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**Deception: A View from the Rationalist Perspective**

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Self-Deception in General

"A Liberal Decalogue" suggests (Russell, 1967, pp. 60-61) 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 that 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 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, 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, Chapter 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 unshakable. 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 reasonable, 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. Its 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, 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 which 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 widespread 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, of 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 commonsense. It is commonsense, 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 effort 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 has aptly put it (Hume, 1980, Bk. 2, Pt. 3, Sec. 3). On 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 marshaled. 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 (he conclusion of Hume, 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 (Kaufmann, 1973; Agassi & Agassi, 1985).

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 not 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 fall for it. (Others are guilty of the sin of pride.) Hence, regardless of whether one should be as fully self-reliant as possible, and whether the canons of right conduct are those of enlightened self-interest, self-deception is both erroneous and sinful, yet it is regularly practiced. Why? In particular, is it the sin of it that brings about the error, or is it the other way around?

Before we proceed, we may wish to know, what does it matter? Imperfection is a familiar fact, as are both wickedness and stupidity. Why does the old party insist that all impropriety is sin, and why does the new party insist that all sin is error? Why not lump them together, or say that impropriety and misconduct are at times due to error and at other times due to sin (and often due to both)? After all, criminal law says exactly this: Criminal courts are often called to adjudicate and decide about the reason for some misdeed -- is it due to sin or to error? Moreover, such courts also distinguish between permissible and impermissible error. (This is the root difference between murder, premeditated or not, and involuntary manslaughter or accidental killing.) Why insist on reducing error to sin or the other way around?

The answer is this: Suppose that behind every sin lurks some error. The way to reduce sin is then not by preaching, but by enlightening. This is the explanation that historically stood behind the Enlightenment movement's optimistic view of humanity: Sinfulness is allegedly a part of human nature, whereas ignorance certainly is not. But this is questionable: Just as one may say that behind every sin is error, one may also say that behind every error is sin. Ignorance leads to excusable error only, whereas the error of people's ways are deviations from the straight and narrow. Established religion comes to prevent sin, and it teaches the true doctrine, but people who are wicked will not listen. Thus, according to all establishments that issue rules of proper conduct, self-reliance is the cardinal sin. (Hence, science can have no such establishment! This is conspicuously false, yet in the Age of Reason, in the time when classical rationalism flourished, it was much more reasonable than it is today to assume that

science has no establishment whatsoever.) Here, again, we meet the source of the disagreement: It is this question -- what is better to rely on, individual self-reliance or traditional wisdom?

This does not solve the problem at all. The fact remains that both morality and science are cultivated. Why try to eliminate one of these? The answer is that one depends on the other: Wisdom, says established religion, begins with the purity of heart ("the beginning of wisdom is the fear of God"); ethics, retort the enlightened, begins with the intelligent employment of reason. Does this dispute matter? Should it not be ignored and both morality and reason be employed?

All this will still not do. This discussion is stuck with the problematic phenomenon of self-deception; it is admittedly both stupid and wicked; It is better eradicated, but no one knows how. Even the combined use of both explaining and preaching does not overcome it, and so there is a genuine need to learn more about it so as to cure it. The two common theories identify it as a sin as well as an error, yet they differ as to which one is the source of the other. Which is it then? In the hope of finding a better cure, a better understanding of self-deception may be sought. In this search, attempts may be made to criticize both theories.

#### Bacon's Doctrine of Prejudice

The present discussion has got into a loop as sin and error are reducible to one another: Even if all error/sin is sin/error, it seems that the very disposition to err/sin lies in our moral/intellectual imperfection. All humans are disposed to both sin and error, and it is hard to decide which of the two dispositions lies deeper. Moreover, as this discussion concerns self-deception, it is important to note possibly self-deception is

inexplicable even were it known if error is the cause of sin or vice versa. The curious historical fact is that the presentation of the problem was first forcefully made by Sir Francis Bacon, around the year 1600. He solved it not by any attempt to choose between blaming sin for error and blaming error for sin but by blaming self-deception for both. He was not concerned with the question, which comes first, sin or error? He was not concerned with social and political philosophy. He had a tremendous vision: A great scientific revolution is in the offing, and it will bring about a great technological revolution. He was convinced that most social and political problems would be solved by the technological revolution. Until then, he recommended, a conservative attitude to politics should prevail.

As Bacon was convinced that technology would be revolutionized by the development of scientific knowledge proper, his sole concern in most of his writings was to help the advancement of learning (for a detailed discussion of all this, see Agassi, 1988b). Bacon took for granted the ancient doctrine of how enlightenment comes about: The pure mind is prepared to perceive the truth in an intuitive experience of sorts. This doctrine is generally known all over the world as mysticism (see Agassi, 1981b, Chapter 23). There is much confusion here: The mystics proper do not claim that their knowledge is given to clear articulation, yet the Platonic and Aristotelian theories of learning do. Hence, these theories are not quite mystical; the neo-Platonic or cabalistic doctrines are mystical. The central question that this raises is, how is the mind purified? It engaged Bacon as it engaged many others before and after him. (Different mystics have offered different rituals for this purpose.) Everybody agrees, of course, that, to that end, the

mind has to be of a righteous man -- free of error. The question remains, how is the mind of cleansed of its errors? Both Plato and Aristotle recommended critical debate as the means to that end. (Aristotle called this method 'epagoge', and this word was translated into 'induction'.) It is the method of questioning that ends up with definitions, said Aristotle, as invented by the Pythagoreans and perfected by Socrates and Plato. Definitions are the foundations of science, Aristotle added, and they constitute the source of all true knowledge. Bacon agreed about all of this except for the ancient view of the efficacy of critical debate.

Critical debates, said Bacon, have gone on in universities for centuries, yet to no avail: Each party sticks to its guns. The reason is simple: One can always ignore criticism, or dismiss it with a witticism ("this is an exception that proves the rule"), or, if one is obliged to take account of it, one can make a new subtle distinction, to make a small exception, or otherwise belittle the worth of an argument.

This raises two central questions. First, is it always possible to belittle criticism? Second, why should one do that? The answer to the first question is in the affirmative. It is a powerful part of logic, known today as the Duhem-Quine thesis. Exceptions can always be classified in a different category. (To take a common example, the prejudiced who recommend the discrimination of any sort of people may admit that an instance of the sort in question is unjust; they will then place these counterinstances in a separate class and cling to their prejudice against the remaining members of the discriminated sort. For more details about the Duhem-Quine thesis see Agassi, 1994.)

There are different attitudes to criticism. Duhem said science must accept criticism only in small doses so as to maintain its

continuity. Why should science do that? Duhem did not explain, but the truth is that he was defending the same medieval method that Bacon was attacking because he greatly respected the same medieval thinkers Bacon despised. Bacon declared them enemies of progress; Duhem declared their contributions essential to the history of science. Bacon denied the very existence of mediaeval science; Duhem was its first great historian. More important, Bacon agreed with the ancient revered philosophers that total scientific knowledge of the whole universe is possible; Duhem did not. Bacon declared the need for one and only one scientific revolution -- the one that eradicates all prejudice and all error; Duhem advocated continuity and denied the possibility of scientific revolutions. Bacon envisaged a tremendous explosion of science; Duhem taught that science proceeds in small steps. Bacon ignored mathematics altogether and recommended for the mind free of prejudice to collect as many and diverse observations of simple facts as possible, and to proceed slowly and carefully towards the goal of total scientific knowledge; Duhem saw this as naive and insisted on the need to develop the mathematical apparatus that is essential for scientific knowledge and fitting the facts within it.

How is one to judge between these views? Probably most people will reject both, at least because at least two scientific revolutions have occurred, contrary to both. Bacon was too radical in his demand to clean the slate with no theory left and Duhem was too conservative in his claim that science suffers no revolution as each stage of it depends on a previous stage (Agassi, 1957, 1963, 1981b. See also the biography of Duhem, Jaki, 1984).

Bacon was a Utopian visionary in the style of his time -- the early 17th century. He based his vision on a new idea: He assumed that the rejection of all preconceived opinions and the accumulation of a vast collection of items of factual information will lead rapidly to the full growth of theoretical science.

Further, he was deeply convinced that this growth will bring salvation, and that salvation is around the corner because everyone is naturally disposed to contribute to the growth of knowledge (Bacon, 1994, Bk. I, Aphorisms 15-18). Why, then, is salvation not here already? Because there is a small obstacle to it: The sins of laziness and pride. People offer conjectures instead of working hard in the search for the truth, and then they refuse to admit criticism as it puts them to shame. Thus, the demand for the purity of mind includes the demand for devotion and humility, caution and resistance to the temptation to conjecture. Once one has made a conjecture, one sees the world as conforming to it, is then bound to endorse it as true, and is then trapped in it: It becomes a fixed feature of one's intellectual makeup. (This is corroborated by contemporary cognitive theory: One who endorses the theory that all is x, say cognitive psychologists, sees x everywhere; x can be atoms, life, sex, selfishness, or anything else.)

Prejudging matters instead of letting facts speak for themselves, Bacon explained, is the acceptance of a bribe. His explanation is subtle, and reminds one of what the Bible says of it (Exodus, 23:8): Bribery blinds the wise. That is, one says to oneself that one is wise enough not to be blinded by the bribe, but to no avail. The very bribe, argued Bacon, is what blinds one to the truth, as it is the flattery to oneself. It is only self-deception that stands between humanity and salvation through science. People flatter themselves that they are

cleverer and more knowledgeable than they are, thus getting blind to criticism. Moreover, the psychology of perception as first offered by Bacon, and as still taught today, suggests that nothing can be done about it. To become a good researcher, said Bacon, one must humbly admit ignorance, and relinquish all the preconceived notions that one happens to have; only then, he said, will one qualify to seek knowledge, and even then this holds as long as one does not pronounce opinions. Bacon's idea is generally rejected nowadays. It is generally agreed that people cannot live with empty heads. (Only some devotees of popular cheap versions of Oriental mysticism endorse the false view that some techniques empty the head of all ideas.)

The observation that theory blinds one to facts that offer criticism of it is a central part of contemporary psychology of perception and cognition. It often goes today by the name of the 20th-century psychologist Leon Festinger. This observation has led some thinkers, such as Giordano Bruno and Galileo Galilei of the 16th and 17th century, to the obvious conclusion that such observations spuriously validate the theories that invoke them. Bacon agreed but claimed that a theory can be properly validated -- when it is rooted in unbiased observations: As long as theory precedes observation, he said, its validation by facts is assured for all those who propound it and for no other; only if it emerges by itself out of many and diverse observations, he assured his reader, is the result truly assured and will convince all. Hence, proper observation begins with the cleaning of the observer's mind, and therefore observers must be humble and attend to small facts, not aspire to be the proud originators of great philosophical systems.

Why is the sin of pride so special in the scheme of things? Why are all sins to be viewed as errors, yet pride the sin at the root of error? Bacon answered that pride too is but error; of course it is a form of self-deception. It is the error that is the source of all errors, as it inhibits the natural disposition to learn the truth; it perverts the natural order of things by placing theory prior to observation, like building a house beginning from the roof.

Bacon stressed that the matter is subtle. There was no known reason to forbid the making of conjectures before he discovered that conjecture perverts the mind so that it is essential to relinquish all preconceived notions before one can contribute to the advancement of learning. Because the natural disposition to develop science is stronger than the disposition to make conjectures, Antiquity had knowledge and no reason to advance any conjecture. Then conjectures were advanced, especially those of Aristotle, and they were wicked. Once knowledge was perverted, it could not be restored without Bacon's new cure -- his prescription of cleaning the slate and proceeding with caution. Naturally until then self-deception was the rule. Accordingly, Bacon called his philosophy "The Great Instauration", meaning the return to the golden age of Antiquity.

### A Short History of Self-Deception

Self-deception, to repeat, is ubiquitous, as is the folk literature about it. Also, folk literature presents self-deception as self-flattery. This is a point that Bacon's doctrine makes central. Bacon's proposal of a remedy had an old component and a new one. The old component is the following advice: Do not be gullible, trust no one but the facts and your own reason. The new component is; Discard all earlier opinions and start afresh.

This is Baconian radicalism, and this is what characterizes modern, classical rationalist philosophy. Its most specific characteristic is its being Crusonian, as Popper and Gellner have called it (Popper, 1945, vol. 2, pp. 219-20, 215; Gellner, 1995, p. 7; see also Agassi, 1981b, pp. 477-85, 488). As Descartes found out, after cleaning one's slate and before developing one's own philosophy, one is utterly alone. In the 19th century Descartes' philosophy and his venture, the Baconian venture of starting afresh, were not as popular as in earlier centuries. One of its opponents was Kierkegaard (1985, Preface), who nevertheless admired Descartes for having the courage needed for this venture. As this venture was deemed central to modern, classical rationalism, understandably, rejecting it led many, Kierkegaard included, to reject rationalism itself.

The reason that self-deception is the single obstacle, and such a formidable one at that, is simple. Almost any obstacles that may lie on the way of a self-reliant individual may be handled in the best manner available. The only insurmountable obstacle to self-reliance is self-deception, since its victims are unaware of its very presence. Classical rationalists deemed the Baconian venture of cleaning the slate indispensable because it is easy to deceive oneself: As long as one holds to any opinion, to any opinion whatsoever, one is too well disposed toward it. Hence, those who rejected Bacon's radicalism were disposed to the view that self-deception is unavoidable. After Bacon had granted prominence and significance to the disposition for self-deception as the chief obstacle to the advancement of learning, and so to advancement in general, it became clear that the disposition to be rational depends on the single condition that self-deception be avoided. The irrationalists then centered, as

they still do, on this question: Can this single condition ever be met? Irrationalism is the correct denial of the possibility of avoiding all self-deception and the erroneous conclusion that it is better to rely on tradition, the leadership or one's gut-feelings than on oneself.

(Bacon's radicalism is not new: It is cabalistic in origin. Why did the performance of the cabalistic ritual fail to bring salvation? Because there is a catch here: To be valid, the ritual should be performed by a deserving individual, and that individual must be humble. But it is hard to be humble when one brings salvation to the world. Why do people end up in hell if they may repent even at the gates of hell? Because the wicked are haughty, and, at the gate of hell, they deceive themselves that they are there not deservedly, but out of good will -- out of the will to save its inmates.)

The advocacy of self-reliance looks as if it were identical to the advocacy of rationality, and either looks as if it were identical to the advocacy of the avoidance of self-deception. The opposite of self-reliance is the reliance on others, who are not reliable, since there is nothing to rely on except one's own reason. Hence, the reliance on others is being deceived and all deception is self-deception at heart. According to Bacon, the transition from reliance on others to self-reliance takes effort, courage, and much good will. This is particularly so because, we remember, according to Bacon, self-reliance begins with the cleaning of one's slate -- with starting afresh. This, as Kierkegaard stressed, is rather frightening. It also leaves too many questions unanswered, such as, what should one do in matters pertaining to one's means of livelihood and of one's religion? These questions were hardly ever dealt with.

Descartes reported that he would not embark on the project of

cleaning his slate before he had answered them to his own satisfaction. Today, almost all students of this matter agree that these questions were hardly ever dealt with, and they can never be satisfactorily answered.

This is a significant point. Children have faith in a Santa Claus of one sort or another, and in their having mothers. Somehow the faith in Santa Claus fades away, but having mothers is never questioned. (Feminists have a point, then, when they say there could never have been a female Descartes.) The demand that one should doubt even the existence of one's body, then, is only understandable in the sense that the extant scientific theories of bodies should be doubted. Indeed, the idealists who denied the existence of matter did not question the commonsense view of matter and of their own having emerged out of their mothers' wombs. They questioned the theory of matter propounded by Descartes, by Newton, or by other physicists. It is no accident that the Baconian program and its execution by Descartes concerned the improvement of the natural sciences and technologies, hardly the improvement of the social sciences (or the moral sciences, to use the antiquated terminology), and even less so the social and political technologies. The application of the Baconian program to social and political studies came later, as an afterthought, and its application to political affairs was unexpected and bizarre.

The Baconian project -- his plan to develop science -- was a great success, as was his idea that technology will develop magnificently on scientific foundations. His view was echoed by his followers John Locke, David Hume, and, above all, Adam Smith (Halévy, 1955, p. 433). During the French Revolution it was echoed by Condorcet (1976; see also Schapiro, 1934). It

was the faith that scientific -technological progress will inevitably improve social matters without much ado. This Baconian aspiration -- to save humanity through the advancement of science and technology -- failed totally, although not before it landed humanity in the modern world -- industrial, post-industrial, and developing -- for better or worse.

The first great fiasco of the Baconian program to save humanity through the advancement of science and technology was the French Revolution. The idea is not new that the revolution was the daughter of the ideas of the Enlightenment movement, especially its radicalism. This idea was advanced by the leading Reactionary thinkers, Edmund Burke and Georg Wilhelm Friedrich Hegel (see Agassi, 1977, pp. 218-20). They did not say it out right, but their followers did: People want to be deceived. They want that because they cannot practice self-reliance. This Reactionary idea helped the tyrants of the modern, developed world immensely, and caused untold harm.

The Reaction had much less of a vision and no program, yet being conservative it could always fall back on tradition. The central idea of the Reaction, then, was that people need tradition to tell them what to believe in. This takes the central idea of the Reaction out of the present discourse. The Reaction made a concession to the Enlightenment movement: Some individuals can be self-reliant. They prove it by going into the desert and staying there without food, drink, or company for forty days and forty nights. The Reaction deprived even the few self-reliant individuals of their reason: They are exceptional because they are extremely ambitious, and they follow their own bent no matter what. This is a recommendation for self-deception on a grand scale. It suggests that the exceptional

must be lonely and stubborn, which is what characterizes many psychopathological cases. Indeed, Hegel said there is no way to distinguish between the exceptional who is a genius from the one who is crazy, or alienated, to use the term of Pinel: To be judged alienated (by accepted norms) is the price for one's decision to be self-reliant (until one manages to alter the norms and then be declared a hero). The Reactionary doctrine of dependence and self-reliance is a gross exaggeration. Let us return to a more commonsensical version of rationalism (Agassi, 1981b, Chapter 15.)

#### Extreme Rationalism as Self-Deception

No rule of logic is more potent than that which proscribes contradictions: They are deadly. Not only are they demonstrably false; declaring one true is the denial of all error, and so it is the admission of every possible statement. Nevertheless, a mathematical text can all too easily include one. In mathematics a misprint may introduce an error, and introducing an error into a mathematical system usually amounts to adding a contradiction to it (the equation  $1 + 2 = 3$  becomes a contradiction when any one item in it is misprinted). Strictly, the rule banning all contradictions renders all texts that contain such misprints worthless. However, it is often easy to eliminate misprints by simply overlooking them, and this is done heedlessly unless and until they cause trouble. Even researchers whose ideas seem inconsistent are known to proceed working without worry about inconsistency, in the hope that this matter will be taken care of later. It is hard to judge how rational this attitude is; in the oversight of inconsistency, one risks the waste of time in the study of a worthless system. If the system under study happens to be consistent, or if the inconsistency in it is easy to remove, the result of the study

may be useful. However, often a researcher investing much efforts in some interesting question will obtain exciting results that rest on an inconsistency, so that the invested labor was sheer waste.

Here is an interesting corollary to the theory of self-deception. It is one thing to take a calculated risk, regardless of whether the end result is happy. It is quite another thing to pretend to have taken a calculated risk, be optimistic about matters, and forge ahead carelessly. Often the investment of effort is only of some pleasant hours of research that one may easily afford to lose. It is an observed fact that if stakes are high and the researcher is highly strung, self-deception steps in as the refusal to entertain the merest possibility of an error. It is hard to differentiate the reasonable cases of calculated risk from the cases of carelessness, as there is no theory that tells us when the risk is great and when not. Perhaps there can be no such theory regarding research.

So much for the requirement for consistency. It is more difficult to study other requirements, as these may be abandoned. This is the case with demonstrability -- the super-criterion traditionally most generally adhered to and rightly most respected. It is invalid; adherence to it causes confusion and self-deception. Without the assumption that philosophers addicted to it are deluding themselves, it is hard to explain its popularity, despite its great allure. Historically, it is a central idea, and yet today it is recognized as most baffling. What is demonstrability? What theory of it is there? As its natural place is in mathematics, it can be examined there first.

The standard examples of demonstrations -- of proofs -- are mathematical, especially those of Euclid and of Archimedes. By modern standards, the quality of these demonstrations is very

low. Russell (1917, pp. 66, 94-50) said that Euclid's proofs scarcely qualify. The first to have offered reasonable proofs, said Russell, was George Boole, at the mid-19th century (p. 74). In classical geometry, proofs consisted of deductions from the axioms of geometry. What follows from a theorem is a theorem, yet two nagging questions remained unanswered. First, what makes the axioms theorems? Answer: Axioms are self-evident: it is impossible to question their truth. Yet at least one axiom of Euclid was always questioned (for each straight line no more than one parallel line goes through a given point). In the 19th century, a system of geometry was constructed in which that axiom was relinquished. Early in the 20th century, Einstein developed a theory of gravity whose geometry is non-Euclidean. (It denies that space is the same everywhere, as it assumes that the properties of space differ where gravity differs.) So much for the self-evidence of axioms. The other question is, how is proof possible without axioms? It has to do with the theorems in the fields of arithmetic and of algebra. These were not based on axioms until early in the 20th century.

So much for proofs. As to proof theory, it was developed in the 1930s by combined efforts of a few great logicians. Their work was clouded by confusions, most of which were cleared decades later. Perhaps even now, proof theory is too problematic, so that perhaps we are still not entitled to claim possession of a clear proof theory, not even in logic and mathematics.

Yet the puzzling fact is that classical rationalist philosophy rested on the idea that rationality equals proof. An example of the magnitude of the puzzlement may be useful, especially as it provides the flavor of the feeling that accompanies the situation. The classical and most popular work of Wittgenstein

(1922, Preface and famous last sentence) is accompanied by an air of tremendous tension: It declares that, on the one hand, what it says is so obvious that its articulation is neither possible nor called for, and on the other hand it is so difficult that it is beyond words. Much controversy rages as to how to read his text, and much of it revolves around the question of proof and provability, and of what exactly the message about it is. Possibly, however, the literature in question is a mere expression of a tremendous sense of frustration at the inability of commentators to face their own inability to prove, which is to say that the literature in question is a mere exercise in the futility of self-deception.

As proof theory developed, it was proved that all effective proof procedures are limited, even in mathematics, let alone elsewhere, were proof elsewhere at all possible. The proof -- Gödel's celebrated proof -- was rejected by Wittgenstein. In the meantime, the matter has developed much further, and proof procedures and their limitations have become a field of intensive study within computer science. What is not provable in one system may be provable in another, as it can be added as an axiom; but their addition will create other unprovable theorems. Contrary to Wittgenstein, there is no comprehensive system in which the logical status of all that can be said is decided once and for all.

The idea that rationality equals proof is most basic. It is the source of much strength, but also of much self-deception -- within philosophy as well as within science. Bacon, Wittgenstein, and many others said, when in doubt one should refrain from endorsing any opinion, one should suspend judgment, and one should never express any opinion about what is doubtful, particularly not in public. Otherwise, self-

deception is inevitable. This idea, hostile to self-deception as it is, looks immune to it. The fear that it is itself the malady it comes to cure is as frightening as the idea that physicians cause death. The fear that the medicine is worse than the ills it comes to cure produces a feeling of helplessness, and that feeling is a tremendous incentive for self-deception. Indeed, this is what happened when Semmelweis brought crucial empirical evidence to support the claim that physicians kill patients by not washing their hands. For decades his view and his prescription were rejected by his peers. This is a clear case of a dangerous, irresponsible, grand-scale self-deception, practiced by a scientifically oriented group.

However erroneous classical rationalism is, it is still very popular among philosophers who like it for its advocacy of the use of reason and its support of science and of self-reliance. Yet it is itself a case of self-deception. These days, the rule of science is tacitly identified as the acceptance of the expert's authority. This is very disconcerting, as any acceptance of any authority is, as it conflicts with the demand for self-reliance. It is also silly. It is well known that the acceptance of the expert's authority may be fatal (see last paragraph for an example). The standard answer to this trite observation is that the reliance on experts is unavoidable in the modern world. Even if it were unavoidable, this does not make it less fatal. Moreover, the unavoidability of the reliance on experts has nothing particular to do with the modern world: It has always been the case, and it is much less so today, when the educated citizen knows more medicine than the best physician of a century ago. As the hypothesis that there is no choice but to rely on experts is refuted, it may be replaced with increasingly better hypotheses that will say how far and under which conditions the reliance on

the experts' authority is worse than doing altogether without them. The reliance on experts' authority is clearly the worst superstition of the allegedly rationalist and the allegedly scientifically inclined, and this includes most research scientists around (Feyerabend, 1970).

### Self-Deception as Fixation

Bacon's doctrine of prejudice was limited to the prejudices of the researchers. Marx extended it to the views -- the prejudices -- extant in the general population, especially the extant philosophy of life. He labeled it 'ideology'. Following Hegel he denied the universalism of the Enlightenment movement, and replaced it with the view that the parochial views are locally valid. (Hegel called the views and attitudes agreeable to the state 'the Universal'.) This theory is known as relativism or, more specifically, epistemic and moral relativism (see Agassi, 1992). Every period of history, Hegel said, has its own truths, as created by the heroes who are the leading lights of that period. These heroes together constitute the group of individuals who count -- "the World Historical Figures." Marx accepted Hegel's epistemic and moral relativism only for the past -- for class society. He declared the truth in a class society to be socially determined, but he taught that, in classless society, the truly universal would prevail. Hence, in a class society all truths are relative and socially determined. Hence, all ideology is class prejudice. Being prejudices, ideologies are hard to shake off. This can only be done by individuals who can peer into the mechanisms of history, like Marx himself -- they can divine the future society and the truths of that society.

According to Marx the society of his day was ruled by employers, by the capitalists. He predicted that the ruling class

of his day were destined to be replaced by employees, by the workers. He viewed other philosophers as captives of capitalist prejudices. He viewed himself as the mouthpiece of the future society. He viewed the prejudices of the capitalists inferior to those of the workers. He therefore held the view that the views he was holding were superior to those held by other philosophers.

This is Hegelian: The top representative of humanity, be it the top nation (Hegel), top class (Marx), top civilization or culture (Spengler, Toynbee), or anything else that is tops, is tops in each and every respect. Hegel had a simple justification for this bizarre idea: The best is the militarily strongest, and the strongest takes all that is of value -- the way Napoleon robbed the countries he conquered of their artwork. Hegel and Marx never explained why the arts and sciences always progress and they disregarded the historical facts of regress. The most conspicuous fact that Greek art and science are superior to mediaeval art and science was brushed aside with the aid of the claim for the superiority of the mediaeval political system or its agricultural technology over its predecessors. This is only evidence that being superior in one dimension is no guarantee for superiority in another. This option did not occur to Marx nor to Marxist scholars in the middle of the 20th century. (The famous scientist and historian of science J. D. Bernal (1939, Chapter 2, Section 1) declared flippantly that medieval science is superior to Greek science. (See also Bernal, 1952, 1954, p. 209; Agassi, 1963, Chapter 7 and notes.)

Traditionally, philosophy was reductionist: It recommended that events that belong to the different human sciences should be explained by theories from only one human science. Traditional reduction was to psychology: All human science, it was

suggested, are at heart psychology: Sociology, politics and economics are really parts of psychology. Bacon's doctrine of prejudice was perhaps behind this trend. When Hegel reduced the individual to society and declared political history the basic human science, he declared it essential for sanity to believe in national myths. Marx advocated the reduction of all human sciences to economics. He wanted to see all explanation of human affairs by reference to the economic conditions of the society in which they occur, chiefly in terms of the advancement of its technology. Freud, however, clung to the traditional recommendation to reduce all human phenomena to psychology. He attempted to explain the way some private prejudices have a strong hold on the minds of their victims: He was impressed by the fact that neuroses constitute intellectual blind spots, especially when the neurotics who sustain them are intelligent. He explained this by his theory of the emotional trauma ('trauma' means wound).

Freud's theory of the emotional trauma is simple. The cause of every neurosis, he suggested, is a trauma caused by some frightening, painful childhood event. Initially, the trauma leads to an attempt to cope with it by conjecturing a hypothesis. Being infantile, this hypothesis is not surprisingly of a low intellectual level. What is surprising is that the neurotic never gets over the initial hypothesis. This, Freud explained, is due to two facts. First, reliving the traumatic incident is painful. Second, one attempts to avoid that pain. For example, if one conjectures that the pain in question is caused by the rejection due to one's lack of achievement, one will increase one's efforts to achieve. The refutation of the hypothesis will only lead to redoubling the effort, rather than to recognizing that no effort will reverse the rejection (because one tries to achieve

the wrong object, because the rejection is irreversible, because there was no rejection to begin with, or because of anything else). Therefore, the purpose of psychoanalytic treatment should be liberating neurotics from the prejudices that are at the base of their neurotic conduct, which incapacitates them. This, according to Freud, can be achieved only by helping them relive their initial traumatic experiences. Once this is achieved, patients experience strong relief and a sense of catharsis, and then, according to Freud, all is well.

This is Freud's celebrated catharsis theory. He later claimed to have refuted it to his own satisfaction. It is difficult to say what replaced catharsis as the aim of psychoanalytic treatment after that theory was abandoned. Possibly Freud was too hasty to reject the theory; Possibly the fault was not in the ascription of therapeutic power to catharsis, but in the view that, after it, the patient is well and the treatment is over. I (Agassi, 1981a) have suggested that the recovered mental patient needs treatment that is usually accorded to the physically convalescent. When a convalescent has weak muscles, it matters little why; the question is, how should they be strengthened? The same may be true of the mentally convalescent, whose decision power is small. If so, what precisely the prejudice was that the catharsis reveals is less important than the treatment accorded to willing mentally convalescents. This shows that Freud's theory is one of self-deception. It is a model for a number of such theories, yet not a sufficiently good one, as it does not take into account the atrophy of self-reliance due to prolonged neurosis. Freud has rightly observed that adolescents often get rid of their prejudices, but not those acquired under severe traumas --

including morality, which is thus inculcated under the conditions of brainwashing, said Feyerabend (1968).

Self-deception can be treated in all generality. It is rational to inquire, to seek the truth, but perhaps not at any cost. At times, the search for the truth is too costly, and its outcome is of little significance. In these cases, it is reasonable to give up the quest. This is a troublesome catch. One remains ignorant, first, of the truth that one allows to remain hidden, and then also of the cost of giving it up -- of relinquishing it. More than Bacon, Freud renders self-deception as the opposite of the search for the truth. He insisted more on the relentless search for the truth. Yet the limitation on the cost of the search for the truth remains. Selectiveness is unavoidable, and one about the search for the truth is inherently blind. What should be done about this? Freud was troubled by interminable analysis, which is an expression of both the excessive cost of analysis and its contribution to the increased atrophy of the patient's self-reliance.

This is where Freud got stuck. Bacon's doctrine relates to the search for the scientific truth. He said the search should not be selective, because any selection is guided by an idea, and that idea is a prejudice: It is judgment prior to the presentation of the relevant evidence. Even asking specific question, Bacon said, is selective. The choice of a question is rooted in a prejudice. To avoid prejudice, research must be indiscriminate and all discovery accidental. Freud's view of his own research was orthodox Baconian; his claim that his theory evolved out of myriads of observations was clearly Baconian; his suggestion that analysts intervene minimally in the analytic process of self-discovery was based on his fear of prejudice. Yet his theory was related to everyday life, where the question about

the search for the truth cannot be as all encompassing as in research. Thus, he could not say how neuroses-free the average citizen should be (Freud, 1962, third paragraph from the end).

Freud appealed to simple common sense: One often deviates from the normal healthy views of things, and one is then normally corrected by circumstances or by peers. It is abnormal to resist this kind of correction. Abnormal resistance to common sense is at times intelligent, as in the case of a research scientist. Alternatively, it is sometimes unintelligent, at other times it is hardly a trouble, and still other times it incapacitates. This then requires treatment. Here then is the place for Freud's original contribution: The neurotic resistance is still rational, although it is obsessive (i.e., pathological). It is the insistence of avoiding the pain of reliving the trauma. This is a hurdle the incapacitated should be helped to clear. Reluctance to discuss one's opinions rationally is the outcome of the assessment that discussion will be painful. However, one is never able to assess properly the cost of the reluctance to acquire information for want of that very information. Therefore one should always be ready to reassess one's view that the pain is not worth the benefit. If common sense calls for this reassessment and is met with an obsessive refusal, perhaps the cause is psychopathological. Otherwise, the resistance is better diagnosed differently, especially when it expresses the fear of self-reliance ('decidophobia' is the apt term offered by Kaufmann, 1973).

#### Conclusion: The New Theory of Rationality

The discussion thus far is couched within common sense or in a framework that differs radically from the classical theory of rationality. Since Freud fully endorsed that theory, his

discussion was possibly inconsistent -- in that it mixed common sense with the classical theory of rationality. Even if it is consistent, it is encumbered with irrelevant difficulties, and in its original wording it is much harder to comprehend than its (more general) variant reproduced here.

The discussion herein also deviates from the classical theory of rationality in its avoidance of the theory that the rational is the provable. Nor does it require an explicit wording of an alternative theory of rationality. The new theory of rationality that is required should share with common sense the idea that there is no human perfection. It should not assume any part or aspect of any product of the human mind to be perfect and above error. Briefly, it should include the idea that it is desirable to eliminate error as far as possible; it suggests that this is done by criticism. Criticism, then, should be viewed not as hostile, but as help. This idea is not new, and is clearly expressed in Plato's Gorgias. Yet in the writings of Plato (and Aristotle) the rationality of criticism is presented as a mere preliminary to the rationality of proof. Omitting this, we receive the new theory of rationality, or a variant of it: Critical discussion is not the appetizer but the main course. Hence, it is not just concerning received opinions, as Plato and Aristotle suggested, but an endless process of inventing ever newer conjectures and their refutations -- as much as is within the powers of the participants in the process Popper, 1945, [Agassi, 1995]. (This raises the question, is logic perfect, and is mathematics? These matters are not discussed here, although they are of great philosophical interest.)

The assumption that criticism is rational is very rational, and its rejection by Bacon and his followers is a great pity, although Bacon was right to observe that critical discussion as

practiced in the universities was an exercise in futility. The first modern variant of the fallibilist theory of rationality, which incorporates the assumption that rationality is critical debate, is due to Popper (1945, Chapter 24). His theory is not free of objections, especially Bacon's. Criticism may be pointless at times. It can also be an unaffordable luxury. It is impossible to know if this applies to the case at hand. The theory under consideration may deserve criticism and it may not: Investing in criticism risks wasting valuable time.

Examples of irrational critical thinking abound, and at times they can be classified as pathological. Psychotherapists are familiar with many kinds of them. Patients are often ingenious at inventing new excuses that allow them to ignore or belittle criticism of their views and conduct. Patients are likewise ingenious at inventing criticisms of, and in finding lacunae in, the assumptions behind threatening proposals of therapists. People often use many tools -- physical or mental -- without bothering about their inner mechanisms. When patients are afraid of using a proposal made by their therapists, they suddenly show passionate interest in the mechanisms involved in the proposal and in critical debates about them. These passionate interests are delay tactics and expressions of fear. The observation of Konrad Lorenz is relevant here: Conduct under fear and pressure is less intelligent than the average in all animals. The claim made here is that even losing one's mind is a process due to rational conduct, but in fear and under great stress, and so with an ever-decreasing level of rationality (Fried & Agassi, 1976).

Thus, there are levels of rationality; the highest level available is hardly ever attained. It is approached only in some very leisurely, research-oriented discussions. Even then it is not

always clear what avenue is best to take (contrary to classical rationalism), as there are many possibilities, some of them inherently blind. Thus, it is only seldom clear how the level of rationality can be raised. That the rationality of action may be a matter of degree is common sense, and if all rationality should be seen as a matter of degree, it is useful to view rational thought as a variant of rational action. Traditionally, rational thought, or rational opinion, was distinguished from rational action (including thinking). This is reinforced by the traditional distinction between states (of mind) and (mental) processes. This distinction is subtle and redundant: Jarvie and I (Agassi & Jarvie, 1987) have suggested to view thought as a kind of action and the theory of rational thought as a part of the theory of rational action. This is meat to be a supplement to Popper's theory of rationality.

There are two points to mention before bringing this chapter to a close. First, unlike the classical theory of rationality, the fallibilist theory does not split rationality sharply to the scientific and the rest. It also recognizes common sense and its progress. (Think of the views of nutrition common a century ago, which recommended what is today viewed as empty calories and/or a cholesterol-rich diet; or of sexuality, which deemed masturbation self-destructive and the pleasure of sex undesired by decent women.) It also takes for granted that, in science as elsewhere, every significant criticism is an invention, so that it is important to see the difficulty of being critical (and so of being highly rational). This relates to the second point. The fear of criticism is rational, but not as rational as the effort to overcome it. Self-deception is thus a form of rational human conduct, but it is inferior to attempts to overcome fear and more so to fearless openness. This is not to

say that every possible case of self-deception is equally harmful and to be equally harshly combated. Often psychotherapists encounter cases that they judge -- hopefully rightly -- as not deserving treatment. The cases that do deserve treatment, even at a great cost, Freud noted, are those that grossly interfere with the ordinary course of life. Some cases are subtle and difficult to judge. A sense of proportion must prevail in discussing them. The pursuit of the truth is laudable, but it is not necessarily always the required treatment.

A sense of proportion is indispensable anyway, since there is no greater self-deception than the claim that one is utterly free of it, as is regrettably exemplified by the great thinkers Bacon, Marx, and Freud. This should be remembered as a warning against excessive self-confidence: Humans are all fallible and, as Plato already observed in great detail, it behooves us to be grateful for any attempt at criticism and correction.

### Appendix

The editor has drawn my attention to a very recent essay by Alfred R. Mele (Mele, 1996), that deserves notice because it comprises a very comprehensive survey of the most recent literature on self-deception, which is becoming increasingly fashionable these days. The literature is written from the viewpoint of the theory of rationality as the rational degree of belief and that as the degree to which the belief is justified by experience. This viewpoint was declared in this chapter as a version of self-deception, perhaps also an expression of some anxiety. The starting-point of that literature is the so-called paradox of self-deception. Assume that successful deception occurs when one who thinks that some statement is true convinces someone else that it is not. Assume further that one

successfully deceives oneself the same way. As a result, one does and does not think that the statement in question is true. As was explained here, it is easier to begin with self-deception and view most cases of deception as variants of it. As explained in this chapter, self-deception is always a form of ambiguity and/or confusion and ignorance, so that it is a spectrum, and there is no sharp division between those engaged in it and those who keep clear of it, although some people are very near the one end of the spectrum and others on the other.

Mele reports numerous experiments in self-deception, with no regard to the question, how well trained the subjects of the experiment are in the art of self-criticism. The absence of self-criticism, it was argued in this chapter, is not the same as self-deception, especially since all criticism is the result of some creative act. There is also the question of the cost of self-criticism that the experiments discussed by Mele disregard. The experimenters do not ask, how important is the self-deception under discussion and how important the individuals in question considers it. Most engagement in astrology by modern educated people is a mild, harmless form of self-deception that cannot be taken as seriously as the case of self-deception that leads to disaster.

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