mores of self and time. Simultaneously, memes express our angst and humor, but they also mark emerging efforts at adaptation, which makes them a vivid and often amusing source of data. In order to "work" and be shared, memes must touch a nerve. Memes capture the many small disasters of self-presentation and reveal the challenges of time work.

We aim to spotlight collective reflection on self and time, as embodied in memes circulating online during the period of social isolation and shutdown for the COVID-19 pandemic (from March to July 2020). Like jokes, memes are a great medium with which to illuminate problematic aspects of the social order, decrying but also enjoying shared frustrations and insights occasioned by the pandemic's massive disruption of everyday life. Our project was inspired by Erving Goffman's study of photographs in magazines and newspapers (*Gender Advertisements*, 1979).

The tribulations of working from home have become the new normal.

Telework is one of the strongest disruptions of sequence and timing in our enactment of self. Work and home have usually offered us separate stages and audiences for our performances. Now, the spatial separation of the two settings has disappeared, leading to temporal merging and confusion. Unexpected videoconference sightings of pets, family members, or intimate clothing have become a regular source of excitement in pandemic life. Video meetings in half formal attire and half underwear, on kitchen tables or balconies, have become common references.

The home workspace and equipment are not up to our usual standards. There is widespread neglect of personal upkeep. Our appearance becomes careless and unprofessional as our diligence erodes and our motivation evaporates. Instead of "Leaving so soon?" we imagine the Netflix sign-off says "Maybe you should take a shower and come back later." How we look depends on whether we are communicating with

others via video, audio, or email. In the absence of support staff and the usual resources, our children and pets become misbehaving and troublesome "coworkers."

Interestingly, as more and more social interaction transpires online, our hair seems to become a growing existential concern. Our hair is a symbolic banner and often expresses tacit claims to a particular identity. Unruly hair undermines our presentation of self and threatens the validation we seek from others. Controlling our hair is an important aspect of body discipline. Crucially, our hair is still visible in our online performances, while many other facets of our physical presence have become irrelevant. Sight and sound have taken over other senses in the impoverished scenes that we e-play on screens.

By the same token, certain aspects of our presentation of self are liberated. Suddenly, hair on female legs is celebrated, and breasts are allowed to move freely more often than before. We can wear whatever we want below the waist in Zoom meetings, as long as we stay seated. The memes display celebration as well as frustration.

There is a blurring of days and weeks.

Without the rhythmic alternation from office to home, from morning to afternoon, from work to leisure, and from weekdays to weekend, we lose track of time. The days of the week have lost their conventional routines and distinctive meanings, and every day seems the same. Days and weeks merge into one long and shapeless interval that dilutes self-presentations. There are no special days that punctuate the calendar.

Time is perceived to pass slowly.

Waiting, anxiety, and boredom magnify attention to self and situation. As a result, there is a feeling of protracted duration. Thus, a great many memes represent distortion in the perceived passage of time. Each hour, day, week, and month of social distancing seems endless. Last week felt like a year; March felt like a decade or even an epoch.

With the cloistered repetition of our days, time seems stretched to gigantic proportions. Ordinarily, the social organization of time enables us to coordinate our actions with others, but this becomes nearly superfluous with social distancing and widespread unemployment. Time reckoning becomes a basis for exaggeration and joking. And those Zoom meetings? They seem to go on forever.

It would appear that, for many of us, the vicissitudes of life during the pandemic demand more diligence with self-medication.

Coffee and alcohol are two of the most widely used chemical props, stimulating or dimming awareness, respectively. In memes, caffeine and alcohol facilitate adaptation through humor, self-expression, and weary sociability. Daily calendars are marked with beverages. On an impoverished stage, and confronting a pent-up audience, resorting to mood enhancements has intensified.

All of this time on our hands provokes despair in some people and creativity and contentment in others.

When all structure fails, we collapse on the furniture or floor like children overcome by lethargy and despair. Lying around has become the quintessential position in that gray area

between asleep and awake, work and leisure, frontstage and backstage. Other structures that gave days direction and meaning, from horoscopes to regular outings with friends, are also lost. Not much is going on to generate interesting stories for our presentations of self. We are in sore need of quality stories and settings.

Yet there is also heroism and hedonism in unstructured time. Some love it; some hate it; some try to make the best of it. In the 17th century, Blaise Pascal wrote that "All of humanity's problems stem from man's inability to sit quietly in a room alone." It turns out that the apocalypse is not filled with zombie terror. Instead, a ruined or stale presentation of crummy self is met with boredom and loathing on the part of an audience that is way too familiar with this performance. The elusive character of our enemy, the new coronavirus, is also partly to blame: its delayed attack, asymptomatic contagion, and lack of horrendous skin marks make it easy to underestimate from the closed confines of our impoverished home theaters.

There is a lot of variation in how we cope with the disruption occasioned by the pandemic. Indeed, for some of us, social distancing is normal social life or even something better. Self-indulgence may now be redefined as a heroic effort at containing the spread of COVID-19.

Memes point to the emergence of strange outcomes and unexpected benefits. Here, we find new and ironic forms of courage, happiness, and adaptation, as well as complaints about those who do not rise to this occasion. With nothing else to do, we exhibit extraordinary inventiveness and ludicrous inspiration. An entire kitchen is covered in glitter, and a cow's udder on a carton of milk is pierced just so it becomes anatomically correct. Trapped in these strange circumstances, we may welcome or deplore unruly hair and unstructured time.

The self has deteriorated during the long period of social distancing.

Persistent social distancing and temporal disruption take a toll on our presentation of self. The memes depict us drinking more, aging quickly, and fearfully hoarding toilet paper. Look, for instance, at what happens to the Mona Lisa. She was young, beautiful, and carefree. Now she is haggard and anxious—yet clinging to those few means of self-control that she has left, from nail painting to facial treatments and, of course, the stereotypical wine.

Overeating and gaining weight are common concerns. Like the cat or the baby, we may consume the food we had supposedly set aside for a possible quarantine, expanding our figure in the process. We are eating our feelings and anything else we can find. We mark time and make it go away by snacking. With decreased face-to-face interactions, the balance of incentives has changed: There is self-indulgence instead of a finely tuned presentation of self.

Repeatedly seeking solace in our pantries and refrigerators, we envision ourselves as annoying pests at home, constantly trying to salve our souls with something to eat. We imagine that our refrigerator grows tired of seeing us, rebuffing us reproachfully. Food adds to the gravity of the situation.

Therefore, a lot of the memes display a before-and-after design. We were svelte before the pandemic, but after weeks of social distancing we fear becoming considerably rounder. Our bodies could be changing in ways that reflect the newfound inertia and immobility in our lives. The humor in these memes reflects the growing tension between our new timeless and structureless situation and hegemonic ideals for personal self-control.

There is a great deal of voluntary and involuntary experimentation with one's appearance.

Laughable outcomes offer proof that intention matters less than skill in shaping our unruly bodies and fitting them with props. We inflict these experiments on others (including our pets) as well as ourselves.

Memes suggest that our intimate relationships have been strained by prolonged hours of co-presence.

Our relationships entail demands on the self. A certain amount of time for privacy—moments of freedom from the obligations of impression management—is intrinsic to liberty. It would appear that we miss intervals of absence or aloneness. What happens to the presentation of self when the individual confronts a nearly unchanging audience? Partners and other members of the family become inescapably and annoyingly present. One's performance as husband or mother suffers as irritations emerge and relationships deteriorate. Memes depict the resulting discontent, with gallows humor.

We have been spending a lot more time at home, whether alone or with our families. The other members of our household witness much the same show day after day. With few new experiences, our performances grow increasingly stale. Constantly on stage for this unavoidable and unappreciative audience, without the wherewithal to improve the script, to renew props and costumes, or to enact dress rehearsals with strangers, the presentation of self loses vibrancy and risks dullness. Tomatoes may be thrown in all directions.

The erotic situation, a dangerous but possibly rewarding stage for self-presentation, has not fared well during the pandemic. At the outset, it seemed that a new baby boom might result from months of lockdown, but will it? Intimacy among couples has been strained by continuous co-presence and overfamiliarity.

Outside of established relationships, the subtle eroticism of daily flirtation with attractive colleagues or strangers is impeded, if not impossible. The pandemic diminishes opportunities for the erotic presentation of self. Will there be an upsurge in online porn and virtual encounters?

Restrictions, risks, and sheer distance make dating difficult, and they change a game that had volatile rules to begin with. Optimism seems more like wishful thinking than before, and emergent dating norms are mocked in the memes.

For many of us, our performance of intimate relationships is further complicated by the challenges of homeschooling.

With comic ingenuity, memes invoke a newfound respect for the work that teachers do and a decided unwillingness to add teaching at home to working from home. Judging from these memes, teaching our own children is more difficult than we might have guessed before the pandemic forced it upon us.

As for kids, the most wonderful but also the most terrifying and unrewarding audience at times, our prolonged and more frequent presentations of self in front of them have brought increased risks of onstage disaster. Our usual temporal rhythm of alternating presence and absence, routine time and quality time, compartmentalized by long hours apart at schools and jobs, is no longer possible. Our homeschooling performances cast us in the role of stand-in for absent teachers, but, because we are poorly

trained and lack requisite props, the stage is set for novel forms of bungling and fiasco.

Memes litter online platforms. It is tempting to trivialize or dismiss them, but, by turns funny and poignant, they illuminate our thoughts and feelings during this extraordinary chapter in our lives. In new ways, never envisioned by Erving Goffman, they show us that our efforts at impression management are artifacts of dramaturgy. The self is a harried and problematic performance before an audience that may be empathetic or critical. Moreover, COVID-19 has changed our reckoning of time and our temporal experience. Under its onslaught, our standard units of time become elastic, prolonged, and unrecognizable. We feel "stuck," unable to imagine or plan for an uncertain future, but a sense of humor is a powerful source of resilience and adaptation during these difficult days. It seems that so much has changed, but, even in these unprecedented circumstances, memes confirm that the self and time are facets of social interaction.

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PART II

LANGUAGE AND SOCIAL DEVELOPMENT

Language and Human Development

Jodi O'Brien

Imagine that you have just been kicked in the knee. How do you respond? Your immediate physical response is probably an upward jerk of the leg. Perhaps a rush of air and a surprised gasp escape your lips. In behaviorist psychology, the blow to the knee is considered the stimulus, and your direct, physical response is your jerking leg and cry of pain. This physical response to the stimulus of being kicked is the same for most humans. However, in addition to this physiological response, you are likely to have reactions that are not as predictable. How do you respond to the person who kicked you? You may kick the person in return. You may apologize for being in the way. You may flee. Your response to the person who kicked you depends on how you *interpret* the incident. Do you perceive it to be an act of aggression, an accident, or a playful joke? Your interpretation of the incident is based on the situation and the cues you pick up from the person who kicked you. If you are in a crowded space and the kicker smiles apologetically, you are likely to interpret the act as an accident and to respond accordingly. If you have been reading quietly in an empty room and the kicker glares at you menacingly, you are more likely to interpret the kick as an act of aggression than as an accident.

Symbolic interactionists are interested in the process of assigning meaning to actions and the responses that follow. The meaning that you assign to being kicked determines how you will respond to the kicker and, in turn, how the kicker will respond to you. That is, how you perceive the incident will determine how you feel about it and your subsequent course of action. This interpretive perception will also be the basis for how you store the event in your memory and recall it later. A jerk of the knee and a cry of pain may be predictable, universal, physical responses. However, there is nothing inherent in the interpretation. It depends entirely on the context. To symbolic interactionists, the most interesting aspect of human behavior is how we give meaning to our own actions and interpret the actions of others. Although it is possible to chart direct stimulus-response patterns in human behavior, for symbolic interactionists these patterns are of limited interest in understanding human behavior and social institutions. Human behavior involves a process of interpretation between stimulus and response. Thus, the interesting question for the student of human behavior is not what the objective stimulus is (for example, the blow to the knee) but what meaning the receiver of the kick assigns to the stimulus (how the blow is perceived). It is the process of assigning meaning that determines how people feel and act.

"Physical reality seems to recede in proportion as man's [*sic*] symbolic activity advances." This quote is from a well-known philosopher, Ernst Cassirer.

Cassirer claims that humans do not respond directly to the physical universe. Rather, we perceive our environment selectively (are you paying attention to your feet right now, or just the words on this page?) and then we think about what we perceive. As Cassirer observes, instead of dealing with the things themselves, people are constantly conversing with themselves about what things mean. For Cassirer, humans do not exist in a direct state of nature; rather, we exist in worlds in our head, worlds made up of commonly understood meaning—symbols—and conversations with ourselves. Like all animals, we have the capacity to respond directly to the physical world (you still flinch when pricked by a thorn), but, as a species characterized by symbol use, we are less and less attuned to the natural world (we can't hear or see at the same frequency of many animals; we can't sense changing weather patterns). In short, we are less likely to exist in nature and more likely to think about it. Thinking is a symbolic activity.

To exist directly in a state of nature is to be nonconscious, nonreflective, and nonsymbolic. In such a state, the organism is propelled directly by the forces of nature, which include internal physiology and the external environment. In contrast, the symbolic creature comprehends, comments on, and organizes behavior in accordance with abstract representations (symbols). This does not necessarily imply that humans are superior to animals, nor does it suggest that we do not have an animal form (biologically and physiologically). Rather, most noteworthy human activity is symbolic (abstracted from a direct state of nature). Thus, the symbolic interactionist focuses on human behavior and culture primarily as expressions of meaningful symbol systems.

A comparison with elephants illustrates this point. When elephants meet, one places its trunk in the mouth of the other. Body temperature and fluids in the mouth indicate whether each elephant is in a state of arousal or aggression or is passive. This encounter triggers the appropriate response—copulating, fighting, fleeing, or traveling together. The elephants, as far as we can tell, do not think about this encounter; they do not interpret the event and assign meaning to it. They simply engage in a series of stimulus-response behaviors in a direct state of nature. The difference between humans and elephants is that humans do not respond directly to the physical environment. Rather, humans impose symbolic interpretations on experiences and draw conclusions based on these interpretations. It is true that we are attuned to odors and other physiological manifestations of our fellow humans and that we may experience these directly rather than through a process of interpretation. But most of our responses to others are determined by our interpretation of various cues. These cues include physiological features, gestures, and accessories and adornments, such as clothing and other symbolically meaningful items.

If you have ever driven across a border into another country, you know that it is the duty of border guards to ascertain whether you are bringing merchandise into (or out of) the country in violation of international or national laws. These guards cannot read your mind, nor can they experience directly whether you are

telling the truth when you claim not to be carrying illicit goods. The guards infer your intentions based on symbolic cues, such as the type of car you are driving, your ethnicity and gender, and the style of your clothes and hair. In other words, the guards guess at your integrity based on their symbolic interpretation of you and the situation. (As we will discuss further on in this book, this inferential process is fraught with stereotypical bias.) As another illustration, consider the process of cue interpretation you engage in when you are trying to figure out whether the person across the room is flirting with you. In such a situation, you have no direct knowledge of the person's mood or intentions. Is this someone who is a potential date? If you approach, will the person be hostile or receptive? Before making a move, you will assess the situation and consider many cues. You may even discuss the cues with a group of friends before deciding to act. All of this is interpretive behavior.

Social psychologists are interested in how people make inferences and the reliability of these inferences for predicting the intentions of others. This predictability is not a function of directly experiencing the "natural" world. Rather, it is the product of how we assign meaning to objects. How do humans learn to participate in this meaning-making process? How are we able to think about things and make interpretations? The short answer is "language." Language is the basis of human development and society. Understanding human social behavior requires understanding language.

What Is Language?

Language is a system of symbols that allows humans to communicate and share meaning. Language gives humans the capacity to become social creatures—which is to say, the capacity to comprehend and to participate in culture. The basic unit of language is the word. Words are symbols that denote the meaning of something. The power of words to represent human activity can be seen in the following exercise:

List words for as many emotions as you can think of, then sit across from someone and read your list to them. Chances are that the person will comprehend the states of being that each word suggests. Now, think of a common emotion and attempt to communicate it to the person simply by touching their arm (no fair trying to write out the word!). Basic emotions—such as anger, lust, and fright—may possibly be communicated by touch. However, it is likely that the list of emotion words that you generated conveys a much wider range of emotion and greater emotional subtlety than you can communicate effectively without resorting to words.

In other words, unlike the elephant, humans do not typically express their state of being or understand those of others through direct physical contact. We use words to express what is going on with us. Words are abstractions which means that they stand in for, or are symbolic of, general ideas (in this case, feelings). We won't go down the rabbit hole here of which comes first, the word

or the feeling; the point, for now, is that words enable several human functions. Words (language) enables us:

- to think,
- to make sense of, organize, and guide our actions,
- to learn from others,
- to transcend time and space (to remember), and
- to share ideas and experiences with others (to communicate).

In other words, through language you not only have an emotion (e.g., anger), but you are aware of your anger (you are thinking about it), you can imagine what might happen if you express it (guide your behavior), and you can tell someone else about it later (remember it and communicate it). Abstraction allows us to remember, fantasize, plan, and guide behavior. When we imagine something, we formulate an image—a symbolic representation—of something that is not present in the immediate state of nature. Remembering is a similar activity. When we fantasize and make plans, we are managing symbolic images of ourselves, others, and objects or ideas (a constant movie playing out in our minds). To comprehend the significance of the human ability to engage in symbolic abstraction, consider how much time you spend in the physical presence of your intimate friends versus how much time you spend thinking, remembering, fantasizing, and planning around them. Would it be possible to experience love for someone if you could not imagine (represent abstractly) that person when they were not actually physically present? Language also enables us to learn vicariously. Vicarious experience means to learn by observing the actions of others; we need not experience everything ourselves to comprehend what someone else is experiencing (i.e., you don't have to touch a hot stove to understand getting burned). Most of what we know, we learn vicariously. Vicarious learning is key element in individual survival and in the transmission of culture. In short, without language, human experience and culture would not be possible.

Grammar

As powerful as a single word may be in assigning meaning, the full power of language is in the relationships among words, or the structure of language. Words are juxtaposed in such a way as to convey one meaning rather than another. For example, each of the words "cat," "dog," and "chases" suggests a particular meaning. The first two are nouns that denote certain types of four-legged mammals, and the third is a verb that names a particular action. Presumably we have a shared understanding of the general class of meaning to which these words refer. Now, consider the alignment of the words "dog chases cat" and "cat chases dog." Do both combinations suggest the same event? Try writing other possible combinations of these

three words. How many of these combinations make sense to you? The structure of language, called *syntax*, comprises the rules of grammar. Syntax allows humans to combine words into strings or clusters of meaning more complex than the meaning suggested by isolated words. The syntax of a language also permits us to convey entirely different meanings by recombining words, as in the example of "cat," "dog," and "chases."

Another interesting feature of syntax is that humans seem to learn and use the rules of language without necessarily being aware of what these rules are. For instance, although most people can give an example of a yes-or-no question (e.g., "Is your car red?"), very few can name the formal rules for constructing such a sentence. Nevertheless, people recognize when the rules have been violated. Not all combinations of words are equally meaningful or likely to be generated. Intriguingly, people can ascertain the difference between gibberish and mutually comprehensible strings of words without actually knowing the rules of grammar. The power of language derives from the human ability to employ rules to convey meaning without necessarily being aware of the rules. Humans are able to continuously produce novel combinations that will be understood by others, provided the combinations follow accepted syntactical structure. Linguists refer to the ability to formulate novel but mutually understood statements as the *generative property* of language. The extent of this generative ability is profound—it allows young children to formulate novel sentences (rather than just repeating preprogrammed speech) and allows nuclear physicists to develop abstract and complex theories, and it is the very basis of our everyday lives, whether we are spending time alone or in interaction with others.

Language, Thought, and Socialization

George Herbert Mead is one of the founding thinkers in social psychology. His only book, *Mind, Self, and Society* (1934) was published three years after his death and consists of a series of lectures he gave as a professor at the University of Chicago. Like other social philosophers of his day (Sigmund Freud and William James), Mead was interested in what it means to be human: What is "thinking"? What is "self"? And how are these connected to society? For Mead, the key to understanding the connection between mind, self, and society is language. Our initial exposure to language (through our early interaction as infants) flips the switch for thought. Our capacity for thought (cognition) evolves as we become self-aware (able to "see" ourselves as something that exists as an entity). Society provides the tools of language that shape this process. In this section, we focus on the connection between language, thought, and self-awareness (see Parts III and IV for further discussion of Mead's theories on language, self, and society).

Which comes first, language or thought? For Mead, this is a concurrent process in human development. As infants gain sensual acuity (i.e., as their sight, hearing, and sense of touch develop), they begin to differentiate their environment

(small babies are not aware that the four-legged blob on the floor is separate from the floor, let alone a dog). Through exposure to language, they begin to differentiate and recognize objects in their environment (that blob is a "dog") and to associate the objects with expected behaviors ("dog" licks). For Mead, the development of "mind" occurs as the infant begins to comprehend that they, too, are an object in the environment; they are a thing, and other entities respond to them. This ability to "see" themselves as objects is the beginning of the internal awareness that we consider "mind" or thinking. As they develop, children transition from mere objects to agents (e.g., they may seem to delight in opening and shutting a cabinet door repeatedly) and then realize that "I" is the one doing the action. Thus, for Mead, mind and self-awareness develop simultaneously. Subsequent development is a process of learning to associate meaning and expectations with specific objects and to behave in response to the meaning. A toddler who dislikes being licked by the dog will not only move away when the dog approaches, but also narrate the activity with increasing self-referencing (from "No dog!" to "Alex doesn't like dog licking"). Eventually, the toddler will be able to recall and tell someone else about the experience later.

Toddlers typically refer to themselves in the third person—"You want some banana," or "Eddie wants some water"—because they are imitating the names other people use for them. The use of "I" and "me" indicates comprehension of self as a referential subject and develops after considerable practice. For instance, a toddler may say aloud, "No pick," as they pick the flowers in the garden they were told not to. At this stage of development, they are learning to associate lines of action with consequences, but they cannot yet moderate their behavior accordingly. Eventually, they learn to associate picking flowers from the garden with parental disapproval, as in *If I pick that, Papa will be upset with me*. These associations are the building blocks for both an evolving sense of self (see Part IV) and the capacity to think conceptually and sequentially and to remember and recall. The entire process is language-based and involves realization of the self as an object, as well as another a key aspect of human development: conceptualization.

Language Acquisition and Conceptualization

The Russian linguist and social psychologist Lev Vygotsky wrote extensively on the relationship between language and thought during the 1920s, but his writings have been available in English only since 1960 (e.g., Vygotsky, 1962). Writing independently of the North American debates regarding the origins of language, Vygotsky, like his fellow Eastern European social scientists, recognized a mutual relationship between individual neuro-cognitive processes and social learning; language acquisition and social learning are simultaneous and complementary. For Vygotsky, the key to human development is the ability to move from the "perceptual" to the "conceptual." For instance, children begin to grasp that the bright, chunky things they are stacking (their direct perception in the

moment of playing with something) have a name and belong to a class of objects called "blocks." This movement into the "conceptual" is what enables the child to transcend the immediate environment and to think about the concept of "blocks" (and, eventually, related concepts or abstractions, such as "shapes" and "colors," into which the blocks can be sorted).

According to Vygotsky, children make sense of their environment by grouping things (persons, objects, and events) that seem, through their own experiences, to be connected. The result is complex thinking—grouping seemingly related things into complexes. Concepts generated from the complexes stand in as abstract representations of meaningful relationships between concrete things and experiences. For instance, a child's experiential complex for the family dog might consist of *Ruffy, big, furry, tail, bite*. Conceptual thinking replaces the complex when the child learns the general name for the complex—dog. Initially, the child may attempt to interchange the specific name, "Ruffy," with the general name, "dog," and refer to all dogs as "Ruffy." She may also experience fear when she encounters any dog, because her complex or cluster includes the experience *bite*.

Comprehending a parent's explanation that "dogs only bite if you pull their tail" is an illustration of the child's ability to generalize based on abstract thinking. It is also an illustration of the child's ability to learn vicariously through language. The child need not experiment with pulling the tail of every dog that she encounters in order to gain an understanding of the conceptual relationship between tail-pulling and being bitten. Rather, she uses the words to formulate a more general idea and to encode both the specific experience and her general interpretation of it in her memory. In this way, she begins to develop a lexicon of experientially based, but socially influenced, names—complete with evaluative action codes ("Dogs might bite, so beware").

Vygotsky's work demonstrates how, as we acquire language, we learn to make conceptual sense of our environment and are able to think abstractly and to communicate with others. His research is especially useful for understanding how we learn concepts from our specific culture (i.e., we are shaped by the culture into which we are born) and yet also have individualized responses. In Vygotsky's words:

> In the experimental setting, the child produces a pseudo-concept every time he surrounds a sample with objects that could just as well have been assembled on the basis of an abstract concept. For instance, when the sample is a yellow triangle and the child picks out all the triangles in the experimental material, he could have been guided by the general idea or concept of a triangle. Experimental analysis shows, however, that in reality the child is guided by the concrete, visible likeness and has formed only an associative complex limited to a certain kind of perceptual bond. Although the results are identical, the process by which they are reached is not at all the same as in conceptual thinking. . . .

> Pseudo-concepts predominate over all other complexes in the preschool child's thinking for the simple reason that in real life complexes corresponding to word meanings are not spontaneously developed by the child: The lines along which a complex develops are predetermined by the meaning a given word already has in the language of adults. . . .
>
> This language, with its stable, permanent meanings, points the way that a child's generalizations will take. The adult cannot pass on to the child his mode of thinking. He merely supplies the ready-made meaning of a word, around which the child forms a complex. . . .
>
> The pseudo-concept serves as the connecting link between thinking in complexes and thinking in concepts. Verbal intercourse with adults becomes a powerful factor in the intellectual development of the child.
>
> (pp. 67–69)

In normal cognitive development, children operate at the nexus of practical experience and preestablished concepts. Even as they are forming experience-based groupings of things in their environment, children are learning to use ready-made words that are based on socially established conceptualizations. Thus, both the child's individual experiences and social influence, through preexisting language, play a role in the development of language and cognition. The resulting conceptual knowledge is a combination of individual experience and social learning. For instance, children grow up with very different personal experiences with dogs (some bite, some lick, some are fun to play with, some are not), and they carry these experiences with them into the social learning process. However, in the process of language development, they also learn general concepts or names for things, including "dogs," and they then organize, classify, recall, and respond in accordance with this general concept. Individual experience takes on its shape or meaning through the general linguistic conceptual frame such that the adult experience might be *Dogs are common pets that people like, but I'm frightened of them*. Concrete experiences enable the child to comprehend in an embodied, fully feeling way (perceptual). Through language acquisition, the child transcends the immediate experience into the conceptual realm, where the child is able to make sense of and generalize the experiences.

Language and Socialization

Scholars agree that language is the bedrock of human behavior and social life. There is disagreement, however, about whether the capacity for language is socially learned (nurture) or physiologically innate (nature). Noam Chomsky and other linguists consider language an innate human ability. Chomsky (1972) has made a convincing case that the deep structure of language is more complex than anyone could learn through social contact alone. He argues, instead, that one feature of

the human brain is an inborn computational modality. That is, humans are hardwired to comprehend and generate abstract representations and to piece together complex strings of words that require them to compute various possible lines of meaning and association. This activity is so complex and so unavailable to general consciousness that, according to Chomsky and his supporters, it would be impossible for children to perform the incredible mental gymnastics required to communicate if the brain were not hardwired for language.

Chomsky is correct, in part—the aptitude for abstraction and linguistic computation is innate; it is a fundamental property of humanness. But what is the source of the conceptual abstractions that the mental processors are acting on? This is the question that intrigues social psychologists, anthropologists, and social linguists. Our capacity for abstraction and the computation necessary to process language may be innate, but the actual content is learned through social contact. The meaning and significance of sentences—people's attitudes, feelings, and behavior toward a string of words—is determined by the context in which the words appear and by the attributes people have learned to associate with these contexts. This is a social process. For example, people don't need to be taught how to respond physically when kicked in the knee (they jerk their leg automatically). But the range of possible social responses to being kicked that occur to people, and their understanding of the appropriateness and consequences of a given response, are the result of having been taught, through language, what to think and do about the incident. The meaning that we assign to an experience acts as a sort of shorthand that shapes our subsequent thoughts about how to respond to the situation. In this way, language, experience, and thought continually interact—they are mutually interconnected in a dynamic system loop.

Much of what we know about language and development has come from studying disruptions or anomalies in language acquisition. Researchers are particularly interested in the few documented cases of "feral children"—children raised in isolation from adult human interaction. In the 1940s, sociologist Kingsley Davis described the case of a young girl who was subjected to extreme isolation during crucial developmental years (see Reading 4). In presenting the girl's case, Davis pursued the hypothesis that social intercourse is necessary for the development of language and intellectual activity. Without exposure to language, children do not achieve the ability to engage in normal human activities; specifically, they are less able to conceptualize. According to Davis's study of Anna and a parallel case, Isabelle, interaction with others is a key to kick-starting language acquisition and corresponding socialization. The question Davis couldn't fully address was whether there was a cutoff age for language acquisition. At the time he was writing, in the 1940s, it was generally believed that if children did not have normal exposure to language within the first few years of life, their cognitive-emotive behavior would be limited.

Further evidence was reported in 1974 by linguist Sue Curtiss and her colleagues at UCLA. The case involved a young girl, Genie, who was discovered at age 13 living in horrendous circumstances of neglect. She had been kept hidden