

Utopia in Mind: An Inevitable Consequence of Human Cognition?

Abstract: The dream of a better or perfect world, Utopia, seems to be inescapable for humans. We have the cognitive capacity to imagine any conceivable future. This capacity, needed for complex social interaction, hunting, and gathering, has as a byproduct given us the everpresent notion of a better state, internally or externally. With this notion in mind, we seek ways of improving the inner world (e.g., through meditative or ascetic self-control, use of mind-expanding drugs, etc.) and the external world (via science, engineering, artistic practice, political action, etc.). Another byproduct is the multitude of prophets and political leaders with their minds set on realizing their Utopias at any cost. The evolutionary history of our cognition is also mirrored both in our willingness to follow such leaders and in their will to power.

Key words: evolutionary biology, cognition, cognitive ethology, psychobiology, Utopia, human internal and external improvement, scientific world-view, artistic perfection, political action, leadership

1. UTOPIA IN MIND

Utopianism, in its most common signification, designates the habits of mind of a spiritual, social, or political reformer, given to visionary dreams and schemes of human improvement. The term originates with Sir Thomas More's dialogue *Utopia* (1516). In this work, More presents a criticism of the social conditions of his day. Tyranny and corruption were ubiquitous, the fundamental evil being seen as the misuse of private property with resultant dispossession of the poor from the land, unemployment, and waves of crime to which society retaliated with savage laws. The remedy is a contrasting vision of an ideal society on an imaginary island, where tyranny and luxury have been abolished and private property is unknown. However, More was by no means the first to entertain the thought of a much better world than the one at hand; nor will he

be the last. It seems that Utopia, whatever form it may take, is an inescapable dream in humanity, an essential aspect of the human condition, as it were. Why is this so?

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A dog can obviously have some notion of the future. When its master says, 'Let's go for a walk,' it will run to the door, wagging its tail in anticipation. A chimpanzee may cry 'Snake,' to make everyone else leave the area, in hopes of having a hidden bunch of bananas all for itself. But as far as we know, man is the only animal capable of making up any conceivable future he likes. He may, for instance, imagine an entire future hunt, from the choice of hunting grounds and what routes to take, through the implements needed, the division of labor within the group, the appropriate steps to take and arrangements to make, to the ultimate possible result and the division and distribution of the spoils. If evolution has provided us with this basic capacity, it follows that we can also imagine other worlds and alternative ways of living, different in degree or kind from the favors apportioned by fate. Thus, the notion of a better world, free from starvation, disease, harsh weather, shameful indolence, bad sex, and boring dinner parties appears to be an irrevocable consequence of the evolutionary construction of human cognition.

The ability to think of another reality than the one allotted is not what evolution was geared at, but it is a by-product of the essential capacity to understand the world, to handle reality, to analyze the environment, to predict possible outcomes of our agency, and to plan ahead for the future. It is a consequence of our capacity to envision probable future states of affairs, which in turn is a prerequisite for hunting, for storing food supplies, for building huts, etc. But this very capacity allows us to think up entirely novel realities and ways of being as well, to envisage a brave new world where all evil has been eliminated and everything is hunky-dory. With our basic disposition, the possibility of imagining a better or even perfect world follows suit, and – most important – the urge to make it come true.

To be sure, the probability of succeeding in that very endeavor must have been almost trifling in a stone-age culture. You could very well indulge in sweet dreams of health, ample food supplies, and satisfying personal relationships, but there was very little you could do about it. The dreams of Utopia were virtually bound to remain individual and impotent; they rarely sparked off any change in society at large. Perhaps a tribe with a charismatic leader could incidentally advocate and carry into effect a total communism, with regular changes of sexual partners and a communal upbringing of all children. However, this would in all likelihood only be a period of a most transitory nature in the history of the tribe. Soon enough things would return to normal, that is, to an organization structured by connubial, kinship, and friendship bonds.

The feasibility of imposing Utopia upon one's fellow human beings radically increased with the onset of agriculture and husbandry in the great flood cultures, i.e., in India, Mesopotamia, China, and Egypt. For the first time in human history, the tribal system was superseded by hierarchic systems. In such systems, the practical possibilities of making dreams come true multiply. A pharao, like Ikhnaton, would no longer be obliged to resort to his own personality in persuading his cohorts to obey him. The system would, for example, enable him to decide that henceforth everybody shall worship only one god instead of a plethora of small gods – or the other way around, for that matter. The upshot of this is that the new, comprehensive hierarchically structured models made it possible for single leaders to impose their own belief-systems and agendas on very large numbers of people at the same time, independently of contingent personality traits or other idiosyncratic factors.

This turnstone in history brought forth countless of prophets with their minds set on founding new sects or, like Moses, on having already established leaders embrace the idea of a new better world way over yonder. Reading the Bible will yield sufficient

proof of this, but evidence of the same development can be found in all cultures that pass on to agriculture and husbandry and, as a consequence of this, develop large organized societies. Inevitably, these societies all seem to set up a caste system with dejected classes – slaves, workers, or what have you – and dominating classes feeding on them – priests, masters, sages, rulers, warriors, etc. Without fail, a tantalizing dream gradually comes alive in such a caste system, to wit, the notion of an egalitarian society, where all men are born equal and should treat each other as equals. The fact that the earliest visions of Utopia stress an artificial kinship – the brotherhood of man – must no doubt please sociobiologists, since it supports the biological point that being closely related is the key to helping and supporting other human beings. Undoubtedly, Jesus was not the first reformer to use terms such as ‘father,’ ‘son,’ ‘mother,’ ‘brother,’ and ‘sister.’ As soon as an organized society with a more or less rigid caste system is in place, the seeds of the egalitarian dream has naturally been sown – intimations of a better world where everything is shared, where all men are equals and worthy of equal respect, and where no individual is disproportionately happy in comparison to the rest of us.

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The general point here is that the practical consequences of utopian thinking are dependent on the social structure within which the individual lives. In a tribal society, these consequences will be short-term and restricted to a small social sphere; in a large-scale hierarchic society, the effects of utopianism may be revolutionary, long-term, and very often terrifying.

2. HUMAN COGNITION AND ALTERNATIVE WORLDS

We share 98.5 percent of our genes with our closest relative in the animal kingdom, the chimpanzee. Still, we are obviously distinctive in a marked degree, being able to

accumulate knowledge and to create cultures. But what are those salient features, more specifically, which differentiate us from other species, by enabling us to master our environment and to fashion worlds and ways of living that no other mammal or primate could ever dream of?

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Different times and traditions have suggested various answers to this question. For instance, many religions attribute a soul to man, some kind of spiritual quality or substance that only members of our species are endowed with. This notion commonly entails that, equipped with this soul, humans also have privileged access to the Tree of Knowledge, or that we are the unique bearers of reason. In some extreme cases, the assumption is not just that we differ from nonhuman animals by having reason and the capacity for symbolic thought, but also that only we have emotions. Oftentimes the practical consequences of this thinking have been atrocious, in the form of excruciating animal suffering.

Since the Enlightenment era modern science has searched for explanatory alternatives to the soul hypothesis, pointing to man's ability to make tools, his capacity to plan ahead in several steps, general intelligence, and – last but not least – language. However, recent primate research has shown that these supposedly exclusive human traits to some degree also are prevalent in our animal cousins. Yet the fact still remains that man is the only animal that has left nature's unrelenting thralldom behind, by evolving into the only species capable of deciding – in a great measure, at least – how it wishes to conduct its own life.

Are there biological behavioral traits unique to human beings? Indeed, there are several, but in this context one is of particular interest. Humans display a considerable amount of altruistic behavior. In other social species, interactions that seem altruistic at the first blush can well-nigh always be explained in terms of kinship, or else a rudimentary form

of reciprocal altruism. But the human species has added a highly developed form of reciprocal altruism, namely, contract-based mutual cooperation, which proceeds tit for tat. Many small favors call for a big one in return, or vice versa. Metaphorically speaking, each party to the agreement has a bank account in the other party, where deposits and withdrawals can be made. Balancing the checkbook, one may either owe or have justifiable claims to make on favors, help, or compassion to or from the banker. In order to succeed in this enterprise, we must know what the other person knows and does not know, differentiating between our own and his knowledge. This is a prerequisite not only for cooperation but also for fraudulent proceedings, or the ability to cheat. Apart from humans, only the great apes are capable of cheating, though in a rather limited degree. Noteworthy in this context is also that the ability to readily distinguish between what I know about myself and what others know about me does not occur until the age of five or six in the mental development of the human child.

On the face of it, the most plausible explanation for the evolution of this mental capacity in our species is that it is required by a fully developed social interaction and cooperation in a 'normal' human tribe (probably, around thirty to forty individuals). For knowing what everybody else knows, more or less, is a prerequisite for efficient and economic linguistic practice. In communicating we do not transmit complete information; rather, we just send the critical bits that fill in the gaps in the recipient's knowledge, or we suggest a rearrangement or reconstruction of information already existent in his mind. To be able to know what other people know one must possess the capacity to imagine another inner world than one's own, alternative ways of thinking, and different ways of understanding or explaining the world. And one must be able to entertain such notions abreast of one's own beliefs, to differentiate between alternative inner worlds, and - whenever this is appropriate - to seize upon them, exchanging an inner world for a new and better one. After all, this bartering and comparison of

conceptions is what humans in all cultures spend a very considerable time doing; the importance of gossip can hardly be overestimated.

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An interesting consequence of the ability to understand how other people see the world is that it also enables us to feel compassion, even with strangers, since we can understand that the other individual suffers or is in pain. This capacity for empathy in turn is a necessary condition for a moral obligation: Only if we *can* understand that another person suffers, there exists a moral duty to the effect that we *ought* to try to alleviate the suffering (as well as the prohibition that we must not be the cause of the person's pain). A genuine or pure altruism – one that seeketh not its own – thus emerges, created by our capacity to understand that other people may suffer the same pains as we ourselves do, or would be as happy about aid and care as we would be in a similar situation.

So the proposal made here, then, is that our ability to think of other worlds than the one at hand evolved as a necessary means for interacting with other individuals in a complex social setting, i.e., the human tribe. But as so often in evolution, once a trait that has evolved for a specific reason is in place, it may be used for new, unexpected purposes as well. Flight in birds may be used not only to escape enemies, but also to catch prey in midair or on the surface of the ocean, to nest in inaccessible places, to migrate, etc. Although it originally evolved in snakes as a means of speeding up the decomposition of prey swallowed whole, poison may also be used as a defense against predators. The ability to imagine how a fellow human being actually sees the world may also be used to dream about a nicer world.

3. IMPROVING THE INNER WORLD

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There are two ways of coming to grips with a toothache: either by controlling your mind through meditative techniques to the effect that you can ignore the toothache, or by having a dentist repair or extract the tooth so that the pain is eliminated. In a similar vein, the dream of a nicer world may either emphasize inner change, or lay stress on manipulation of the external world.

During most of the history of mankind, which spans at least five million years, we have been obliged to resort to the inner world and its improvement. As the opportunities to exert control over the external world were highly limited, we were thrown upon our own resources of mind, so to speak. Instead of experiencing frustration and helplessness, or venting one's anger on innocent people or inanimate objects, one should strive for a better state of affairs by bearding the lion in its den; that is, personal betterment through self-control. The goal of self-control is to master the inner world of desires, emotions, feelings, pangs, affects, preoccupation and rumination. This ideal, in different guises, can be found in all major religions and life-philosophies.

Classical Greece virtually abounded with examples of it. Stoicism, for instance, preached the virtue of self-control in the form of Stoic resignation or *apathia*, which encourages one to accept one's situation in the world, and to view this as a reflection of the ultimate reason of things. To live according to reason means to simplify one's life. Simplicity as a route to the austere independence of the will was also cherished by the Cynics. Diogenes of Sinope is a case in point. According to legend, he lived in a tub at the temple of Cybele. On seeing a slave boy drink from his hands, Diogenes destroyed the single wooden bowl he owned. Alexander the Great offered to fulfill any desire he had, and Diogenes requested that Alexander not stand between him and the sun. Being an advocate of virtuous self-control, he held that morality implies a return to natural

simplicity. And virtue requires the avoidance of physical pleasure, both pain and hunger being positive aids in the attainment of virtue. To the Epicureans, on the other hand, the ideal state of mind and feeling was *ataraxia*, a state of calm, untroubled pleasure, enjoyed in tranquillity and free from mental or physical disturbance. *Ataraxia* must not be mistaken for any lustful kind of pleasure on the sensational model; what it amounts to, essentially, is peace of mind. The Epicurean communities provided a peaceful escape from ordinary society and also a substitute for it, employing pastoral techniques in guiding their adherents to a serene and happy life.

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Self-knowledge always lies at the heart of the ideal of self-control or self-restraint; the famous maxim of the Delphic Oracle, 'Know thyself,' is by no means an accidental slip of the tongue. Evidently, many modern therapies of the depth-psychological variety focus on self-knowledge via the 'talking cure' toward inner health. In psychoanalytic therapy, for instance, the patient is supposed to utilize the method of free association in order to reach insight about the unconscious cause of his neurosis by connecting it to traumatic childhood experiences, perhaps using the material of his dreams. Once its origin has been revealed in the clear light of consciousness, the neurosis will disappear, and in that way the patient will gain control over his inner world of emotional attachments and reactions.

Self-control in the form of self-denial is the dominating theme of asceticism: the body is to be denied, possibly mortified, in order to make possible the purification of the soul in its progress toward a better or perfect state. This point can be exemplified very widely in religion. In Hinduism, the third and fourth stages of life are expected to embody renunciation, separation from family, and a mendicant life as a means to purification. In yoga, which has its roots in Buddhism, the techniques for disciplining the body are often quite rigorous, especially in *Hatha* yoga. The point of disciplining the body is to make oneself endure such pain and discomfort that ordinary mortals normally cannot

bear, e.g., in the kind of trials that Tibetan monks have to stand when they go out in ice-cold weather, wrapped up in a soaking wet sheet to let it dry slowly on the surface of the body. In Christianity too, the examples of asceticism range from monasticism to hermitage. Be it through withdrawal from society or self-torture, ‘the law of sin that dwells in my members,’ as St. Paul has it, is to be overcome (*Romans* 7.23). The penitential movement of the Flagellants in the Middle Ages was characterized by processions of men scourging themselves with leather thongs and iron whips – a powerful reminder of the central role of suffering in the religion of charity.

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One might well ask why pain and suffering have been so much in focus in these movements aimed at self-control. After all, the main concern in our present-day society in the Western world seems to be to maximize happiness and escape boredom. No doubt the ability to increase one’s happiness by direct manipulation of the inner world would be extremely attractive to any human being. But earlier in history, it was a far more important concern to control, endure, and/or remove pain and suffering. The reason for this is, of course, close at hand. Until recent times pain and suffering were present more or less on a daily basis, and in large quantities at that. Under such circumstances any method promising to lighten or remove this burden would be of great interest. Undoubtedly, a person’s ability to withstand pain, discomfort, hunger, thirst, etc., would then be considered a highly admirable and impressive quality. If you wanted people to regard you as a wise and knowledgeable spiritual leader, what would be more persuasive than displaying your control over the worst and least controllable aspects of your inner world – pain and suffering – through tedious and interminable prayers? What could be more convincing than a preponderance of evidence showing that, after days and nights of insomnia, with your hunger and thirst still unslaked, you were even able to master your insatiable desire for sex?

Did the Flagellants whip themselves in order to practice the control of pain, to show off their ability to control it, or to offer this control as a promise of a better world? 11

Whatever the answer, their existence is just one of many examples of the important role of suffering in the inner world of people during the lion's share of human history when the available technology could do but little to relieve the pain. For want of external technology, we were compelled to utilize any internal techniques for voluntary control over the psychological experience of pain, whether they focused on numbing our reactions or dimming our attention to pain.

The evolutionary function of pain is to prevent permanent damage to the organism, prompting responses that aid recuperation and lead to greater precaution in the future. A direct, voluntary control would be counterproductive, since the ability to shut out the sensation of pain at will would, in the long run, mean a decreased biological fitness. The capacity to forget about the pain in a sprained ankle would be all too tempting to make use of, with the effect that the healing of the ankle was delayed or offset. Evolutionary biology has little difficulty explaining why it would be a drawback to have voluntary control over the sensation of pain.

At the same time, however, we all know that the body has the capacity to block the sensation of pain, if necessary. It is not a law of nature that we must feel pain. Under special circumstances – extreme stress, panic, defending one's offspring, etc. – it is quite possible that even excruciating pain gets blocked. This, of course, also has a survival value, since defending your children despite your own agony will increase your biological fitness. Likewise, it is more adaptive to escape on a sprained ankle, which will be damaged for life, than to perish and lose all chances of reproduction. Accepting pain as inevitable would be far easier if we knew that, on grounds of principle, it cannot be blocked. But we all know that it happens sometimes. Consequently, it should be possible to do the very same thing by voluntary control that a good fright or anger can

do. The idea that it has to be practically possible to block pain at will – by way of some mental technique or other – must be as old as mankind.

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The same line of argument would also hold true for the sensation of pleasure; it too, after all, is an internal state, triggered by certain external factors. At first sight, it may seem odd that, in order to experience pleasure, we have to make the effort to create an external situation which includes factors that will produce pleasure. For example, you work hard to make the down payment for a yacht, in order to take pleasure in the activity of sailing it. There ought to be some mental switch by which we could make ourselves feel pleasure directly, without having to travel the cumbersome route through the recalcitrant physical world. Many of us would no doubt find it most convenient, and much cheaper, if we could have pleasure simply by chanting a mantra with our eyes closed, in lieu of buying a yacht.

But, as in the case of pain, this would be highly counterproductive in evolutionary terms. If I could have the full pleasure, in my mind, of tasting a juicy mammoth steak, without having to hunt, kill and slaughter the animal, why on earth should I take the pains doing all that? Or if, by sheer imagination, I could make a sour apple taste exquisitely sweet, why not swallow the bitter pill, instead of making the exertion to find a better-tasting apple? If sexual fantasies could give the same pleasure as sexual intercourse, why bother about the potentially embarrassing debacle of making contact – in courting, foreplay, and taxing physical exercises that soak the sheets? Why is masturbation just a poor substitute for copulation?

The evolutionary answer is not hard to find. Pleasure is the inner reward system of our body. If we satisfy its needs, doing what is good for us and what increases our biological fitness, it will reward us by providing pleasure. Obviously, this reward must be withheld until we have done our fair share of the deal. There must be no back door to

the candy store where lazybones can sneak in and steel the sweets; they have to go through the motions, using the front door and putting up the dough like the rest of us.

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Suppose there was a mutation by which an individual gained control over all the different kinds of pleasurable sensations in the normal human repertoire. This mutation, however desirable for its bearer, would clearly be an evolutionary disadvantage. It is not very likely that a bearer of it would have been competitive and a harbinger of biological fitness in a toilsome stone-age environment, where you had to pay at the price of exposure, hunger, thirst, exhaustion, and boredom for the few evanescent pleasures offered south of the Ice Rim. A more plausible assumption is that this indolent, blissful person would very soon be obliterated from our ancestry. The people who became our ancestors were manifestly those willing to pay the price for survival, rather than the ones who created their own dainty titbits in their heads. But even though this evolutionary consideration is perfectly sound, it seems to have difficulties competing with the grand old idea of a mental technique which allows us to sit down in lotus position and, by an act of will, have great sex, unmitigated fun, and general amusement all day long without moving.

A quite interesting point is that, while it is exceedingly difficult to control, by volition, one's reactions to simple bodily sensations, it is even harder with socially determined responses. For example, we are more hard-pressed to neglect the sorrow and discomfort caused by a fellow human being than the pain of a simple toothache. And just as Antony's Cleopatra awakens appetites where most she satisfies, the social bed of torment may hold us in equal uncompromising thralldom. Whereas sages in many cultures have practiced strict regimens of bodily control, and surprisingly often have been successful in their endeavor, they all seem to underwrite the shibboleth that the only way to escape the pain that other people may inflict on you is to withdraw from

ordinary society entirely. The total solitude of hermits is a phenomenon which is known from Greenland to Tasmania, in all recorded history. And many people in our present-day society every now and then feel that it might not be a bad idea to become a recluse, living on the top of a high pillar in the desert. 14

Here, as before, the evolutionary background is not hard to make out. More important still than personal pain and suffering is membership in a tribe, and to be accepted by other people. For the major part of the time our species has existed, a solitary human was a dead human. As for the unfeasibility of living a secluded life, one may point to our notorious incapacity to solve our problems by our own accord. It seems that we are wired to deal with our preoccupations in a social context, i.e., by talking to somebody, rather than coming to grips with our difficulties through private ruminations. Unless I discuss my problems with someone, I am not likely to become aware of what they really are – and, hopefully, of their triviality. It is significant that in a society like ours, where it is possible to lead your life as a self-invented figure which, in fact, may be nothing but an empty facade, many people run into trouble they cannot divulge in their immediate social surroundings, because that would mean that they no longer could keep up appearances but would have to unmask. A whole flourishing industry has emerged on this market, where it is current to charge a substantial fee for the service of being an understanding friend or the perfect stranger in the cocktail bar, who listens with a therapeutic mien to our ramblings about our petty misfortunes. In this prosperous cadre of professional helpers, the cure for our sorry condition is never in short supply: ingesting substances that disrupt our nervous functions, new ways of breathing or speeding up the bowel movements, crystals to wear under the waxing moon, or sticking needles into protruding parts of the body.

An expansive path into the inner world that most cultures have explored is the use of hallucinogens, such as, for instance, mescaline and LSD. Significantly, these substances

are often labeled mind-expanding drugs, being seen as ways to apprehend the outermost aspects of reality, to acquire knowledge of what is otherwise hidden or unknowable, or to gain a deeper insight into the ultimate reason of things. An interesting phenomenon that clearly has a biological, cognitive foundation is the fact that the person under the influence in general assumes that the hallucination is an experience of something that really exists out there, albeit as an aspect of reality which is normally indiscernible, looming behind an epistemic veil, as it were. Rarely the assumption is that the hallucination is just a state in the drugged mind. However, the belief that what we see is what there is must overall be a vital assumption. As the constructivists emphasize, all perception is in the head, to the effect that the difference between a hallucinating mind and a person in full possession of his senses is not that the former sees a mirage or an illusion, while the latter directly perceives reality as it is; it rather lies in the fact that, in the sober mind, the experience so closely resonates (as Gärdenfors puts it) with reality that an uninfluenced person can interact with the external world in a useful way, whereas in the hallucinating mind the construction is in faulty resonance with reality or none at all. Evolution has favored individuals in whom the resonance is close and reliable. For such individuals it is a most serviceable notion that the things they experience actually exist. Constructing a lion in the mind in close resonance with the appearance of a hungry lion in the external world is very adaptive, as is acting on that construction as if it were real, by dodging the lion. Those of our human predecessors who did not exhibit a sufficiently close and precise resonance between mind and reality simply did not live long enough to become our ancestors.

If the smoke from the herbs tossed on the fire by the Holy Man makes the young apprentice see strange things and hear voices, his first choice will be to gather that he has made a break-through to the other side and is being furnished with knowledge about the secret aspects of reality. Far less attractive is the assumption that it is only his mind running amuck due to poisoning of the brain. To be sure, this assumption would fly in

the face of the evolutionarily installed resonance between mind and reality, as hallucinogenic substances hardly constituted a selective factor in human evolutionary history, thus making the expectation that we are prepared for their effects unwarranted. Furthermore, the making of this assumption would also preclude the young man from conceiving of himself as a chosen one, an initiate in a clandestine fraternity hoarding ancient wisdom; on the up-and-up, he is being transformed into a holy man who has visions indicating which actions he ought to take or avoid, an awe-inspiring person who is wiser than the rest of us and should be treated to food, shelter, and other mundane necessities of life so that he can devote himself entirely to the mystical rites by the holy well, offering up newborns and a sacrificial lamb or two. So, should Mother Mary come to you at nightfall, speaking words of wisdom, it would no doubt be propitious to assume that this occurrence was for real, thus making you a venerable person who belongs to the select few, cherished and holy. In contrast, by making the inference that your vision is an effect of fatigue, hunger, hysteria, or your condition of being stoned out of your skull, and that it therefore has a reality only in your mind, you will end up with a rather unproductive theory, leading as it does to few attractive repercussions, if any at all. Sometimes, perhaps often, the adoption of a vital lie may turn out to be a successful strategy in improving the inner world of self-perception and self-esteem, even if what it boils down to is self-deception.

The above should not be interpreted so as to say that there is a sharp division to be drawn between a die-hard, matter-of-fact realist, and a superman manqué, soaring in mystical dreams. All things considered, it must be a rather advantageous aspect of our cognition to assume that we are smarter, sexier, and more attractive than we actually are, and that our experiences (including the slides from our last vacation) are valuable to other people as well. These exaggerations are apt to increase our self-confidence, which in turn is likely to improve our social standing and ranking in the tribe, on condition that the exaggeration is at least half-way credible. Perhaps we should all lie to

ourselves, but to an optimal degree, since lying too much will lead to unacceptable losses in terms of social status and friendship, not to mention financially, when it comes to footing the bill for psychotherapy.

4. IMPROVING THE EXTERNAL WORLD

Shifting our attention from the amelioration of the inner world to the external world and its improvement, we find that a precondition for any major progress in the latter enterprise is the availability of successful technologies for exerting control over the various processes and events taking place in our environment. This, in turn, calls for the development of a reliable body of empirical data and testable hypotheses, based on the general paradigm of natural science. Among all the cultures that have seen the light of day in history, only the modern Western civilization has fully developed what might be termed a scientific world-view, which shuns the disorderly whimsicality of accounts invoking phenomena that occur by a freak of fate, preferring instead simple, systematically naturalistic explanations. Unscientific or religious world-views, consisting of a mishmash of either compatible or incompatible though rarely comprehensively related beliefs, ultimately rest on an epistemic canon or bedrock, a set of fundamental truths or dogmas that are not to be disputed under any circumstances. By contrast, natural science may be said to comprise the first general outlook with the radically critical tenet that, given certain conditions, anything can be doubted. Our knowledge of the external world is only provisional and bound to change little by little, as it keeps in step with our observations and experiments. Reality, as construed in those observations and experiments, takes precedence over any favored, inveterate notions we uncritically might embrace about the world, not the other way around.

Despite the simplicity of the scientific world-view, it yet seems utterly hard for human beings to truly take its inherently critical stance to heart, as well as its naturalizing tendency. Vying for our stakings of faith, and with a head start of several million years, two other human attitudes remain seemingly unfazed: the tendency to uncritically believe in authorities, even if they capriciously set forth a confused, self-contradictory mixture of dogmas; and a disposition for animistic thinking. As for the latter, a lot of people, even in secularized Western societies, still appear to inhabitate some kind of animated universe, where astrology, reincarnation, ghosts, poltergeists, soothsayers, sorcery, and all kinds of antiquated new-age mumbo-jumbo play a significant role, as is evidenced by virtually any double-page spread produced by the tabloid press.

It is not hard to see why an animistic outlook on the world is so close at hand for members of our species. During millions of years, the most important items by far in our environment were other human beings and the animals we hunted, that is, living creatures with affects, emotions, volition, memory, and knowledge of some kind. Against this background, the notion that even plants, in virtue of belonging to the living world, have affective, volitive, and cognitive faculties appears to be a natural and sensible assumption. Why should not a tree have feelings, experience pain when felled, and be prone to retaliate by turning the canoe I carved out from its trunk into a lousy vehicle? On the whole, it seems a good idea to placate the tree before cutting it down, by prayers, sacrificial offerings, or whatever action the wise man of the tribe deems appropriate in this context. And if plants are ascribed a mind or spirit, why not brooks, clouds, and rocks as well? After all, lightning is a very strong indicator of the considerable power possessed by clouds. On the assumption that this tendency toward animistic thinking is a basic aspect of human cognition, as inherited from prehistorical times, it becomes clear why people, even in high tech societies, still respond to their milieu as if the inanimate objects in it were alive and could have a grudge against them

or be appeased by prayers to fulfill their desires. Every now and then, the computer will be screamed at, or disciplined with a rapid succession of biffs and blows against the keyboard. And on a frosty morning, the car will be urgently requested to start, and then kicked on the wheels when it refuses. 19

As for the uncritical belief and trust in the statements issued by authorities, it must have been an exceedingly prudent and advantageous response nearly throughout human history to unquestioningly believe what older, experienced people said. The stone-age world hardly changed at all from generation to generation, and most of the orally transmitted knowledge was reliable. If your grandmother told you that cobras were venomous and mortally dangerous, it paid just to believe her rather than showing inappropriate curiosity or applying independent thinking in creative explorations on your own. If the elders claimed that wily, large predators lurked in the dark African night, abhorrent creatures that undoubtedly would regard a little boy as a tasty snack, it was a very good idea to take this at face value without any inquisitive reflections. If your mother ruled that meat from carnivorous animals is inedible, she did not have to get herself entangled in wordy explanations referring to trichinosis. *It just is not done* is still a very persuasive reason for adherence to social custom in most parts of the world. And blind obedience, in spite of the fundamentally uncritical mind-set involved, is often an instrumentally rational strategy to adopt.

Thus, one may safely assume that uncritical belief in authorities has a genetically determined foundation in our cognition, going far back in prehistory. This tendency is not only apparent in ordinary everyday life, but has also been pronounced even in the history of science. The maneuver of adjusting one's theories about the world in light of the results of controlled experiments and observations may seem obvious to us now, but it only represents a fairly recent development. Most cultures have never given the idea of it much thought, and our own historical record shows that an allegiance to various

authorities by and large was cock of the roost in the development of science until the Enlightenment era. Before that it was a general rule that if authorities like Aristotle 20 stated that seals are fish, then so be it – despite overwhelming evidence to the contrary, apparent to any seal hunter. If the Papal States promulgated that the Earth is flat, then it was inappropriate to brood over the awkward fact that ships sailing away gradually disappear below the skyline.

The rise of a full-fledged natural science, governed by the norm that theories be adjusted to the results of observations and experiments, was a revolutionary turn for our way of thinking about the world and our role in it. The questioning of the ancient wisdom that matter ultimately is reducible to four basic elements, accompanied by piecemeal alterations of the theory and the number of elements until the resonance with reality was so good that experiments produced the predicted results, paved the way for a science of chemistry which has produced substances far more valuable than the alchemist's gold that never materialized, as well as less desirable inventions. Following systematic observations of animals raised in captivity or the laboratory, the untenability of behavioristic explanations for behavior, solely in terms of reflexes and learned responses, crystallized itself. Having thus ridded ourselves of an image of the brain as an amorphous, unstructured neuronal mush, we were able to understand that the brain instead is a well-adapted, evolutionarily shaped organ, laden with species-specific behavioral programs.

By viewing the human body as a machine to be taken apart, in order to methodically examine its basic construction and various functions in dissections and experiments, with a view to developing effective treatments for the illnesses that human beings may be stricken with, the foundation for the success story of modern medicine had been laid. Its sophisticated cures are drastic improvements when it comes to therapeutic efficacy, in comparison with the medicine man's remedies of tapping large quantities of blood,

ingesting long shreds of linen, eating toad turds, or being pulled through a hollow tree trunk. In fact, the medical treatments offered today are so highly developed and subtle that we can look forward to a protracted process of dying of old age, hooked to buzzing machines and flashing appliances, bedridden but in terminal care. 21

It is outside the scope of present paper to explain, in historical terms, why the Western civilization took this particular course at the outset of the modern age, adopting the method of changing the map when it does not fit the terrain, instead of insisting on the correctness of the map (which is the primary reaction, as service in any army will reveal). However, some general aspects of this question may be of interest here, since they directly involve cognition. We are prone to believe that the modern Western way of thinking is basic and inevitable. But as even modest crosscultural experiences will show, this is by no means the case. For instance, many elements of logical thinking are extremely hard to grasp and apply for people in general, a fact which indicates that these subtleties may have compatibility problems with the stone-age programming.

Self-referential paradoxes only seem paradoxical to people oriented toward the Western way of thinking. In our culture, the liar paradox, in which Epimenides, a Cretan, claims, 'All Cretans are liars,' typically evokes the following line of thought: 'Is he telling the truth or not? One or other must be the case, but if it indeed is the case that all Cretans, including Epimenides, are liars, then both cases lead to contradictions.' In many other cultures, however, people have profound difficulties when it comes to dealing with the literal import of universal propositions, maybe because a more particularist kind of thought-pattern has been activated and cultivated in their context. Particularist thinking proceeds in the absence of the notion of a regularity or *ceteris paribus*-law that brings together separate instances under the same umbrella. The following anecdote may be illuminating. Having meticulously trained his pupils to take apart and repair the carburetor of a certain car, the British teacher of a Nigerian mechanics class discovered,

to his great astonishment, that the pupils thought that they had learned how to repair the particular carburetor of that particular car. The teacher had taken it for granted 22 that they would universalize their hard-earned know-how to carburetors in general, or at least to carburetors for the same make of car. But to his pupils that was a new and very surprising strategy, every carburetor being different in some respect from the other; the subsumption of individual carburetors under a general law of mechanics, in virtue of their similar construction, simply was not in the repertoire of these students.

Another interesting cognitive aspect is that we must learn to question obvious clashes in our world-view. It is very easy to see that humans ordinarily are fully prepared to affirm self-contradictory statements and accept glaring inconsistencies in their general outlook. Most mythologies and sacred texts are full of logical impossibilities, mutually exclusive explanations, and incompatible sayings. However, this does not at all prevent a very large segment of the human population from believing in the truth of the word.

Seemingly untroubled, many people simultaneously embrace contradictory theories of the world, e.g., by assenting to the truth of modern astronomy at the same time as believing in astrology. This is perhaps understandable in view of the fact that man's knowledge of the world and its processes did not have to be coherent in prehistorical times. A scattered mosaic of well-founded beliefs was sufficient for responding adaptively in many different situations. There must have been little need to make a unified, systematic picture out of this mosaic, as long as each piece of the tessellation fulfilled its function. A need for a more coherent picture of the world probably did not emerge until agriculture commenced in a larger scale, making much greater demands on longterm planning and organization. Repetitious life in a small tribe does not require a comprehensive, logically sound system of beliefs.

The scientific stance does not only include the basic norm that theories be testable, but also the desiderata that a theory must be internally consistent, that each theory has to be

compatible with the other, and ideally, that the same fundamental principles be applicable in every single domain, be it ship-building, the construction of bridges or aircraft, or the technical design of dishwashers. The modern Western culture dreams of a great unifying theory in science, but it is thought-provoking that other cultures and civilizations have shown little of this aspiration, and that humans, even in the Western sphere, likewise seem able to live happily with muddled, logically incoherent, and mutually exclusive ideas about the world they inhabitate. 23

So far, natural science has yielded singularly efficient methods for improving the external world and making it more fit for human needs and desires. Now we are about to enter a new era. The computerized systems we develop for monitoring and controlling various realms of reality, from manufacture through industrial design to climatic conditions, are getting more and more complex. It would be naive to think that, in the future, we will not build information systems so complex, fast, and comprehensive that no single human brain will be able to monitor or completely understand everything that goes on, or why. It is a crucial question whether we are really prepared to trust such systems, especially information about the consequences of different courses of action, not least political ones. Already there are scary indications that even well documented and scientifically founded predictions about, e.g., the effect of our activities on the atmosphere or maritime ecology are, if not neglected, then at least not at all countered by the necessary political action. A cornerstone of our faith in science and the power of reason has been that, once we have reached a good understanding of some significant part of reality, we will act in a way advantageous for us. Once science in a convincing way has shown the risks involved in drug abuse, smoking, drinking alcohol, etc., people will refrain from these actions. Once it is unequivocally clear what greasy cholesterol-distended junk food might do to you and your children, people will turn to healthier food. But this cornerstone of modernity's progressive rationalism is rapidly turning into a colossus with feet of clay.

The assumption that we are rational beings, and that – invoking a somewhat Socratic 24
identification of reason and virtue – once we know what is good for us and our society,
we will also be motivated so as to do that, has very little, if any, foundation in history or
the development in present-day societies around the world. On the contrary, the
examples are legion as to our steady march into sheer folly, as individuals, groups,
nations, or supranational federations. By and large, the cherished notion that the foolish
deeds by earlier generations were due to the fact that they did not know any better is
untenable. In many cases, it can be demonstrated that people actually understood
perfectly well where their community or culture was heading, but that they lacked the
inclination, the courage, the necessary support from the public opinion, or the political
means to do anything about it. The Roman empire would constitute a fairly convincing
example in this regard.

We already have information systems that enable us to make better decisions than the
ones we make by our own accord. Doubtlessly, we will see a major development in this
sector, systems with a potential of putting us in a position to foresee a great many
problems that the future may hold as well as their possible solutions. The question is
whether we will be prepared to act on the computations and predictions emanating from
these systems, or if we will rashly charge into a vale of tears, if not the valley of death.

The notion of a unified view of reality – in tandem with the idea of adjusting the map to
the terrain, or harnessing the horses to the carriage (rather than the other way around) –
has led to the greatest revolution in our relation to the external world that humanity has
ever known, for better and for worse. On the face of it, there is no limit to this
development. We might well ask if it is not the case that we have started a number of
self-structuring systems, e. g., in economy, where we have little influence over the
upcoming development. Despite the fact that we have constructed and designed these

systems, they may develop structures that we have not foreseen and give rise to consequences that we cannot handle. We have let a jinn out of its bottle, and so far we can only guess – at best – what further developments are in store. Human cognition is the same as it was ten thousand years ago, but it has to cope with this new, everchanging world that is so hard to survey. Manipulation of the human genome will perhaps eventually let us change the basic characteristics of our species to order, to the effect that evolution by natural selection could be replaced with evolution by human intervention. But until then, we have to get along with the mental equipment we have inherited. 25

5. ARTISTIC PERFECTION

The propensity to delight in artistic creation, or at least in ornament and decoration, is universally observable among human cultures. However variable the admired objects, there is reason to believe that certain basic aesthetic preferences for color, form, pattern, sound, and proportion can be accounted for in evolutionary terms and traced back, for instance, to mating preferences. As for proportion, the cross-cultural male preference for a female waist-to-hip ratio of .70 is a case in point. This phenomenon, or the ‘sense of beauty’ as Darwin called it, is ubiquitous in the animal kingdom, where certain kinds of color, body-form, movement, plumage, song, and smell are found attractive. If such aesthetic preferences emerge in a species, they will always play a role in natural selection, thus perpetuating the relevant qualities and behaviors. It is a vexed question whether these preferences in nonhuman animals, too, are accompanied by positive internal states of enjoyment and appreciation. However, at least in mammals it seems a sound assumption to posit some kind of inner experience. Why should our species be so different from closely related ones? Chimpanzees at least seem to enjoy themselves when they get a chance to paint. And if mammals have the capacity for aesthetic

pleasure, why not vertebrates in general? There is a striking example in birds. Bower birds decorate their lekking sites by applying blue color (from fruit) to the branches with a brush and by collecting ornamental shells. It makes you wonder if it is really credible that the bird does not take pleasure in this activity, nor appreciates the result thereof. In any case, the burden of proof lies on those who maintain that aesthetic pleasure is an exclusively human affair.

26

Our capacity for aesthetic appreciation, coupled with our ability to imagine yet better aesthetic stimuli than those readily found in nature, paves the way for efforts at artistic perfection. As is well evidenced in ethological research, animals may react more strongly to supernormal stimuli than to normal ones, but man is uniquely capable of creating such stimuli by himself and to his own taste. For example, using a formula reminiscent of Disney cartoons, we can create an image which artifactually epitomizes baby cuteness: snub nose, a pair of huge, lustrous eyes, high forehead, small chin, chubby cheeks, a pouting expression, etc. In a dialogue on truth and probability in art, Goethe poses the question of why a perfect work of art also appears like a work of nature. The reply is, 'Because it harmonizes with your better nature. Because it is above natural, yet not unnatural' (*Goethe's Literary Essays*, New York, 1921, p. 57). The movement toward aesthetic idealization of nature, broadly speaking, has indeed been very powerful in the history of the arts.

Consider, for instance, the urge to represent the perfect human body. According to details of measurement first specified by Jean Cousin in *l'Art de dessiner* (1685), the ideal proportions of the human body are set by the basic unit of a head's length, that is, the distance from the crown to the point of the chin. Based on a golden section or two and the finest works of sculpture from classical antiquity, such as Polyclitus' *Spear Bearer*, it is determined that this distance should equal one eighth of the entire length of the human body, though Nature is more prone to display a ratio of 1: 7.5. Then the rest

of the body is divided into seven more parts, each equalling the head in length: from the point of the chin to the nipples, from the nipples to the navel, from the navel to the lower end of the pubic bone, and so on and so forth, till you have *Aphrodite of the Cnidians* before you. There are ideal measures for each and every part of the body as well: the head, for instance, is divided into four equal perpendicular parts, each of which having the same length as the nose. 27

In real life, one might very well encounter a hero with an unimpressive physique, and a noble-minded woman may look rather emaciated and have a lop-sided face. But in classical sculpture there is no inner perfection without corresponding external forms; no hero with weak muscles, nor feminine graciousness in want of symmetric voluptuousness. Through direct idealization, the represented figure in a sculpture often becomes a symbol of its own kind; for instance, a hero will be the universal hero, a man will signify manhood in general, or a winner in the Olympic Games will be transformed into The Winner. Even in portraits of real people it is not unusual with some degree of artistic perfection or idealization of the real looks of the historic characters – to render them the way they *ought to* have looked had their appearance completely been in character with their inner selves. This can be seen in portraits ranging from the classical renderings of Sophocles and Demosthenes to Thorvaldsen's Schiller and Sergel's Gustavus the Third; these figures all had to be represented as monumental in order to convey their perceived personal qualities. And there are also examples of historic portraits where the idealization primarily functions in a compensatory, indirect manner – e.g., in da Volterra's bronzes of Michelangelo, whose ugliness, aggravated by his broken nose, had to be set aside so as to enhance the expressive qualities of sensitivity and drama necessitated by his artistic genius. In the end, the idealized portrait is likely to survive, as the 'true' version of its subject. Speaking of Michelangelo, it was pointed out that his statue of Giuliano de' Medici in the Medici Chapel bore no resemblance at all to its subject, being an idealized Prince in military garb, young, muscular, and

pensive. Allegedly, Michelangelo's only comment was, 'A thousand years from now, nobody will know what he actually looked like.'

28

Nature may be artistically perfected in so many different ways. The aesthetic effect of a scenic view in a Flemish landscape, for instance, may be enhanced by adding a high mountain to the picture, though mountains are rare things in those parts of Europe (cf. *The Return of the Hunters* by Bruegel the Elder). The addition may be justified either in compositional terms, or by reference to a sense of drama. In the first case, the rugged rocks of the mountain may function as a contrast to the soft shrubbery and the billowing fields; in the second case, the role of the mountain would be to set a mood to the painting, e.g., by indicating the grandeur of nature. This simple example introduces two general principles of direct idealization in landscape painting: the plastic and the picturesque style, respectively. In a picturesque landscape, the local physiognomy is brought out very sharply, but permeated by a depth of mood through disharmonic forms and a pallet of unruly, romantic, and emotionally tinged color shades. A plastic landscape, on the other hand, launches a nature that is imprinted by a calm ideality, using pure lines in an interplay between curved and rectilinear motifs, distances softly shaded off, etc. The former style is exemplified in works by Jacob van Ruisdael (e.g., *The Jewish Cemetery*); the latter is found in the stylized, heroic landscapes by Nicolas Poussin (e.g., *Landscape with the Burial of Phocion*) and Claude Lorraine (e.g., *A Pastoral*).

Symmetry plays a vital role in many forms of artistic perfection. The preference for bodily symmetry is well documented in higher vertebrates, including humans, and is thus in all likelihood innate. The evolutionary explanation for this preference is that symmetry is a most reliable indicator of physical vigor and health as well as an upbringing under good, nourishing conditions. Our inclination toward symmetrical shapes and patterns in art and craft is, plausibly, an offshoot to the basic genetic

preference. Why else bother about depicting human faces in such a way that one side mirrors the other? Or representing horses with symmetric front or hind legs? As 29
perfect symmetry is seldom, if ever, found in nature, it is not strange that so much artistic effort during the ages has been directed at creating it – in decorating vases, ornamenting knife handles or sheaths, tiling floors, etc. A proximate explanation for the aesthetic appeal of symmetry might perhaps refer to the pleasant impression a symmetric structure is likely to afford us, namely, that of a uniform solidity conforming to law and the ability to carry its own weight with equipoise. This is particularly evident in architecture, where it is also plain that the question of symmetry may be related to matters of great practical importance; a building will collapse, for instance, if the pillars supporting the roof are much thicker on one side than the other. In painting, compositional symmetry is often achieved through visual emphasis and subordination; the compositional pattern may then either be based on the pyramid shape, with a central figure or group flanked by two other ones (e.g., in Raphael's *Madonna di San Sisto*), or it may be a horizontal composition which is gathered around a focal point, as in *The Last Supper* by Leonardo.

Broadly speaking, all music is idealized sound: a rhythmic, characteristically structured progression of tones, or melody. In a normative sense, a melody is a perfected succession of tones that carries an autonomous, complete meaning in itself, and which, therefore, is comprehensible (and perhaps pleasing as well) when heard abstracted from its larger context and without accompaniment. In a way, the melody is the fundamental musical form, but as simple or homophonic melodious progression it also constitutes a kind of its own among other more plentiful musical kinds. Historically, the transition to polyphonic forms, fuelled by the passionate joy of combination, was a development toward the ideal of pure musical construction, an alluring musical Utopia that hove in sight to the mind's eye: the grand musical cycle with a closed structure, perfectly uniform yet exceedingly rich, exploiting both thematic unity and structural and formal

variety to the maximum in a way that seems perfectly natural and facile. The fugue, with its strictly ordered imitation and contrapuntal plaiting of the different parts, is arguably the perfection of polyphony – or the ideal ensemble. In a fugue, the unity of the basic subjects is joined to a variable manifold and wealth of harmonic combinations, as well as an agility in the different parts as they subdue and relieve one another; and this in a manner, too, which exhausts all the possibilities of polyphonic music. What Bach created with the complex polyphony of *Die Kunst der Fuge* was more or less the perfect jam session – and with a one-man band at that! It is just an accidental circumstance that this great work in full, with its vast cycles, can only be performed live by a whole ensemble of instruments, as it would otherwise require some kind of superinstrument that does not as yet exist. 30

By that we have brushed against a characteristic that has been cultivated in isolation in Western art music, namely, structure; that is, the construction of the succession of notes, the variations on a theme, the interplay between different parts of the work, the rules of what is permissible and what is not, etc. The perfection of musical structure requires, first, the presence of a notational system, and second, musical professionalism. Structure is, of course, already important in improvisatory folk music as well, but in that context it is for the most part a question of how the soloist varies a more or less fixed theme, in a structured extempore improvisation to a relatively simple, repetitious accompaniment in the background. In this connection, the simple but persistent bass rhythm of the boogie-woogie comes to mind, as well as the medieval basso continuo (or thorough bass) which could be designated by numerals to indicate the proper harmony, pretty much in the same way as that of the chords for guitar accompaniment. However, much more than this cannot be accomplished if you are an amateur playing at occasional barn dances, and in the absence of a proper notational system. No doubt a band of talented musicians would be able to learn a multitude of improvisations by heart, but they would clearly meet with resistance in trying to produce two different

parts simultaneously without reducing the one to being an accompaniment to the other. It is so much easier to play in unison, creating the illusion of polyphony by brandishing triplets and quadruplets, etc. And a larger structure can also be introduced, designed as a pattern of rules for repeats, with the effect that a couple of rather simple phrases may be extended into a whole dance.

31

However, when a society has developed to the point that it parades professional musicians, for instance, owing to the fact that the religious institutions or the courts provide opportunities for people to work with music full time, then the need to transcend extempore improvisation follows suit. At this point, the invention of a manageable notational system will also be close at hand, so that you can write down unusually ingenious improvisations by gifted professionals. In that way, other people can play these outstanding pieces too. Furthermore, you can develop the accompaniment beyond simple bass harmonies, for instance, by constructing separate parts that correspond to the solo part in extending tonally and rhythmically harmonious progressions. And then you can pore over the music sheet, polishing it all until every single note tallies with the rest. The result is on the analogy of a jazzband, where all the players simultaneously are soloists, each performing his part, and where all the parts are in perfect accord and harmony. And not only that, for this is indeed a remarkable band: in the final analysis, the players are one and the same person. The entertainment provided stems from the composer, playing his own minutely constructed piece on the different instruments. In this way, the occasional executors are reduced to craftsmen carrying out somebody else's ingenious plan.

The perfect plan is something that fascinates us in many areas of life, from musical composition through chess and crime to technology and social engineering. The individual who thought of it all, covered his tracks and got away unimpeded, perhaps even with murder, is likely to engage our interest and may even, unless he or she is

morally too reprehensible, be an object of admiration. In narratives, literary or otherwise, the perfection of plan or *plot* has been a major structural concern as long as the practice of story-telling has existed, a period which probably equals the time our species has been around. You want to hold the attention of your listeners while telling a story, and you do not want them to be disappointed when all is told. There must be no anticlimax; you cannot have your audience think that the narrated events all came to nothing or just were too far out. By the same token, Aristotle states in his *Poetics* that the events of a plot ‘make the strongest impact when they occur unexpectedly and at the same time in consequence of one another’, whereas in a bad plot ‘the episodes do not follow one upon another in accordance with the probability or necessity’ (1451b-1452a). By and large, the terms of probability and necessity are set internally by the work itself and/or determined by the institution of fiction and its genres, rather than being imported wholesale from the ordinary world. In fiction, we generally allow for a certain degree of condensation and simplification of plot: for instance, it does not seem incredible that everything that transpires in an episode of *General Hospital* should happen to a small group of people during a very short period of time, or that a die-hard fighter of Bruce Willis’s ilk could keep on doing business around the clock without taking a leak. 32

To be really captivating, the successful plot, which is both coherent and complex, must also keep the audience in suspense, and this requires that the story-teller closely monitors the mechanics of the dramatic structure; that is, the way the story is told, the building and relaxation of tension (cf. wide-spread notions of the perfect screw). When it all comes out nicely we experience heightened control, a sense of closure, or even catharsis. Apart from its obvious connections to a mechanistic view of the universe as a great clockwork, the strong appeal of the perfect plot maybe also is parasitic upon the kind of superstitious beliefs to which even mature human beings are prone to revert

when unchecked: our existence makes sense because there is a meaning or purpose behind everything that happens, and we are part of the demiurge's grand plan.

33

Tapping into this sense of meaningfulness, a propagandistic narrative work may be overwhelming to the recipients, especially if it uses powerful aesthetic means in the construction of plot and drama. Here Leni Riefenstahl's film *Triumph of the Will* comes to mind, a documentary of the 1934 Nuremberg rally of the Nazi Party. Its undisputed success as a piece of propaganda must owe in part to how skillfully it casts the German people in a meaningful story, by weaving the ideas of *ein Volk, ein Reich, ein Führer* into a persuasive plot. The vision it projects is that Hitler is the hero of a grand narrative; both leader and savior, he has come to restore a defeated Germany to its ancient splendor. As for historical truth and consequence, the real event of the 1934 Nazi rally did not just unfold; it was constructed in part to be the subject of Riefenstahl's movie. And part of the future this film promised is now is horrifying past it helped to create.

6. PERFECTING THE WORLD POLITICALLY

Every political ideology or movement has a more or less clearly formulated visionary end-state, a desirable goal which is the ultimate objective of all political activity. This utopian vision may be thought of as possible to carry out in practice, or it may be cherished as an ideal to which we ought to strive as best we can, though it will never be fully realized. There are many interesting philosophical issues concerning the nature and justification of political Utopias. Here, however, we shall focus more on their practical dimensions, and on some of the mental factors involved in the construction and application of political ideologies.

Successful as the scientific world-view may have been in indicating workable strategies for changing man's external world into a human zoo, clear of dirt, hunger, pain, disease, toilsome labor, and dangerous animals, it yet has had little effect on political thinking and action. In the realm of politics, the basic assumption still seems to be that the Word is the beginning; ideas of paradise take precedence over reality. Ideologies are seldom based on scientific analyses of actual social conditions and/or human needs and capacities; the analyses involved are often value-laden and question-begging, in that the outcome is already, by and large, tailored to fit Utopia. Whether they are realistic or not, in terms of the present situation, the economic conditions, man's psychological constraints, or the laws of nature, seems to be an issue of minor importance. The worst enemy of politics is reality, and wishful thinking appears to be the main mechanism in adopting goals and strategies. It seems that people with firm political convictions often adhere to the view that the desire to realize Utopia also will make it come true, one way or the other. Purpose and perseverance are everything; and if the political will is strong enough it shall subjugate reality, as faith can remove mountains. The former Swedish prime minister Olof Palme expressed the gist of this pragmatic voluntarism by saying that politics is will, but Benito Mussolini's motto *Potere è volere* was perhaps more dashing. 34

However, scientifically inspired political Utopias are by no means unknown. Francis Bacon, for instance, projected in *The New Atlantis* (1627) an ideal society in keeping with his scientific principles. In that society, science is regarded as the key to universal happiness and is fostered under state guidance and control. Ostensibly, the Marxist ideology is based on materialism and science, dubbed a 'scientific socialism' as it was by Marx and Engels, in contrast to the 'utopian socialism' of Proudhon, Saint Simon, Fourier, and others. Unfortunately, it must be judged an abysmal failure in this respect, even though it has provided many valuable insights and analyses. Despite its scientific ambitions, the ideology already at the outset was distorted because the theoreticians

chose theories and beliefs that fit their visions of the projected end-state and the path leading up to it. The paradigm of adjusting the theory to the outcome of experiments and observations was belied from the beginning. 35

A pertinent example is that Marxism immediately seized upon the behavioristic view of human and animal behavior, since the image of the individual as a *tabula rasa* encompassed a highly attractive notion, necessitated by the general upshot of the strategy toward the desirable state of society: namely, that man can be endlessly indoctrinated and molded to fit Utopia. Due to this commitment, the only biology tolerated by the Marxist-Leninist ideologues and party officials in the Soviet Union was science that supported the *tabula rasa* idea, or the theory that the environment fully determines behavior and development. For instance, Pavlov tried to give this general idea a scientific basis in his theory that reflexes are the sole foundation of behavior; and Lysenko, denying the existence of genes and heredity, worked on teaching potatoes how to resist cold weather, instead of using selective breeding to improve the strains. When modern behavioral biology and genetics gained momentum and steadily developed well-founded theories, thus reducing behaviorism and Soviet Lamarckianism to historical anecdotes, Marxists nonetheless insisted on the truth of these doctrines – and still do, to a surprising degree.

Nazism similarly claimed to have scientific principles at its core. A huge amount of resources, not least in academic research, was spent in trying to prove the superiority of the master race and the inferiority of others, and to give the extensive sterilization program a ‘scientific’ foundation. Here, as in many other cases, the leaders had no difficulty finding an abundance of scholars and researchers who were willing to pursue their scientific work in accordance with the desires and directives of the political establishment. In the case of Nazism, two things became crystal clear: first, the enormous respect that even the highest officials had for natural science and the

legitimacy it could provide; and second, the ease with which the scientific practice can be corrupted through insidious political gerrymandering, a fact indicating that science involves a way of thinking which is exceedingly hard to achieve and sustain.

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A more recent example, which is instructive, is the protracted debate over nuclear power in many Western countries. It took the community of natural scientists and engineers a long time to realize that the critical issue, in the final analysis, did not concern the immanent risks and advantages, and how they should be weighted against those appended to other energy sources. The fact that the debate necessarily had to come down to issues and categories within the intellectual grasp of the general public certainly was something of a shock to those scientists, technicians, and politicians who had been lulled into the belief that the problem at hand could be solved solely on a rational or scientific basis, and tenuously kept a firm hold of this conviction until defeated by public opinion.

Political ideologies seldom, if ever, prosper in the absence of some kind of leader. Like religions, they seem to need a personification, a human face, to flourish. As for penetrative power, the doctrine in itself never seems enough, and so prophets or executive do-gooders become indispensable. This need for personification may well be a reflection of our biological heritage, since the willingness to follow, even to adore, an imposing leader is evident in all group-living primates. The advantages of letting one experienced and ready-witted individual make quick decisions, whom every member of the tribe unquestioningly follows, are by no means hard to find. However, it may be a bit harder to explain why we strive for power at all, and why so many of us are more than willing to make enormous sacrifices, personally and otherwise, in order to transcend our competence level.

When asked about his literary motivity, author William Styron allegedly replied that he wrote books because he wanted to get rich so that he could fuck starlets.

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Similarly, a common opinion is that politicians are in it for the dough, or for all the pleasures that money, prestige, and power can buy. There are, of course, many examples of this, but at the same time we can point to a whole lot of historical cases of an entirely different kind, especially among the very powerful. Many of them lived an austere life, more or less devoid of such petty pleasures as sex, good food, family, children, and friends. The personal happiness of Hitler, Stalin, de Gaulle, or Napoleon does not seem to be worth a life of enormous personal sacrifices, with far-reaching responsibilities, around-the-clock service, stress, and intrigues.

Consequently, the question arises as to the motive or driving force behind such leaders. What could possibly account for their will to power? If it is not the pleasures that the Oval Office can give, we must look for other reasons that can out-Lewinsky any strictly self-centered concerns. It is not to be denied that power as such may provide great satisfaction (and increase the attractiveness in men who otherwise would have a hard time), but it seems that a more probable, and perhaps terrifying, explanation is that these people often believe that they have a mission, and that they take on the work and accept all the stress, not for the rewards, nor for power, but in order to create a better world. Today, it may seem ludicrous to say that a man of Hitler's caliber regarded himself as a well-intentioned savior, who was to restore Germany's rightful greatness. Yet even a slight acquaintance with his writings and speeches will substantiate this claim, as well as give the clear impression that he fervently believed in his skewed ideals.

If each generation produces a number of people who are convinced that they have been appointed to create a better world, by leading people out of or into deserts, and who are convinced that those individuals who do not share their ideals and visions must be

eliminated, it is an even stranger phenomenon that, no matter how abstruse the new political ideology or religion is, there will always be people willing to follow the leaders. But biology may again give us a hint, it being advantageous to follow an experienced leader and trust his advice. After all, very few people who were slow on the uptake got old and experienced in prehistory, and those who perchance did were hardly equipped with eyes burning brightly and a honied or thundering voice filled with persuasiveness. In modern society, self-confidence is not necessarily based on experiences or actions indicating that the person is competent in some domain, but that was hardly the case in prehistory. A charismatic, silver-haired prophet could reasonably be relied upon.

It is of considerable interest to note that two things are often mentioned about the great leaders in history: their eyes and their voice. The latter is rather obvious, since charisma can hardly be carried without good rhetorical qualities. The eyes, burning like fire, as attributed to many such leaders, seem a bit harder to explain, unless one submits to the simplistic idea that these people just had a confident, steady stare. Everyday experience tells us that outstaring the enemy is a very efficient way of subduing him, and the skeptic may find evidence of this in any old western movie. Hitler is a case in point when it comes to the importance of charisma, since there are many contemporaries bearing witness to his 'steely gaze,' and – perhaps somewhat surprisingly to us latecomers who have only seen him as a raging and screaming lunatic – to him being a very avuncular, charming, and persuasive person, with a warm and mellow baritone. The image of Hitler in today's media may even be dangerous, giving us the false impression that future leaders of the same dangerousness would be easily spotted as bellowing maniacs.

Without denying that the actual ideas preached by the leader or the prophet are of fundamental importance, it seems clear that personal persuasiveness is a crucial factor.

However, one should not forget that some leaders in history have mainly based their position, not on charisma, intelligence, or profound knowledge, but rather on their high ability as plotters in subtle, complicated schemes. Acting in the background as it were, by letting the flashy, charming, and creative colleagues who aspire for power eliminate one another, the gray eminence just waits until none is left and he stands alone – pathetically devoid of any charismatic qualities or persuasive grand ideas, but resting his power on the ability to mislead everyone into thinking that he or she is in particularly high favor with him, while threatening with terror if that favor is lost. One such historical figure that comes to mind is Stalin, but there are many others, even though this kind of tactic seems to be more efficient in smaller institutions, like companies and universities.

As for the birth of new ideologies and new Utopias, the Western civilization seems to have been a very fertile ground. Whereas religious movements and their leaders dominated in the Middle Ages, one chasing after the other, the political ideologies became the vogue in the Enlightenment era. The growing success of the scientific view of the world, the improving infrastructure of the Western civilization, and the discovery of the rest of our planet gave an impetus to dreams of a better or even perfect world, since in all this we found reason to believe in the feasibility of making profound changes in the old society. Liberalism is a good example, with its vision of a world that not only has been materially improved, but spiritually and intellectually as well, a society where the prejudices responsible for inequality and discrimination have been extirpated. The last five hundred years have presented a steady oscillation back and forth between egalitarian, liberal dreams of a new society and a more conservative adherence to old customs and traditions, and sometimes to more or less Fascistic ideals. But it is hard to see that the different Utopias have undergone any drastic development during this time, since the main strivings basically remain the same, just as the

gullibility of the population when it comes to the promise that this time it will all be different.

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It is a sobering and terrifying thought that we may well be doomed, through our biology and our cognition, to repeat the same errors forever and ever, always being prepared to try to force our new ideas on the rest of humanity, or to sheepishly follow an adored leader, regardless of the repulsiveness of his preachings. If hope really springs eternal in the human breast, it is hard to see why the future should be devoid of charismatic leaders, striving for high ideals, and eager acolytes prepared to do their bidding.

7. CONCLUDING REMARKS

If the dream of Utopia is an inescapable byproduct of human cognition, we must expect it to accompany humanity in the future as much as in the past. The idea of a better or perfect world, with beautiful things and shiny, happy people, is certainly not objectionable in itself, and there is no denying that the permanent striving to improve human existence in many cases has yielded results so clear of some of the major discomforts of life that few people in modern Western societies, for instance, would swap places even with a prosperous prince in the Middle Ages.

But the undeniable progress on a broad front has also engendered the misleading belief that man has been radically changed as well, that an intrinsic mental transformation of our species has taken place. This notion is not altogether far-fetched if reinterpreted in terms of powerful cultural constraints imposed on us through nurture, since it would be hard to find many people advocating the use of torture, death penalty for petty crimes, public floggings or decapitations, and other similar atrocities as means to correct crime and lawlessness in our society. However, the idea that modern man, literally speaking, is mentally different from earlier human models lacks a biological foundation, tempting

and flattering though it may be. Merely fivehundred generations of agriculture, husbandry, and large-scale civilization simply cannot have exercised any profound influence on human cognition and behavioral genetics – and even much less so, when it comes to the last twohundred years of relative freedom in the Western sphere from some of the heinous deeds standardly perpetrated by earlier cultures. As Nazism has taught us, it is still too easy to cast this veneer of humanity aside, even in old nations priding themselves of the advances made throughout history as regards the respect for human lives and rights. The assumption that we still essentially are the same kind of humans as our ancestors does indeed seem necessitated by reality and history, however disagreeable it may be. 4 1

If we still are the same in all essential respects, it may well be that Utopia as an idea will always be with us, but that the inherited restrictions in our cognition make it utterly hard for us to judge which utopian visions are feasible, which ones will lead to bliss or to terror and bloodshed, and which flamboyant leader we should follow. Without disputing the need for visions of societal improvement and their potential usefulness, it is vital to remember that virtually all wars, sufferings, genocides, ethnical cleansings, witch-burnings, etc., have been caused by people trying to realize some kind of Utopia, which soon turns into Dystopia. Speaking for ourselves, we cannot but imagine that this world would be a far better place if people at least occasionally stopped imagining better worlds.

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