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MyTHomaniAs

The Nature of Deception

and

Self-Deception

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Edited by

Michael S. Myslobodsky

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**The Mythomanias:
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and Self-Deception**

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Edited by
Michael S. Myslobodsky
Tel-Aviv University



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Contents

| | | |
|----------|--|------------|
| | Foreword <i>Irving Maltzman</i> | vii |
| | Acknowledgments | ix |
| | Contributors | xi |
| 1 | Living Behind a Facade: Notes on the Agenda <i>Michael S. Myslobodsky</i> | 1 |
| 2 | Self-Deception: A View From the Rationalist Perspective <i>Joseph Agassi</i> | 23 |
| 3 | Self-Knowledge and Self-Deception: Further Consideration <i>Anthony G. Greenwald</i> | 51 |
| 4 | The Tricks and Traps of Perceptual Illusions <i>Dan Zakay and Jonathan Bentwich</i> | 73 |
| 5 | Wishful Thinking From a Pragmatic Hypothesis- Testing Perspective <i>Yaacov Trope, Benjamin Gervy, and Nira Liberman</i> | 105 |
| 6 | Identifying the Origin of Mental Experience <i>Marcia K. Johnson</i> | 133 |
| 7 | How Can We Be Sure? Using Truth Criteria to Validate Memories <i>Michael Ross and Tara K. MacDonald</i> | 181 |

| | | |
|----|---|-----|
| 8 | The Single-Mindedness and Isolation of Dreams <i>Allan Rechtschaffen</i> | 203 |
| 9 | Denial, Anxiety, and Information Processing <i>Hasida Ben-Zur and Shlomo Breznitz</i> | 225 |
| 10 | Imposture Syndromes: A Clinical View <i>Lloyd A. Wells</i> | 245 |
| 11 | Neuropsychology of Self-Deception: The Case of Prosopagnosia <i>Israel Nachson</i> | 277 |
| 12 | Mnemopoesis: Memories That Wish Themselves to Be Recalled? <i>Leslie Hicks and Michael S. Myslobodsky</i> | 307 |
| 13 | Phantom Limb Phenomena and Their Neural Mechanism <i>Marshall Devor</i> | 327 |
| 14 | Awareness Salvaged by Cunning: Rehabilitation by Deception in Audiovisual Neglect <i>Michael S. Myslobodsky</i> | 363 |
| | Author Index | 393 |
| | Subject Index | 409 |

Foreword

Philosophers, social and clinical psychologists and psychiatrists, and, recently, neuroscientists, neurologists, and cognitive scientists have reflected on the broad and loosely bounded range of phenomena called *deception* and *self-deception*. Unexpectedly, I am immersed in the mood of the theme by virtue of civic duty and the human interactions it yields as I am sitting in a long L-shaped corridor in the courthouse of Culver City, California, the municipality where I live. I have been chosen at random from among the more than 14 million residents of Los Angeles County for jury duty, which must be completed within 1 month, 10 days in court, or service on a jury that reaches a verdict, whichever comes first. Three of the allotted weeks have passed, and I have been in the courthouse 6 different days.

The judge and deputy district attorney, as well as the public defender, repeatedly caution the panel to avoid biases toward or against police because of personal experiences and media events, toward or against members of minorities because the defendant is a member of such a subgroup, and so on. They are admonishing us to avoid self-deception, and ask us if we can do this. Everyone on the panel agrees that they can avoid bias. The deputy district attorney also points out that we have to use common sense and avoid being misled by possibly deceptive testimony from arresting officers or witnesses, or by possibly deceptive testimony of the defendant if he wishes to testify. Instructions are directed toward avoiding deception as well as self-deception. Is the defendant who says he did not commit the crime, where evidence seems to show that he did, lying, intentionally deceptive, or engaging in self-deception? Is it possible to deceive oneself, or is there always a glimmer of truth that is avoided? Must one have an intention to deceive oneself, and therefore know the truth? How else can it be avoided? Contemplate our minds. Do these questions not raise an old paradox? How can I consider self-deception and deception of others unless my own perceptions are subject to deception?

The problem of self-deception is nearby on any turn of the history of the human spirit. Its various aspects have been studied from the beginning of the experimental psychology of thinking: *Einstellung*, *mental set*, *Aufgabe*, *determining tendency*, *attitude*—an entire armamentarium of terms referring to a highly robust phenomenon is still with us. Among them are the

lasting contribution of the Wurzburg school, “magical thinking” of Skinner, cognitive illusions, and “immanence illusion” of Minsky. Instructions to be on guard, “not to be blind,” may reduce some kinds of mental set, as demonstrated years ago by Luchins in his classic series of experiments on *Einstellung*. In considering the other side of the coin, facilitation rather than inhibition, Lashley—in his seminal paper on serial order—suggested a solution to the problem of, for example, Horowitz playing a Beethoven sonata so rapidly that it would be impossible for his performance to be determined by recognizing more than each note, each stimulus, evoking its response. The solution must be in a form of preparedness—a mental set. Nowadays, it might be called *automatic*, as distinguished from *declarative learning*. What Lashley, a pioneer of behavioral neuroscience, did not know was that the Leningrad school of physiologists was already studying and theorizing about the physiological basis of mental set in terms of the phenomena and principles of the dominant focus; there was a massive amount of data and theorizing on the problem of set generated by Uznadze and his colleagues.

Epistemology aside, this book contains a fascinating array of problems. It displays the work of a diverse group of investigators marshaled by Myslobodsky to examine the various forms of “mythomania,” deception, and self-deception ranging from the mundane to the bizarre (e.g., imposture, confabulations, minimization of symptomatology, denial, anosognosia). The outcome reflects the range of skills of its polymath editor—an experimental psychologist, neuroscientist, and physician, with efforts in art during his youth, who is equally at home in conducting wet and dry neuroscience, conducting research with rats as well as college sophomores, schizophrenics, and individuals suffering from epileptic seizures. Most assuredly, the book also reflects the versatility and skills of the authoritative authors of the individual chapters. Although the diverse phenomena discussed share a family resemblance, they are unlikely to have a common neurological machinery. To reach an explanation for these phenomena, a reliable pattern of lawful behavior must be delineated. It would then be possible to develop reasonable explanations based on the underlying neurobiological processes that give rise to the deficiencies designated as the mythomanias. The chapters herein provide an outline of such a development. The collection is consistent with the emerging gospel, indicating that neither the machinery of “nature” nor the forces of “nurture” taken alone are capable of explaining what makes cognition and behaviors aberrant. Enjoy the adventure-filled journey that awaits you.

Irving Maltzman
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There are many intellectual debts to my colleagues that this acknowledgment could hardly pay back.

This collection gives voice to my personal and professional appreciation of Seymour Kety, a great scholar, a man of deep humanity, a friend, and an inspiration. He helped in many kind ways.

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Leslie Hicks (Howard University) helped to channel my ambivalent interest in confabulations into a research paradigm uniting both of us. He and his students provided a vital backing for my research. Collectively, they contributed to an air of sophomore optimism I experienced every time I came to Washington that eventually made the town my second intellectual home.

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This volume was originally conceived as a product of a symposium to be sponsored by Adams Super Center for Brain Studies at Tel-Aviv University. Alas, this meeting proved impossible to organize in 1995, but the

volume survived owing to the willingness of the contributors to expand and/or clarify their views. The majority of submissions were subjected to peer review. I wish to thank the referees who helped in making some painful decisions. Ms. Debbie Nir is gratefully acknowledged for expert secretarial assistance.

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Living Behind a Facade: Notes on the Agenda

Michael S. Myslobodsky

*What is your substance, whereof are you made,
That millions of strange shadows on you tend?*

—W. Shakespeare, *Sonnet 53*

Deception is a perennial instrument of survival. For centuries, a cunning mind has been considered important in reaching individual and national goals, to the extent that it has been sanctified as a means of endurance in many cultures. By contrast, honesty went up in value with the development of social institutions and bonds, when deception was branded as an inferior, maladaptive, and inadequate individual coping strategy.

The word *honest* originates from the Latin *honestus*, which simply means “a man in an elite position,” and thus approved by his fellow citizens because of his superior status. When Cassius, in a passionate tirade, incites Brutus against Caesar, he does not forget to mention: “. . . we petty men/Walk under his huge legs, and peep about/To find ourselves dishonourable graves./The fault, dear Brutus, lies not in our stars,/But in ourselves, that we are underlings” (W. Shakespeare, *Julius Caesar*, I; ii). The idea is that it should be unbearable for such a noble soul as Brutus to live as a small and timid “underling” (i.e., to live dishonestly), and Cassius gets his way. This connotation of honesty being reserved for the upper class guardians of public morality has long been dispelled. Truth became a dominant principle of behavior because it provided a better chance to adapt, grow, and evolve; it has acquired the rank of a drive that has made a difference in the world. Some adhere to what they perceive as truth even at the risk of personal doom. It has become socially unacceptable to persist in deceiving for personal gain, and it is either condemned or strongly resisted by society by education-

al, legal, or medical means. The departure from deception heralded a departure from nature to culture, or from nature to civilization.

Deception and truth are polar opposites on a continuum with various degrees of departure from blatant dishonesty to unbending truth. A small dose of duplicity may interfere little with family and social duties, particularly when triggered by difficult circumstances. It may either pass unnoticed or receive endorsement within a culturally stipulated range of conduct. By contrast, some flagrant falsities that violate cultural codes by their ineptitude, absurdity, or extravagance, so as to resemble carnival personalities, have long attracted the attention of the medical profession. Notice the proximity of French *un démenti* (lie, denial, contradiction, failure of effort) and *démence* (dementia, insanity)—a suggestive etymology.

This volume touches on several neuropsychiatric conditions in which deception or self-deception, in one form or another, play a visible role. They appear either as “positive-symptom” disorders (e.g., imposture, transvestitism, exhibitionism and obscene telephone calling, Münchhausen’s syndromes, delusional misidentification, confabulations) or “negative-symptom” conditions (e.g., denial, anosognosia, prosopagnosia, various anomalies of perception and memory). These disorders have diverse explanations, and their symptoms may be hidden behind a variety of diagnostic labels.

WHY THE MYTHOMANIAS

An interest in this theme dates back to Mandeville’s (1730/1981) book, *A Treatise of the Hypochondriack and Hysterick Disease*. Dupré (1905) continued the theme and coined the term, originally to isolate an irresistible urge to lie, perhaps reminiscent of *pseudologia phantastica* (“*la tendance pathologique, plus ou moins volontaire et consciente, au mensonge et à la création de fables imaginaires*”; p. 263). Later, the label of *mythomanias* metamorphosed to behavioral acts of pretense and impersonation (Dupré, 1925), and so included many who live in anguish behind a peculiar facade.

The boundaries of the syndromes of mythopsychopathology remain uncharted. The present volume is meant to convey the view that mythomania could be delineated in the spirit of “fuzzy logic” classification. This logic assumes that an object or event can have “fuzzy” boundaries, and thus can simultaneously belong to more than a single group and to a varying degree (Kosko, 1992). In reality, all psychiatric problems have fuzzy, rather than hard, boundaries. It is clear, however, that these symptoms may be abundant outside psychiatric hospitals, including bu-

limics who “binge and purge” in secret, emaciated anorexics who are convinced that their bodies are fat, and those who otherwise seem to be perfectly normal individuals even if with a penchant for self-dramatization (Wells, chap. 10, this volume). Their mode of coping, however, is so stigmatizing that it makes some of these individuals hopelessly lonely, unsure of their own significance, and unable to respond to cues of love or confide in parents, teachers, physicians, psychologists, or clergy. In a number of cases, the presence of mythopathology goes with (a) somewhat lacunar insight and a minimization of deficits, (b) defective feedback of actions, (c) misconception regarding immediate or remote goals, (d) proneness for magical ideation, (e) a lack of ability in setting priorities, (f) an inability to modulate drives, and (g) temptations (“irresistible urges”) that run counter to what is good or what circumstances demand.

Consistent with Dupré, Merriam-Webster (1993) defines *mythomania* as “an excessive or abnormal propensity for lying and exaggerating.” The word *excessive* implies a degree of tolerance to the message, its claim, or a claimant. *Trust* is the right word for the accepting attitude on the receiving end of any communication. Trust is a cumulative product of a collective effort with a biological and socioeconomic history of its own. It grants a promise that some allegations will receive a fair hearing, suspended disbelief, and even an initial acceptance. It is a form of faith that provides the binding glue for society and scientific community alike (Shapin, 1994). Trust is a buffer that permits the delay of disrespect or social punitive or medical actions unless the messenger defies the collective experience, by providing a completely garbled, inappropriate, excessive, and grotesque (i.e., untrustworthy) message. The scale of trust is a product of its society. Interestingly, Ambroise Paré, a giant of medieval medicine, did not challenge the accounts of others. He reproduced in his text an absurd story of the Countess Hagenan, who was said to give birth to 365 children (Haggard, 1946). Society has a score of individuals who are convinced of and even prompted into futile actions by their UFO experiences and the sense of once being abducted by extraterrestrial astronauts. Many share their beliefs.

Normalcy is portrayed as the disposition to emit dependable signals (e.g., verbal, postural, sexual) and reliably monitor the imperfections of memory, inadequate emotions, and flawed perceptions in oneself and/or others. In contrast, mythomanias, in view of the foregoing, could be conceived of as behaviors (messages) that cannot be sustained by institutionalized trust of their witnesses. The catch here is that the threshold of trust may be set rather low. As Bruner (1986) observed, humans are so easily taken in that they must be described as *Home credens*. The allusion to institutionalized (“collective”) wisdom poses additional problems. Societies are easily misguided by their gurus; occasional cases of myth-

omanias may remain undiscerned, whereas numerous others are facilitated. Agassi (chap. 2, this volume) shows self-deception in a historical perspective. His chapter is also a statement of awareness that the danger of self-deception lies in its becoming a part of organizational politics in scientific and medical practice alike. Societies impose or tend to recruit conformity, which is a misleading measure of accuracy. At times, it may even be a pernicious standard. Ross and MacDonald (chap. 7, this volume) indicate that an agreement between the parties provides convincing evidence only if the observations are independent. Some claims and motives may seem so compelling as to recruit substantial support, particularly if they are peddled by the professional “confidence tricksters” (see Agassi, chap. 2). The ability to subconsciously endorse falsities may lead to resounding pathology when someone endowed with authority “takes hold” of people’s “memories” (see Ross & MacDonald, chap. 7; Wells, chap. 10). An illustrious example is the False Memory Syndrome of childhood—a troubling phenomenon akin to iatrogenic maladies promulgated by incompetent practitioners who maneuver their patients into the delusional plots of betrayal, incestuous love, and abuse. According to Wells, such cases could be viewed as a form of imposture by proxy on the part of zealous and poorly trained therapists. In their ineptitude, they kindle highly compelling scenarios by feeding into the inflamed imagination of their clients a piecemeal of low-probability events.

Beyond the episodes covered by psychiatric nosography, there are volumes of lay descriptions of daydreamers, saints and martyrs, plain hypocrites, puritan “commissars” with blasphemous erotic fantasies, pedophilic clergymen, vain terrorists, cyberpunks, promiscuous adventurers who cast themselves as victims, a spectrum of perverts, hard-headed ideologues, phony aristocrats, therapists who peddle seduction, and canny politicians who pursue their goals in contemptuous disregard of all evidence of the way the world operates. They all provide an exhibition of the “normal” range of mythopathology. They all show that the partition between normalcy and bona fide mythopathology is often paper thin, and what is codified as *mythomania* varies with the ways of society and its expectations, fears, and mores.

One of the reasons the mythomanias remain unexplored under their genuine name is that they look so normal. The other reason, perhaps, is that they are chameleons made of Shakespeare’s “millions of strange shadows,” and are described by dipping a pen into a dozen different inkpots. Thus, it is possible that the mythomanias are not less prevalent than other mental illnesses; they certainly could be both as devastating to an individual and as costly to society. Some of its forms may appear as

remnants from a bygone age (e.g., astral and magical experience, demonic possessions, roles of a prophet, messiah, Satan, or God), whereas others are small bills for the changes of lifestyle in this century finally coming due (e.g., extraterrestrial encounters). There are efforts to rationalize Doppelgänger (heautoscopy) phenomena as a proof of the reality of an astral body state. More recently, the public was treated to a unique display of behavioral aberrations molded in "cyberspace." Cyberspace has become a "meal of the month," and now provides an alternative manner of communication where identities can be manufactured and concerns of appearance and posture drowned.

Despite its general interest, mythopathology has largely remained an obscure French affair (Bénézech, 1994; Douverger, Obler, Alric, & Wartel, 1991; Neyraut, 1960), not readily familiar to an English-language readership. The mythomanias seemed like a bit of curiosity that did not neatly fit into a specific deficit of central nervous system (CNS) processes. Nor were they intellectually compelling and academically rewarding in comparison with such conditions as schizophrenia or manic-depressive illness. With time, the name has become illegible as an old epitaph and ignored by the frontier neuropsychiatry preoccupied with its own molding. This oblivion has helped create a discipline at the price of overemphasizing the nosological confines. It is time to recognize that mythomania is among the last bastions of psychiatry that has little, if any, neurological authority and fuzzy boundaries. I believe that the "core" psychiatric disorders would be sooner transferred into the realm of neurology if such marginal issues were shifted into the center stage of neuropsychiatric research. Although with a little ingenuity one could group many forms of aberrant behaviors together, it is apparent that, apart from the homage to French psychiatry, the *mythomanias* provide a useful label for various remarkable signs of pathological duplicity and it is a term not difficult on the tongue to stay.

DECEIVING PROSPECTIVELY AND RETROSPECTIVELY

Any falsehood in behavior can be subdivided into two major categories: an "online" response and a long-term course of action. Dupré (1905) distinguished them by *duration* and *intensity*. Perhaps it is more accurate to designate the short-term episodes of duplicity as *reactive* or *retrospective*, whereas the long-term changes in behaviors are *prospective* maneuvers. This demarcation is based on the fact that these two manipulate different kinds of information, represent dissimilar strategies, and are

established in response to unlike contingencies. Retrospective behaviors are aimed at deflecting punitive actions, avoiding embarrassment or an awkward social situation, obtaining something impossible to attain otherwise, protecting friends from trouble, demonstrating power over authority, and so on. An important point is that maneuvers of this kind are isolated, brief episodes that often elicit a compassionate smile from a witness and may not have any continuation in the future.

Prospective duplicity is directed at precluding future threats, fictitious, illusory, or real. It thus represents a lasting agenda set for gaining success of winning admiration or love of others. It becomes a fraudulent lifestyle when self-deception appears as the strategy of defense against depression and anxiety, rather than a fleeting tactical device. The mythomanias, by and large, fall into the category of *prospective duplicity*. Unlike the strategies used for benign retrospective deceit, which could be likened to a typical short-term withdrawal response, mythomanias could be conceived of as an approach strategy. It is frequently a disguised eruption to purchase social bonds, albeit on conditions of significant alterations of self-identity, behaviors, habits, or memory, and it may be associated with grotesque self-mutilation tendencies (Wells, chap. 10, this volume; Feldman, 1988).

Normal dimensions of self-deception in the realm of memory are exposed in the chapter by Ross and MacDonald (chap. 7, this volume). They have marshaled a wealth of evidence that people normally differentiate genuine from false memories at only slightly above chance levels. This is particularly evident in a case of episodic memory, which is one of the reasons that autobiography, or an unwritten autobiographical account (i.e., self-portraiture), as a genre is so problematic. As Bruner (1993) concluded: "There is no such thing as a 'uniquely' true, correct, or even faithful autobiography" (p. 39). To a neurologist, sane cases of "inadvertent misremembering" look like frank blunders of memory, known as *confabulations*. Perhaps they could legitimately be placed on one end of a continuum with the latter (see Johnson, chap. 6, this volume; Hicks & Myslobodsky, chap. 12, this volume). Ross and MacDonald (chap. 7) as well as Trope, Gervy, and Liberman (chap. 5, this volume) explain that people may tend to obscure the past instead of coming to terms with it.

Johnson (chap. 6, this volume) outlines a range of factors and conditions that make "episodic" memories bind to or dissociate from their origin (perceptual, contextual, affective, and semantic). She views cognitive processes underlying learning and memory within a complex framework—a multiple-entry, modular (MEM) memory system. This framework shows that memory could not be described without recourse to

reflective activity. Its two reflective systems, R1 (refreshing, reactivating, shifting, noting) and R2 (rehearsing, retrieving, initiating, discovering), are driven by motivationally significant goals, designated as heuristic and strategic agendas. This framework is a gold mine of paradigms for examining when deficient source monitoring can make raw data of the senses produce biases and false beliefs and evolve into confabulations, delusions, and multiple personality in the context of age and individual differences.

Another kind of prospective self-deception may normally appear in the form of wishful thinking (Trope et al., chap. 5). Wishful thinking is the last hope of vanishing validity of people's decision-making process. On the scales of Trope's paradigm, philosophical dichotomy between romantics and rationalists (classical vs. recent, low-level vs. high-level); (see Agassi, chap. 2, this volume) does not exist; they appear to be the same group of folks. Both constantly err on the side of optimism. Trope et al. (chap. 5) point out that the distortion of reality is not a phenomenon limited to the mentally ill; everyone tends to maintain the illusion of their own rationality by seeing their freely chosen behaviors as desirable and then bolstering that opinion through selectively exposing themselves to information.

Wells (chap. 10) covers a number of prospective stratagems frequently observed by psychiatrists and clinical psychologists. The most articulate and all-inclusive representative is imposture. Impostors advance their goals almost as skillfully as mythological Proteus—a god who, as the legend has it, changed his form by will. I prefer to call the disorder the *Proteus syndrome* to avoid the derogatory label. In this group, Münchhausen's patients are particularly striking in their persistent solicitation of the piercing brute force of invasive medicine. They are determined to obtain surgery as if it promises an erotic touch, a lascivious kiss, and loving bonds. It is still uncertain why these patients pretend to be what they are not. Do they redress their identity and expertly stage behaviors to minimize specific recognizable or imagined faults? How much do they monitor the degree of departure in their disguise from what they are? Alas, we do not know. To paraphrase Bruner (1986), the arguments of behavioral neurology convince one of their truth, clinical accounts of their lifelikeness. There are no neat and overpowering solutions in psychiatry and clinical psychology. However, the approach taken by social and cognitive psychologists (Johnson, Ross & MacDonald; Trope et al., Greenwald) helps demystify the mythomanias by pathologizing the norm—by showing that the syndrome does not develop de novo and that outlandish and extraordinary are frequently ordinary.

A SWEET SLAVERY OF SELF-DECEPTION

If self-deception originates in strategies of deception, whereas communication systems evolve to be reliable (Zahavi, 1993), then self-deception must be a unique trait. Somehow, however, most people are guilty of it. Everyone knows all too well that human beings are imperfect and fallible. They are frequently gullible; unrealistic in their expectations; imprecise in their recollections; inaccurate in assessing their chances for success, health, and individual contributions vis-à-vis roles played by others; and overly optimistic in their prospects for future gains in important, risky, or mundane, everyday events (see Agassi chap. 2; Trope et al., chap. 5). On top of what people experience during wakefulness, for a good portion of the nights, people's thinking and acting are jumbled, bizarre, and cannot be reflexively evaluated when the dreams take place (Rechtshaffen, chap. 8, this volume).

Self-deception begins with such staple of people's perceptual repertoire as illusions (Zakay & Bentwich, chap. 4, this volume). Being "tricked and/or trapped" by errors of perception while exploring "that great book" of the Universe, our sages were tempted to blame the Universe, which, in Galileo's words, "lies before our eyes." The falsities, of course, belong to all. As Asch (1952) mused: "We act and choose on the basis of what we see, feel, and believe. . . . When we are mistaken about things we act in terms of our erroneous notions, not in terms of things as they are" (pp. 64–65). The allusion to "our erroneous notions" is the comfortable way social psychology, in the past, implicated the ways of the brain, or top-down processes (i.e., experience, memory, motivation, inferences, beliefs perpetually enlisted in perception.)

Zakay and Bentwich (chap. 4) discuss the puzzling thing about illusions—that people continue to experience them without losing sight of the fact that they are illusions. Likewise, patients with parietal brain lesions are helped very little by "knowing" that they cannot have a supernumerary limb or experience pain in the missing extremity (Devor, chap. 13, this volume). Zakay and Bentwich suggest that some illusions are "adaptive" and aid in conforming to the reality, whereas others are not (or, perhaps remain in the rank of perceptual solutions in a search of a problem). Adaptive or not, illusions are a faithful caution that a joker is always hidden in the deck. It is likely that the inaccuracies of receptors have certain useful qualities; they may serve as a reservoir of contemplation and bold intuitive leaps of the scholar's thinking. One might wonder whether the deficits of self-knowledge, lack of insight, wishful thinking, and deviations from truth-telling are "anomalies" that sprout from the "prefabricated" deficit in sensory systems' design. That permits

the departure from sensation to perception, which virtually borders on imagination. In Johnson's (chap. 6) view, two reflective systems of her model (R1 and R2) permit manipulation of externally derived and self-generated information in memory to go well beyond perceptions to anticipate future events and imagine alternatives. Perhaps one general benefit of such strayed perception is that it permits one to stay delighted and have fun in situations of adversity.

The adaptive role of self-deception is exemplified here by denial, emotional numbness following trauma or medical illness. Denial is a continuation of the largely unconscious normal tendency to accept subjectively desired state of affairs ("optimistic biases") and wishful thinking (Trope et al.). Outright denial is typically a retrospective episode. It is believed to represent a motivated act (Gur & Sackheim 1979) and may thus be construed as a drive (pain)-reducing mechanism, sort of intracranial brain self-stimulation instantly recruited for self-repair. It is a symbolic adaptive mechanism, a guardian of hope, identity, and self-esteem in the face of distress (Ben-Zur & Breznitz, chap. 8, this volume).

Self-deception seems like an exclusion from the principle that brain avidly collects and updates information to create and shape within itself representations of the outside world. When brain works in the mode of the analytic, data-driven, bottom-up machine, it must be virtually immune to self-deception. But this is not a regular mode of its operation nor does it guarantee an enhanced viability. This was nicely shown by Feigenberg and Levy (1965) on the example of the size-weight illusion. The illusion is elicited when an individual is asked to compare weights (that are kept identical) of two objects of different volume. Feigenberg and Levy (1965) noticed that schizophrenic patients are insensitive to the illusion, which makes them more accurate than controls in the estimate of weights of handled objects. One reason this observation is so intriguing is that it is almost uncommon to find a task that schizophrenics execute better than normals. Yet this puzzle is predicated on the wrong assumption that an increment in perceptual accuracy is ever a sign of increased adaptation. The brain is programmed to use internalized beliefs. That makes its strength at the price of occasional self-deception. Thus, one cannot liberate the brain from self-deception. Without it, the brain has little left to do.

Self-deception either actively deflects relevant knowledge or turns on "top-down" processes that reach the circuits mincing fairly adequate information. When input information is blurred, the top-down processes are always ready to make sense of the message (Ross & MacDonald). Still another operation is to reject the unwanted or frankly

harmful stimuli and dump for an infinite time the recall of this action (Ben-Zur & Breznitz). To limit the scope, Ben-Zur and Breznitz reserved the term *denial* for operations conducted on external input, or rather a recognizable "outside" event. Yet self-deception is hardly a homogeneous operation. More often, it is called to defuse damaging ("negative") inputs. That is why it is frequently seen in individuals with neurological and/or psychiatric disorders (Johnson). Some of these patients may minimize or completely disregard their condition, confabulate or manifest delusional misidentifications. For example, patients with troubling involuntary movements (e.g., Tardive dyskinesia) may be content with their state and report feeling fine when assessed with an indiscriminate (global) instrument such as Cantril's scale (Myslobodsky, 1993). Other kinds of self-deception may operate on representations, such as chronic painful memories and troubling distortions of body image. A good example is that of a child with cerebral palsy who omits one or two limbs when drawing pictures of humans from memory (Critchley, 1979). By contrast, some individuals develop crippling self-deception by suppressing "positive" inputs. Nachson (Chap. 12) draws attention to the case when patients deny their residual capability, but are explicitly aware of their deficit. Perhaps these are utterly different operations bearing the same name of self-deception.

Most of the time, the process of denial runs its routine job in the background. It mops behind the difficulty of consciousness to confront a problem, but deals with a particular assembly of cues, rather than specific issues. Greenwald (chap. 3, this volume) sees the strategy of knowledge avoidance as the operation of discarding "junk" mail. His example is that of a cancer patient who maintains the expectation of recovery against the overwhelming evidence of the incurable malignancy. This paradox prompts him to ask, "How could that defense be maintained so skillfully *without* using knowledge of the unwelcome fact to anticipate the forms in which it might try to intrude itself on consciousness?" If self-deception requires unconscious cognition, "how does that unconscious cognition relate to conscious cognition?" His theoretical account indicates that the paradox of self-deception was self-imposed by an attempt to explain the phenomenon from within the psychoanalytic view of coordinate conscious and unconscious cognition. The latter assumes a prior complete unconscious representation of threatening information and its control by a single agency. He draws attention to the fact that self-deception is part of knowledge avoidance, which derives from the initial and relatively weak step in a cascade of information processing within a complex neuronal network. It is thus a "pervasively ordinary phenomena" that appears in full color in a case of individual or global threats.

One might wonder, what is the evolutionary benefit in supporting a reproductive success of intrinsic inferiority in perception and self-perception? Why does such an inaccuracy fail to be mitigated by a more realistic assessment? What are the neurophysiological mechanisms of self-deception? When and why does the normal measure of self-deception reach pathological proportions? Who are the susceptible individuals? These questions have been addressed by a number of contemporary thinkers (Ceci, DeSimone Leichtman, & Putnick, 1992; Ekman, 1985; 1989; Festinger, 1964; Goffman, 1959; Gur & Sackeim, 1979; Lockard & Paulhus, 1988; Mele, 1994; Mitchell & Thompson, 1986; Taylor, 1989). Although much has been accomplished, the answers to these questions are unknown. It is certainly beyond this undertaking to give more than a sketch of an answer. There is surprisingly little to say about the nature of pathological duplicity. It is an obstinate problem, and it has been treated outside mainstream neurobiology.

BEHAVIORAL NEUROLOGY: THE NECESSITY OF THE SECOND HAT

Some readers might find it worrisome and wonder why they have been asked to read about prosopagnosia, hemineglect, or phantom pain. The answer is that "Psychiatric systems, like religions, kinship systems, or political systems, are culturally constructed" (Gains, 1992, p. 3). Although somewhat disdainful, this statement is accurate in suggesting that psychiatry is an atheoretical discipline with low cross-cultural validity. It cannot provide exhaustive answers to many of the previous questions. When the "normal-abnormal" facades of behavior begin to thicken into a wall, the concepts, tools, vocabularies, and approaches taken by social and clinical psychology, or even psychiatry armed with the classical way of salvation by "inventing ever newer conjectures and their refutations" (Agassi, chap. 2), become insufficient to either understand or help a patient. Rather, a straightforward reductionistic assault in a search for brain mechanisms of the camouflage becomes an instrument of choice. Its goal is in "anatomizing the living" using a highly structured analysis; it is conducted by scrutinizing and/or experimentally reproducing neurological disorders which pathophysiology is isomorphic with different aspects of the mythomanias.

Johnson (chap. 6) consistently turns from the area of intelligent guesswork to that of verifiable anatomical claims. She discusses the contribution of several brain areas in monitoring memory for events. A number of the duties that earlier scholars confidently pronounced to be

"hippocampal," "temporal," or "frontal" are carefully considered in her model.

Devor (chap. 13, this volume) shows how effective a fine-grained neurophysiology could be in resolving the mystery of neural processes behind the hallucinatory experience known as *phantom organs*. The clinical literature has long promulgated the belief that chronic phantom limb condition is a higher brain-level ("central") phenomenon. A classical example is that of a syndrome following an abrupt vascular lesion in the parietal lobe. Such a picture may be composed of sensory hemineglect and contralesional hemiplegia (the syndrome of loss commonly unappreciated by a patient), along with a phantom supernumerary limb that is personified as "the intruder," "that fellow," or something alien that imposes on a patient (i.e., the syndrome of acquisition, undesirable gain; Critchley, 1979). How this centrally created phantom—which looks more as partial heautoscopy (Grüsser & Landis, 1991)—forces its way on consciousness is difficult to understand. Likewise, the analysis of other falsities is almost hopeless unless a "mock-up" mythopathology is first explored (e.g., phantom organs, hemineglect, confabulations, or prosopagnosia). The beauty of Devor's model is that it permits a rigorous analysis. It helps demonstrate that abnormal firing, subserving phantom limb sensation, might arise, in principle, anywhere along the somatosensory projection pathway. Its ectopic sources in the periphery decide the sensory quality of the phantom percept. The activity of neurons in one or more CNS representations of the body, designated as the *neural matrix of conscious sensation*, determines its shape.

Three of the chapters herein take aspects of memory as their theme (Johnson, chap. 6; Ross & MacDonald, chap. 7; Hicks & Myslobodsky, chap. 12). They do not discuss the neurobiology of memory. However, they all allude to the fact that memory could hardly be conceived of as a system that is capable of flawless reading or "copying" of information from its storage. Normally these copies are surprisingly inaccurate. Yet a deviation from the template does not conflict with survival. Only occasionally, previous experience, as well as ongoing perceptual circumstances, are known to create grotesque "mutations" of a memory, so to speak, that could reach the stage of flagrant fantasies with no internal consistency. For some reasons, the latter products, called *confabulations*, are frequently harvested in frontal lobe patients (Johnson, chap. 6). Why should frontal lobe deficit be associated with confabulations? This volume provides only a few reductionist attempts to answer this question. All revolve around the shared belief that the frontal lobe is fundamental for voluntary control of attention, referencing of past experience, its organization, and evaluation. The crux of Johnson's argument is that an

agenda (i.e., a cognitive script set by a combination of goals and component processes of the two reflective systems) is a pivotal agency for information source monitoring, introspection, self-control, and self-observation. The "agendas" are one's mind's eye that scrutinizes the self, and thus is instrumental in projecting and attempting to read through the minds of others, thereby contributing to awareness of awareness. Agendas are governed by the prefrontal circuits so that deficient frontal lobes make one incapable of pinpointing episodes when behavior and utterance become palpably implausible and psychologically unrealistic, imagery bizarre, logic muddled, and ethical system deranged. It is probably from this fertile soil of dwarfed insight, with an unintelligible, passionate yearning of a company and love, that the mythomanias (or at least some of their multifarious manifestations) come to bud, although it may be too simple a way of putting it. Yet even when making allowances for the contemporary scholarly leaning toward the primacy of prefrontal area in defining the anguished individual self-questioning in the steering between the rights and wrongs of life, Johnson does not seem to attribute confabulations solely to their inferior showing, nor does she tie her model irrevocably to the mast of frontal deficit. She conceives of frontal dysfunctions as jumbled transactions between different frontal areas and/or between frontal and extrafrontal regions.

By providing incongruous recollections, frontal lobe patients give themselves away: They concoct, rather than recall, their stories. They use memory storage to provide a response, but pick up its components in a fickle way. Hicks and Myslobodsky (chap. 12) wonder whether the fragments of information that appear in confabulations are random items (imagined or veridical) in the storage system that always appear with free recall, but normally remain suppressed as implausible. They acquire unusual allure because of patients' unusual bind to any fleeting recollection, in the same manner that irrelevant environmental objects "beg" to be handled by patients afflicted with environmental dependency syndrome (Lhermitte, 1986; Lhermitte, Pillon, & Serdaru, 1986). Consistent with the model of Lhermitte (1986), Hicks and Myslobodsky allow themselves to attribute the reduced sensitivity to dissimilar plausibility of recalled events and ongoing environmental cues following frontal lesion to the activity of the temporo-parietal cortex unopposed by the prefrontal inhibitory circuits. In a way, confabulations may be akin to denial: The process of retrieval is derailed such that alternative information is acquired instead of the needed one (Ben-Zur & Breznitz, chap. 9).

If we accept that there are certain benefits in denial, motivated

"knowledge avoidance," or falsities in recollection, what is the benefit of confabulations? The answer is uncertain. Perhaps a satisfactory solution can be provided if, under the circumstances, a grave alternative might be in the loss of speech and consciousness. The experience of experimental and clinical neurology suggests that immense vitality and adaptability of the nervous system are achieved through an effort to function even if such a venture may initially seem pathetic and yield only confabulations. One might wonder whether confabulations spur cortical reorganization that helps recover function after CNS damage. This returns us to the point discussed earlier.

The overwhelming supremacy of cognition over perception might possibly suggest that the perfection of the senses was not an evolutionary target. As Milner and Goodale (1993) said: "Natural selection operates at the level of overt behavior: it cares little about how well an animal 'sees' the world, but a great deal about how well the animal forages for food, avoids predators, finds mates, and moves efficiently from one part of the environment to another" (p. 317). Thus, the brain may retain its gullibility if it assures advantage for survival. The perceptual world is brought into registry on the basis of knowledge and expectation of a dominant bias (a euphemism for deception) of one of the senses. Vision is one such coordinator. "Seeing is believing," goes on old bromide. As Ackerman (1991) maintained, the eye is always trying to make sense of life, "if it encounters a puzzling scene it *corrects the picture to what it knows. If it finds a familiar pattern, it sticks to it, regardless of how inappropriate it might be* in that landscape or against that background" (p. 230, italics added).

Hers is an adequate description (if with certain poetic license) of the way other senses succumb to vision. A remarkable, but seldom explored, example of visual dominance is the ventriloquist illusion. Struck by its robustness, Myslobodsky (chap. 14, this volume) showed how the illusion could overcome auditory neglect. Hemisensory neglect is a peculiar case of dissociation when a reasonably high level of sensory responsiveness may be combined with a profound oblivion of the stimuli. The patients were deceived as to the source of sounds by drawing attention to the dummy speaker on their "seeing side." As a result, they regained hearing of previously neglected sounds. In keeping with Festinger (1964), one could argue that perceptions shaped by existing knowledge are capable of overcoming a phenomenal disability. In the syndrome of unilateral audiovisual neglect, the ability to translate the tacit (inexpressible) information into explicit knowledge amounts to regaining consciousness. Here, too, the question of clinical utility of deception for the rehabilitation of patients with the syn-

drome of hemineglect cannot be resolved correctly without asking what the alternative would be.

METHOD OF MONSTERS

In keeping with Dupré (1905, 1925), it is recognized that some cases of mythopathology develop against the background of gross brain damage. Brain injury could also be conceived of as a model that permits the exploration of psychopathological syndromes, anchored in easily quantifiable brain abnormalities. The advantage of such models is that they relinquish the "realistic" etiology of maladies for plausibility of specific features. They tend to mutilate their target to emulate reality. Paradoxically, by sacrificing precision, or absurdly exaggerating certain elements, such models, like canvasses of Magritte, tend to arrive at understanding the generality. The whole idea of art is based on the validity of distortions of reality. Did not Henry Matisse utter the famous dictum, "Exactitude is not truth"? These deliberate distortions are at the heart of the "method of monsters" (see Lakatos, 1976), whose thesis is that the organization of normal systems is well served by scrutinizing their maladies, and that pathology is often capable of inflating the machinery operating in normalcy: "If we want to learn anything really deep, we have to study it not in its 'normal', regular, usual form, but in its critical state, in fever, in passion. If you want to know the normal healthy body, study it when it is abnormal, when it is ill. If you want to know functions, study their singularities" (Lakatos, 1976, p. 23). As Johnson (chap. 6, this volume) seconds, "much can be learned about a process from looking at 'normal' errors, or more serious errors that arise when the processes break down" (p. 71).

Devor (chap. 13) provides the most convincing argument to support the claim that the analysis of the "seat of (somatosensory) consciousness" could be best advanced by scrutinizing the pathological alterations in the body schemata. Regrettably, not all kinds of hallucinatory experiences are ready for such exhaustive scrutiny as his "somatosensory ghost."

Having analyzed the mechanism of denial in several planes—the plane of psychoanalytic theory, self-deception tactics, coping strategies developed in stress theory—Ben-Zur and Breznitz (chap. 9) demand, "How does the system know that it should not know?" This is a crucial question if one wishes to invite a neuroscientific debate. Although the answer is elusive, the authors hint at the possibility that contradictory strategies (i.e., different levels of knowing, different states of conscious-

ness), or conscious and "verbally unreportable cognition" (Greenwald, 1992), represent a problem of brain laterality. The mere legitimacy of such a hunch is rooted in the split-brain operations in patients suffering from intractable epilepsy. An avalanche of neuropsychological evaluations spurred by the Sperry (1964, 1985) and Gazzaniga (1970) studies have shown that the two hemispheres have strategies and processing capacities of their own, and respond to different environmental cues. Future studies should explore whether denial is associated with the fact that the "dangerous aspects of the environment" give relative priority to the right hemisphere, presumably more competent in the matters of emotions, thereby reducing the ability of the verbal (i.e., conscious) processing of the "terrifying reality."

In a similar vein, questioning the assumption of unity within a personal knowledge system implicit in the term *self-deception*, Greenwald (chap. 3, this volume) indicates that the contrasting way in which the right and left hemispheres handle different input information is relevant for interpreting denial phenomena. In view of his allusion to the concept of orienting reflex (OR), it is tempting to juxtapose his sequential-stage view of information processing with the neo-Pavlovian doctrine of OR. There is no machinery in the brain other than OR to handle inputs for both spatial orientation and object identification whenever a novel, relevant, and/or sufficiently strong stimulus is encountered or severed internally by cognition (see Maltzman, 1977, for a review). The language of OR is a *lingua franca* of the brain that crosses several domains (e.g., perception, memory, motivation, motor control) before a less fixed-action pattern of organismal action is specified. At least two neuronal systems with different expertise are postulated for OR—the celebrated "where" and "what" steps. The latter have different meaning and frequently opposite motivational valence equivalent to the "withdrawal" and "approach" steps in behaviors. "Withdrawal OR" anticipates a detrimental conclusion regarding an event, whereas "approach OR" counts on an agreeable outcome of new circumstances. The OR network assumes a common metric of processing at different levels of the neuraxis. It requires the presence of numerous sources of information until the "neuronal model of stimulus" (Sokolov, 1963) is sufficiently updated to permit the transition to the "approach" stage of OR (see Soroker, Calamaro, & Myslobodsky, 1995, for a review). Based on the concepts of 'involuntary' and 'voluntary' orienting response of Maltzman (1977), it is possible to speculate that OR embodies aspects of signal processing that necessitate comparisons with mental representations, drives, and volition. The two kinds of OR may possibly have token borders with numerous interim steps between them so as to fit the network postulated by

Greenwald's model of self-deception. (Parenthetically, one might wonder whether Maltzman's internally generated OR is a psychophysiological version of Johnson's R1 and R2.) The possible role of the right hemisphere in the mediation of electrodermal-orienting responses was repeatedly on the agenda of research for its pertinence for the understanding of pre-conscious processing (see Mintz & Myslobodsky, 1983; Soroker et al., 1995, for a review).

Johnson (chap. 6, this volume) seeks to emphasize the divide between the neuronal mechanisms of reflective processes. Attributing reflective subroutines of her model (R1 vs. R2, or tactical-strategical or habitual-deliberate processes) to different degrees of control of the right- versus left-hemisphere networks, she is careful about proposing how this is achieved, and for good reasons. We have been slowly weaned from the idea that cognitive functions can be easily pinned on right versus left-hemisphere processes. In the end, the reader must wait for the time when functional brain-imaging techniques will preside over the debate. With the coming of age of brain imaging, these concepts are ready for a careful scrutiny.

Still another example of a puzzling deficit known as *prosopagnosia*—when familiar people are frequently identified by various nonfacial features, such as sounds of speech, manner of walk, odors, paraphernalia, and so on. It is one of other, more esoteric errors of facial perception (e.g., *paraprosopia*, *pareidolias*; see Grüsser & Landis, 1991, for a review). Nachson (chap. 11, this volume) proposes to conceptualize self-deception in *prosopagnosia* in terms of a dissociation between a (largely modular) face-recognition system and the (central) conscious-awareness system. He postulates a functional dissociation between cognitive functions, rather than a structural disconnection between distinct anatomical sites. Whether this is the mechanism of the syndrome remains to be elucidated. But if Nachson's cautious guesswork is near correct, it would not be difficult to nominate which of the presumed deficient brain sites should be selected for further analysis.

Virtually all people have a guaranteed place on a stage of insanity and imposture that is passionately played in their nocturnal dreaming. Such a rare kind of hallucinations as *heautoscopy* (hallucination of oneself) is an ordinary dream experience that appears in waking patients with temporal lobe epilepsy, drug intoxications, schizophrenia, parieto-temporal injuries, migraine, and other conditions. For Bliss (1986), the syndrome of multiple personalities is a process that has a quality of dream that "creates an inner world where 'magical' events may be encountered," thereby providing "an escape from intolerable realities." It is a small wonder that the notion of psychopathology as the intrusion of

dreamlike states into wakefulness has been a target for investigation for some time. Somewhere along the road, however, it was quietly dropped without retraction. As Rechtschaffen (chap. 8, this volume) argues, this was done for worthy reasons. The parallel between the two might be legitimate only in a metaphorical sense due to the union between the change of consciousness and bizarre dream contents. Features of dreams, such as their nonreflectiveness, monothematicity, absence of intrusion of parallel thoughts or images, thematic coherence, and poor recall (i.e., their "single-mindedness," in Rechtschaffen's definition), do not look like psychotic hallucinations. Rather, the encapsulation of confabulatory story and single-mindedness of dream experience seem so close that Rechtschaffen is tempted to suggest the similarity in mechanisms. The heuristic advantage of juxtaposing the two is in helping generate the neurological framework from which to consider one of the least understood features of sleep. This is done in his update. Yet if one searches for the nature of these staged nightly self-deceptions, and particularly the fact that they are kept below decks like the oarsmen of ancient galleons, visual hallucinations can hardly be discounted. One might profitably study the nature of single-mindedness in waking delusional patients.

Although this list could go on, it is not continued because this collation is fraught with ambiguities. Neurological models are not ready to cover the entire cast of the mythomanias, nor is it a goal of the present effort to map the psychiatric condition on a specific circumscribed neuronal deficit (e.g., brain regions, neurochemical system). This volume makes no pretense of being able to pinpoint lesions in specific brain sites that produce the whole complexity of the clinical syndromes discussed. Rather, it portends that only by neurologizing can we ever hope to give the mythomanias their place in the realm of neurosciences and provide answers regarding the brain machinery underlying deception and self-deception in general. A homely parable reiterated by Fuller Torrey (1989) may prove helpful in emphasizing the point:

One evening, a man was trying to read the newspaper. His little boy was making so much noise that he could not concentrate. Finally, in desperation, the father took a page of the newspaper showing a big map of the world and cut it into small pieces. "This is a puzzle," he said to his son. "Put the world together right." The little boy worked quietly in the next room, and in only a few minutes he returned with the map of the world put together exactly right. "How did you do it so quickly?" asked the father, in great surprise. "Oh," said the little boy, "there was a picture of a man on the other side of the page. I found that when I put the man together right, the world was just right, too." (p. 65)

I am hoping that the mythomanias can provide good service in the guesswork needed for reconstructing such a map. With its pieces glued together, a better picture of the brain's inner workings will be sketched.

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Self-Deception: A View From the Rationalist Perspective

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SELF-DECEPTION IN GENERAL

In his “A Liberal Decalogue” Russell (1967, pp. 60–61) suggested not to envy people who live in a fool’s paradise: It is a place only for fools. This saying invites detailed commentary. A fool’s paradise is not a place, but a state of mind; it is a system of opinions, of assessments of situations, that calms one down, that reassures one into the opinion that all is well, even when all is far from well. Fools may be ignorant of the severity of their situations, perhaps because being well informed tends to get them into a panic. This happens regularly, and there is little that can be done about it, except that the wise would still prefer to be well informed so as to try to cope with the panic more constructively. They would not easily fall for the reassuring hypothesis, preferring to examine any reasonable alternative hypothesis about any risk that might invite action—so that if the hypothesis is corroborated, they can try to mobilize some appropriate action.

Alternatively, fools may tell themselves that there is no risk. This is self-deception, and the question is, why do people deceive themselves and take risks? To take a concrete example, people with weak hearts may avoid taking precautions and prefer to live like normal people and risk instant death from heart failure. This is possibly a rational choice. Yet some who suffer from weak hearts pretend, even to themselves, that they are normal. It is hard then to say whether they have chosen to live normally and take the risk. Perhaps they prefer to take precautions, and yet do not do so because they are unable to look the risk straight in the face.

More sophisticated ways of living in a fool's paradise are known. One may live there knowingly. One may feel that one does not share the reassuring received opinion, yet pretend that one does. This is what Russell warned against: Anyone who knowingly chooses to live in a fool's paradise is still a fool. Anyone who thinks that awareness of one's living in a fool's paradise immunizes one to its dangers is a fool. This is self-deception about one's ability to cope with deceit. Many philosophers have noted that people who habitually deceive finally fall for their own deceptions. This is the well-known phenomenon: confidence artists appeal to the willingness of their victims to deceive both themselves and others in one and the same act: The victims are encouraged to deceive themselves into thinking that they deceive only others while ignoring their own greed and the immorality of the way they choose to satisfy it. To this Russell added that the same holds true for all self-deception: Those who think they can live in a situation of self-deception without deceiving themselves finally fall for their own self-deception. The seemingly wise deceive themselves that they only pretend that they endorse the reassuring hypothesis: They do not know the cost of the pretense, which is the neglect of thinking out the viable alternatives.

The reason one endorses the reassuring hypothesis despite attempts to immunize oneself is complex. It is in part intellectual: One does not invest in the examination of alternative hypotheses. It is in part social: One cannot discuss alternative possibilities when one pretends to the world that one is committed to the reassuring hypothesis. It is in part psychological: One is ambivalent about matters, and one reassures oneself that one does not need the reassurance.

The case of self-deception, in brief, is complex. It involves error, impatience in thinking out detailed matters, unwillingness to examine each and every obvious option, and also deception proper. Yet clearly something is missing here: It is fear and obsession. As Freud was first to notice, self-deception usually rests on the stubborn reluctance to consider alternatives when these are suggested by others.

Not all cases of self-deception, however, are cases of life in fool's paradise. This phenomenon is usually associated with the self-deception that involves whole social groups. The social case is more complex than the personal case. The personal case of self-deception is puzzling because its victims refuse to consider corrections suggested by their environment. The case of the fool's paradise that is group self-deception, usually national, is different and more complex: A whole society declares a certain option not open to public discussion. Its given rationale is that it is dangerous to discuss different options—because it will help other people or discourage our people. Indeed, it is very similar to the

case of the confidence artist: The group (national) leadership suggests that, although our case may be shaky, we may be able to succeed if it will be nevertheless accepted, and for this it should be presented with full confidence. All that is missing from the picture to complete it are two true observations. First, many political leaders are confidence tricksters, and they see themselves as such. Second, confidence tricksters make a profession of deceiving themselves that they deceive only others. In principle, then, the difference between the two cases—the private and the public—is only technical: Both are cases of reluctance—of not allowing oneself to examine views that deserve to be examined, where an excuse for this reluctance is left unexamined as well. The two cases differ as to the excuse offered for the reluctance. To make the difference purely technical, what is needed is to observe, as is explained in detail here, is that any effort to present a case authoritatively—be it personal, social, political, or intellectual—is in itself nothing short of self-deception.

In summary, when one deceives oneself, one does not know the cost of the self-deception, and it is usually this that makes the error significant. In other words, however irrational any case of self-deception looks, when one unpacks it, one finds it not very problematic. The inability to see this rests on a difficulty that enters the picture with the introduction of a theory of rationality. Two important theories of rationality are found in Western philosophy. The earlier of the two is the more important. It was known as the rationalist theory, and now it is known as *classical rationalism*. It identifies rational action with one based on rational belief and rational belief as that which rests on proof of sorts (Agassi, 1986a; Agassi & Jarvie, 1987, chap. 16). The other important theory is *romanticism*: It identifies rational action with one based on strong intuition: One acts rationally when one is true to one's inner self, when one listens to the right inner voice. This theory, be it true or false, is not given to rational discussion for the following reason. There is only one argument against it: By listening to one's inner voice, one can make tragic decisions. The followers of the romantic theory of rationality are not dissuaded by this argument for reasons that are good or bad. Whatever is the truth of the matter, the followers of the romantic theory are unshakeable. Hence, there is no point in pursuing this discussion unless and until someone comes up with a new suggestion (for details see Agassi, 1982).

The rest of this chapter is devoted to a discussion of the classical theory of rationality and of its implications for the case of self-deception. At the end, a new avenue for the theory of rationality is highlighted. The newer theory of rationality is more commonsensical, as it takes rationality to be a matter of trial and error. Thus, it permits the discussion to proceed along the lines suggested here.

RATIONALITY AND THE SOCIAL ORDER

The prevalence of self-deception is part of folk knowledge; it is the target of a rich folk literature, and of more sophisticated literature as well. It has not puzzled people, however, until the advent of modern times. The reason is not far to seek: The phenomenon began to puzzle people when it conflicted with received opinion and/or when it constituted a challenge that was surprisingly hard to meet. The surprising difficulty presented by a challenge testifies to the presence of a theory in the light of which it should be easily met. The theory that human beings are rational is the source of the trouble: Obviously, self-deception is not rational.

As long as the received opinion was that human beings are foolish, or unreasonable, it was expected that they should behave erratically, deceive themselves, and so on. Clearly, this traditionally received opinion was an unavoidable corollary to the traditionally received religious doctrines of the Western world prior to modern times: The wages of sin are slight and momentary and the cost of sin is eternal damnation; hence nothing is more rational than to behave properly. Yet people will sin ("the flesh is weak"). The prevalence of sin was taken by all the traditionally received religious doctrines of the Western world prior to modern times as conclusive evidence of human irrationality.

The situation was taken quite differently by most of the modern rationalistic philosophers, the classical rationalists: They considered the prevalence of sin to be evidence that sinners simply do not believe in eternal damnation. They reasoned thus: Rational people act in accord with their beliefs; people do not act in accord with the belief that their actions will lead to eternal damnation; hence, clearly, they do not believe in eternal damnation. Moreover, the classical rationalists taught that it is important to hold the right beliefs. To this end, beliefs should be adopted rationally, and then all will be as well as can be expected. Self-deception, however, does not fit the classical rationalist prescription: Classical rationalists always viewed it as the willful deviation from rational belief. Its prevalence, then, is, or seems to be, a refutation of their theory of rational belief. Hence its centrality for their theory of rationality—for the theory of rationality presented in the classical rationalist tradition (Agassi, 1977, 1991).

This last point deserves a slight elaboration. Practically all Western religious traditions and practically all folk wisdom constantly preach the restraint of natural human appetites on the ground of the (false) observation that selfish conduct obviously undermines social stability. The classical (Western) tradition of rationalist philosophy disagreed with this teaching and rejected this observation (as obviously the very opposite of the truth). It declared any desirable restraint better achieved by reason-

able, self-reliant individuals than by those frightened by hell fire and brimstone. Classical rationalists preferred, on the whole, not to prescribe restraint. They did not deny that some restraint is reasonable. Yet they considered particularly erroneous the demand to avoid greed and selfishness. The reasonable, self-reliant individual, they taught, will practice the necessary self-restraint anyway. The end of rational conduct is always selfish, as action comes to satisfy the natural appetites of actors. Hence, the best way to act, the best way to achieve one's end, is to behave intelligently—to act as a reasonable self-reliant individual (Agassi, 1986b).

In brief, the classical (Western) tradition of rationalist philosophy rejected as too strict the preaching of (Western) religious traditions and folk wisdom for the restraint of natural human appetites. It preached reasonable self-reliance, on the opposite view that reasonable, self-reliant individuals are better able to judge how strict their conduct should be. Rational action is best guided by thought; hence, the problem of rationality is less a question of the choice of a mode of conduct and more the question of the choice of the right belief to endorse. The problem then can be limited, at least initially, to rational belief.

The 17th- and 18th-century rationalist philosophers were liberals. They learned to argue against the traditional religious requirement for strictness, which was based on the observation that the unintended social consequences of selfish action are socially undesirable. The liberal philosophers suggested, on the contrary, that some social conditions ensure that the unintended social consequences of selfish action are socially desirable. Under such conditions, then, following natural appetites, selfish actions will (unintentionally) support social stability rather than undermine it. If so, instead of preaching to curb natural human appetites by the threat of hell fire and brimstone and eternal damnation, it is wiser to create conditions that will make selfish conduct socially beneficial: The readiness to act selfishly is more reliable than the readiness to curb selfish motives merely out of fear (Gellner, 1992, 1995, p. 8).

Initially, in the 17th and 18th centuries, the theory of rationality was prescriptive rather than descriptive. It became descriptive in the 19th and 20th centuries, with the advent of modern social science. It was recognized then that it is well worth investigating the facts of the matter, to observe what actions some extant ideas bespeak, and how. This created a need to distinguish explicitly between the two kinds of rationality: (a) the intellectual rational choice, the choice of beliefs or of opinions to endorse; (b) the practical rational choice, the choice of the right conduct. This distinction is briefly denoted as the choice between rational thought and rational action, or that between thought and action. The need to make this distinction explicit was first presented in modern sociology. It

usually goes by the name of Max Weber, one of the acknowledged fathers of that field, who made his studies at the end of the 19th and the beginning of the 20th centuries. Now the classical rationalist assumption is that action is guided by thought, and rationally this is done as best as possible. Hence, the problem of rationality can be limited, at least initially, to the problem of rational thought: What opinions should one endorse? What is rational to believe in? What criterion of choice of a belief should one endorse? The best solutions to these questions, the classical rationalists taught, will ensure the best solutions to all problems.

RATIONALITY AND SELF-RELIANCE

Question: why did the classical rationalists find it so important to insist that, by the classical rationalist recipe, all is as well as can be expected?

Answer: Because throughout the history of classical rationalism, its adherents have opposed the religious doctrine that humans are evil and replaced it with the classical rationalist gospel of self-reliance as the road to salvation (Agassi, 1977).

Question: If all is as well as can be expected, why is the world still so frustrating, and why are people so disappointing as they are?

Answer: Because, says the classical rationalist, people are still not self-reliant.

Question: Why are people not self-reliant? What will make them so?

Answer: People are not self-reliant, says the classical rationalist, because they are captives of the [religious] doctrines they are taught, which makes them rely on their teachers. Only giving up these doctrines will enable people to become self-reliant. After the act of giving up received opinions, beliefs will be as rational as can be expected (for more details, see Agassi, 1991). The world may still not be perfect even when people will be as rational as possible, but it will be as perfect as possible. This is the classical theory of rationality: Rational conduct will bring about the best of all possible worlds, says the classical rationalist, particularly because it will advance scientific research, and thus increase self-knowledge and self-reliance.

It was in this way that self-deception was integrated into the broader system of the modern or classical rationalist movement, or of the Enlightenment movement, or the moderns. Self-deception, they taught, is irrational, and irrationality is due to the absence of self-reliance, and this absence is due to lies with which one is raised. Members of this movement were hardly ever explicit about religion. Few of those who were

religiously skeptic dared hint at that fact. It only became permissible to refuse to assume the existence of God in the early 19th century, after the demise of that movement, and even then there was no attack on established religion until the mid-19th century. Nevertheless, this much is clear: The undercurrent of the gospel of Enlightenment was that of self-reliance; the educational system was blamed for teaching ideas that impede it. The education system was, of course, run and carefully monitored largely by the religious establishment. In the civilized world, this monopoly was broken by the French and American Revolutions, yet the monitoring of it by the religious establishment still goes on there to this day. However, few will blame the religious establishment for the wide spread of irrationality.

The situation merits careful analysis. The basic classical rationalist tenet is this: Self-reliance is the reliance on reason; therefore it is the same as rationality. It follows from this that self-reliance, or rationality, is the best guide to life. There is no substitute for thinking: Regardless of whether one is religious, it was suggested, one should not rely on any church or leader. Some modern rationalist philosophers preached and still preach religious self-reliance, or course ("God helps those who help themselves"). Yet it was this idea that undermined the authority of established churches and leaderships, regardless of whether and to what extent this authority was hostile to self-reliance.

The question then is, what is rationality? It was treated in a standard way within the classical rationalist tradition, and its current formulation is as follows. The question is first split into two: What is rational action? What is rational belief? The classical rationalist tradition took it for granted that people always act in accord with their beliefs; otherwise they are coerced by others, by the laws of the land, or by the laws of nature, and so they do not act freely, and so they do not really act. This is the distinction between action and behavior that entered the literature. (Behaviorism, accordingly, is the view that people never act in this sense of the word—that they are always coerced to move as they do by the combination of the general laws of nature and specific circumstances. The standard classical rationalist view rejects this doctrine, and takes for granted as a fact the repeated observation that people do act.) Assuming, then, that people act, it follows that they act rationally. It then follows that if their beliefs are rationally held, then their conduct is as good as can be reasonably expected. This seems reasonable, and even common sense. It is common sense, of course, only on the supposition that humans are naturally rational and self-reliant, that irrational conduct is due to childhood indoctrination in unreasonable beliefs, and that this indoctrination can be overcome for the asking. This means that people are rational unless they are deceived. Why, then, do people insist

on being deceived? Why are people gullible? Classical rationalism offers no answer. This is the big gap in the classical rationalism of the Enlightenment movement. This doctrine is still very popular, and so the gap is still conspicuous.

Thus, the prevalence of self-deception is the major refutation to the doctrine of natural human rationality, which is at the root of the doctrine of the Enlightenment movement. Moreover, all deception is due to the fact that some of it is successful, and successful deception is possible only because many people allow themselves to be deceived. Why do they? Because they deceive themselves about other people's credibility. Admittedly, since rational opinion is at times erroneous, one may be deceived without self-deception. Yet, since reason is the best guide, if the rationalist philosophy is true, it will prevent constant systematic error. Systematic error is the result of insistence on it, of the mistrust of reason, and so it is due to self-deception. Even the trust in the teaching and indoctrination during childhood is a form of self-deception. It is possible and rationally obligatory to give it up and be set free. Yet people often cling to their education. They deceive themselves to trust it. The question that classical rationalism has to answer is, why then do people allow others to deceive them systematically? According to classical rationalism, what prevents bridging the gulf between the best, which is the life of reason, and the real, which is the practice of systematic error, is self-deception alone. This phenomenon deserves special attention: It is any systematic error that cannot be viewed as anything other than self-deception. All efforts to correct it are met with unintelligent excuses.

ERROR AND SIN

The ethics of the Enlightenment movement, of the modern philosophy of life, is simple: "Reason is and ought only to be, the slave of the passions," as David Hume aptly put it (Hume, 1980, Bk. 2, Pt. 3, Sec. 3). In this view, self-interest is the only right motive force for action, provided it employs reason to the full, which, of course, is eminently reasonable. Hence, all sin is violation of self-interest, and so, at bottom, all sin is error. This is the doctrine of enlightened self-interest. It is scarcely new. In antiquity it was known as the Socratic doctrine of eudaimony (*eu* is good and *daimon* is spirit; the name refers to the story, narrated in Plato's *The Apology of Socrates*—Socrates explains that he is the wisest by reporting that he has a good Fairy Godmother who prevents him from doing what he does not want to do, which is not good for him). This doctrine is particularly hard to defend, since experience is more in accord with the opposite doctrine, according to which humans are both

wicked and self-destructive. Thus, the moral doctrine of classical rationalism appears to be empirically refuted.

The rejoinder to this criticism comes in two steps. The first move is to reduce all self-destruction to self-deception—on the supposition that as self-destruction hurts oneself, it is never desirable and so it is never reasonably desired. (It is unnatural.) The second move is to reduce wickedness to self-destruction. The way to effect this last reduction is to show that the wicked are sawing the branch on which they sit. This is shown by the claim that, as their need for friends requires, they should be benevolent not wicked. This is unsatisfactory, as it may work for friends, perhaps even for potential friends too, but not ever for enemies. It looks eminently reasonable to be vicious to them. Then different arguments are marshalled. An appeal is made to providence: It is in one's best interest to be on good terms with divine powers. This, too, is unsatisfactory, as it is an appeal to the wishes of the divine, not to those of a self-reliant actor. The holders of the monopoly on divine powers always oppose self-reliance. An appeal may then be made to one's need for peace of mind, and hence for peace with one's conscience (the conclusion of Hume, 1748/1980, explains martyrdom this way). This, too, is unsatisfactory: Conscience is based on religion, and the exercise of eudaimony was initially intended to do away with it, and for good reasons. Clearly, it is not conscience, but the sense of guilt, that disturbs the peace of mind. This sense of guilt is forcibly established by religious education to undermine self-reliance. All advocates of self-reliance recommend that the sense of guilt be eradicated (Agassi & Agassi, 1985; Kaufmann, 1973).

It is still possible to defend the doctrine of eudaimony, or enlightened self-interest: Self-destructive action is prevented by the sufficiently clear understanding of its consequences. The standard contemporary example is smoking, but any bad habit will do. The victims of a bad habit know that their conduct is not in their self-interest, but only in a vague manner: They often refuse to see it clearly until their physician convinces them that they are killing themselves. Then many of these people find themselves freed of their bad habit with no effort at all. Hence, the intensified energy and sense of guilt invested in efforts to stop a bad habit are forms of self-deception. What is needed is neither effort nor strong will, but clear understanding of the harm it causes, say the sages of the Enlightenment.

As it happens, all this is neither here nor there. Whatever the rule is for right behavior, it is clear that self-deception is not the right mode of conduct, yet it is prevalent. Even the assumption that all wickedness is due to self-deception does not help vindicate humanity very much, since self-deception is evidently wicked: The pure at heart will hardly