

BRAINWASHING, LSD, AND CIA: HISTORICAL AND ETHICAL PERSPECTIVE

JOHN BUCKMAN, M.D.

*Professor of Psychiatry, University of Virginia, School of Medicine
Charlottesville, Va. 22901*

SUMMARY

The history of various attempts at thought control and chemical warfare is briefly reviewed. Brainwashing, thought control, industrial and national espionage, and covert activities are becoming more sophisticated. These issues have been revived and accentuated by the Vietnam war, the Middle East Crisis, Watergate, the CIA investigations and the Patty Hearst trial. Historical perspective and the ethical implications of these activities are explored. It is suggested that there is a growing level of individual and international mistrust amounting to paranoia and complicating the issues of individual freedom, civil rights and human experimentation.

MAX Beloff (2), speaking at the University of Virginia, said, "Today the United States is passing through a period of intense and regrettable introspection, the introspection due to an uncertainty produced by the Vietnamese and Watergate crises". At other times, this introspection had been called self-flagellation, agonising reappraisal, breast-beating and rigor mortis of democracy. Since Second World War when the United States abandoned its policy of isolation, there have been several periods of such "agonising reappraisal". They were precipitated by a national sense of failure, guilt and anger whenever there has been frustration of the self-imposed image of the U.S. being the model democracy, the world's greatest power, the world's policeman, the world's bread basket. Thus, we see the formation of CIA after the second world war. There were the Alger Hiss trials, and trials of eleven U.S. communist leaders after the Russians solidified their position in Europe by blockading Berlin and taking over Czechoslovakia. We later see the Joe McCarthy era at the conclusion of the Korean War, and the condemnation of McCarthy in December of 1954. This condemnation, however, showed a good deal of ambivalence in the country and twenty-two out of eighty-nine senators voted against it. This ambivalence was further documented by the fact that two years later, Eisenhower was re-elected and that popular dissatisfaction with the old order did not reach anything like an adult voice until 1960 when Kennedy was elected by a small majority. The tragic and costly ten-year involvement in the Vietnamese War came to an end after all but the most naive realised that the world has been tightly divided into two spheres of influence — one the Communists — the other the western democracies. This was done only after prolonged and painful soul searching, civil unrest and disobedience in the armed forces. All these proved most valuable ammunition to the Communists during the attempts at indoctrination of the American POW's in Vietnam. By the time these POW's were due to come home, the nation was in no mood for celebration. The guilt, the anger, the frustration, the soul searching had already begun. The hastily orchestrated welcome receptions for the POW's fizzled out with less energy than a party firecracker, and most of them gladly disappeared into anonymity very much as the Korean POW's had done before. Some of them were convinced and openly stated that the nation could not care less and did not want to be reminded of a tragic fiasco.

he need to forget was well illustrated by the fact that in the same week that the last U.S. combat troops left Vietnam, the eleven-week trial of the Harrisburg seven ended in a mistrial. The jury declared itself hopelessly deadlocked, 10-2, in favour of an acquittal. Just when the process of re-examination of the U.S. involvement in Vietnam was beginning in 1972, it became obvious that something was terribly wrong at the highest echelons of the administration. In June, five men were arrested for breaking into the office of the Democratic National Committee in Washington. Former Attorney General John Mitchell, confidant and campaign manager of President Nixon, quit on July 1 as Chairman of the Committee to Re-elect the President, stating "the need to devote more time to his family". As the impeachment proceedings went on, there was a feeling of dissociation, of disbelief, that all this was in fact happening. The impact of the media, the daily broadcasts on television and radio, as well as newspapers, made denial of reality impossible, and once again there was the agonising reappraisal. There was a need to forget, to start afresh, to learn from the past, or maybe to find a new scapegoat.

One of the five men arrested at Watergate was James McCord, who was a former CIA agent. There was an attempt to lay the whole responsibility for the conspiracy at the doorstep of the CIA. Here was a ready-made scapegoat, a mysterious cloak and dagger organisation, sometimes despised, sometimes admired, poorly understood but well financed, which had all the trimmings of a scapegoat but not a sacrificial lamb.

The recent controversy regarding CIA is a good example of the constant catchfulness and re-examination of its institutions that every democracy needs if it is to survive. But at what point does re-evaluation become neurotic, agonising appraisal and the need to destroy and purge so common to the puritanical obsessive personality. None but the very naive still believe that democracy and any ecological totalitarianism such as Communism have very much in common. At best, one can settle for peaceful co-existence dictated by healthy respect for each other. Nothing beyond this can only be achieved by greater understanding of the philosophy of totalitarianism, especially that brand which is Chinese Communism, and why it has gained such apparent appeal to so many millions of people. In 1961, Carl Gustav Jung (17), who was once unjustly accused of being a Nazi, said "Today we need psychology for reasons that involve our very existence. We stand perplexed and stupefied before the phenomenon of Nazism and Bolshevism because we know nothing about man, and at any rate have only a lopsided and distorted picture of him." He later said "The Christian nations have come to a sorry pass. Their Christianity slumbers and has neglected to develop its myth further in the course of the centuries". He later continues "Our myth had become mute and gives no answers. The fault lies not in it as it is set down in the scriptures, but solely in us who have not developed it further, who rather have suppressed such attempts. The original version of the myth offers ample points of departure and possibilities of development". Is the implication then that democracy has outlived its usefulness, and that it is doomed to failure because it is obsolete in the last quarter of the twentieth century? Could it be that democracy and Communism, while both struggling to control human instincts and environment, have attempted to do in diametrically opposed fashions? Modern democracy, which is ideologically the rule of the people by the people through its chosen representatives, is opposed to continuously re-examine and update its idea of the common good and constantly strive towards enabling each individual to reach his own maximal potential. Jefferson calculated that every 18½ years, based on the average life

span, the new mature generation should re-negotiate the social and political contract by which they live. This was the way he contemplated that men in society would remain free, creative, and regenerative. Communism, on the other hand, assumes that it has arrived at the final solution; that it knows the goals of human existence, and that all it needs to do is to bring up all its young members in the proper atmosphere, insuring that this education or indoctrination persists throughout the individual's life. Lifton (19), in his book, *Thought Reform and the Psychology of Totalism*, says that this method relies heavily on milieu control, constant demand for purity, the cult of confession, and the acceptance of doctrine over the person. According to this doctrine "The experiential world is sharply divided into the pure and the impure, and the absolutely good and the absolutely evil. The good and the pure are, of course, those ideas, feelings, and actions which are consistent with the totalitarian ideology and policy. Anything else is apt to be relegated to the bad and the impure. Nothing human is immune from the flood of stern moral judgements. All taints and poisons which contribute to the existing state of impurity must be searched out and eliminated. Thus, absolute purity is good Communism and anything done to anyone in the name of this purity is ultimately moral. By defining and manipulating the criteria of purity, and then by conducting an all out war upon impurity, the ideological totalists create a narrow world of guilt and shame." This was the ideological climax in China during the early 1950's when the American and United Nations prisoners of war in Korea were wondering what was happening to them. Those who have read about the blood baths and the tortures committed throughout the ages in the name of religious or political doctrines, as well as those who witnessed the barbarism of Nazi concentration camps, the Japanese atrocities on the Burma road and the POW camps and later the atrocities of forced marches and POW camps perpetrated by the Koreans and Chinese may ponder once again Freud's (11) words in *Civilisation and its Discontents*: "men's aggressive instinct, the hostility of each against all, and of all against each other, opposes this programme of civilisation. The aggressive instinct is the derivative and the main representative of the death instinct, which we have found alongside of eros, and which shares world dominion with it and now I think the meaning of the evolution of civilisation is no longer obscure to us. It must present the struggle between eros and death, between the instinct of life and the instinct of destruction as it works itself out in the human species".

The balance of terror decides that we need to know more about the Communists and that the Communists need to know more about us. The concept of intelligence may in fact be helpful as it may lead to greater mutual respect rather than to precipitous action. The knowledge about Communism in Russia and in China has been gained through laborious putting together of fragments of information given to CIA by some of the agents, but mostly by ordinary people who live, travel, and trade with the Communist world. Other information, of course, has been gained in a very painful first-hand fashion by those who were imprisoned as POW's or political prisoners. These experiences produced a very rough awakening to complacent westerners about the so-called brainwashing or thought reform which went on under Communism practically since its inception. It is important to know, at least in broad principles, the various methods of assault upon your body or your mind that the potential enemy may have at his disposal. One of these methods, of course, is chemical warfare. In the mid-1950's, serious consideration was given by numerous governments on both sides of the Iron Curtain to the feasibility of

ing LSD and other hallucinogens as a form of chemical warfare. One idea was that the substance could be put into enemy water supply, rendering the enemy temporarily psychotic. Our chlorinated water, to a large extent of course, detritates LSD. A later idea was to use LSD in a form of aerial drop so that the bomb filled with LSD would explode at ground level or some feet above the ground and the local population or troops would, through inhalation, become intoxicated, psychotic, and ineffective. Chemical warfare, of course, is not an invention of the modern man. According to Encyclopaedia Britannica (10), in about 670 A.D., a highly combustible mixture of chemicals called "Greek fire" was used as an incendiary in land and sea warfare. Incendiary arrows have been used by many including the American Indians. During the war between Sparta and Athens in the fourth century B.C., burning pitch and sulphur were used to produce suffocating fumes and at the siege of Sevastopol in the Crimean War, the British contemplated, but did not use, burning sulphur. The Germans used gas against the Russians in Poland in 1915, and later against the Allied positions on the Western front. Toxic chemicals were later used by Mussolini against the Ethiopians in 1935 and 1936, the Japanese against the Chinese in 1937 and 1942, and by the Egyptians against the British in 1966. It is well known that even now numerous countries maintain quantities of various noxious chemicals that could be used in warfare. General H. J. S. (30), in his book, *Tomorrow's Weapons*, describes how elaborate maps have been compiled which illustrate the prevailing winds in different parts of the world to insure that the toxic gas would be carried into the enemy territory.

What knowledge has been gained about methods of indoctrination, potential weapons, and means of counteracting them? Information has been acquired through painful experiences of the POW's and political prisoners, and research into the use of psychological and pharmacological methods of altering human behaviour.

Brainwashing or psychological remolding is a method perfected by the Chinese for re-educating incorrect "bourgeois" attitudes before such persons can take place in society. This "thought reform" was practiced during the growth of Chinese Communism between 1921 and 1948 when it was used on a mass scale on Chinese intellectuals, peasants, and soldiers as well as those few Europeans and Americans who were imprisoned by the Communists, and whose confessions could be used in intensive propaganda. Later the techniques were used on prisoners of war, as described by Schein (35), Lifton (18), Hinkle et al (13), Strassman et al (39), and others. Results were reviewed by Hunter (16), Meerloo (25), (26), Mayer (23), Gellert (34), West (42), and others. The techniques involved forced marches and exhaustion, isolation from associates and sources of information, a humiliating, acting prison routine with strict control over the periods allowed for eating, sleeping, washing, and eliminating. The prisoner, with hands and forearms tied behind his back, and ankles in chains, was escorted to the latrines where he was given between 15 and 30 seconds to urinate and defecate, relying on the guard to open his fly or to lower his trousers for him. At other times, he would have to urinate and defecate in the cell and eat his daily ration of gruel by holding the can between his teeth and tipping his head backwards. Prisoners were forced to spy on each other in the belief that carrying information about each other to their captors would get them better treatment. Daily study groups of the Communist doctrine were followed by group discussions lasting three to eight hours a day. The prisoners were forced to re-examine the past, admit that they were, in fact, spies, conspirators against the people, and war criminals and therefore not subject

to the Geneva Convention rules. This indoctrination took from six months to four years or more. The physical exhaustion, the sleep deprivation, and the near starvation combined with the constant threat of punishment or the firing squad kept an unbearable level of anxiety which led to the syndrome of apathy and regression with undue reliance on their guards and tormentors, especially for the necessities of urination and defecation. The condition was similar to that described by Bettleheim (1) in "Individual and Mass Behaviour in Extreme Situations". Bettleheim described regression into infantile behaviour, which included ambivalence to one's own family and one's own beliefs, despondency, finding satisfaction in daydreaming rather than in action. Prisoners were forced to soil themselves and could not defecate except with the permission of the guard. The mixture of rage, fear, and apathy produced in the prisoners eventually a phenomenon of identification with the aggressor as the only means of dealing with the conflict and an alternative to psychosis. Such identification of conversion is, of course, not permanent and not even lasting as most of the repatriated POW's returned to their old views and beliefs soon after leaving Korea. One wonders what is it in the Communist Chinese makeup that made them devote such enormous effort over several years to gain a comparatively shallow change in a man's belief. One answer would be their total belief in their own system of values, and this may account for the apparent invincibility of the North Vietnamese.

LSD and CIA

No major organisation has ever attempted to exist without an espionage system. Euphemistically, however, these are normally termed intelligence gathering activities. This is a well known activity on the part of all major industrial companies who have elaborate systems of spying on their competitors and who pay substantial rewards for information about actual or potential technical advantages other companies may have. In many cases, this amounts to actual burglarising and stealing of blueprints or actual engineering parts. It would be very naive to believe, therefore, that any country could exist without an elaborate spy system. The romantic cloak and dagger exploits of the Scarlet Pimpernel and Mata Hari have given way in every major country to an elaborate but cumbersome and expensive bureaucracy which often manages to obtain no more than insignificant information at a tremendous cost. Militarily significant information is usually inaccurate or obtained too late while information which may have significant effect on the balance of power is transmitted sporadically and unpredictably through the defection of a highly placed official or scientist. Thus, the defection of an atomic scientist from one power block to the other is a "free gift" as compared with millions of dollars spent on "covert activities". Wars and major shifts in power are much more predictable than we are led to believe. More and more, we have to be impressed with Santayana's (33) dictum "those who do not remember the past are condemned to relive it." When Adolf Hitler (14) first published his *Mein Kampf* in 1925, it should have been very obvious to everybody except the most naive as to what his ultimate aim was, and that the seed for a major world war had been sown. When Hitler, bemoaning the fate of Germany after the 1914-18 War, said "I begged repeatedly that destiny be given free reign and our movement allowed a chance to settle with Marxism, but I preached to deaf ears". It should have been clear to everybody that the next world war was meant to be between the Nazis and the Marxists. Both are totalitarian philosophies and, paradoxically, more destined to clash with each other than with democracies or capitalist democracies. While Hitler

elt that in 1923 he was preaching to deaf ears, the same must have been the experience of Winston Churchill in 1933 who repeatedly gave clear warnings that the Second World War was inevitable.

These issues of history and its lessons may have been in the mind of President Harry Truman when he decided to form the CIA in 1947. Truman had a rare sense of history, and his idea was that an intelligence gathering community should be composed of men of common sense, wide education, and experience and not merely "professional spies".

Truman must have realised that it was not just a coincidence that 1933 saw the arrival of Adolf Hitler as the German Chancellor, the first "fireside chat" broadcast by President Roosevelt, and also the dramatic recognition of the Soviet Union by the United States. Truman, maybe more than Roosevelt, was bound to sense that sooner, rather than later, the two dictatorships, the Communists and the Nazis, were bound to clash. The question that remained, of course, was what part, if any, were the Western democracies to play in the world that survived. He also did not know that he was to be the first person to order the explosion of an atomic weapon. Truman realised that in order to deal with a potential adversary, one had to understand him better rather than to ignore him. Truman must have remembered the words of Karl Marx (22), who wrote in 1873 "the learned and unlearned spokesmen of the German bourgeoisie tried first to kill "Das Kapital" by silence . . . as soon as they found that these tactics no longer fitted in with the conditions of the time, they wrote, under pretence of criticising my book, prescriptions 'for the tranquillisation of the bourgeois mind'."

Although the CIA was not actually formed until 1947, the need for such an organisation was clearly understood by Truman as early as 1945 when instructions to information gathering agencies went out to shift the attention from the Nazis to what the Russians were doing in the Balkans. Truman became President on April 12, 1945, the day that Roosevelt died. This was only two months after the Yalta conference, where Truman was convinced that the aging Roosevelt and Churchill were "sold a bill of goods" by Stalin. Late 1940's saw the final establishment of the Russian sphere of influence culminating in the Russian production of and explosion of the first atomic bomb on September 23, 1949. In 1947, President Truman decided to charter the CIA as an umbrella for all the information gathering agencies. According to the report to the President by the Commission on CIA Activities (8), the CIA was established by the National Security Act of 1947 as the nation's first comprehensive peacetime foreign intelligence service. The objective was to provide the President with coordinated intelligence which the country lacked prior to the attack on Pearl Harbour. The Director of CIA was to report directly to the President, while the directions to CIA came from the National Security Council. The charter of the CIA was to respect the Bill of Rights and the Fourth Amendment which declares "the right of people to be secure in their persons, houses, papers, and effects against unreasonable searches and seizures". In recognition of this right, the CIA would have no police, subpoena, law enforcement powers, or internal security functions. Last among the mandates of the CIA and other equivalent intelligence organisations in other countries was to become aware of any potential external threat to the security of the country. This obviously had to include any new or potential scientific discoveries which would add to the armamentarium of the foreign power including mechanical, biological, and chemical weapons. Truman may have had private misgiving about barring the CIA from any internal activities when the

German-born atomic research physicist, Klaus Fuchs, pleaded guilty on March 1, 1950, to violating the Official Secrets Act, having worked at one time at Los Alamos, New Mexico, where the first atomic bomb was produced. Fuchs subsequently communicated valuable atomic information to Russia.

A minor CIA interest in potential war weapons was revived in 1975. This had to do with CIA experimentation with LSD in the 1950's and early 1960's. LSD-25 (d-lysergic acid diethylamide) was discovered by Stoll and Hoffman at the Sandoz Pharmaceutical Laboratories in Basel, Switzerland, in 1938, and in 1943 Hoffman described its effects. The interest in the drug grew in the 1950's when it was found that the drug can mimic the whole spectrum of the functioning of the human mind, both normal and abnormal. Military experts in both the West and the East were informed about the psychotomimetic potential of this and other substances, and interest grew in the feasibility of using LSD in warfare in order to render the enemy psychotic and ineffective for a limited period of time. Vast literature has been accumulated about the effects of LSD on humans, and Buckman (4), (6) has summarised these effects in clinical settings and in casual or illegal use.

The Place of Hallucinogens in Chemical Warfare

The wartime use of noxious chemicals in water or propelled through the air is not new. Kurt Wachtel (41), founder of the Pharmacological Section of the Kaiser Wilhelm Institute, writing as early as 1941, warned that the democracies are traditionally and chronically behind time in getting sufficient intelligence and defence against possible offensive weapons. He stressed the need for careful advance planning of material and human resources of a nation, combined with the correct scientific evaluation of all factors, and he warned that the chemical warfare preparedness of Britain and the United States was hopelessly out of date. About England at the beginning of the war he cynically said "England was equipped with 50 million gas masks against the tons of explosives which now destroy the property and war industries of the British Islands." He drew our attention to the fact that as long ago as 600 B.C., Solon, the leader of the Athenians, ordered many roots of hellebore thrown into the small river from which the beleaguered enemy drew his water supply. This produced violent diarrhea and weakening, and finally defeat of the enemy. During the American Civil War, there were frequent descriptions of carcasses of pigs and sheep being thrown into ponds and wells to poison the water supply for the enemy, and so, not surprisingly, in the '50's and '60's, there is ample evidence that among the chemicals considered for use in war was LSD.

As early as 1942, G. W. Merck (27) in a report on biological warfare to the U.S. Secretary of War said "Any method which appears to offer advantages to a nation at war will be vigorously employed by that nation. There is but one logical course to pursue, namely to study the possibilities of such warfare from every angle, make every preparation for reducing its effectiveness, and thereby reduce the likelihood of its use."

Theodore Rosebury (29) in his book, *Peace or Pestilence*, published in 1949, says "before 1943, Camp Detrick was an open field". At that time, things were not going well for the Allies. "The Germans reached Stalingrad; we tasted victory in North Africa and drenched Salerno with American blood; Normandy was a year away . . . Japan had reached her crest."

On the positive side, experiments at Camp Detrick contributed towards treatment of cases of glanders with sulfadiazine, anthrax with penicillin, tularemia with

teptomycin, as well as psittacosis treated by a combination of penicillin and lfadiazine. Interest in chemical and biological warfare increased in the U.S. and ewhere.

In 1956, no less person than Marshall Zhukov (43), Chief of the Russian General aff, spoke of ". . . means of mass destruction such as atomic thermonuclear, emical and bacteriological weapons."

In a 1959 report (40) to the 86th Congress on chemical and biological warfare, is stated :

Another film seen by the committee demonstrated that troops exposed to one of these psychochemical agents were not even conscious of their abnormal condition which was so changed that they were unable to follow simple commands and perform normal tasks with acceptable accuracy. Only an outsider not exposed and coming upon them would recognise their behaviour as eccentric.

Think of the effect of using this type of material covertly on a higher headquarters of a military unit, or overtly on a large organisation! Some military leaders feel that we should not consider using these materials because we do not know exactly what will happen and no clear-cut results can be predicted. But imagine where science would be today if the reaction to trying anything new had been, "Let's not try it until we know what the results will be."

Rothschild (31) comments :

Incapacitating chemicals with a number of different physiological reactions appear to be worth looking for. One which caused temporary paralysis was demonstrated before the House of Representatives Committee mentioned above. Certainly, any drugs which could cause disabling physiological effects such as temporary blindness, loss of equilibrium, or deafness would be of military value.

In 1960, Colonel Lindsey (20), writing in *Military Medicine*, said "in the field non-lethal incapacitating agents, there had been in my opinion, too much aphasis on psychochemicals and not enough on physical incapacitation. Psychochemicals are worthy of some notice, but certainly they are not the whole story. f the psychotomimetics a number of compounds are known." He then goes on mention LSD and psilocybin. Colonel Searle (36), writing in *Arizona Medicine* 1961, quotes Soviet General Drugov stating that LSD has attracted considerable tention, particularly in the field of experimental psychiatry, and that this is ilitarily interesting as an incapacitating but non-lethal chemical compound. Later 1961, Dr. Rump (32), writing in a Polish military medical journal, notes that June 16 and June 22, 1959, Major General Stubbs, Chief of Chemical Warfare the U.S.A., in evidence to the House of Representatives mentioned the Army's terest in chemicals which have effect on the human psychic processes. Among them course was LSD.

In 1963, Karlheinz Lohs (21) published an article entitled "Synthetic Poisons : emistry, Effects, and Military Significance" (published by the East German ilitary Publishing House) in which he states "one of the most interesting and portant of these compounds in LSD and psylocin. These two substances are amples of drugs which interfere with the mental processes . . . there is the ospect that active substances will be discovered which can be converted to ilitary use."

In 1964, a book written by Brig. Gen. Rothschild (31), *Tomorrow's Weapons*,

discusses the use of LSD in warfare. Rothschild says that a military commander under the effects of LSD would lose his ability to make logical, rational, decisions and issue coherent orders. Group cooperation would suffer. In October, 1964, Dr. Sherwin (37), Deputy Director of Research and Technology, complained about difficulties in recruiting well qualified scientists to work in the research in the fields of physiology, toxicology, and microbiology. At the same time, Albert E. Hayward (12) of the U.S. Directorate of Defence Research and Engineering stated "The goal, of course, is to render the enemy incapable of movement — that is, we would like to be able to paralyse the voluntary body functions while allowing the involuntary to function normally. Lesser effects, however, might be just as acceptable — for instance, temporary lose of sight or disruption of normal body functioning by including such things as vomiting, dysentery, or various types of food poisoning." In 1965, there was a brief controversy about the feasibility of using LSD in warfare. Moral and ethical questions arose. Statements for and against were made by Hollyhock (15) and Buckman (3) respectively.

In 1966, Sidel and Goldwyn (38), writing in the *New England Journal of Medicine* on chemical and biologic weapons, wrote "These agents (psychochemicals), also known as hallucinogens, lead to mental derangements that are usually reversible. The substance most frequently discussed is LSD-25." They further say "An investigating Congressional committee viewed a film that demonstrated that troops exposed to one of these agents were not even conscious of their abnormal condition which was so changed that they were unable to follow simple commands and perform normal tasks with acceptable accuracy".

In 1968, Robin Clarke (7), in a book called *We All Fall Down*, quotes members of the Defence Department repeatedly complaining of the underfinancing of chemical research. There was difficulty in attracting suitable personnel, a problem that simply does not exist in the Communist countries where researchers are directed to places and areas of investigation. Also in 1968, the U.S. House of Representatives had hearings on increased controls over hallucinogens and other dangerous drugs. Buckman (5) pleaded for stricter controls of illicit drugs, but continued support for research. In 1969, Richard McCarthy (24), in a publication called *The Ultimate Folly, War by Pestilence, Asphyxiation and Defoliation*, wrote "BZ is an incapacitating gas which produces an effect in man similar to that of LSD for 12 hours up to several days." It was first developed in the U.S. in the 1950's and it is the only standardised incapacitating agent by 1963. In 1969 an editorial (9) in *Annals of Internal Medicine* entitled "Chemical and biological weaponry and warfare" spoke of chemical antipersonnel agents, among them LSD and BZ.

In 1973, a report of the Stockholm International Peace Research Institute quoted two Russian delegates, Reutov and Milnekov (28), saying that LSD and other hallucinogens might be significant chemical warfare agents. International control of production of these would be very difficult in that it would in large measure depend on mutual trust. They carefully stressed that the opinions were those of their own and in no way determined the policy of the U.S.S.R. in the field of chemical disarmament.

Social Unrest and Drug Abuse

The 1960's was a decade of social upheaval in the U.S. marked by political assassinations, escalation of the war in Vietnam, and polarisation between various groups. Within the unrest, there was a wave of drug abuse, especially of the narcotics and hallucinogens.

In this country, since 1966, much of the work with LSD has been greatly impeded by the enormous increase in casual use of all drugs. For the next few years, much of the nation's efforts and money had been spent in combating drug abuse which was seen as dangerous to the establishment. The wave of abuse of hallucinogens and amphetamines crested in the late 1960's and then began to subside slightly, giving way once again to the more traditional depressants like alcohol and other sedatives. The diminution in the abuse of hallucinogens was not brought about by any legislation, but by social evolution and necessities. The government found itself involved in more threatening issues such as increase in the likelihood of a global war, hunger, pollution, economic and energy crises. The need for scapegoats, however, did not vanish. In the 1950's, it was the Communists; in the 1960's, it was the hippie; and in the 1970's, it is the established institutions. As a result of Watergate, there is an endless search for the perfect legal document which will insure individual and public morality. There is mushrooming of institutions which are dedicated to "protection of people's rights." Everybody feels it of step unless they can document that they are being persecuted, plotted against, and exploited. We have created an electronic monster that monitors all our movements and stores the information in its ominous bulk to be used later. All this leads to proliferation of human rights and an administrative nightmare for all established institutions. The paranoia of youth so described by Littleheim has been extended to the not-so-young, the old, and the senile. George Orwell's *1984* is coming through in a paradoxical way. As somebody aptly put it, we have ten commandments and a million laws to enforce them.

Individual Rights — A Fetish

Early in 1975, the nation witnessed a strange press appearance by the President's miniscent of Mr. Nixon's volunteering to review the Lt. Calley case. It became known that one of the CIA subjects who was given LSD in the late 1950's killed himself subsequently. There was some question as to whether the subject had been given LSD without his knowing. The CIA was deeply in trouble. The family testified for Congressional Hearing and amid the uproar President Ford was seen in a television meeting with the family of the deceased and saying that he would support a law suit against the CIA if any legal grounds were found for it. Whether this is an exact quote or a paraphrase is unimportant, but this is the way it sounded to this observer and many others witnessing this interview. This may be what we are gradually beginning to expect — freedom from suffering, from hardship, and from the knocks of everyday life or compensation. Nobody can argue that there could be ample protection of individuals, and that all scientific research should have high ethical standards. It is difficult, however, to understand the puzzlement at so many people expressed at the news of CIA sponsored experimentation with LSD. The author's interest in these drugs arose partly out of experiences in Korea where he learned about various methods of indoctrination, brainwashing, and sensory isolation. It was not surprising that shortly after the Korean War a number of governments wanted to know what effects LSD would have on their own and enemy troops. In some cases, public indignation may be justifiable, but is it really surprising that this or any other government finds it necessary to understand all the potential dangers its troops may be exposed to? The tragedy of the huge U.S. casualties in the Korean POW camps was partly due to lack of preparation for an understanding of various non-chemical methods of "mind-blowing" employed so successfully by the North Koreans and the Chinese. Descriptions and films of the

effects of LSD on troops have never been top secret except to those who did not want to know. Stanley Baldwin, the British Prime Minister, said in 1932, "Democracies will never face the truth until they are right up against it", and Secretary of Defence Schlesinger speaking recently said "Dismantle intelligence and you become blind and deaf". If democracy is to survive, it will have to grow up beyond its adolescent indignation. Scientific investigation in this country is gradually being stifled by a mistaken bureaucracy that thinks it is responding to the wishes of the people. One of the most eminent historians of all time, Toynbee, died in London recently. He once said "World civilisations decay because of their mistaken response to the needs of the time."

BIBLIOGRAPHY

1. Bettelheim, B.: "Individual and mass behaviour in extreme situations", *Journal of Abnormal and Social Psychology*, Vol. 38, 1943, pp. 417-452.
2. Beloff, M.: Speaking before the Student Forum, University of Virginia, Charlottesville, Virginia, October 20, 1975.
3. Buckman, J.: "The effects of LSD-25", *New Scientist*, May 20, 1965, pp. 531.
4. Buckman, J.: "Theoretical aspects of LSD therapy", in *The Use of LSD in Psychotherapy and Alcoholism*, H. Abramson, editor, New York, Bobbs Merrill, 1967, pp. 83-97.
5. Buckman, J.: Letter to Representative T. L. Carter, "Increased controls over hallucinogens and other Dangerous Drugs", Hearing before the Subcommittee on Public Health and Welfare of the Committee on Interstate and Foreign Commerce, House of Representatives, Ninetieth Congress, February 19, 26, 27, and March 19, 1968, U.S. Government Printing Office, Washington, 1968, pp. 211-212.
6. Buckman, J.: "Social and medical aspects of illicit use of L.S.D.", *International Journal of Social Psychiatry*, Vol. 17, Summer 1971, pp. 163-176.
7. Clarke, R.: *We All Fall Down*, London, Allen Lane, The Penguin Press, 1968.
8. Commission on CIA Activities Within the United States: *Report to the President by the Commission on CIA Activities Within the United States*, U.S. Government Printing Office, Washington, D.C., January, 1975.
9. Editorial: "Chemical and biological weaponry and warfare", *Annals of International Medicine*, Vol. 71, 1969, pp. 204-208.
10. *Encyclopaedia Britannica*, Chicago, William Benton, Publisher, Vol. 5, 1973, p. 382.
11. Freud, S.: *Civilisation and its Discontents*, London, Hogarth Press, Vol. 21 (1927-31), 1961, p. 122.
12. Hayward, A. E.: Quoted by Clarke, R., *We All Fall Down*, London, Allen Lane, The Penguin Press, 1968, p. 27.
13. Hinkle, L. E. and Wolff, H. C.: "Communist interrogation and indoctrination of 'Enemies of the State'", *Archives of Neurology and Psychiatry*, Vol. 76, 1956, pp. 115-174.
14. Hitler, A.: *Mein Kampf*, New York, Reynal and Hitchcock, 1940, p. 985.
15. Hollyhock, M.: "Weapons against the mind", *New Scientist*, London, April 22, 1965.
16. Hunter, E.: *Brainwashing in Red China*, New York, Charles E. Tuttle, Vanguard Press, 1951.
17. Jung, C. G.: *Memories, Dreams, Reflections*, Aniela Jaffe, editor, New York, Pantheon Books, 1963, p. 331.
18. Lifton, R. J.: "Home by ship: reaction patterns of American prisoners of war repatriated from North Korea," *American Journal of Psychiatry*, Vol. 110, April, 1954, pp. 732-739.
19. Lifton, R. J.: *Thought Reform and the Psychology of Totalism: A Study of Brainwashing in China*, New York, Norton, 1961.
20. Lindsey, D.: "Selective malfunctioning of the human machine", *Military Medicine*, Vol. 125, 1960, p. 603.
21. Lohs, K.: *Synthetic Poisons, Chemistry, Effects, and Military Significance*, 2nd ed., East German Military Publishing House, 1963. (Published in English Translation by U.S. Department of Commerce, O.T.S. as J.P.R.S. 23, 681, 1964).
22. Marx, K.: *Capital, A Critique of Political Economy*, New York, The Modern Library, 1963, p. 20.
23. Mayer, W. E.: "Why did many G.I. captives cave in?", *U.S. New and World Report*, February 24, 1956, pp. 56-72.
24. McCarthy, R.: *The Ultimate Folly: War by Pestilence, Asphyxiation, and Defoliation*, New York, Alfred A. Knopf, 1969.

15. Meerloo, J. A. M.: "Pavlovian strategy as a weapon of menticide", *American Journal of Psychiatry*, Vol. 110, 1953-54, pp. 809-813.
16. Meerloo, J. A. M.: *The Rape of the Mind*, The Psychology of Control, Cleveland, World Publication Company, 1956.
17. Merck, G. W.: Quoted by Clarke, R.: *We All Fall Down*, London, Allen Lane, The Penguin Press, 1968, p. 137.
18. Reutov, O. A. and Milnekov, N. N.: *The Problem of Chemical and Biological Warfare*, Stockholm International Peace Research Institute, 1973, p. 231.
19. Rosebury, T.: *Peace or Pestilence, Biological Warfare and How to Avoid It*, New York, McGraw Hill, 1949, p. 7, p. 184.
20. Rothschild, J. H.: *Tomorrow's Weapons, Chemical and Biological*, New York, McGraw Hill, 1964, pp. 82-83.
21. Rothschild, J. H.: *Tomorrow's Weapons, Chemical and Biological*, New York, McGraw Hill, 1964.
22. Rump, S.: "Srodki wojny psychochemicznej dwuetylamid kwasu d-lizergowego", *Lekarz Wojskowy*, R. XXXVII, Warszawa, 1961, pp. 101-108.
23. Santayana, G.: Quoted near the frontispiece of Shirer, William, *The Rise and Fall of the Third Reich*, New York, Simon and Schuster, 1960.
24. Sargant, W. W.: *Battle for the Mind*, Garden City, N.Y., Doubleday, 1957.
25. Schein, E. H.: *Coercive Persuasion*, New York, W. W. Norton, 1961.
26. Searle, V. C.: "The chemical warfare threat", *Arizona Medicine*, Vol. 18, 1961, pp. 26-31.
27. Sherwin, C. W.: Quoted by Clarke, R., *We All Fall Down*, London, Allen Lane, The Penguin Press, 1968, p. 45.
28. Sidel, V. W. and Goldwyn, L. N.: "Chemical and biologic weapons, a primer", *New England Journal of Medicine*, Vol. 274, 1966, pp. 21-27.
29. Strassman, H. D., Thaler, M. B., Schein, E. H.: "A prisoner of war syndrome, apathy as a reaction to serve stress", *American Journal of Psychiatry*, Vol. 112, 1955-56, pp. 998-1003.
30. U.S. House Committee on Science and Astronautics: *Chemical, Biological and Radiological Warfare Agents*, (86th Congress, First Session, Hearings) Washington, D.C., 1959.
31. Wachtel, K.: *Chemical Warfare*, Brooklyn, N.Y., Chemical Publishing Company, Inc., 1941.
32. West, L. J.: "Psychiatric aspects of training for honorable survival as a prisoner of war", *American Journal of Psychiatry*, Vol. 115, 1958, pp. 329-336.
33. Zhukov, G. K.: Quoted by Rothschild, J. H., *Tomorrow's Weapons*, New York, McGraw Hill, 1964, p. 111.