Introduction

Beyond True and False

Brooke Harrington

I T SEEMS FITTING to follow Murray Gell-Mann's Foreword with a story involving two other illustrious physicists. During the 1940s, Leó Szilárd—who discovered the nuclear chain reaction—decided to keep a diary of his work on the Manhattan Project. He told Hans Bethe, one of his colleagues on the Project, that he did not intend to publish the diary, but only "to record the facts for the information of God." "Don't you think God knows the facts?" Bethe asked. "Yes," Szilárd responded, "He knows the facts, but He does not know *this version of the facts*."[1]

This quip actually raises a serious point about the aims of the present volume: If, as Szilárd suggested, humans merely produce a "version of the facts" while absolute truth is known only to God, how can we even begin to define deception? That is, if we cannot agree on what is true, we cannot hope to agree on what is false. As a result of this basic epistemological problem, we are still grappling—after thousands of years of inquiry—with basic questions about what constitutes deception and how it should be evaluated, morally and ethically. Where the greatest thinkers in history have failed to converge, this volume can hardly hope to succeed. So let us acknowledge at the outset that while we, too, confront the difficult questions of defining deception and its positive and negative effects, this volume does not resolve those issues. Rather

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than making conclusive or programmatic statements, we have sought to integrate and synthesize research on deception from across the humanities and the sciences.

It may be surprising to learn that this is a significant advance in its own right: while deception and its manifestations have long held a central place in many realms of inquiry, knowledge remains fragmented. At the same time, the need for synthesis is urgent, as new forms of deception arise in a wide variety of arenas, from online communication to modern warfare. So, while this volume will not by any means be the last word on deception, it is the first to invite the long-overdue cross-disciplinary discourse about it. The chapters that follow thus provide a kind of status report on deception, bringing readers up to date on what biologists and sociologists, poets and computer scientists, among others, have learned and can learn from each other.

Reluctance to force a definitional consensus should not be interpreted as a sign of intellectual laziness or hopelessness about the task. Instead, we are trying to avoid the kind of premature, misleading conclusions that have vexed our understanding of deception and encouraged the fragmentation of knowledge. As many of the following chapters attest, the sciences and humanities are littered with incomplete and unsatisfactory definitions of deception; rather than adding to their number, we attempt to make a more enduring contribution by gathering together a wide range of research streams and putting them into dialogue about deception, in many cases for the first time. Where fruitful connections among the disparate research traditions are possible, we make them, but we also acknowledge the irreducible differences and points of contention that remain. By pointing up areas of both convergence and controversy, this approach can contribute to more rapid advances in deception research and a more robust platform for future inquiry than has hitherto been available.

A second reason we avoid developing a conclusive consensus definition of deception is the problem of selection bias, which affects virtually every domain of research on the topic. That is, as psychologist Maureen O'Sullivan puts it in this volume, "We think lies look like the poor-quality, easily detectable ones we have uncovered." Her observation can readily be generalized to all forms of deception: indeed, the evidence from across the sciences and humanities is consistent in suggesting that many more deceptions are perpetrated than are detected. For all we know, the deceptions that philosophers and scientists and artists have been pondering for thousands of years—that is, deceptions that

have been detected—may be qualitatively very different from deceptions that succeed in eluding our awareness. This suggests the need for caution in making conclusive statements about the phenomenon, as well as the advantages of the kind of disciplinary multivocality and methodological pluralism adopted in this volume.

What Deception Is Not

While definitions of deception have varied across disciplines, time periods, and cultures, there has been a strikingly broad and enduring consensus about what deception is *not*. For instance, there is long-standing agreement that deception is *not* synonymous with lying. As St. Augustine pointed out in his essay *De Mendacio*,[2] deception may occur in the absence of any intentional falsehood; one can thus deceive others by making false statements that one believes to be true. So, unlike lying, which requires intent to promulgate a falsehood, deception can take place without either intent or awareness on the part of the deceiver. Among humans, this raises problems of self-delusion that complicate definitions of deception in interpersonal settings. Similar issues arise in biology: as natural scientists remind us, animals and plants employ deception to facilitate reproduction and survival; to the best of our knowledge, these phenomena—such as changing color or shape to attract prey or mates—occur without conscious intent. These insights led us to strive in this volume toward accounts of deception that could encompass both its intentional and unintentional forms.

Similarly, we sought to formulate our understanding of deception without overconstraining it in ethical terms. On the one hand, the Western religious and philosophical canon would seem to condemn deception unambiguously, in all forms and circumstances. Dante famously reserved the largest circle of Hell in his *Inferno* for deceivers, treating them to some of his most imaginative punishments, including being thrown into a lake of boiling pitch, and being buried upside-down with their feet on fire.

However, there are opposing strains within Western thought that often go unacknowledged—arguments in favor of what might be called "ethical deceptions." In the realm of statecraft, for example, Plato argued in *The Republic* that political leaders not only could but often *should* "lie for the public good";[3] similarly, Winston Churchill said that "in wartime, truth is so precious that she should always be attended by a bodyguard of lies."[4] Deception

can also follow from Hippocrates' dictum to physicians: "First, do no harm." Thus, deception arises in many forms within medicine, from the administration of placebos in research studies to the deliberate concealment of truths likely to cause pain or damage to vulnerable persons, such as the gravely ill.[5] An article published in the *New England Journal of Medicine* summed up the position held by many physicians that "it is meaningless to speak of telling the truth, the whole truth and nothing but the truth to a patient. . . . So far as possible do not harm. You can do harm by the process that is quaintly called telling the truth."[6]

The uses of deception to save lives may constitute more than exceptions that prove the rule: several chapters in this volume suggest that deception is actually *necessary* to social and physical survival. For example, psychologists Mark Frank and Maureen O'Sullivan show how socialization leads us to commit certain routine forms of deception so that social interaction may proceed from day to day. In addition, natural scientists have long argued for the value of deception in ensuring evolutionary fitness through increasing attractiveness for mating purposes and decreasing visibility to predators.[7] This theme is illustrated with particular timeliness in the chapter by communications scholar Jeff Hancock, who reviews some results of his study of deception in online dating forums.

The ways in which deception is connected, seemingly inextricably, to mating and survival among humans and other animals may help explain why, despite the many social and ethical proscriptions against it, deception remains so common in everyday life. Among humans, recent psychological research indicates that lying is actually the norm rather than an anomaly in social interactions.[8] Indeed, one study found that, in the course of a ten-minute conversation, over 60 percent of subjects lie at least once; the average person tells two or three lies during that period.[9] Although deception generally decreases in frequency with the increasing closeness of a relationship, participants in these recent studies report lying in one-third to one-half of the interactions they have with their lovers and their mothers. Some linguists have even argued that deception was at the root of the development of human language.[10] Thus, as Maureen O'Sullivan (this volume) points out, connection to others inevitably entangles us in webs of deception: "In ordinary social life, all but saints, sinners, and madmen collude with liars."

The prevalence of deception in interpersonal settings also suggests the need to consider why there are so many instances of "authorized" deception

within societies that otherwise condemn the practice. For example, in sporting events and the performing arts, deception is regarded with appreciation and admiration. What would baseball be without deceptive pitches such as the changeup, the slider, the sinker, or that recent Japanese innovation, the "gyroball"? From the batter's point of view, they all leave the mound looking like fastballs, but arrive at the plate moving with a totally different speed or trajectory than expected. These pitches win games, and the pitchers who throw them are lionized for their deceptive skill, much as Odysseus was for the tricks recounted in the *Odyssey* (see Kenneth Fields's concluding chapter in this volume for more on trickster heroes). By the same token, excellence in the performing arts—from theater pieces and magic tricks to the special effects in films—is defined in part by successful artifice: their ability to make audiences suspend disbelief or forget altogether that they are watching a performance.

So, why do societies that condemn deception accept it in these cases where necessity—to save lives, for example—cannot be argued? One possibility is suggested by the treatment of deception in the visual arts. While *trompe l'oeil* and photorealism in painting historically have been prized and rewarded as marks of artistic skill, altered photographs (as described in Hany Farid's chapter, this volume) have been condemned as frauds. The distinction between art and fraud depends on context: it is not only a matter of where one finds such works (on a museum wall versus the front page of a tabloid newspaper), but also of the expectations elicited by those settings. The context "newspaper" customarily implies information (and thus accuracy and truth), while the context "art" implies the aesthetic enjoyment of artifice.

With entertainment, as in love and war, "consensual reality" is premised on the expectation that individuals know in advance that when they enter settings such as a theater or a playing field, deception may (or will) occur. By participating in such events, even as an onlooker, one is presumed to be giving his or her consent to be deceived. As Mark Frank (this volume) puts it, "in some scenarios, like acting, we permit deception and actively participate in it. . . . Other scenarios, in which we are not notified by the person or the context that deception is happening—such as when a lie is told—are deadly to trust, if uncovered." Obviously, the boundaries around these areas of "authorized deception" vary considerably by location and time period; even within the same society at the same time, individuals and groups can disagree violently about what kinds of deception are acceptable (see my chapter on caveat emptor and deception in financial markets, this volume). However, it is noteworthy that in many research

domains, a defining characteristic of deception is its nonconsensual character: that is, a regular feature of the phenomenon is that one or more parties to the interaction has not agreed—implicitly or explicitly—to be deceived.

To draw out other regularities among the domains of inquiry represented in this volume, and to point up key points of contention, the chapters have been organized around four broad thematic areas: defining and detecting deception, the role of technology in deception, the relationship between deception and trust, and the key social institutions through which deception is perpetrated and regulated. Mindful that many edited volumes can read like disconnected essays linked only by a common topic, this one attempts something more ambitious: to capture in print the cross-disciplinary dialogue we began in person at the Santa Fe Institute. To this end, each chapter explicitly defines its links to others in the volume, pointing up similarities and differences in terms of basic premises, levels of analysis, methodologies, and conclusions. Our intent is to create a richer and wider perspective on the topic than is available through a single-disciplinary lens.

Part I: Defining and Detecting Deception

The first section of the book is comprised of four chapters that directly address the problem of definitions. We begin in the animal kingdom, as evolutionary biologist Carl Bergstrom introduces us to a realm in which "organisms deceive one another in every imaginable way in order to attain every conceivable advantage." Behind the matter-of-fact title of his chapter, "Dealing with Deception in Biology," we find a flamboyant rogues' gallery of deceivers—like the carnivorous fireflies that send out false mating signals to lure their prey—along with marvels such as "the bluffing threats of a molting stomatopod." The volume leads with this chapter for two reasons. First, it offers an elegant model of deception—one that sets the context for the rest of the chapters in the book by showing why and how deception, despite its costs, can serve the survival interests of many living things. Second, Bergstrom's text elegantly blends the sciences and humanities, modeling the kind of transdisciplinary approach that this volume seeks to advance.

From the animal kingdom we move to the realm of philosophy. "Paltering," by Frederick Schauer and Richard Zeckhauser, not only reviews the philosophical and legal definitions of deception but does so by highlighting the distinction between two of deception's most common manifestations: lying

and paltering. Readers may find it noteworthy that *paltering* is a not a neologism coined by the authors but a word that came into English centuries ago by way of the Vikings. Modern Danish and Swedish preserve the word to this day as *pielter* and *paltor*, respectively, meaning "rags" or "worthless shreds," leading to speculation that the connection between paltering and deception involves telling worthless shreds of truth to create a false impression. Thus if lying is commonly understood to involve fabrications, paltering involves manipulations of truth, including fudging, twisting, slanting, exaggerating, and selective reporting. So, while nothing in a palter may be factually untrue, it nonetheless belongs under the rubric of deception.

Impression management and interpretation are the subjects of the next two chapters, both authored by psychologists whose research careers have been devoted to detecting deception. Mark Frank's chapter, "Thoughts, Feelings, and Deception," deconstructs the micromechanisms by which facial muscles—particularly those around the eyes and mouth—give away would-be deceivers. Frank, who trains law enforcement and counterterrorism officials based on his research, shows how accurate detection depends on attention to context and patterns of behavior, rather than on spotting a single indicator. Biases—such as the tendency to be too trusting or too suspicious—can undermine observers' ability to interpret what they see and hear. This points up the interactive, contextual nature of deception: another theme that recurs throughout the volume.

Maureen O'Sullivan's chapter delves further into the impact of interaction on deception by examining "truth wizards"—an elite group of research participants who were found by chance to have unusually (and consistently) high accuracy in detecting deception in others. While the truth wizards come from all walks of life, one feature they share is the willingness to bear the significant cognitive and emotional costs of deception detection. Not only does spotting deception require close attention within interaction settings, but it carries the social burden of "accusatory reluctance": the hesitancy many people feel to risk destroying a relationship by voicing their suspicions that someone is acting deceptively. Thus, O'Sullivan argues that truth wizards are rare in part because the high socioemotional costs of accuracy in this regard often outweigh the benefits of being right or preserving the integrity of truthful communication. As La Rochefoucauld—a keen observer of the court of Louis XIV—put it in one of his best-known maxims, "Social life would not last long if men were not taken in by each other."[11]

This raises a question that recurs throughout the book: what harm is there in deception, if any? In the case of paltering, what could be the harm in a confection of partial truths? Schauer and Zeckhauser take the position that while paltering may be "less than lying" in content, the effects are, if anything, *more* dangerous than that of outright fabrication; this is because mechanisms for detecting and punishing palters are so few, and the "truthiness" of palters (to borrow a neologism by way of *The Colbert Report*) makes them harder to detect. The social cost of degrading trust and truth arises in other chapters throughout this book (notably that of Tom Lutz), as does the problem of institutional safeguards against the subtler forms of deception, such as paltering (see in particular the chapter by Ford Rowan). In examining deception in this detailed manner, we inevitably must grapple with the meaning of trust and truth, which are the subjects of the third section of the book.

Part II: Deception and Technology

No 21st-century discussion of deception could be complete without addressing the role of technology. While public discourse often focuses on the role of technology in aiding the detection of deception, the three chapters in this section review the ways in which the digital age has made deception easier than ever, and in some cases more difficult to detect. Hany Farid's chapter, "Digital Doctoring: Can We Trust Photographs?" takes on an issue that many of us confront every time we stand in the supermarket checkout line: the ways in which the evidence of our senses, which many of us are used to treating as reliable, can be used to mislead us. While we may have grown sophisticated enough to know that tabloid journalists routinely doctor photos for "dramatic" effect—mixing and matching heads and bodies, or creating "couples" by the cut-and-paste method—it may be more disconcerting to learn that iconic photographs (such as the full-length portrait of Abraham Lincoln that appears in many American history books) are just as fraudulent as the celebrity collages featured in the *National Enquirer*. Such revelations can inspire something alarmingly close to the paranoia of those who believe that other historically significant photographs (such as the images of the Apollo 11 moon landing in 1969) have also been faked. The implications of this erosion of trust are explored at greater length in Gary Alan Fine's chapter on the social psychology of urban legends, "Does Rumor Lie? Narrators, Trust, and the Framing of Unsecured Information."

Jeffrey Hancock's chapter, "Digital Deception: The Practice of Lying in the Digital Age," delves further into the deceptive uses of technology by exploring how different modes of interpersonal communication—e-mail, telephone, and face-to-face encounters—influence the frequency and content of deception. Hancock's research explores the question of "which properties of technology affect how honest and self-disclosive we are, and why." His findings indicate, somewhat surprisingly, that electronic communication is *not* the most hospitable environment for would-be deceivers. Rather, that distinction belongs to the telephone, which—by stripping away the visual cues that people use to detect deception in face-to-face settings, and failing to create the kind of documentation provided by e-mail—remains the most common medium for deception. Within the realm of electronic communication, it will likely surprise no one to learn of Hancock's finding on the abundance of deception on dating websites: not only do people doctor photographs of themselves, but they lie in the text of their online personals (men usually claim to be taller, and women slimmer, than they actually are).

Paul Thompson's chapter, "Cognitive Hacking: Detecting Deception on the Web," delves into the conceptual structure and implementation of these deceptions, uncovering the mechanisms that have brought us some of the banes of 21st-century life, such as "phishing" and identity theft. Addressing both the technical and social sides of the phenomenon, Thompson investigates how hackers create programs that send millions of plausible-looking e-mails to trick recipients into divulging personal information such as their bank account and Social Security numbers. Executing such deceptions successfully requires the ability to develop what psychologists call "theories of mind" about others; thus a successful hacker is not only technically skillful but psychologically astute as well, able to imagine what signals would be interpreted as trustworthy within the relatively impoverished medium of e-mail communication.

Part III: Trust and Deception

This leads directly into a discussion of trust: the hackers described in Thompson's chapter, along with the digital deceivers who figure in Farid's and Hancock's research, succeed in large part because they are free riding on the trustworthiness and integrity of the vast majority of interactions we have with each other and with institutions. As O'Sullivan points out, our disposition

to believe that most people are honest until proven otherwise is borne out by research evidence; that is, *not* expecting deception is in fact the most rational course of action. Unfortunately, as Guido Möllering points out in his chapter, "Leaps and Lapses of Faith: Exploring the Relationship Between Trust and Deception," this generalized trust provides useful cover for would-be deceivers. If most individuals expected deception in their interactions, it would be more difficult for any given deception to pass undetected.

Möllering's thoughtful theoretical discussion of trust makes explicit several themes that are implicit in the earlier essays in this volume, including the interactive and performative nature of both deception and trust. We behave toward each other in an "as if" mode, he writes, investing individuals and institutions with our trust and thereby imposing an obligation on them (which they may or may not accept, but that is nonetheless felt as consequential) to act in accordance with our expectations. As Möllering writes, "trust exerts an almost compulsory power." Thus trust—and, by implication, deception—does not exist a priori, but arises as a consequence of interactions and expectations.

As a result, two parties interacting could just as well find reasons to assume deception from one another as they could reasons for trustworthiness: it all depends on how they draw meaning from what Möllering astutely terms "the semiotic chaos and ambiguity in most real-life situations." This indeterminacy is vividly illustrated in Gary Urton's chapter, "Tying the Truth in Knots: Trustworthiness and Accountability in the Inka Khipu," in which mutual trust suddenly turns to mutual suspicion and accusations of deception. The story begins with the encounter between the Inka empire and the Spanish conquistadors; the latter initially accept at face value the "inviolable," quasi-sacred truthfulness of the Inka accountants—the guardians of the knotted *khipu* strings by which the empire's wealth was measured. The cause of the abrupt demise of this equilibrium is unknown, but one can imagine how this interaction might have turned disastrously antagonistic. As Möllering writes (this volume), it takes very little to catalyze a vicious cycle of negative attributions and interpretations: "one act of unnoticed deception often triggers further such acts and possibly an escalation of deception, because the deceiver wants to conceal the initial deception or has self-reinforcing incentives to exploit the situation further and further." Perhaps one of the Inka or one of the Spanish made a mistake, or intentionally exploited the trust that initially flourished between the two groups; that single act might have started a chain reaction in which

the relationship, already vulnerable due to cultural and language differences, fell apart rapidly. A similar interpretation is suggested by considering Urton's chapter in light of Mark Frank's work, which mentions the "Othello error"; that is, expressing the expectation that another person will deceive you in some sense creates an invitation to deceive by lowering the reputational costs of the behavior. Thus, if one has heretofore been honest and then becomes an object of suspicion, it is sometimes easier to "live down" to others' expectations (for example, that one is deceptive) than to prove one's honesty.

The problem of expectations also figures prominently in Gary Fine's chapter, "Does Rumor Lie?" As Fine explains, rumor "works" in part because it confirms prior expectations; as a result, certain stories can become "too good" *not* to be true, making them virtually indestructible, even in the face of compelling evidence of their falsehood. Part of rumor's robustness stems from the kind of cognitive laziness described in O'Sullivan's chapter. Another element, however, is the entertainment value of deception: the "will to believe" or to suspend disbelief that sustains our enjoyment of magic tricks, films, and *trompe l'oeil* paintings, just to cite a few examples. This issue is revisited in greater detail in my own chapter, "Responding to Deception: The Case of Fraud in Financial Markets," and in "The Pleasures of Lying" by Kenneth Fields.

But to return to Möllering's insight about the "semiotic chaos" of interaction, the concluding chapter of Part III—"Crocodile Tears, or, Method Acting in Everyday Life" by Tom Lutz—problematizes the very notion of trust and deception as clear-cut categories. As Lutz illustrates in his autobiographical account of the early days of his relationship with his future wife, deception can occur without the conscious intent of the deceiver. This challenges the definition of deception proposed by Frederick Schauer and Richard Zeckhauser in their chapter, "Paltering," which lists intent as one of three necessary conditions for an act to be deemed deceptive. The intent requirement creates a bright line between deception and other types of interaction, and accounts for some of the elegance and clarity of Schauer and Zeckhauser's contribution. However, if one removes the intent requirement, the domain of inquiry instantly expands to include animal behavior as well as important realms of human behavior that are otherwise captured only in the arts. As Joan Didion observed in one of her best-known essays, "Self-deception remains the most difficult deception. The tricks that work on others count for nothing in that very well-lit back alley where one keeps assignations with oneself."[12]

Such deceptions are difficult to trace within oneself, let alone in others. And acknowledging the existence of self-deception complicates our understanding of deceit, implying—like the tears Lutz describes as *simultaneously* sincere and contrived—that imposing discrete true/false categories distorts and does violence to the empirical reality. As this section of the book moves from the macro to the micro levels of analysis, from that of whole civilizations to that of dyads, the risks of reductionism become increasingly apparent. Lutz sums up the problem by noting the way "the binary thinking we are pushed toward in all of our considerations of trust and deception . . . necessarily fails to account for the endlessly recursive variety of motives and understandings informing any intimate encounter." This is reminiscent of Conrad's observation in *Lord Jim* about "the essential sincerity of falsehood"—the way in which the most skillful and effective deceptions begin with self-deceit. This suggests why we need insight from the humanities to engage with deception and perhaps other complex phenomena in the social realm: literature seeks to describe behavior accurately before (or instead of) imposing reifying categories. The power of Conrad and Didion derives from the accuracy of their observations, and the clues they have left us in their writing can help scholars embark on the study of phenomena that may not fit readily into existing conceptual frameworks, but that are nonetheless eminently deserving of attention.

Part IV: Deception and Institutions

The fourth and final section of the book looks at the role of institutions as agents and regulators of deception. While previous chapters examine deceit among individuals and groups, this section takes institutions—in the government, financial, military, and cultural realms—as the unit of analysis. These institutions are (dis)credited with innovating techniques of deception on a mass scale: the best-known examples being propaganda and disinformation campaigns, which employ lies in the conventional sense of the term. But newer methods are more akin to paltering, in that institutions are becoming more skillful at deception without falsehood. This may be driven by mass communication technologies, particularly the World Wide Web, which make it easier to check the evidence for factual claims (and thus to expose lies), but that can also provide new opportunities for deception, such as overdisclosure.

In the present era, when "transparency" is among the most highly prized descriptors applied to political and corporate institutions, providing an ex-

cess of information can be an extremely effective tool of deception. The technique consists simply of disclosing far more information than is required or requested, making it difficult to find the essential data points among the extraneous ones. It might be compared to piling hay around a needle, or manure around a pony; at any rate, it exploits well-known limitations of human cognition when it comes to information search—a phenomenon termed "bounded rationality."[13] For example, as this introduction was being written, staffers for John McCain—the Republican candidate for the 2008 presidential race—executed this move brilliantly: responding to public demands for disclosure of the 70-something senator's health records, they literally buried the story in an avalanche of information. Instead of the 400 pages the press expected, reporters received 1,173 pages on the Friday afternoon of Memorial Day weekend and were given four hours to examine the documents. Not surprisingly, McCain's health ended up being a nonstory because it was too difficult to sort through that much information in such a short time. What is significant for this volume is the change of tactics: unlike the traditional and much more common response of withholding sensitive information, institutions such as political parties have swung to the opposite extreme, which might be termed the information-saturation approach to deception. This provides deceptive cover while retaining the moral high ground through the appearance of disclosure.

While such *trompe l'oeil* transparency can frustrate further demands for institutional disclosure, it has not necessarily promoted trust in those institutions. For example, as Ford Rowan documents in his chapter, "Deception and Trust in Health Crises," expectations of deception by the U.S. government are so widespread now that a majority of Americans polled said that in case of a bioterror incident they would be more likely to trust information from their local fire chief than from the Centers for Disease Control. On the one hand, this can be explained as the logical outcome of Watergate, AbScam, Iran-Contra, MonicaGate, and the myriad of other instances in which representatives of the federal government have been caught lying (or paltering) to the people they are purported to represent in good faith. On the other hand, the quantity of information may have as much to do with the problem as the quality of the information: the vast amount of conflicting data available on bioterrorism—both supporting and contradicting the positions of the CDC—might mean that local figures such as fire chiefs attain greater importance simply because they can serve as filters, reducing the overwhelming flow of information to a more manageable size.

To add a Lutzian twist to this section of the book, the last three chapters deal with institutional arenas in which deception is often rewarded, celebrated, and expected. My own work is informed by the evidence that much of what is accepted as sensible, rational business practice in financial markets involves deception. Language such as "caveat emptor" and "information asymmetry" put a polite face on these behaviors—there is no "fraud" until someone gets caught—but they suggest the degree to which paltering and outright lies are understood and accepted as part of standard operating procedure. As a result, the claims by some people accused of financial fraud—such as Martha Stewart—that they were not aware of committing any wrongdoing seem at least partially plausible, which once again raises the tricky issues of intent and awareness in defining deception.

The ambiguous status of deception as an "authorized" behavior in financial transactions is paralleled by deception's changing role in military strategy. As William Glenney IV reviews in his chapter, "Military Deception in the Information Age: Scale Matters," deceptive tactics embraced in Asian contexts (and recorded in texts such as the *Art of War* by Sun Tzu) were until recently rejected by Western military strategists as both uncivilized and unmanly—a last resort of the weak and dishonorable. But the rise of guerrilla and extranational warfare, including terrorist networks that transcend political boundaries, has brought about a reconsideration of deception's role in Western military strategy. The change has been extremely slow, however, lagging far behind the empirical evidence: despite long-standing acceptance of disinformation and propaganda as weapons of war, the bias against other forms of deception is so strong in the West that lessons from conflicts that occurred decades earlier (such as the Vietnam War) are only now having an impact on the organization and deployment of American and European military forces.

Finally, the volume closes with Fields's chapter, "The Pleasures of Lying," which sums up several thousand years' worth of celebration of tricksters, liars, and cheats. This essay brings the book back to its starting point by featuring animals as agents of deception—as Bergstrom's chapter does—and by challenging the long Western tradition of moral condemnation of deception (as reviewed by Zeckhauser and Schauer). Fields, in contrast, shows us how many cultures have taken exactly the opposite view, including ancient Greece (which lionized Odysseus for his skillful deceptions) as well as early-modern Africa (cradle of the folktales featuring Ur-deceiver Brer Rabbit that came

to America via the slave trade) and Native America, where the antihero of many stories is the lying, sneaky coyote. In all three cases, deception is an integral part of cultural institutions and serves multiple purposes: as a teaching tool (especially when it comes to lessons about survival), as a socialization mechanism, and as a rhetorical vessel for safeguarding traditions threatened by warfare or colonialism.

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While the deceptions by government institutions recounted in Rowan's chapter come across as wholly negative events, those described in the chapter by Fields make it difficult to come away from this volume with a clear-cut moral stance, or even a pragmatic cost-benefit analysis of deception. That is very much by intent. Ultimately, this book aims to represent deception as the complex, multifaceted, and elusive phenomenon it is: to deny those qualities would be to rob deception of much of its significance to world history and its power to fascinate and puzzle some of the greatest thinkers in history.

While this volume resists reductionism, it is nevertheless possible to observe and highlight a number of regularities across its chapters. For example, the following themes recur throughout the text, tying together disparate fields of inquiry in the sciences and humanities:

- Defining deception has always been a matter of controversy, but there is broad agreement that deception can occur without any intent or deliberate falsehood; examples include adaptive deception in the animal kingdom as well as self-deception by humans.
- Lying is among the least problematic modes of deception, since definitions of the phenomenon and sanctions against it are generally clearcut; but we have far fewer institutional and conceptual mechanisms for dealing with partial truths and self-deception, making deception without falsehood a more insidious and potentially damaging issue.
- Despite historically and culturally variable definitions of deception, the concept is inevitably linked to notions of truth and trust; we cannot discuss deception without considering the other two, implicitly or explicitly.
- Deception ordinarily involves *interaction* between two or more parties; the amount and type of deception in any given case are shaped by the

institutional and technological contexts: wartime versus peacetime, for example, or online versus face-to-face communication.

- Judeo-Christian cultures are conflicted on the moral status of deception; while numerous religious and philosophical sources condemn it in all circumstances, there is tacit acceptance of deception in love and war, as well as for "palliative" purposes (that is, to shield people who are deemed physically or psychologically fragile from upsetting truths that might cause their condition to deteriorate) and for entertainment (as when the deceived collaborate with the deceivers by suspending disbelief).
- Many non-Western cultures treat deception in an explicitly positive light and use it to serve important functions, including adaptation, teaching, socialization, and survival.

Research on truth wizards indicates that the highest forms of awareness of deception involve remaining open to the data and avoiding premature conclusions. As the bulleted items above imply, this book asks something similar of readers. In this sense, the book is as much about the *process* of inquiry into the workings of a complex system as it is about providing insight.