

LEWIS MUMFORD

Interpretations
and Forecasts:

1922-1972

Studies in Literature, History, Biography,
Technics, and Contemporary Society



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A B C D E F G H I J

More than once in recent years I have been asked to bring together in a single volume a representative collection of my writings over the last half century. An early attempt at such a book, 'The Human Prospect,' came out indeed almost twenty years ago. But since it reflected solely the independent judgment of the editors, Professor Harry T. Moore and Professor Karl Deutsch, it has served as a challenge, rather than a deterrent to the present work. Only three of the twenty-nine selections in the earlier book have been used in the present more ample collection.

At first I hesitated to take on this task, since all my major books, with one exception, 'Green Memories,' are still actively in print, beginning with 'The Story of Utopias' in 1922. But Elmer Newman's recent bibliography of my writings made me realize how little even my later work is known to the present generation, since some of my more valuable contributions appeared in periodicals of limited circulation, now vanished or difficult to consult. In order to keep the present volume from being over-compressed or over-bulky, I have reserved for a future occasion a similar selection from my writings on architecture, urbanism, and regionalism.

By concentrating on five main themes I have warded off the temptation to present scattered, unrelated samples of my "best work" and have confined myself to those areas where I have had a fresh contribution to make. By observing these conditions, this closely interwoven collection has, I trust, turned out to be, not a mere mélange or anthology, but virtually an original work in its own right: all the more useful, perhaps, as a general introduction because my earliest thoughts and my latest often gain in significance by appearing side by side.

—L.M.

The Uprising of Caliban

1954

We have the misfortune to live under the sign of Caliban. Hate, fear, suspicion, violence have become almost endemic. In America, abnormality is fast becoming our norm: automatism our overruling providence: irrationality itself the criterion of reason. Fantasies of wholesale extermination and annihilation no longer fill only the minds of certified paranoiacs: their studious translation into the practical devices of atomic, biological, and chemical warfare has dominated the activities of leaders in science and government for more than a decade.

These practical preoccupations, so quietly pursued, have given a deceptive air of sanity to projects that match the hallucinations of more obvious victims of mental disease, confined to hospitals for the incurably insane. At lower levels, the same methodical irrationality prevails under the sober guise of law, order, national security. Though in every period disintegrating forces tend to break through the crust of orderly life, in our age they have broken through at so many points that they have formed a second crust: indeed, they have spread so widely and hardened so solidly that they threaten to suppress every benign manifestation of life.

For the sake of brevity, and for reasons that will become plainer as I go on, I propose to personify the demoralizing forces of modern barbarism by the figure of Caliban. That fawning brute, that gibbering fool, that snarling animal, as Shakespeare pictured him in 'The Tempest,' may well stand as image of the lower powers of man—of nature untouched by nurture, to use Shakespeare's own terms—against whose uprising and domination no person, no civilization, is ever entirely safe.

In an effort to curb this creature, earlier societies had made him a prisoner and thrust him into a dungeon, treating him with a savageness that disclosed the proper fear that the ever-seductive temptation to relapse into brutishness provokes in the human breast. To make reparation for that harsh attitude, our more humanitarian age, prompted by a complacent naturalism and a misapplied egalitarianism, put Caliban on the same level

as Prospero, and accorded him an equal degree of power and authority. In repayment for this kindness, Caliban now refuses to acknowledge that there is any higher power than his own: indeed, higher and lower are meaningless terms to him, along with good and bad, creative and destructive; but insofar as his behavior implies a recognition of difference, he is on the side of the destroyer. As a result, the problem of our time, the problem that holds a key to every other issue, is to bring Caliban back once more under the control of Prospero.

In contrast to Caliban, Prospero is the incarnation of man's higher powers. His is the discerning intelligence that foresees and anticipates, in a state of constant alertness against blind habit and meaningless automatism. His is the sensitive morality that weighs and evaluates, restrains and directs human conduct; his is the brooding imagination that, by means of art and love, fashions a fresh form for man's every activity, a more human mask for the face and character of man, and a higher destiny for his life.

To Prospero, finally, belongs the religious insight that seeks to unite the limited purposes of man with cosmic processes that outlast his brief existence; and through Prospero's very ability to interpret these processes, he takes over nature's responsibilities and turns them more consciously into the path of development and perfection. If Caliban is brute vitality and energy, undirected and self-destructive, Prospero is potentiality and purpose, value and meaning, power molded by form, providentially directed to the service of man's present life and toward the development of a greater life that shall transcend its limitations.

Caliban is the symbol of the primitive unconscious forces in man which, when neither controlled by morals nor expressed by art, offer a greater threat to reason and love than their more obvious enemies. My figures are as simple, indeed as old-fashioned, as that; and though they may mean more than Shakespeare himself intended, they can be translated, without too great distortion, into the terms of modern analytical psychology. If your Shakespeare fails you, Dr. Sigmund Freud will stand you in stead: for Caliban, read the id, the primitive underworld self, and for Prospero the superego, even though I shall define that superego in more generous terms than Freud used. If, again, you prefer the symbols of theology, you will be equally near my meaning if you identify Caliban with the demonic and Prospero with the divine.

Now those of you who have grown up during the past forty years may, for lack of any other kind of experience, believe that the inordinate violence and irrationality of our times have always characterized our civilization. Most of you cannot remember, as I do, the look of incredulous horror on everyone's face when they read the morning papers on a May day some thirty-nine years ago, and found that the steamer *Lusitania*, a ship loaded with many hundred passengers, had been sunk without warning by a German submarine. The shock of that event went far deeper than the first Fascist bombing of civilians in Madrid during the Franco uprising against

the constitutional Spanish republic; and that, in turn, was greater than the horror evoked by the wiping out by the Nazis of thirty thousand Dutch civilians in the center of Rotterdam. Again, that event seemed more dreadful, at least to Americans, than our own extermination of one hundred thousand civilians (along with fifty thousand soldiers) in Hiroshima, by our dropping of the first atomic bomb in 1945.

Note that in thirty brief years, violence and slaughter had increased at geometric ratio, while the human reaction to it had altered inversely. Yet the obnoxious principle in all these cases—the ruthless killing of helpless noncombatants under the guise of military necessity—remained the same. Mankind's long sustained effort to limit the area of slaughter and rapine even in warfare has been halted in our own age: indeed, its direction has been reversed. Modern war, pursued to its logical end, means not the defeat of the enemy but his total extermination: not the resolution of the conflict but the liquidation of the opposition. This is the characteristic Caliban note of our time: one that is coming more and more to dominate both domestic and foreign politics.

The import of this fact apparently has not penetrated the armor of habit that protects sensitive persons: even professed pacifists fail to make any distinction between the limited violence of warfare, brutal though that is, and the unlimited violence of mass extermination. Few of you, perhaps, can remember the time when it was taken for granted that the poisoning of the enemy's water supply, for the purpose of embarrassing his army, was no longer permissible, indeed no longer thinkable, as an act of war. In those days our current preparations for wholesale extermination—extermination by poisoning water and atmosphere, by utilizing nerve gases and lethal bacteria lest any vestige of life by chance escape the hydrogen bombs—would have been regarded, even by coarse, unfeeling people, as the proposals, not of men, but of demented brutes. Such measures violate the principle that Immanuel Kant laid down in his essay 'On the Nature of Peace': "Confidence in the principles of an enemy must remain even during war, otherwise peace could never be concluded." When hostilities "degenerate into a war of extermination" the means befoul and blacken every justifiable human end.

One final story, trivial but no less significant, will give the measure of the change in the moral climate that began in 1914. Early in World War I, when German Zeppelins had begun to raid London by night, Bernard Shaw wrote to the 'Times' of London to suggest that the London County Council build air-raid shelters for their school children, in anticipation of Germany's widening the method of attack. The editors of the 'Times' were so indignant over Shaw's suggestion that they barely consented to print the letter; and in an editorial they reproved Shaw for being so irresponsible as to hint even in jest that a civilized government, like that of Germany, would ever stoop so low as to bomb civilians from the air. There was no need

for Shaw to defend himself against that reproof: the Germans themselves supplied the answer.

I cite these facts, a handful from among a score I could draw on, to show that the violence and irrationality to which we have become calloused differ both in kind and in amount from that which one discovers in happier periods of history. Even if a growing part of the population has made Caliban their god, we have no reason to think that the kingdom and power have always been his. What, indeed, is the history of the last five thousand years of civilization, but the continued attempt, often halted, sometimes set back, but never permanently defeated, to restrict the powers of Caliban and to elevate those of Prospero?

But if we must not make the error of thinking that violence and irrationality, in their present quantities, are normal, we must equally be on guard against another illusion, more flattering to our egos, more soothing to our patriotic pride: the notion that these moments of disintegration are peculiar to peoples who, like the Germans, the Russians, or the Japanese, have long been subjected to a repressive, authoritarian government, and have not been moralized, as we have been, by the more reasonable and co-operative practices of democracy. That illusion perhaps seemed plausible in the thirties, when the contrasts between the practices of American democracy and totalitarian absolutism were more sharp than (to our shame) they now are. During that decade the democratic forces in our country had proved their capacity to meet any emergency under the Constitution, even the most paralyzing of economic depressions, without forfeiting liberty or even impairing the rights of property, despite the confident proselytism and active intervention of both Communism and Fascism. But by now we must realize that we have no natural immunity against either spontaneous or organized Calibanism. We have still some distance to go before we sink to the Russian level of political intimidation and repression; but in relation to our own conceptions of human decency and freedom, we have already sunk far too low.

Too easily, indeed, during the past decade, we have attempted to cover up our own uneasiness by redoubling our outrage over the conduct of our enemies: the familiar Freudian device of the transferred reproach. We continue to be indignant over the Iron Curtain that the Communist-dominated countries have lowered, to prevent easy travel and spontaneous social intercourse; but we forget that even under the administration of President Truman, the State Department and the Congress had erected an Iron Curtain of our own, somewhat more open-meshed, but just as arbitrary in its prohibitions. Restrictions upon free movement and social intercourse, normal, indeed indispensable, in wartime, have hardened into daily routine: people who have no criminal record and no official secrets have been confined to this country by administrative act—the withholding of a passport—as if it were a prison, and candidates for high public office are now subjected to

the gratuitous humiliation of security investigations, as if the unedited dossiers of our secret police, filled with anonymous scurrilities, were a reputable means of bolstering public confidence in a loyalty that should, in a normal society not ridden by pathological suspicion and fear, be taken for granted. If the fathers of our country had been as frenetically alarmed by Benedict Arnold's treason, and loyalism generally, as our present-day governments have been by the threat of Communist subversion, they would have anticipated the French Revolution by instituting a Reign of Terror in the name of Public Safety, and thrown our young republic behind the bars of a Police State. Instead, they deliberately extended the protection of the Bill of Rights to all suspected criminals, even traitors.

Next to disregarding entirely the threat of Caliban to our civilization, the worst folly would be to identify him solely with Nazism or totalitarian communism, and to disregard the many evil features and gestures that can already be detected in our own country.

Even if by some providential exhibition of prudence and forbearance we were insured against any major outbreak of international genocide for the next century, that is no guarantee that the forces of Caliban, if otherwise unchecked, might not be dominant at the end of that time. Our children might indeed escape wholesale incineration; and yet find that what had begun as a tentative cold war against Soviet Russia had turned into a permanent cold war, a deepfreeze war, against every human faculty that did not lend itself to mechanical standardization or governmental control: a war against all those people, native or foreign, who differed in thought or attitude from our self-imposed totalitarian orthodoxy. In the act of closing ranks to face the worst we might, in fact, produce the worst.

George Orwell's nightmare world of 1984 is already uncomfortably near. The verbal rewriting of American history, in close imitation of the Russian precedent, has already begun; and if Presidents Truman and Roosevelt have been publicly referred to as traitors or the accomplices of traitors, it will not be long, if this state of mind solidifies, before Woodrow Wilson and Thomas Jefferson will be included in the same category. Whitman, Melville, Thoreau, and Emerson, to say nothing of Lowell and Howells, will vanish from our libraries for the same reason, in an effort to convert the freedom that characterized our past into the inquisitorial authoritarianism that threatens our present and may doom our future.

So much for the outward signs of Caliban. But if we would be wrong to impute all these symptoms to our present national enemies alone, we would be equally wrong if we imagined that a few malign or honestly mistaken men, in official positions, could by themselves bring about this general lowering of public morality, or that a mere weapon of destruction could by itself produce the other characteristic symptoms of this self-induced illness—baseless suspicion, hostility, random violence, non-cooperation, and non-communication. In diagnosing the collective psychosis that now threatens to break out on an even wider scale, we must not make the mistake,

which medicine once made with regard to disease, of attempting to isolate only the individual germ and to locate the particular areas of infection. That kind of analysis is important; but it is equally necessary to understand the general state of the whole organism and to identify the factors that have lowered its immunity. If we are forthright in our analysis, we shall have to admit, I believe, that the inroads Caliban has already made indicate more fundamental weaknesses in our philosophy and faith. Perceptive observers, like Delacroix the painter and Burckhardt the historian, had ominous premonitions of the coming barbarism a full century ago. For this reason, an adequate diagnosis may keep us from spending too much time dealing with mere symptoms: it should rather be general enough to open the way for a more radical correction of our whole regimen.

Our delay in understanding the processes of disintegration at work in our time has, perhaps, been due to the fact that, both in Soviet Russia and in the United States, Caliban has crept into our homes, not as a marauding beast, but in the guise of a friend, bringing special gifts. In Russia he promised justice and equality, the removal of the power of property over the humble and helpless: a life centered on public service, rather than private profit. In the United States, he brought the promise of power and abundance that would transform life from a painful struggle into a picnic: everywhere he stood for a release from all constrictions, religious, moral, legal, sexual. The disguise was all the more effective because Caliban had appropriated, from Prospero, the magical spells of science: for every occasion he could quote a scientific authority, as the Devil himself reputedly can quote Scripture. Only recently has it become plain that some of the institutions we have valued most, some of the changes in the human personality we have regarded as most beneficent, have actually abetted the rise of Caliban. Following up this clue, I purpose therefore to center attention upon two changes that have come about in the last half-century: the overthrow of the superego and the domination of the automaton. Either of these transformations would have been dangerous by itself: the two together now constitute a serious threat to our whole society.

The other designation for the "overthrow of the superego" would be the "unchaining of the id." By an unusual coincidence, the practical effort was accompanied by a theoretic explanation; and this explanation first demands our attention, since it both interprets what has actually happened and indicates what measures we must take to overcome the forces of disintegration.

Both the concepts of the id and of the superego, as essential components of the human personality, were the outcome of a profound analysis of the human psyche that has taken place during the last seventy-five years, and very rapidly during the last fifty. The two men who did most to define this change, who added the dimensions of depth and height to the post-theological description of the personality, were two men of contrasting talents and purposes: one of them, Frederic W. H. Myers, known to his own

generation as an investigator of extrasensory phenomena, has been practically forgotten in our time. The other, Dr. Sigmund Freud, stands out as one of the most courageous and original minds that has ever attempted to understand man's nature. The result of these investigations, if I may dare to make such a swift summary, was to establish that the human self is not, to begin with, a simple unity, but a federation of selves, old and new, latent and active, buried and budding.

At bottom, usually below the level of consciousness, is the body and its members and all the processes that go on at an organic level: the instinctual urges and reflex acts, the impulses and promptings and wishes that well up from even deeper strata and reveal themselves enigmatically to us in dreams, or more practically, in proposals and projects that lead to works of art and invention. This primitive underlayer of the self Freud called the id, which is Latin for the aboriginal "it," that which has not yet become "I" or "you" or "we." The id is that part of the spiritual anatomy which Christian theology habitually refers to as the Old Adam; and it is, perhaps, significant that the Old Adam was rediscovered at the end of a century when men blandly supposed that the primitive elements in life had been wiped out by the advance of science and mechanical industry, just as the primitive races were being wiped out—or what was almost the same thing, 'civilized'—by the spread of colonial empires. Like his contemporary, Joseph Conrad, Freud discovered the Heart of Darkness, not just in the African aborigine, but in the soul of modern man himself.

By definition, the id is basic to every other part of the personality. So long as it is attached to the whole personality, as a co-operative member of a federated constitutional government, the id is neither good nor bad. Its undifferentiated and undirected vitality, however, seems as incapable as Caliban's of choosing goals that will even insure its own survival: as Freud pointed out, the id, being the helpless victim of the pleasure principle, has no hold on reality. Indeed, the id in its unmodified state, before it has accepted the discipline of constitutional government, shows many infantile, irrational, even criminal characteristics. We behold the id in its unmodified state in the juvenile delinquent who murders a passing stranger for the pleasure of the experience. Like a little child, it is capable of saying, "I am going to kill you!" when it only means, "Stop bothering me and go away!" Or Caliban will shout, "You are a traitor!" when all he means is that the hated creature holds a different opinion about matters whereon the id, with its feeble grip on reality, sees no possibility of difference. When it breaks loose from the whole personality the id actually carries out these imbecile threats.

Above the id, Freud uncovered two other layers of the self, both later than the id, for they are products of nurture and culture, not just raw nature. One of these is the ego, the commonplace, conscious, daylight creature, the official presentable self, disciplined by experience to admit that fire burns and ice freezes, no longer under the infantile illusion of

boundless power. The ego learns to walk warily among other egos, conforming and compromising, striving for security and status, for recognition and approval, accepting the taboos and customs and goals of the tribe, performing its appointed social roles: yet often prompted by the Five Lusts, as the Chinese call the libido, into seeking channels and expressions of its own, sometimes regressing into the id, yet sometimes transcending its limitations by creating an ideal self, masked by a different costume and cosmetic than that of the tribe. Above the ego Freud detected another aspect of the self, which he called the superego: the voice of duty and conscience, which seeks to bring unity into man's often conflicting claims and activities, and to direct them to a purpose beyond his immediate needs and satisfactions.

For Freud, this superego was a sort of universal Mrs. Grundy, and a male Mrs. Grundy at that, for he tended to identify its authority with that of the repressive father, who constantly stood in the way of the male child's incestuous impulses toward his mother; and so deep was his hostility toward his own father, once his eyes had been opened, that he extended to the superego his long-buried resentments. Freud's understanding of this part of the personality was, I regret to say, something less than perfect; for the most patent manifestations of this superego, in its creative aspects, come from the realms of art and religion; and since Freud regarded religion as an outmoded superstition, the product of illusion, he was not in a favorable state to appraise one of its chief characteristics: the fact that, from the age of the pyramid builders onward, it sought to turn man from the limited goal of animal survival to the endless task of self-development, self-transformation, and self-perfection. Though Freud's early disciple, Jung, presently disclosed the mechanism of this development, in his analysis of the prophetic and anticipatory function of the dream, Freud was so obsessed with the notion of the superego as a censor that he actually announced that the object of psychoanalysis was to "strengthen the ego, to make it more independent of the superego." That injunction was dangerous, for it both broke down the unity of the self and challenged the authority of the higher functions.

The reason for Freud's failure of insight here should by now be plain: in his analysis of the development of the self, he left out of account the positive influence of the other member of the family, the mother. Overemphasizing, if anything, the rule of the father, the Jovean, power-seeking, repressive, organizing element in the personality, he played down the function of the mother, with her life-bestowing gifts, her relaxing and yielding attitudes, her life-transmitting and life-nurturing functions: the mother's sympathy and responsiveness, her giving of the breast to her infant, her special effort to establish an I-and-thou intimacy through language, her endless ways of expressing love. If one necessary part of the superego is inhibitive and withholding, the other is persuasive and affirmative, expressive and life-enhancing.

Alone either agent, paternal or maternal, may be harmful to the normal development of the personality; for too much mothering, if it lead to over-attachment and overprotection, may produce weakness, and that may be as fatal as the harsh commands of an overauthoritarian father. The principle of dynamic balance, so important in all organic functions, holds with particular force here. The superego, to be effective, must draw constantly on the energies of the id at the very moment that, through art, philosophy, and religion, it gives them a creative outlet and a superpersonal goal. If, as Freud thought, art is a mere mechanism of escape, philosophy a rationalization, morality an oppression, religion an outright fraud, the only fragment of the superego left, to counterbalance the id, is scientific truth. How little that leaves us will come out presently.

Now apart from Freud's brilliant theory of dreams and the resulting diagnosis and therapy there was nothing essentially new in this analysis of the self: nothing that was not in large part already familiar to Plato, down to the description of the irrational and potentially antisocial elements that Freud found latent in the id. Did not Zeno the phrenologist discover in Socrates' bumps the evidence of criminal tendencies, and was not Socrates sufficiently well acquainted with himself to admit that these were indeed traits against which he had found it necessary to struggle? But Freud's fresh insight came at a moment when, among the European middle classes, sexuality had been unduly restricted, and in treating neuroses, particularly hysterias, Freud found that the symptoms would often disappear if the patient could be made to confront his or her sexuality and ease avoidable pressures. By lightening the burden of repression, Freud helped to restore order and health in cases where a purely censorious superego had clamped down too hard.

But if sexual repression were the cause of illness, might not the unlimited expression of sexuality be a preventive? That was a tempting thought. Freud himself did not succumb to it; for his own life, as a loving husband and the father of six children, seems a model of domestic felicity, and he turned his own unconscious drive to seek a more sterile goal into an occasion to uncover hitherto hidden areas of the psyche: so that he sublimated his homosexual impulses in science as Whitman did in poetry. But ironically, the popular result of Freud's teaching was to undo the exemplary lesson of his life. The relief of sexual tension widened into a letdown in all tensions: "Be yourself" now came only to mean "Be your lower self." Once the lid was off sex, less attractive components of the id also emerged: cruelty had already found its apologist in Nietzsche, and violence presently found its philosopher in Georges Sorel. In short, the influence of Freud's teaching, as it was vulgarized, was to favor the id: one of his favorite disciples, Georg Groddeck, even wrote an apologia for the id. With the apparent blessing of science, man's primitive self now rose to the top: it was no longer the body and its members that were despised, but

every aspect of the superego, the discipline of morality, the ideal fantasies of art, and above all love. What Dr. Ian Suttie eventually called "the taboo on tenderness" came to characterize both the ideology and the actions of a great part of Western society.

This change did not, of course, take place overnight: still less was it the work of a single thinker. Though Freud was trained in the exacting disciplines of the scientific laboratory, the tendency of his work was to continue the romantic assault on civilization that had been opened in the eighteenth century by Jean Jacques Rousseau. The idealization of the primitive and the spontaneous, the natural and the effortless, was in origin a salutary revolt against life-denying systems of order. The adventurous exploration and settlement of the planet provided a counterpoise to the mechanical routine introduced by capitalism. Vitalities too long held in check by archaic institutions had reason to crave a fresh outlet, if only on a desert island with Robinson Crusoe: hence romanticism had, for a time, an activating and regenerative effect. And this was true, above all, in the political community where nationalism and democracy served as correctives to outworn institutions, molded to protect a single class. But in overthrowing the artificial hierarchies of property and privilege, the twin forces Romanticism and Revolution also tended to turn their back on natural hierarchies: including those that give authority to knowledge over ignorance, to goodness over malice and evil, to the rational over the irrational, to the universal and enduring over the time-serving and particular.

The revolt against the superego, which has taken so many forms during the last century, has had the effect of reversing the true order of human development. Primitive and unconscious processes take precedence over rational and conscious ones: hardness and sadism trample on tenderness and love. In short, elements that every high religion has devoted thousands of years to restraining, canalizing, damming, or diverting into distant fields, have now overflowed every embankment. Yes: the id and the superego have reversed roles. By now it is the primitive urges that give commands, and it is the superego, art and religion, morality and law, that timidly carry out the id's orders.

Do not misunderstand the purport of this analysis. I would not for a moment have you suppose that either Rousseau or Freud, or yet the Romantic poets and novelists, by themselves brought about the condition we now face. To hold that view would in itself be to descend to the primitive level of so much current thinking. What is important to grasp is that the result of our increased knowledge of unconscious and primitive urges—the realm of the not-yet-human—has been to besmirch our specifically human qualities, and to lower our faith in human potentialities that challenge past achievements and have still to find their form in new works of art and their incarnation in living persons. The upsurge of the id, in thought and imagination, has given extra energy to a downward movement in world civiliza-

tion: the forces that should be commanding Caliban are either his helpless victims, or, as so often in modern art and politics, his not unwilling accomplices.

In seeking to understand our primal urges, we have lost sight of our peculiarly human traits and our potential human destinations, not given in nature but fabricated and projected by man. How commonplace it is to reduce every higher human development to a lower term, the pages of the Kinsey reports reveal with almost disarming—or should I say alarming?—naïveté. Dr. Kinsey and his associates would regard it as a ludicrous form of moralism—as it surely would be!—if we chose to reprove a monkey or a cat for not respecting the conventions and sentiments of human marriage. But these seemingly neutral scientists do not apparently see that it is equally absurd to turn reproof into justification, in the opposite direction. If animal behavior justifies sodomy, why not also the murder of rival males in courtship? If murder, why not cannibalism and incest? Is it not characteristic of this devaluation of the human, that in this whole study of the sexual life of American men and women, seemingly so exhaustive, the word love does not appear in the index of either volume? This is the science of Mickey Spillanes. By now its one-sided methodology has been transferred to every human activity: careful of quantities, ignorant about qualities, knowing much about causes and probabilities but indifferent to purposes.

Had this change in ideas come about during some long sleepy summer afternoon of Western man's existence, one might not have noted any general transformation, corresponding to it, in human society. But the traditional manifestations of the superego were theoretically undermined just at the moment when the irrational forces that had been gathering for more than a century had begun to break loose. During this climactic period, the struggle between economic classes had sharpened, and the tension between nations had increased. The resulting conflicts, the strikes, lockouts, assaults, aggressive demonstrations, wars, genocides, broke down long-established inhibitions against violence and spread anger and fear, brutality and terror: presently otherwise normal people were prepared to perform acts against human beings that only a little while earlier they would have hesitated to perform upon live rats. Under wartime conditions, hate and fear and violence are natural responses, indeed psychological accessories to survival. Such conditions pamper and inflate the id, and starve all of man's higher functions. Need I remind you that it is under these negative conditions that mankind has lived for the last forty years: years of hot and cold wars, of ruthless domestic repressions and vengeful revolutions, of widespread municipal gangsterism and fascist sadism, of systematic torture and random extermination. The only self that has been acceptable, under such conditions, is the lower self, hardened to any violence, heavily insulated against reason and love.

During the last forty years few of us have escaped the taint of Caliban: by our passivity, if not by our active connivance, we have contributed to

the overthrow of Prospero; indeed, those who should have been most concerned to forestall this debasement have in fact all too often abetted the final betrayal: the real *trahison des clercs*. Because of the set taken by our institutions, we have reached a dead end in human development; and if the infernal instruments supplied by modern science are ever put to extensive use, that may prove a dead end in the most final sense. In descending to the level of the id, we have thrown away every guide and chart wisdom produced in the past to avert this catastrophic conclusion. Our leaders and guides seem as much the victim of their obsessive fantasies of power and retaliation as was Captain Ahab in 'Moby-Dick': that mad captain who, when the moment drew near for coming to grips with his mortal enemy, turned a deaf ear to the call of love, uttered by Pip, and cast aside sextant, compass, and chart, only to bring his ship and all but one of its crew to utter destruction. How close to home that symbol now comes! With almost one voice our obsessed and driven leaders in science and government say that there can be no turning back: indeed, no halt or pause for reflection. In the name of security they go on piling up the weapons that not merely increase our own vulnerability, but that, if used at fullest strength might wipe out the larger part of mankind and perhaps make the whole planet permanently unfit for life. Unlike the physical destructions of World War II, already so largely repaired, we know those of the atomic age will be irretrievable. Yet the only meaning of such a war, if it broke out, would be to relieve the fears produced by the infernal weapons that prompted it: the very process would cancel out every human purpose.

In short, what began as a contempt for the higher functions of life now threatens to end with a contempt for all life; for once men defile their own humanity, life, even if they survive, becomes meaningless, valueless, directionless, death-seeking. By renouncing those emergent qualities that, being attached to the superego, are specifically human, man becomes a monster, finally, even to himself, and an enemy to his own species. Under the irrational and criminal pressures of the id, we have come dangerously near losing even the animal's saving instinct of self-preservation.

But now I come to the final bitter paradox. This revolt of Caliban would hardly have proved so threatening, at least on the scale we now witness, had it not been abetted by another phenomenon: the mechanization of life and the transformation of man, the creator and inventor, into a mere agent of the automaton he has created. Modern man, in revolt against earlier systems of thought, sought to emancipate himself by controlling the forces of nature: by inventing new instruments of power, water mills, gunpowder, coal-burning engines, dynamos, he finally found himself in possession of the cosmic forces locked within the atom itself.

This transformation, which met so fully the id's infantile wish for unrestrained power, was the product of an entirely different sector of the human personality: the detached intellect, freed from all other biological promptings or moral and social claims, pursuing truth with the aid of a new

methodology, that of experimental science applied to the piecemeal analysis of the external world. In all matters that lent themselves to quantitative measurement or mathematical proof, this new method produced immense results: above all, a framework of order, and with it an ability to understand, to predict, and in increasing measure to control all natural phenomena. Knowledge, as Bacon had confidently said, was power; and power became the main object of knowledge.

As a result, science became increasingly the only part of the superego that seemed to have objective existence and so was capable of exercising authority. Art and religion became supernumeraries, who danced attendance on their new master in his leisure hours. Unfortunately, this concentration on power, order, knowledge was achieved, both in technics and in science, at the expense of the human personality as a whole. To practice science successfully, its adepts voluntarily submitted to a severe system of restraints and inhibitions: within their own province, they renounced every passion or sentiment or feeling that would interfere with their single end, exact knowledge. The ideal of scientific thought was to be as free from personal bias as if it were the product of a machine. This systematic self-restraint moralized a vast department of thought more effectively than any earlier code of morality: within its own domain it fortified patience, deposed vanity, elevated humility, eliminated selfish bias, enthroned reason. But the personal and social penalty for that achievement was heavy. Causal insight widened, but purposeful direction and creative audacity, in every other department of life, weakened.

With a few admirable exceptions in every period, from Pascal to Clerk Maxwell, the practitioners of science divorced themselves from social responsibility and prophetic anxiety: indeed, they prided themselves on this indifference. The words cold, detached, rigorous, unemotional, in a word, objective, are all considered laudatory words by the scientist when applied to him. What does this mean but that science, by its method, disengaged the scientists from life, from the real world and the real self in which emotion, imagination, and dreams are as real as instruments of measurement?—that in order to concentrate effectively on his own limited object, the scientist has deliberately fabricated for himself a defective personality? There is much biographical evidence to suggest that this very suppression may itself be the outcome of anxiety, an inability to face life as a whole, particularly that part of it related to the scientist's emotional or sexual nature.

But the mischievous results long remained hidden for the reason that science approaches infallibility in every department where mathematical analysis, quantitative measurement, and experimental verification can be applied: thus, in compensation, it gives the devotees a quiet sense of god-like power. By identifying themselves with the infallibility and omniscience of science they escape any sense of their own all-too-human limitations. Power, order, and knowledge under these circumstances become absolutes;

not human instruments under human control. Though the belief in these absolutes is itself the most dangerous kind of subjectivism, it escapes the otherwise self-corrective methodology of science. So the automatic increase of scientific knowledge, technical invention, and physical power, has taken on in our time the character of a dangerous neurosis. We have now ruefully to acknowledge that a highly rationalized, scientifically disembodied superego is just as incapable of dealing with reality as the primitive id.

The scientist's detachment from life as a whole, his indifference as scientist to any other human values and purposes but his own, explains an otherwise strange phenomenon: the fact that the physical sciences have flourished, the last thirty years, under tyrannous systems of government. Give the scientist freedom to pursue his method, let him preserve his vocational integrity, and he will pursue his researches under social conditions that would be crippling to an artist or a poet or a philosopher. The artist usually cannot work at all under insistent restraint, because he must be a whole man to command his creative processes; if he remains creative it is by heroically pitting all his forces against the regime that thwarts him. But the scientist, who, as a matter of method and principle, turns his back upon the whole man, does not labor under such a handicap: his isolated superego, so highly moralized within its special province, has no need to rebel against less benign forms of repression. If he enjoys the freedom to follow up his researches, the scientist is all too easily lured into serving tyranny, no matter for what base ends his discoveries may be used. Superbly moralized and responsible in his own sphere, he refuses as scientist to acknowledge moral responsibilities outside it.

By our overvaluation of physical power and scientific truth, aloof from other human needs, we have paid the same price Faust had to pay when he made his compact with Mephistopheles: we have lost our souls, or to speak in more psychological terms, we have depersonalized ourselves and have turned our conscious, thinking selves into automatons. Is it any wonder that our whole civilization goes on repeating processes it has once started, even when they have lost both their original meaning and any valuable humane end? Behold the way in which we continue to produce butter and wheat we neither eat nor share, goods that we do not have the social providence to distribute, knowledge we do not have the intellectual capacity to assimilate, instruments of mass extermination whose use might put an end to the human race.

The scientific superego, so far from helping us to control this relentless automatism, is itself a part of the same process and has no internal means of resisting it. Even the atomic scientists who have been most aware of the dangers issuing from their own discoveries, have never had the insight to question the rationale of their own vocation: rather, with antlike persistence, they have gone on with their researches, consoling their uneasy consciences, perhaps, with the thought that their duty to scientific truth is higher than any other duty to humanity. In repressing the mothering and

nurturing impulses in the personality, the scientist has also lost the normal parental concern for the future of the life it cherishes. One hardly knows whether to characterize this attitude as innocence or infantilism; it certainly indicates a failure to reach maturity.

This abdication of responsibility, this failure of forethought, this detachment from all other needs and values than those of knowledge and power, has been one of the contributing factors in the resurgence of barbarism. The only part of the superego to which Freud and his contemporaries unreservedly paid homage—the passion for exact truth—has by its very divorce from the whole personality played back into the hands of Caliban. Detached from the rest of life, the scientific ego becomes automatic; and automatons cannot give provident directions to other automatons. This perhaps explains why, though one part of our culture, that dominated by science and technics, has reached the highest point ever attained in human history, the rest of our existence is falling into planless confusion, directed toward life-negating and irrational goals. These conditions stem from our failure to nurture every part of the human personality, and to match every paternal increase of power with a maternal increase of love, and with a common parental increase of moral control.

Modern man, therefore, now approaches the last act of his tragedy, and I could not, even if I would, conceal its finality or its horror. We have lived to witness the joining, in intimate partnership, of the automaton and the id, the id rising from the lower depths of the unconscious, and the automaton, the machine-like thinker and the man-like machine, wholly detached from other life-maintaining functions and human reactions, descending from the heights of conscious thought. The first force has proved more brutal, when released from the whole personality, than the most savage of beasts; the other force, so impervious to human emotions, human anxieties, human purposes, so committed to answering only the limited range of questions for which its apparatus was originally loaded, that it lacks the saving intelligence to turn off its own compulsive mechanism, even though it is pushing science as well as civilization to its own doom.

It is this last act that we are now beholding in our own time. Those of us who have strong stomachs know the evidential proofs of that union in the records of the Nazi doctors, correctly called Doctors of Infamy, who added a final horror to the Nazi extermination camps. These were men trained in the rigorous impersonal methods of science, who obediently carried through the orders of their superiors in the German government, to perform revolting tortures upon human victims under conditions that counterfeited and hideously caricatured scientific experiments. The detachment of these doctors was admirably 'scientific': their observations were coldly objective: their indifference to social results was in the best tradition of science—yet their total behavior was depraved. Though that was a classic juncture, revealing depths of evil deeper than any Dante could imagine in his candidates for the Inferno, it is by now a commonplace. But already

this partnership has spread far beyond Nazi Germany and Soviet Russia. Is the final purpose of the Nazi crematories in essence different, by any other facts than distance in space and swiftness of operation, from the meaningless extermination of life that would take place in what we now politely call ABC war—a large-scale effort to liquidate the enemy population? Except for omitting the sadistic pleasures of torture, the end that is sought, complete annihilation of the hated object, is precisely the same.

As things are going now, unless a strong countermovement restores our humanity and our sanity, the union of the automaton and the id will probably bring about the catastrophic destruction of our civilization. The god-like powers that scientific thought has opened up to man are now at the service of progressively diabolical means, which have automatically sanctioned equally diabolical purposes. Once set in motion, there is no halting point in that downward descent. The only destination of such a union is the final victory of the irrational: collective genocide and suicide, on a scale that would reduce to meaninglessness the whole process of life's evolution and man's own ascent from brutishness to civilization: leaving that ultimate nothingness out of which only nothing can come.

If I thought that this last act of the tragedy was inevitable, I would not, you may be sure, have consented to give this paper. When a ship is doomed, it is wiser to strike up the band and speak cheerfully to one's fellow passengers than to hold an inquiry over the villains who sabotaged the machinery and planted a time bomb in the hold. But while there is life there is, proverbially, hope. The cries of anger and anxiety that have at last broken through the wall of silence, prompted by the hideous devastations of the hydrogen bomb, were not confined solely to our European and Asiatic friends: the instinct for self-preservation, which could be quieted among us at home when we thought that it was only the Russians who might be endangered by our lethal devices, has at last asserted itself, now that we realize that ourselves and the rest of mankind would be equally stricken, if not completely wiped out, in another large-scale war. What once mistakenly seemed a prudent method of offsetting Russian man power with American atomic power has patently become a gross mockery, now that we ourselves are in even greater jeopardy. This deep anxiety, so much more realistic than the childish assurances with which our leaders have attempted to cover over their radical miscalculations and errors, gives ground for hope: we may yet overcome this coupling of the unrestrained id and the automaton, and redress the balance in favor of life.

Admittedly, the mischief that has already been done will not easily be undone: the genii we have unloosed, as in the 'Arabian Nights' fable, cannot so easily be put back into their bottle. Generations and even centuries may pass before the nightmare that now hangs over man will be finally dissipated; for there remains the possibility that even the peacetime exploitation of atomic energy may bring grave dangers to organic life, before we exercise sufficient restraint. To go forward, we must partly retrace our

steps: to overcome the misapplications of power we may be forced, as Christianity was once forced, to give up many desirable applications of technics, in order to have sufficient vitality to nourish other parts of the human personality. Fortunately those in whom the streams of life continue to run freely have still to be heard from. Prospero may yet arise and take command.

(1954)

CHAPTER THIRTY-TWO

Apology to Henry Adams

The title of this essay does not indicate that I propose to re-examine Henry Adams' contributions as an orthodox historian, and perhaps rescue his reputation from those who would cover up their own shortcomings by revealing those disclosed by Henry Adams' scholarship, in his later work like 'Mont-Saint-Michel and Chartres.' This is far from my purpose; or at most, it is but an incidental by-product of a more difficult effort. What I seek to explain, and belatedly help perhaps to overcome, is the fatal inertness of Adams' contemporaries, when confronted with his most challenging and penetrating insights into the prospects of our civilization. I shall try to show that if the plight of the human race is now a desperate one, without any earlier historic or prehistoric parallel, this is because we ignored Henry Adams' timely prognosis, and speeded the very processes that have now produced calamitous possibilities, without making the faintest effort to invent the political and moral instruments imperative for their effective control.

Today mankind, in consequence, totters like sleepwalkers above the abyss of wholesale nuclear extermination; still too enthralled by the dream of "conquering nature" to face the incredible nightmare of reality, with its threat that this very conquest may, unless mankind suddenly awakens and overcomes the paranoid obsessions of its present political leaders, bring human history itself to an end and turn the whole planet into a radioactive, almost lifeless wasteland. What I plan to examine and explain—if possible eventually to correct—is the persistent failure of our generation, even now, to observe the same facts that caused Henry Adams to utter his timely warnings, and to face in advance the problems that were dramatized, but by no means alone caused, by the successful invention of the atomic bomb. My ultimate purpose is to indicate what must be done, at least within the world of thought, if we finally are to meet this challenge.

Now I invoke the name of Henry Adams as a preface to this examination, because he stands alone among all the thinkers of his generation, in