Exhibit P-53

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Scientific Experimentation on Canadian Inmates, 1955 to 1975

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Abstract: The 1998 revelations by two former inmates of the Prison for Women in Kingston, that they were used as test subjects in LSD experiments, led to an internal investigation by the Correctional Services Canada. It was discovered that LSD was administered to inmates and that inmates were used in a number of other experiments, including clinical trials for pharmaceutical companies. This article seeks to reconstruct the social context that allowed these experiments to be conducted, focusing on three inter-related institutional factors that contributed to the abuse of prisoners during the period 1955 to 1975: ethical standards, the medical-industrial complex, and the correctional philosophy.

In the late 1990s, a number of former inmates came forward to claim that they had been involved as subjects in scientific experiments while imprisoned in Canadian penitentiaries in the 1960s and early 1970s.[1] Correctional Services Canada (CSC) had no record of any of this occurring and their spokesperson admitted that: 'the corporate memory, like any collective memory, is short' (Blanchfield and Bronskill 1998b). They responded by conducting an internal evaluation of the newspaper coverage (Furr 1998) and contracted an independent investigation (Osborne 1999) to uncover other experiments that occurred in Canadian federal prisons. In addition, they commissioned a McGill University ethics report (Gilmore and Somerville 1998), which concluded such practices were unethical even when considering the standards of the times.[2]

The issue of social context has practical relevance. In the legal battle involving one former inmate, Dorothy Proctor, one of the main points of contention is whether or not such scientific research was in conflict with the social context of the times. Such determinations are very difficult and open to radically different interpretations. Specifically, CSC has been accused by former inmates, the media, and ethicists, of condoning unethical research in federal penitentiaries during the 1950s, 60s, and 70s. They claim that CSC was unethical in their use and treatment of inmates whose basic human rights were violated. They see themselves as victims of crimes of authority or what others have referred to as 'power [ab]use' (Menzies, Chunn and Boyd 2001). CSC officials and researchers involved in the

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experiments have a different interpretation. They agree that from today's standards, their actions may be considered unethical, but argue that the social context was different 30 years ago and not only condoned their research but encouraged it. For them, their accusers are judging the past by the standards of today – a practice disparagingly referred to by many social scientists as 'presentism'.

While an entirely relativist point of view encourages only political compromise, we must question the stance of temporal superiority that is implicit in modern history. The past has its own set of moral and ethical standards. Presentism encourages a kind of moral complacency and self-congratulation whereby we find ourselves morally superior and our forebears constantly failing to measure up to our present day standards (Hunt 2002, p.1). However, even if it could be argued that using prisoners as research subjects was not in conflict with the social context of the times, it would still be necessary to explain that particular social context, especially those features that facilitated the use of prisoners in scientific experiments. Rather than get bogged down in a theoretical quagmire of determining whether or not the scientific research was unethical, given the ethical standards of the time, this article reconstructs the context to identify the reasons why prisoners were used in scientific research in the first place. Before examining these reasons, it is necessary to consider what is known about scientific experimentation using Canadian inmates.

Guinea Pigs Behind Bars: The Evidence

While much is known about the use of American prisoners for scientific research (Mitford 1973; Meyer 1977; Gettinger and Krajick 1979; Hornblum 1997, 1998), very little is known about the use of Canadian prisoners. There are no historical or sociological accounts of Canadian prisoners being used for scientific research, and even the most recent research has not considered such events (Harris 2002; Hennessey 1999; Jackson 2002; Marron 1996; McNeil and Vance 1978). From an analysis of the *Ottawa Citizen* coverage, the internal and external reports initiated by CSC, government documents, a bibliographic search of 42 scientific journals, and interviews with six of the researchers identified in the journals, evidence on sensory deprivation, experimental use of drugs, behavioural modification, and experimental pharmacology was discovered.[3]

Sensory Deprivation

Solitary confinement or sensory deprivation experiments of the late 1960s and early 1970s were financially supported by the Penitentiary Division of the Federal Solicitor General's Department (Ecclestone, Gendreau and Knox 1974; Gendreau *et al*. 1968a; Gendreau *et al*. 1968b; Gendreau *et al*. 1970; Gendreau *et al*. 1972; Scott and Gendreau 1969; Scott and Trent 1982). The federal government wanted to know the adverse effects of sensory deprivation before they put the solitary confinement units to active

use. The Special Correctional Unit near Laval Quebec had been constructed to separate a 'violent hostile, sometimes psychotic, hard-core group of inmates' from the main body of the inmate population. A criminologist on the staff at the new facility stated that this 'was an opportunity . . . to test objectively some hypotheses on sensory deprivation which were made before the opening of the Special Correctional Unit' (Webb 1968, p.10). New wards – Special Handling Units – were being constructed at Archambault and Millhaven which would be used to totally isolate dangerous offenders.

At this time there was a great deal of disagreement concerning what 'sensory deprivation' constituted, since it was impossible to completely isolate one's senses without drastic surgery. According to the researchers interviewed, the aim of the research was to discover whether or not solitary confinement had the same effects as sensory deprivation and to what extent. Many of the prison volunteers already had previous experience with solitary confinement (interview notes). In one sensory-deprivation study, ten Kingston Penitentiary inmates spent seven days in dark isolation cells to help researchers determine the effects on their desire for visual and auditory stimulation. One prisoner began to panic after four days. Another hallucinated during the final two days, seeing spiders and the face of his dead brother. Another study found that the stress levels of some prisoners were actually reduced when in solitary confinement (interview notes). According to one researcher, the findings demonstrated that there could be serious negative effects for the inmate and that such isolation should be used carefully with a great deal of supervision (interview notes). The researchers concluded that solitary confinement should not be considered for inmates diagnosed as mentally defective, psychiatric case types, or the physically ill (Gendreau and Bonta 1984a; Suedfeld and Roy 1975; Suedfeld 1978; Suedfeld *et al*. 1982).[4]

Conditioning

The allegations of unethical scientific research levelled at CSC and its researchers included conditioning or behaviour modification experiments, which included electric shock therapy, pain tolerance studies and experiments designed to discourage smoking.

Prison psychiatrists used electric-convulsive therapy (ECT), electric-stimulative therapy (EST), Sedac therapy,[5] and Funkenstein tests.[6] ECT and EST were noted as being 'very valuable in prison as a control measure' and had 'been used with good success' (Canada, Government of (1955) *Annual Report 1955*, p.70). Electric-shock therapy was gradually replaced with the advent of new drugs.

In the case of pain tolerance studies, several Prison for Women inmates dipped their arms in water full of ice cubes until they could no longer bear the pain to see whether drug addicts had lower tolerance thresholds than non-addicts (Martin 1964; Martin and Inglis 1965). The researchers were interested in studying how inmates' behaviour had been manipulated by

their drug addictions. This work was innocuous and involved the inmates holding their hand in a bucket of cold water.

In the smoking study, male penitentiary inmates were given what they described as 'painful, and even terrifying' electric shock, to determine whether the stimulus would encourage smokers to quit. The findings noted evidence of reduced smoking levels more than two years later among those who received the worst shocks (Gendreau and Dodwell 1968).

Therapeutic Pharmacology

LSD and other drugs were used on 'the general population' in Canadian federal penitentiaries (Canada, Government of (1958) *Annual Report 1958*, p.73; Scott and Eveson undated (cited in Gilmore and Somerville 1998, pp.97–103); Eveson 1964; Barker, Mason and Wilson 1969; Barker and Buck 1977).[7] The penitentiary doctor's report for the Kingston Penitentiary, notes that: '[m]any different brands of tranquillizers have been tried, the results have been excellent to poor. It is felt that these should be given under a controlled experiment keeping careful observation by a trained observer. Plans are in the making for such a scheme' (Canada, Government of (1959) *Annual Report 1959*, p.69).[8]

In the late 1950s and early 1960s, LSD was the subject of hundreds of research papers, many of which claimed it had potential to break down a patient's defences and increase the pace of psychotherapy (Duncan 1972). Eveson (1964), a staff psychologist at the Kingston Penitentiary for Women, gave 23 women LSD as part of an experiment to see if the drug could effect penetration of appropriate defence mechanisms and give insight into depressed problems. He found the drug to be 'a very effective instrument in this modification of criminal behaviour', and that a single dose of LSD brought 'marked improvement in a minority of inmates' especially 'in subjects whose institutional life had been marked by violence and opposition to custody' (Eveson 1964, p.26). He noted that because he had a problem establishing a generally acceptable method of treatment management and dosage, further study would be required, and that a larger study was being developed pending the approval of the Ministry of Health.

Between 1965 and 1967, the maximum-security division (Oak Ridge) of the Mental Health Centre at Penetanguishene used many drugs to facilitate therapy. Patients participated in 100 hours per week of structured interaction that was 'frequently fuelled with a battery of so-called defence disrupting drugs – Sodium Amytal, Amphetamines, Scopolamine, Dexamyl-Tofranil and LSD' (Barker and McLaughlin 1977, p.357). In addition, in 1968, some inmates volunteered to be administered LSD and spend time as a group, without clothes to 'facilitate the uncovering of the private parts of one's mind' (p.357), within a Total Encounter Capsule. The Capsule was a specially constructed, soundproof, windowless, but continuously lighted and ventilated room, eight feet by ten feet, with a soft rug-over-foam floor, which provided the bare essentials – liquid food

dispensers, washing and toilet facilities. It was to function as a safe place where voluntary patients could contemplate their life and what led to their criminality (Barker and McLaughlin 1977, pp.356–8).

LSD was still being used some ten years later, albeit after a local advisory committee appraised the ethical issues involved in offering the drug to volunteers in a coercive setting. Over a five-year period, 30 violent prisoners, some of whom had been convicted of murder, were treated with LSD to determine its usefulness. All the patients reported that 'the experience was of great benefit' and the researchers concluded that 'the drug seemed safe and valuable' for long-stay patients (Barker and Buck 1977, pp. 312, 314).

In another case, prior to their release, eleven long-term inmates in the federal penitentiary in British Columbia 'underwent extensive treatment' to treat their drug addictions. As a precaution to ensure that they remained clean, the inmates agreed to spot checks in which they were given injections of a drug called Lorfan which produced 'withdrawal symptoms' if they had been taking narcotics (Kingston Penitentiary 1962, p.13).

A study on aggression in a prison setting examined the effect of psychotropic 'anti-anxiety' drugs, such as lithium and carbamzephine, on violent prisoners. Twenty-eight inmates in Millhaven maximum-security penitentiary received psychotropic medication and the researchers concluded that violent, aggressive incidents occurred significantly more frequently in inmates who were on psychotropic medication than when these inmates were not on psychotropic drugs (Workman and Cunningham 1975).

Prisoners at the Saskatchewan Penitentiary were diagnosed with perceptual errors involving sight, hearing, and other special senses. The researcher found that these problems were caused by a B6 deficiency and so large doses of allergy vaccines, vitamin B3 and other mega-vitamins were prescribed to the prisoners (Brereton 1975, pp.10–11; Hippchen 1976).

Non-therapeutic Pharmacology

Much more contentious are the non-therapeutic drug trials. This category refers to clinical pharmaceutical testing, including toxicity tests of chemicals, food additives and drugs, using prisoners as 'normal' human subjects. Records on the nature and number of tests conducted in the Canadian prison system are scarce. There is little readily available information on the outcome of many studies, nor data on whether any prisoners suffered ill-effects.

However, in the early 1960s, Canadian justice officials pointed to prison trials in the United States as a good reason to allow the same sort of studies. A July 1963 memo, by the director of medical services for the federal penitentiary service, stressed the 'highly important medical research and valuable results' stemming from the malaria and polio vaccine work (cited in Bronskill and Blanchfield 1998). Indeed, the commissioner of penitentiaries' annual report for 1967 to 1968 suggests the practice of

testing new drugs had become commonplace as the end of the decade neared. 'A number of pharmaceutical firms have carried out research using inmates to determine what the effects of some of their marketable drugs could be – this after they had agreed to comply with the rules and regulations governing such research and had received the approval of the commissioner' (Canada, Government of 1968, p.38). In this same report there is a reference to a Project No. 8, Study of the Absorption rate of Aspirin into the System of Young Men and a Project No. 15, Comparison of two Types of Antibiotic Injections (p.41).

While unable to locate any information on the latter, the former was carried out by the federal Health Department's Food and Drug Directorate and its results were published. It involved ten inmates from Collins Bay penitentiary in Kingston Ontario, who volunteered to receive 640mg of Acetylsalicylic Acid (ASA). The study was aimed at determining how quickly ASA was absorbed and excreted when either taken orally or rectally. It was noted that some subjects dropped out of the study but no reason was given why (Coldwell *et al*. 1969). A researcher who was involved with the study could not remember why they dropped out (interview notes). The published results, however, did indicate that 'ASA tablets in the rectum caused slight local irritation in most subjects and there was some visible evidence of mucus surrounding the particles' (Coldwell *et al*. 1969, p.124). A draft news release prepared by the department stressed the 'extremely small amounts' of the chemicals to be given to volunteers, the need to understand the body's reaction to the substances and the 'elaborate care' taken to protect subjects (Bronskill and Blanchfield 1998).

Fifty inmates from Collins Bay penitentiary in Kingston took part in an October 1967 study by Bristol Laboratories of Syracuse, New York, to compare the pain caused by different intramuscular injections of Rolitetracycline, an antibacterial drug. The test 'evidently caused considerable pain around the area of injection', said an account of the experiments in the *Federal Corrections* journal. Present for the experiment were prison psychiatrist George Scott and Dr G.S. Varnam, medical director of Bristol Laboratories of Canada. But Dr James Taggart, from Bristol's clinical research branch in Syracuse, headed the study (Webb 1967, p.10).

In another study, researchers from Queen's University teamed up with the Food and Drug Directorate to assess ways in which the human body alters and excretes chemicals such as agricultural pesticides and sweetening agents in food. Some ten to 50 Kingston area federal penitentiary inmates volunteered and it was noted that this was 'a fine example of public service' (Canadian Corrections Association 1968, pp.6–7).

In 1972, plans for a Quebec study of three penicillin preparations upset prison officials when the firm organising the tests struck Leclerc Institution's in-house doctor from the ethics committee reviewing the experiment. The prison doctor had been replaced by a University of Montreal professor. However, federal officials let the study proceed. Pharmaceuticals were not the only commercial products tested on

prisoners. Brands of shampoo and cigarettes were also tested at the Leclerc Institution (Bronskill and Blanchfield 1998).

In another case, 18 inmates of Stoney Mountain Penitentiary volunteered to be 'injected with blood and a special substance called anti-D gamma globulin in an effort to discover a serum to prevent miscarriages to mothers with RH negative blood'. The experiment had been in progress for five years and was conducted by a team of researchers from the University of Manitoba's Medical college. Inmates were sceptical at first, but willingly agreed to the experiment 'when it was mentioned that it might help preserve the life of an unborn baby' (Webb 1965, p.14).[9]

Reconstructing the Social Context

'The past is a foreign country; they do things differently there', asserts Leslie Hartley (1953) in his novel *The Go-Between*. This goes a long way towards explaining the use of Canadian prisoners in scientific research 30 years ago. This was before the rights revolution of the 1960s had gained any significant momentum. The rehabilitation era was one in which prisoners were powerless, having few, if any, rights. Therefore, they were easily abused by those authorities who controlled their lives. From today's ethical vantage point such practices are highly unethical. But 30 years ago the social context was such that experimentation using prisoners was deemed acceptable. In an attempt to understand this social context more accurately, and to help our understanding of why these experiments were permitted, it is necessary to recognise that punishment has been, to varying degrees and at different time periods, influenced by the larger institutional and structural relations in society. As such, it can be argued that there were three inter-related institutional factors in place that contributed to the abuse of prisoners over the period 1955 to 1975: ethical standards, the medical-industrial complex, and the correctional philosophy.

Medical Ethics

Ethical standards regarding the use of prisoners do not have a lengthy history. While Western medical standards can trace a lineage dating back to the likes of Hippocrates, Thomas Percival, and Claude Bernard, it was not until the end of World War II that modern international medical ethics and human experimentation began to be discussed and developed (Cantrell 1997). For instance, the Nuremberg tribunals judged Nazi doctors who had conducted research on prisoners as criminal. These trials made the world aware of the potential for abuse in conducting scientific research using human subjects. Consequently, the Nuremberg Code, the first internationally recognised code of ethics for research, was established.

The Nuremberg Code formed the foundation for similar ethical standards, including those developed by the French National Academy of Medicine (1952), the Congress of Jewish Physicians (1952), the American Psychological Association (1955), the Netherlands' Report on Human Experimentation (1955), and the United Kingdom's Medical

Research Council (1963). The most influential internationally was the code of ethics produced by the World Medical Association in 1961 and formally adopted under the Declaration of Helsinki in 1964. It was revised in Tokyo in 1975 and again in Venice in 1983 and is probably the most comprehensive international statement on the issue of human experimentation. However, while these codes became ethical hallmarks, the history of scientific research would take decades to catch up to their principles.

Moreover, neither the Nuremberg Code nor the Helsinki Declaration expressly prohibit the use of prison populations in scientific and medical research. In fact, the final draft of the Helsinki declaration omitted the code banning the use of prisoners, which had been present in the original draft (Law Reform Commission of Canada 1989, p.37). What these codes do say is that research subjects should not feel coerced into volunteering for a study. However, the term coercion was open to interpretation. Despite these declarations, doubts remained as to what constituted voluntary consent and what differentiated an experiment from a treatment. It was not a clear-cut argument and the debate over the issue took place over several decades involving many voices in addition to the ethicists.[10]

Indeed, in examining the ethical and legal debate of the 1955 to 1975 period as it was expressed in psychiatric, medical, and pharmaceutical journals, it is clear that there was no established consensus in the debate as to whether or not the use of prisoners in scientific research was an ethical practice.

The reality is, ethical guidelines in general were still being developed in each discipline. An examination of scientific journals over this period reveals that research ethics were still in their infancy. As one commentator noted in 1962:

> Although much has been written and certain guides, such as the Nuremberg rules have been established, there is much need for greater understanding in this field. The legal aspects have not been fully clarified and, as yet, there are really no laws or established customs sufficiently broad to guide the investigator. (Friend 1962, p.156)

Research ethics were often described as 'virgin territory' (Wolfensberger 1967, p.47), in which there was 'considerable misunderstanding' (Ley 1968). It was not identified as an established convention, but rather an area of 'growing interest' (Ladimer 1972, p.1) consistent with the 'current interest in civil rights' (Rozovsky 1977, p.162). It was one of the many 'growing societal concerns' (Gray 1975) of the late 1960s and early 1970s. It was indeed 'a topic of the times' (New York Academy of Medicine 1967, p.168) and only this new 'heightened sense of awareness . . . prompted a serious effort at establishing ethical guidelines for scientific research on human beings' (Morris 1972, pp.782–3). As government agencies became more concerned with regulating pharmacological research, some clinical investigators began to criticise what they saw as the 'institutionalisation' of research (Ostow 1965, p.3), while others even argued against 'too much disclosure' lest the study be 'distorted' (Silson 1966, p.314).

Some researchers were quite adamant about the use of prisoners, seeing it as 'justified and highly desirable' (Hodges and Bean 1967). Some believed that there 'were no definite standards' other than 'refraining from misrepresentation' (Holder 1970), while others saw 'no ethical problem associated with drug studies in prisoners' (Ayd 1972a, p.443). American penal history was certainly rife with examples of prisoners being used for research. Starting in the early 1900s and peaking in the 1960s, the uneducated and financially desperate prisoners 'volunteered' for medical experiments that ranged from tropical and sexually transmitted diseases to polio, cancer, chemical warfare, and the testing of pharmaceuticals (Mitford 1973; Hornblum 1998).

This suggests that the Nuremberg Code and the Helsinki Declaration were far from being decisive statements on the issue. Researchers seemed to have a great deal of room for interpreting the guidelines proposed by these international codes. This was certainly made clear in the comments made by some of the researchers in the newspaper coverage. For Scott, the prison psychiatrist for the Kingston area prisons in the 1960s: 'It's a lot of bullshit. It was good research back then. It was good research with good motivation, with good supervision, and the government supplied the bucks for the whole thing' (Blanchfield 1998). Other researchers who were interviewed stressed that their work was ethical for the social context of the times. As one former researcher explained:

> People wet their pants now when they hear about LSD being used but that was standard practice back then. We see it as stupid now, but forty years ago it was accepted. Ewen Cameron's work at McGill was considered by those in the field as pioneering work. The same with sterilization. Forty years ago it was not questioned. Now, understandably so, we see it as terrible. People will probably look back twenty to thirty years from now and consider what we are doing now as unacceptable. That is why the context is so important. (interview notes)

This informant believed that understanding the context of the times is extremely important in trying to understand prison research. For this researcher, the newspaper articles seem to have been written in a 'plastic bubble' and have 'ignored the overall social context in which the work occurred' (interview notes).

What is treatment in one era, may be seen as punishment in another. This is echoed by another researcher who employed prisoners in an experiment:

> In the late 1950s and early 1960s there were no ethics review boards to review proposed research. The real concern for ethics began around 1973 when the controversial revelations of the Tuskegee syphilis experiments in the United States were made public. I don't understand what all the fuss is about. As far as I can remember LSD and other drugs and electric shock were standard therapies and procedures in the late 1950s and early 1960s in many psychiatric wards. (interview notes)

A researcher involved in the solitary confinement studies believed their experiments were:

> . . . less harsh than some of the solitary confinement experiments conducted on students by Zubek. University students volunteer for any experiment as long as money is involved. Were researchers taking advantage of student poverty? University student volunteers were put in coffin-like containers with ear plugs and blinders for 14 days and were only allowed to exit to eat and use the lavatory. There were no complaints about that research. I put myself in the isolation chamber before it was used on the prisoners. The only bad thing I can say about the whole experience was that I was totally bored. In fact, it was the only time I actually looked forward to prison food. It broke the boredom. (interview notes)

Another researcher involved in this type of research argued that they were very sensitive to the issue of ethics and the research was approved not only by the university but by all the medical personnel involved. Moreover:

> [a]ll the prisoners were volunteers and they were explicitly informed that they would not receive any compensation in any form, other than having their cooperation noted in their files. They were informed that they could remove themselves from the study at any time. They were put under constant surveillance so that no harm could come to them. (interview notes)

The freedom of the prisoners to exit a study was echoed by another researcher who worked on a conditioning experiment. 'All the inmates were volunteers, could remove themselves from the experiment at any time and, as far as I can recollect, were not given any rewards for their participation,' (interview notes). This was echoed by another researcher who worked for the Food and Drug Directorate of Health and Welfare:

> They all volunteered for the job. But they were promised that there wouldn't be any remuneration whatsoever. And there would be no time off. No money. At that time, we even talked about giving them a cigarette and a sweet chocolate bar. We said it wouldn't be ethical. We didn't do any of that . . . A couple of them dropped out and we never forced them back. They were allowed to and they did too. So we ended up with ten of them for this research. (interview notes)

In addition, this researcher felt that their work was very ethical, especially when compared to the Allan Memorial LSD experiments. 'We were nowhere near that. We were the complete opposite, I would think. We never took advantage of people. We never enticed them to do the research. It was all on a volunteer basis. It was all supervised by the prison authorities and a medical doctor. It was all done out in the open' (interview notes).

It is important to note that, in the minds of the researchers, both solitary confinement and conditioning investigations were less 'scientific experiments' than they were scholarly studies designed to further understand their subject matter and were aimed at improving the condition and situation of the inmate. Many of these researchers asserted that their studies should not be lumped in with 'shock therapy or LSD and pharmaceutical testing' because their research was much 'less intrusive', always had 'the best interests of the inmates in mind', and was 'in line with whatever ethical guidelines were present at the time' (interview notes).

It is important to remember that the world of institutional and university research ethics boards that we inhabit now did not exist prior to 1975. Researchers were left to their own devices. It is not until after this

date that there is a substantial decrease in the number of experiments, the emergence of any form of consensus against such practices, and a real evolution in the normalisation of ethical standards.

Medical Industrial Complex

A substantial disagreement over ethical standards was not the only factor that encouraged an environment in which prisoners were used in scientific research. It is necessary to appreciate the tremendous power of the pharmaceutical industry as it was, and still is, a powerful component of the whole 'medical industrial complex' (Klass 1974). The role of medical knowledge and medicine as an agent of social control has been discussed by many (Cohen 1985; Conrad 1975; Foucault 1965, 1975; Harding 1981; Kitterie 1971; Zola 1972). Essentially, the medical industrial complex contributed to the view that drugs were an essential good and the benefits they provided society outweighed the ethical concern for prison volunteers.

The pharmaceutical industry is a powerful business entity, having grown at a phenomenal rate since the turn of the last century (Silverman and Lee 1974). By 1954, with the introduction of Thorazine there was a virtual *revolution* in drug making and drug taking in North America and from then on, psychiatrists and medical researchers received lavish attention from the pharmaceutical companies (Whitaker 2002). By the 1970s, the pharmaceutical industry outperformed all other American industries in net profit after taxes with drug companies regularly being among the very highest (Goddard 1981).

In order to generate such high profits, it had to create a demand. This was accomplished by creating the view that drugs were a social necessity guaranteeing human progress. Psychiatry itself had entered a 'new era' with the development of modern drugs, one that could only be realised 'by increased interaction between psychiatrists and pharmacologists' (Himwich 1955, p.422). Indeed, after 1945, the pharmaceutical industry saw its 'basic consideration', – 'the improvement of the human condition' (Coggeshall 1963, p.147). Indeed, this time period was considered 'the age of chemotherapy' and 'a time of triumph for microbiology and organic synthesis' (New York Academy of Medicine Committee on Public Health 1962, p.135). More importantly, these drugs were viewed to be more humanitarian and a sign of progress in that they had more 'enduring results than those of the barbiturates' and were 'less drastic than electroshock' (Himwich 1955, p.413).

In addition to this idea of progress, the pharmaceutical industry created an advertising campaign that suggested that the solutions to all of our personal and social problems could be found in pills and potions (headaches, upset stomach, constipation, baldness, cold remedies). For the harder drugs, doctors provided customers with prescriptions. Therefore, the pharmaceutical industry spent a substantial amount of revenue on advertising in medical journals (Goddard 1981, p.249). The widespread

use of psychological substances has been referred to as the 'medicalization of Western societies' (Conrad and Schneider 1980; Illich 1976).

From 1940 to 1971, United States manufacturers developed at least 557 single-chemical entities available by prescription. If one includes all forms of pharmaceutics – creams, ointments, drops – the number increases significantly. According to one estimate, in 1956, some 14,000 new medicaments were added to the total of 140,000 in current use, of which an estimated 90% did not exist 25 years previously and 75% had been introduced within ten years (Editorial 1961, p.1). By 1963 it was estimated that '90 per cent of prescriptions written today could not have been filled fifteen years ago' (Coggeshall 1963, p.148). This plethora of new drugs was a product of massive research initiatives.

Indeed, scientific research had become an integral part of the pharmaceutical industry. According to one source, in 1951, the American investment in pharmacological research amounted to $50 million and this increased to $677 million in 1971. Rothman (1991, p.53) has estimated that in 1970, the National Institutes of Health awarded $1.5 billion to some 11,000 grant applicants, nearly a third of them performing experimentation. He describes this new era of questionable ethics in the laboratory 'the gilded age of research'.

Research required human subjects, especially for the clinical trials that determined the effectiveness of new drugs in human beings. For many 'the development of medicine, the safe guarding of health and ... basic scientific advances all require human experimentation ... the current development of human biochemistry, human physiology and human pharmacology has made it plain that man is the animal of necessity here' (Beecher 1959 (cited in Fox 1963, p.423)). No matter how good the animal tests were, at some point drug tests had to be conducted in human beings to guarantee the effectiveness and possible side effects of new drugs (Bernstein 1975; Novak, Seckman and Stewart 1977). The 'testing of new drugs in humans', proclaimed the editor of the *Journal of New Drugs* in its first issue, 'is essential to the very existence of progress in drug therapy' (Adler 1961, p.55). For many, therefore, the welfare of the species overrode the welfare of the individual (Freund 1967, p.399).

Living in a total institution where the population is cut off from the rest of society and is closely observed and administered, including having its diets and medications precisely regulated, prisoners were aggressively sought after as test subjects for pharmaceuticals. One researcher interviewed said that they had 'cooked-up this idea to go and do some work using prisoners because they have the same environment. We could have picked other workers as volunteers, but we didn't want to do that because people would eat different food, be in different climates. But the prison was a controlled setting, an ideal set-up' (interview notes). Prisoners were aggressively sought after as test subjects. Moreover, they were obviously much less expensive than other types of human volunteers. This 'army of volunteers' made it possible to get new drugs on the market months or years earlier than would have been possible in 'less controlled settings' (Dembicki 1969, p.53). It was argued that 'the use of prisoner

volunteers for medical research is justified and highly desirable for the investigator, for the subjects, and for society' (Hodges and Bean 1967, p.179). For example, in the early 1960s, LSD was legal and was viewed in the psychiatric community as a potential wonder drug that could break down the brain's defences and be an effective therapeutic tool. 'We must know more', psychologist Mark Eveson wrote in 1964. 'It is the fundamental responsibility for every professionally trained worker in this field to carry out such research – to try to answer in an objective manner the questions posed by our own inability to effectively and consistently deal with the offender' (Eveson 1964, pp.21–2).

To ignore the tremendous influence, importance, and power of pharmacology during this time is to neglect a crucial factor that contributed to a social context in which prisoners were used in scientific research. Given the overall 'dominance of the medical-industrial complex', especially the burgeoning financial importance of pharmaceuticals, and the collusion between pharmaceutical companies and medical researchers, it can be argued that the ethical considerations of using prisoners in scientific experimentation were often overlooked in North America. Not only did pharmaceutical companies benefit financially, but the status of psychiatry as a scientific discipline was further strengthened. The dedication of doctors to medicine and improving the social conditions of people, made doctors and all structures associated with them, especially the pharmaceutical industry, very powerful figures in society.[11] The financial importance of the drug industry, combined with the prevailing societal acceptance of the ideology of the 'medical-industrial complex' encouraged an environment in which testing on humans, even inmates, was condoned and accepted, despite the existence of the ethical codes mentioned previously. This was further facilitated by a correctional philosophy that had little regard for the rights of prisoners and viewed them as patients requiring treatment.

Correctional Philosophy

The correctional philosophy of this period must also be considered, as it informed many of the prison policies that were implemented in this period. With a few exceptions, prior to the late 1960s, criminology was dominated by a 'correctionalist' perspective that viewed criminal behaviour as a social problem and placed considerable blame on offenders who required treatment of some sort. Garland (2001) has described this as 'penal-welfarism' which is characterised by 'distinctive correctionalist motifs (rehabilitation, individualized treatment, indeterminate sentences, criminological research) and the specialist arrangements that supported them (probation, parole, juvenile courts, treatment programes)' (p.27).

In Canada, it was not until the 1938 report of the Royal Commission on the Penal System of Canada (Archambault) that the reformation of the offender was considered as an objective of the federal correctional system. By the end of World War II, vocational training and education programmes, as well as a wide range of therapeutic techniques were

introduced into federal and provincial institutions. The increased emphasis on the rehabilitation of offenders received additional support from the Fauteux Committee of Inquiry in 1956. The most significant conclusion of the Committee was that individuals who violated the law had been somehow 'damaged' in the process of growing up (Griffiths and Verdun-Jones 1994, pp.466–7).

This view of criminal offenders came to be known as the 'medical model' (Lehman 1972) or 'rehabilitation era' and was a cornerstone of the myriad of correctional treatment programmes that were developed during the late 1950s and throughout the 1960s (Ekstedt and Griffith 1988, pp.73–4; Griffiths and Verdun-Jones 1994, pp.466–7). Through North America and Britain, there was an unquestioning commitment to 'social engineering' which informed the belief system of a new class of criminological experts and knowledge professionals who were dedicated to scientific research to find a cure for what was first termed the psychopathic offender and later the criminal character (Garland 2001, p.42).

These programmes were accompanied by the involvement of psychologists and psychiatrists in developing and operating correctional treatment programmes. This being the case, prisoners were seen not only as inmates in a correction institution, but additionally as patients requiring some form of medical attention. Psychiatric services in the Canadian Penitentiary Service had been in place since 1947 (Wintal 1977, p.23) and an Editorial (1954) in the *Canadian Medical Association Journal* exclaimed that: 'One of the greatest advances has been the provision of psychotherapy in jails throughout the world' (p.286). By 1967, it was reported that Solicitor-General Pennell 'needed more psychiatrists in the Canadian Penitentiary Service' because the penitentiary was 'not a place to punish' but rather 'a place to reform and rehabilitate, to reduce crime by correcting antisocial attitudes' (Waring 1967, p.980). 'Correctional psychology' was an integral component of the overall correctionalist view of criminality prevalent in society during this time period (Bonta *et al*. 1983; Rice and Quinsey 1986).

This is why the experimental use of therapeutical drugs and experimental treatments was common practice in the 1950s, 1960s, and early 1970s. Prison psychiatrists were looking for potential pharmacological cures for criminality and deviance. This medicalisation of deviance led to inmates being increasingly seen as patients. It some cases, inmates may have been given pharmaceuticals to simply control their behaviour. Where this occurred, prison psychiatrists could be seen as contributing to 'custodial repression', promoting the smooth functioning of a repressive state apparatus (Speiglman 1977, pp.34–5). For example, in 1977, it was reported that inmates of the Philippe Pinel psychiatric institute for the potentially dangerous and criminally insane had been 'heavily drugged to make them easier to handle during a guards' strike' (Farquhar 1977, p.A11). In his account of prison life, Caron (1978) recalls how the medical and custodial staff relied on 'handing out tranquillizers like candy' in order to keep some semblance of order.

Given that the correctional philosophy was transforming inmates into patients, researchers viewed these 'patients' as potential test-subjects. This

is especially true when one considers how the altruistic act of volunteering for scientific studies was seen as contributing to the rehabilitation of the inmate-patient. According to some researchers, the use of prisoners not only permitted the conduct of human investigation under ideal circumstances, but also enabled the prisoners to feel that they were serving a useful function. In the eyes of the researchers and prison authorities, for the 'first time' in their lives, prisoners were making a 'contribution to society'. For some, in addition to benefiting from the financial payment, better health care, and safer and cleaner living conditions, found the experience 'rewarding' and 'positive' and one commentator found that prisoners develop 'a genuine esprit de corps' (McDonald 1967). In general, many researchers believed that this altruistic behaviour was an important component of prisoner rehabilitation (Ayd 1972a, 1972b; Dembicki 1969; Hodges and Bean 1967; Novak, Seckman and Stewart 1977; Stoffer, Sapira and Meketon 1969; Wells *et al*. 1974). As one researcher put it: 'I consider it a fundamental privilege for a prisoner to be able to have whatever psychological and spiritual benefits can be derived from being a research subject for the welfare of others . . .' (Ayd 1972b, p.777).

This was echoed in a 1963 memo written by the director of medical services for the federal penitentiary service, Dr Gendreau, who believed scientific testing provided inmates:

> an opportunity to identify themselves with society, whose laws they have violated. It gives participating inmates a feeling of self-respect. It builds up the self-esteem of those who have a low opinion of themselves; they know they can become useful to millions of people. (cited in Bronskill and Blanchfield 1998, p.A4)

This was certainly noted by an account of the 1965 Manitoba prison study on miscarriages, which suggests that an appeal to the prisoners' sense of worth was persuasive. 'The inmates selected, while sceptical at first, willingly signed the paper permitting the use of their bodies when it was mentioned that it might help preserve the life of an unborn baby' (Webb 1965, p.14). Similarly, in the pesticides and sweeteners study, it was noted that the prison volunteers were providing 'a fine example of public service' (Canadian Corrections Association 1968, p.7).

The final factor to consider with the correctional philosophy of this time period is the almost complete absence of inmates' rights. It was not until the late 1960s and early 1970s that courts in Canada and the United States began to entertain the idea that inmates still had rights even though they were incarcerated. Prior to this, the courts took a relatively neutral approach – the 'hands off doctrine' – toward the running of prisons. It was simply assumed that prison administrations were professional enough to balance institutional needs with humane considerations (Jacobs 1980; Cambell 1997). In Canada, the legal basis for prisoner rights was strengthened in 1982 by the Canadian Charter of Rights and Freedoms which led to a 'completely fresh analysis of the rights of individuals and the use and abuse of power in Canadian society' (Conroy 1991, p.24).

Conclusion

These experiments were secretive and are, to a considerable extent, still unknown for a lack of official documentation. Exactly how many prisoners were involved in experiments and the nature of all these experiments is still unknown. This research has identified some of what is known about the topic and has forwarded three reasons why some Canadian inmates were used in scientific experiments between 1955 and 1975. First, ethical standards of the time were far from entrenched in the scientific community. Second, the pharmaceutical advances had created a social and medical climate in which testing for new drugs and products was deemed necessary, regardless of who volunteered for the experiments. Third, a correctionalist perspective pervaded criminology and the criminal justice system, which encouraged prisoner participation as it would contribute to their psychological well-being and ongoing rehabilitation. Some experimentation was regarded therapeutic and considering the relative absence of any notion of prisoner rights, prisoners were powerless to resist. These three inter-related factors facilitated what could be considered an abuse of power.

Scientists, criminal justice officials, and criminologists were all in positions of dominance and were able to define what was criminal, what was appropriate treatment, and what was ethical behaviour behind the prison walls. Ethics involve the specific moral choices made by an individual in relationships with other individuals, and are essentially idealist standards of right and wrong. Given the fact that these elites, especially the scientific community, play a significant role in determining what is ethical, and that there was considerable debate on the issue of prisoner volunteers, scientists should have considered the vulnerable position of prisoners and not included them in their studies. Nevertheless, an argument can be made that these scientists were acting morally in that they were keeping with the prevailing standards of correctness, albeit standards that they helped define.

More information is required to help answer the question of whether this research was ethical or moral. For instance, it would be helpful to have more information on whether similar experimentation was going on in the community at large. If non-prisoners (mental health patients, outpatients, students, seniors in retirement homes, community volunteers, etc) were equally subject to such experimentation, this would have some bearing on the issue. If prisoners were clearly targeted because of their lack of power, this would add to the debate and its resolution. Similarly, it would be interesting to know exactly what criminologists, social workers, and sociologists thought at the time, and if they did anything to actively denounce this type of experimentation at the time. This preliminary investigation did not uncover any such professional condemnation, but if a more detailed investigation unearthed their action or inaction, then a more complete picture could be obtained. The ‘presentist’ argument fades if it is the case that what was done in the 1955 to 1975 period was, in fact, viewed as objectionable and immoral by many, but was difficult to

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prevent, largely because institutional ethical practices were in an embryonic stage.

Further research will help shed insight on this important issue, which is of more than just historical interest. It would encourage CSC to review its current policies regarding experiments involving prisoners, for example those involved in HIV/AIDs research. Furthermore, it would encourage all researchers and the rest of society to question the ethics behind the use of other powerless populations, for example the poor, who sometimes volunteer out of economic necessity rather than the desire to aid the advancement of scientific knowledge.[12]

Notes

1 This began in 1998, when the *Ottawa Citizen* ran a series of articles detailing the use of Canadian prisoners in scientific experiments. They centred on the 1995 allegations of former inmate, Dorothy Proctor, who claimed that she was one of 23 inmates at Kingston's Prison for Women who were given LSD as part of a psychology experiment in the early 1960s. In testimony before the board of inquiry in 1997, Proctor said she was targeted by researchers because she was viewed as a 'throwaway' who had no family connections beyond prison walls (Blanchfield 1998). Proctor says she was given LSD while in solitary confinement and consequently became a drug addict (Proctor and Rosen 2004). Additionally, she suffers from Post Hallucinogen Perceptual Disorder (PHPD). Her $5million lawsuit was dismissed by the Ontario Supreme Court of Justice in 2002 (*Proctor* v. *Can*. (AG) [2002] OTC 79 (SupCt). The newspaper investigation intensified and unearthed accounts of electric shock therapy, sensory-deprivation studies, and clinical pharmaceutical trials (Bronskill and Blanchfield 1998). Soon other former inmates, as well as currently incarcerated inmates, came forward or were identified by other media outlets. For example, John Stanley Faulder had been sent to jail in New Westminster, BC for two years, where he asked for psychiatric help and was put in an experimental drug programme involving LSD (Cockburn and St. Clair 1999). Richard Carlson claims that during his 1968 to 1974 stay in Kingston Penitentiary he was given 20 different drugs, including truth serum that would induce hallucinations (Andrews 1999). Bob McDonald, an inmate from 1963 to 1970, described the Kingston Penitentiary as a 'house of horrors' and claimed that the promise of rewards led him to volunteer for various studies including pain tolerance experiments (Blanchfield and Bronskill 1998a).

2 Curiously, its top recommendation to Corrections Canada was to ignore the report of the department's own board of inquiry, which recommended financial compensation and an apology to the inmates used in the experiments. Rather, the report urged Corrections to follow several other recommendations, including setting up a toll-free line for other inmates who believed they were involved in experiments, offering counselling and trying to find out more about the full extent of the research on prisoners.

3 All interviews were conducted by the author between November 1998 and June 2001 and took the form of a non-structured personal interview. Not all of the researchers contacted were willing to participate. All of them were aware of the current legal battle and were wary of being drawn into one of their own. One of those who declined said: 'the whole thing sounds like a witch hunt' (interview notes).

4 By 1976, there was some evidence to suggest that the solitary confinement units were not being used properly and some, such as the Laval Maximum Security Unit were publically condemned for their abuses (*Montreal Star* 1977, C13). In *McCann* v. *The Queen* ([1976] 1 FC 570 68 DLR (3d) 661, 29 CCC (2d) 337 (TD)) the Federal Court recognised the significance of this factor and found the conditions of solitary confinement in the British Columbia Penitentiary to have constituted cruel and unusual punishment contrary to Section 2(b) of the Canadian Bill of Rights. Others

found considerable evidence which suggested 'that inmates placed in solitary confinement would be more likely to suicide than their cohorts in other locations within the penitentiary' (Burtch and Ericson 1979, p.42). Report after report began to claim that solitary confinement was harmful to anyone and that institutional psychiatrists should advise the general elimination of its use (Vandervort 1977, pp.376–80).

5 This is a form of electro-stimulation therapy requiring some form of sedation. Used to treat phobic neurosis and depression, treatment can run for as long as 20 to 30 minutes. Sometimes the current is lowered and treatments can continue for two to four hours (see Philpott 1973, pp.105–9).

6 Also known as an adrenaline-mecholyl test, it is employed to determine the probability that a patient will benefit from electro–convulsive shock treatment. The test is conducted by injecting the patient intravenously with epinephrine hydrochloride, a form of adrenaline, one day, and intramuscularly the next day with mecholyl, a trademark for methacholine. If mecholyl increases the blood pressure significantly, the patient is regarded as a poor candidate for electro-shock (Goldenson 1984).

7 Many of these 'treatments' and interventions are known to those familiar with the correctional literature. Indeed, many were contested and debated in the mid-1970s (Annis 1981; Coons 1981; Gendreau 1981; Ross and McKay 1978; Martinson 1974, 1976).

8 Canada, Government of (1955 to 1969). These reports frequently mention the use of electric-convulsive therapy (ECT), electric-stimulative therapy (EST), Sedac therapy, Funkenstein tests and pharmaceuticals throughout the years 1955 to 1964, after which reports begin to be less detailed. ECT and EST were noted as being 'very valuable in prison as a control measure' and had 'been used with good success' (*Annual Report 1955*, p.70). In total there were nine pharmaceuticals referred to in the Annual Reports including, Equanil (*Annual Report 1956*, p.66; *Annual Report 1958*, p.73), Frenquel (*Annual Report 1956*, p.66), Largactil (*Annual Report 1955*, p.70; *Annual Report 1956*, p.66; *Annual Report 1958*, p.73), Librium (*Annual Report 1960*, p.69), Pacatal (*Annual Report 1957*, p.68), Serpasil (*Annual Report 1955*, p.70; *Annual Report 1956*, p.66), Sparine (*Annual Report 1957*, p.68; *Annual Report 1958*, p.73), Sodium Pantothal (*Annual Report 1960*, p.69), Stelazine (*Annual Report 1960*, p.69), and Trilifon (*Annual Report 1958*, p.73).

9 These experiments may just be the tip of the iceberg. An interview with a former researcher at the Research Laboratories, Health Protection Branch, Department of National Health and Welfare revealed that many 'technicians would drive down to Kingston to be involved in research using prisoners. But it's unlikely that any of this research was ever published and it probably remains in the hands of the pharmaceutical companies or maybe in government records' (interview notes).

10 Consider the fact that it is only recently that the treatment of sexual offenders has come under the scrutiny of those concerned with ethics in medicine. Opponents are usually critical of behavioural alteration in general and of penile tumescence measurement and aversion therapy in particular (Kluge 1988; Greenland 1988).

11 See Foucault's (1975) ideas in *The Birth of the Clinic* in which he links a new 'climate for research', complete with laws favourable to medicine, and the birth of the research hospital, to the general growing prestige and place of doctors in society.

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