Lay epistemology and attitudes towards AIDS (immune deficiency).

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LAY EPISTEMOLOGY AND ATTITUDES TOWARDS AIDS

by

Peter Cobrin
B.A., University of Toronto, 1982

A Thesis
Submitted to the Faculty of Graduate Studies through the Department of Psychology in Partial Fulfilment of the Requirements for the degree of Master of Arts at
The University of Windsor

Windsor, Ontario, Canada

1989
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Abstract

An individual's underlying values (or lay epistemology) may be a more crucial determinant in the formation of attitudes towards Acquired Immune Deficiency Syndrome (AIDS) and People with AIDS than his or her knowledge about AIDS. Using Unger's (1986) terminology, it is argued that the social constructionist value orientation, as opposed to the logical positivist orientation, is most consistent with the demonstration of humane attitudes, with respect to this issue. Two hypotheses are explored. The first hypothesis is that there is a relationship between lay epistemology and attitudes towards AIDS, such that social constructionism is related to humane attitudes towards AIDS, and logical positivism is related to negative attitudes. This hypothesis is supported by the data. The second hypothesis is that lay epistemology and knowledge of AIDS predicts attitudes towards AIDS. However, a larger proportion of the variance in attitudes towards AIDS is explained by epistemology than by knowledge of AIDS. The results of this hypothesis are promising, though not entirely as expected. Nevertheless, epistemology as well as knowledge of AIDS are significant predictors of attitudes towards AIDS. Both factors should be taken into account in educating the public about AIDS.
Acknowledgements

This paper is dedicated to all those individuals who still see the purpose in the fight against fear and ignorance and their manifestations in hatred and bigotry.

To those people living with HIV disease, there are still those who care.

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Chapter 1

Introduction

During the early 1980s, some of the public apprehension concerning Acquired Immune Deficiency Syndrome (AIDS) could be attributed to general ignorance. Governments (Canadian and American) were slow to respond to the imminent catastrophe. The media were slow to acknowledge the epidemic's existence. Scientific and governmental establishments presented a confusing picture as to the dangers associated with this epidemic.

In 1989, the fear and distrust surrounding AIDS are less easily attributable to a simple lack of information. The recent proliferation of AIDS action committees, government advertisements and media attention have all contributed to a better informed public with respect to the medical dangers associated with AIDS. Presently, most people have some general knowledge concerning the "scientific facts" on AIDS, such as some of the methods of transmission, the known methods of prevention and the so-called "high risk" groups. However, it appears that these "facts" often lose their objectivity when translated into actions and
attitudes concerning AIDS and People With AIDS (PWAs). In particular, the documented inhumane treatment accorded to many PWAs attests to this lack of objectivity.

In this paper, it will be suggested that, by definition, "facts" are value laden. The facts which are presented concerning AIDS are neither conceived nor implemented in a cultural-moral vacuum. The kinds of information that the public receives, and the way in which this information is processed, are more generally influenced by individual and societal beliefs or value systems. Thus, even though the public appears to be better informed, the societal values underlying this information are still related to much ineffective policy and mistrust concerning AIDS.

On the surface, the values underlying present negative conceptions of AIDS are multi-faceted. For example, it is important to distinguish between genuine fears of a dangerous disease and the exploitation of such fears to attack affected groups. Some of the ineffective policy and mistrust stems from the lack of perceiving such a distinction; particular groups have been unjustly exploited as the boundaries between the
beliefs associated with AIDS and with the people who have AIDS have become blurred. In North America, AIDS has mostly affected groups already stigmatized or labelled by large segments of the population as deviant. Such labelling has produced many discriminatory attitudes and practices aimed at these groups. The attitudes which are associated with these stigmatized groups have become intimately linked with, and have been exacerbated by, the negative attitudes concerning AIDS.

More generally, some of the attitudes concerning AIDS stem from an individual's epistemological orientation. Theoreticians have devised various schemata, utilizing different criteria, in identifying an individual's personal epistemology. Unger's (1986) twofold classificatory scheme of personal epistemologies will be utilized. Unger distinguishes between logical positivism and social constructionism. The logical-positivist position assumes that "reality" is relatively fixed and objectively accessible (Unger, 1986). In brief, it is related to a belief in biological and physical determinism, believing in specific causes to explain events (as in the natural
sciences). With respect to its role in attitude formation, an individual holding to a logical-positivist orientation would favour viewing issues in black and white terms, accepting the dominant societal value systems, and interpreting events in moralistic, good or bad terms. This position, in favouring intrapsychic causality to ascribe meaning to events, could be understood as being instrumental in fostering the conceptual confusion which exists between AIDS and the people with AIDS, blurring the boundaries between the two, and encouraging discrimination against both the person and the disease.

The term social constructionism indicates a more relativistic, reflexive view of causality (Unger, 1986). It is understood as growing out of recent epistemologies in the social sciences, which reflect an approach that knowledge is socially constructed and is therefore affected by social values and historical context (see Gergen, 1985). An individual with a social constructionist perspective might be more sensitive to the subtleties, or context of communication, and be better able to distinguish between people and beliefs. For this individual, the
way in which AIDS is generally perceived does not necessarily signify that the construction is universally true; there is more flexibility in understanding, and less willingness to blindly accept society's constructs at face value.

If personal epistemologies are central to the formation of attitudes towards AIDS, educational programs will need to go beyond informing scientific knowledge about AIDS. The epistemological values and assumptions underlying present conceptions of AIDS must also be addressed in order to deal with AIDS in the most effective and humane way possible. Only by changing underlying values can attitudes and actions change.

The present study will explore the unique role that lay epistemology plays in the formation of attitudes towards AIDS. In investigating this issue, several topics will be touched upon, including: putting the epidemic in perspective, exploring some consequences of attitudes towards AIDS being associated with previously stigmatized groups, examining the theoretical basis for the negative/discriminatory attitudes about AIDS, presenting an historical overview
of the social construction of disease in general, and finally, studying the relationship between lay epistemology and the negative/discriminatory attitudes concerning AIDS.

The Epidemic in Perspective

By traditional accounts, AIDS was first recognized in June, 1981 (Ontario Ministry of Health, 1987). The generally accepted working definition in identifying this syndrome, as established by The Centre for Disease Control in Atlanta, is as follows:

A life threatening, unusual malignancy (such as Kaposi's Sarcoma) in a person less than 60 years old and/or a life-threatening opportunistic infection indicative of severe cellular immune deficiency in the absence of any known cause of immunosuppression. (Ostrow, 1984, p.94)

At present, there exists no permanent cure or vaccine. Until quite recently, most medical professionals believed that the opportunistic infections associated with the immune deficiency necessarily resulted in death (e.g. Ontario Ministry of Health, 1987, pp.1-12). Presently, with new advances in treatment, "AIDS is
coming to be seen as a chronic illness that can be managed in much the same way as epilepsy or diabetes" (AIDS Action Now, 1988).

The effects of the AIDS epidemic on North American society have been catastrophic. At the present time, approximately 80,000 people in North America have been diagnosed with either AIDS or ARC (AIDS-Related Complex). Aside from sheer numbers, the physical and emotional pain suffered as a direct result of medical disabilities have been enormous.

The medical costs associated with AIDS have also been substantial. The Public Health Service of the United States has estimated the direct costs for the medical care of PWAs, in 1991, to be somewhere between 8 and 16 billion dollars (Bower, 1987). The estimates vary greatly due to differences in types of opportunistic infections requiring treatment, in medical practices, and in availability of psychological and general support services (Arno & Lee, 1986). Estimates of indirect costs (e.g. money lost in future earnings) also vary greatly, depending on the projected number and the demographic mix of PWAs. These numbers are staggering, especially since 90 per cent of all
PWAs in North America are in the prime of their working lives, between the ages of 20 and 49. One American source estimates the indirect costs in 1991 to be greater than 55 billion dollars (Bower, 1987).¹

Attitudes Towards AIDS Associated with Previously Stigmatized Groups

This study focuses on societal attitudes towards AIDS and their translation into inhumane treatment of PWAs. There does not appear to be a simple one-to-one correlation between the attitudes or societal perceptions associated with AIDS, and the devastating clinical manifestations of the disease. Rather, the negative attitudes are intricately related to the people who are perceived to have introduced and spread AIDS. To understand the genesis of the attitudes, it is crucial to appreciate exactly who has AIDS.

AIDS has affected certain minority groups disproportionately to their numbers. In particular, as of January, 1989, 86% of all known PWAs in Canada were

¹For a detailed comparison of cost estimates and the problems inherent in defining and projecting costs, see Fox & Thomas (1987/88).
either homosexual or bisexual males. In the United States, this number is approximately 64 per cent. In the U.S. the next largest and fastest growing group of PWAs are intravenous drug users. Non-Whites are also overly represented. For example, in the U.S., 87 per cent of women PWAs are women of colour and 91 per cent of all children with AIDS are non-White. In New York City, 80 per cent of the AIDS heterosexual cases are black or Hispanic (Harrington, 1987). In addition, given that AIDS can be transmitted through the blood stream, another prominent high risk group are individuals with multiple sex partners.

Eugene Harrington (1987) echoes many other commentators with his suggestion that the disproportionate number of PWAs among these groups means that the acceptance of AIDS, in effect, means accepting drug abuse, prostitution, homosexuality and bisexuality, blacks and Hispanics. Such widespread acceptance is unlikely in a society already afflicted by many forms of discrimination against these groups. AIDS related discrimination and negative attitudes directed against these stigmatized groups, especially against gay men, has been well documented. Here, some
examples of such discriminatory/negative attitudes will be cited.

When a PWA died in New York in 1983, his neighbours tried unsuccessfully to have his children removed from school as a health hazard. In 1984, officers of a Manhattan district court wore masks and gloves at a trial where the defendant had AIDS (Valdiserri, 1987). In Sydney, Australia, policemen objected to enforcing breathalyser tests because they feared that they might come in contact with someone with AIDS (Altman, 1986). In a widely cited editorial in the New York Times, reminiscent of Nazi Germany, William F. Buckley Jr. decried that "everyone detected with AIDS should be tattooed in the upper forearm, to protect common needle users, and on the buttocks, to protect the victimization of other homosexuals" (Eisenberg, 1986, p.245). In 1987, Roman Catholic bishops in Ireland were quoted as rejecting the use of condoms to avoid AIDS, since the use of condoms would lead to greater permissiveness (Markovan & Wilkie, 1987). Lastly, a member of the moral majority, Ronald Godwin, has been quoted as stating:
What I see is a commitment to spend our tax dollars on research to allow these diseased homosexuals to go back to their perverted practices without any standards of accountability. (Altman, 1987, p.25)²

Rather than being merely isolated incidents, these examples reflect a strong societal trend towards discrimination against PWAs and the groups with whom they are predominantly believed to be associated. That discriminatory attitudes exist on a societal scale is further supported by some opinion polls and questionnaires, as well as related legislation.

Results of opinion polls indicate discriminatory attitudes against both PWAs and those groups with whom they are generally associated. In one poll, 25 per cent of respondents said that they would refuse to work alongside someone who had AIDS. Twenty per cent of parents said that they would take their child out of school to avoid contact with a classmate with AIDS. Forty per cent of respondents said that they would be upset if a treatment or housing centre for PWAs were

²For a more extensive list of examples of discrimination, see Altman (1987, p.25).
located in their neighbourhood (Blendon & Donelan, 1988).

One study employed as their subjects physicians and nurses who work in a large urban teaching hospital. Nearly ten per cent of respondents agreed with the statement that homosexuals who contract AIDS are getting what they deserve.... Approximately thirty one per cent of the respondents admitted that they felt more negatively about homosexuals since the emergence of AIDS. (Douglas, Kalman & Kalman, 1985, pp. 1310-1311)

Results of another questionnaire study found that homosexuals were perceived as being more personally responsible for their illness and less interactionally desirable than were heterosexual patients, regardless of the diagnosis (being either AIDS, Legionnaire's disease, serum hepatitis, or genital herpes). (Triplet & Sugarman, 1987, p.270)

In the United States, there exists legislation which can be perceived as being discriminatory, in particular, legislation that requires mandatory screening (for HIV carriers) of low risk populations,
such as marriage license applicants. The military and immigration departments have also instituted similar mandatory tests to screen out HIV carriers (Mohr, 1987/88).

Mandatory anti-body screening tests are often perceived of as being discriminatory, given the many practical limitations associated with the tests. For example, given the fact that not all techniques are standardized, problems may arise in interpretation, with a resulting unacceptable rate of false positives. In addition, the scientific community is still unsure of the future of all those with positive test results. Also, the danger exists that results of the screening tests may be used as a marker to discriminate in employment, in insurance, and in other aspects of one's life (Durham, 1987).

Even without these limitations, the almost unanimous scientific opinion is that such mandatory screening policies are not effective in disease control (Koenig, 1988). That much of this type of legislation is still in place has led one author to speculate that the legislation requiring mandatory testing is being used as a filter to protect existing social structures.
(Mohr, 1987/1988) The implicit message seems to be that a gay man need not apply for marriage, for military service or, if a foreigner, for citizenship. The point of testing may be "the purge of gay people in order to keep pure the institutions by which the nation defines itself. ... [It] is the reconsecration of heterosexual supremacy as a sacred value" (Mohr, 1987/88, p.178). Although somewhat exaggerated, there might be some truth in Randy Shilts' (1988) assertion that the quarantine of blood is an ominous first step towards further social, political, economic and even physical quarantine of a community already denied many civil rights protections. Stigmatizing the blood of an already disenfranchised segment of society may permit homophobic and racist forces to accomplish in the name of 'science' what they thus far have been unable to fully accomplish politically. (pp.326-327)

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For a general review of AIDS-related legislative and regulatory policy in the United States, see Gostin and Ziegler (1987).
The above discourse is consistent with Adam's (1988) thesis that one can discern three stages in the institutionalization of AIDS, and its concomitant effect on societal attitudes and actions concerning the virus. From 1981 to 1983, "AIDS was guarded by silence, by taboos which forbade talk about sex, especially the 'exotic' sex practices of gay men." Hence, there was scant mention of AIDS in the popular press. The breaking of the silence was marked by much inaccurate speculation, terror and fear (as manifested in the above examples). The third stage, emerging in the mid-1980s, has been marked by state financial and legislative control of AIDS issues (e.g. the discriminative legislation, as outlined above).

The shifts in the way AIDS has been considered have not necessarily led to more humane treatment with respect to AIDS-related issues; as is clear from the above examples, the form of the discriminatory attitudes apparently has changed more than its content. 

**Consequences of Negative Attitudes: Helping the Disease to Proliferate**

Much literature has been devoted to the psychological reactions of the gay community to the
negative/discriminatory attitudes surrounding the AIDS epidemic. For one gay individual, the direct consequences of the exaggerated fears associated with AIDS proved fatal. A report on television, suggesting that the illness could be spread by everyday household contact, prompted a close friend of one PWA to commit suicide (Deuchor, 1984).

More generally, there is a fear on the part of many gay men of being stigmatized, the fear being even greater with AIDS (Morin, Charles & Malyen, 1984). One possible effect of increased stigmatization is an increase in internalized homophobia. The psychological symptoms of internalized homophobia may include withdrawal, active suppression of sexual thoughts about men, and anger resulting from feelings of loss of control and frustration (Hirsch & Enlow, 1984).

Prevalent AIDS-related discriminatory attitudes may not only encourage more negative opinions and behaviours against already stigmatized groups, but these discriminatory attitudes may also be intimately linked to the very maintenance and proliferation of the disease itself.
Discriminatory attitudes directed against a previously stigmatized group can exacerbate existing defensive responses. For example, the suggestion has been made that certain patterns of sexual behaviour are related to low self esteem, itself often the product of social stigma against homosexuality (Altman, 1986). Taking into account the considerable success of educational programs designed to slow down the number of new AIDS cases within the gay community, the increased level of social stigmatization may conceivably be encouraging some gay men to participate in some high risk sexual behaviours in which they might otherwise not engage.

A related idea concerns the association between high levels of stress and the development of AIDS. The suggestion has been made that negative attitudes, insofar as they increase the level of stress, may directly increase the likelihood of an individual contracting AIDS. As Kaplan, Johnson, Bailey and Simon (1987) comment:

[The] circumstances surrounding the potential onset of AIDS, such as the request to provide blood samples to be tested for HIV infection, the
expectation and knowledge of positive test results, and adverse responses by others, may induce high levels of stress.... Such circumstances may heighten anxiety and promote less healthyadaptive, coping, or defensive responses, such as responding with increased unsafe sexual activity. (pp. 144 & 146)

Other factors which may be associated with high levels of stress are lack of community nurturance, lack of supportive role models, and lack of a social outlet to express feelings of anger (Cecchi, 1984).

More directly, it has been proposed that severe psychological stress may be mediated through neural-hormonal pathways to produce adverse effects on the immune system, even conceivably increasing the likelihood of immunosuppression (Chodoff, 1987). In other words, societal attitudes which lead to psychological stress may directly contribute to acquired immune deficiency (AIDS). For example, Cecchi (1984) has argued that neuroendocrine pathways influence the functioning of the immune system.

We might particularly note the relationship of psychological distress and the activities of the
hypothalamic secretions on the pituitary gland and its triggering of the adrenal cortex productions of corticosteroids. This activation of the 'flight or fight' response to stress, often not released or coped with, may produce enough secretions to be immune-suppressive. Chronic frustration may produce enough corticosteroids to be permanently damaging. (p. 288)\(^4\)

Another area in which negative attitudes may be partially implicated in the maintenance and proliferation of the disease concerns government funding. There is much evidence to support the contention that governmental spending to fight AIDS was (and still is) woefully inadequate. For example, by late 1982 (when at least 180 people were known to have died from AIDS), the National Cancer Institute (NCI) had spent 1/40th of 1 per cent of its budget on AIDS, and The Centre for Disease Control (CDC) had spent two million dollars on AIDS, out of a 202 million dollar budget. The first funds were not allocated from the

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\(^4\)For a further discussion on how psychological distress contributes to immune suppression, see Morin et al. (1984), Martin and Vance (1984), and Soloman and Temoshok (1987).
National Institute of Health (NIH) until early 1983, twenty months after the first alert. By September, 1984, the NIH had proposed spending 9.4 million dollars on AIDS, or about one fifth of one percent of the agency's budget (Shilts, 1988). Even as late as 1985, AIDS expenditure was still less than one percent of the total expenditure of the Public Health Service (Altman, 1986).

Government inaction has not been limited to funding issues. For example, public pronouncements, especially in the realm of education, have been extremely limited and late in coming. By March 1983, more than 20 months into the epidemic, the U.S. government had come out with only one public statement aimed at the prevention of the spread of AIDS among gays. By the time President Reagan, in 1987, delivered his first speech on AIDS, 36,058 Americans had been diagnosed with the disease and 20,849 of them had died (Shilts, 1987, pp.243, 596).

Besides the lack of funding, there was also a notable lack of speed on the part of government sponsored scientific institutions. Many scientists have suggested that the AIDS virus was not a
particularly difficult virus to find. Once they started looking in earnest, it took the French only three weeks to discover it and seven or eight months to verify it. It took the Americans about a year. As Shilts (1988) states:

What delayed the National Cancer Institute was not the difficulty in finding the virus but their reluctance to even look. Most CDC researchers privately believed that if the NCI had begun serious laboratory efforts in 1981, the virus could have been detected by 1982, before it had made its vast penetration into American life (both in terms of deaths and also with respect to the exaggerated fears of AIDS, insofar as they are based on ignorance of the transmission routes of the disease). (p.127)

With a quicker governmental response, the AIDS virus might have been isolated earlier, and with more money, a more effective educational effort might have started sooner and been more successful. It is likely that the government's inadequate response was (and still is) affected by the social baggage which has accrued to AIDS, especially in that it has been
identified as being a "gay disease". A full examination of how the negative attitudes of many of the politicians and the scientists involved directly influenced government AIDS policy, would be beyond the scope of this paper. For a thorough discussion of this issue, see Shilts (1988).

Sources of Negative/Discriminatory Attitudes

As mentioned above, it might be possible to attribute some of the early public apprehension and fear concerning AIDS to general ignorance. This state of ignorance was understandable given the media's role in public education. The public has credited the media as being its most important source of information on AIDS (Singer, Rogers & Corcoran, 1987).

The problem is that early on in the epidemic, the public was mainly without its chief source of information since the media were extremely late in responding. One estimate claims that in the first 18 months of the epidemic, the New York Times ran only seven articles on AIDS, none of them making the front page. In the last quarter of 1982, at a time when 643 Americans had AIDS, 260 of them dead, only 30 articles
on AIDS had appeared in the U.S.'s leading news magazines and newspapers (Shilts, 1988). Of course, the media's initial response was probably a reflection of the general apprehension surrounding the so-called gay disease. However, people outside of the decision making process, without direct access to information about the disease, could not justifiably be held directly accountable for their apprehension and fear of AIDS and of PWAs.

Even with the effective lifting of the news blackout, the public was still relatively ignorant, as the scientific and governmental establishments often presented a confusing picture as to the dangers associated with this epidemic. Especially confusing was the May 1983 headline in the Journal of the American Medical Association which read, "Evidence suggests household contact may transmit AIDS." Another good example of mixed messages to the public is the following:

A leading investigator for the CDC was reported as having warned that anyone who says categorically that AIDS is not contracted by saliva is not telling the truth and that it may be transmissible
by tears, saliva, bodily fluids and mosquito bites. (Eisenberg, 1986, p.243)

Most polls now indicate that most people know some of the scientific facts about AIDS. For example, studies have demonstrated that virtually everyone now knows that AIDS can be transmitted by sexual contact, not by being in the same room as a PWA (Singer et al, 1987). However, a recent review on AIDS-related surveys has concluded that prejudicial attitudes still persist even when people understand that they are at a very low risk of being infected themselves (Blendon & Donelan, 1988).

Recently, a group of researchers has attempted to empirically measure the effect of knowledge on attitudes towards AIDS. They surveyed half of a class of medical students prior to a lecture on the epidemiology of AIDS; the other half were surveyed immediately after the class. They found that the lecture had no measurable impact on students' attitudes and perceptions of risk. For example, they found that approximately 22 per cent of both groups believed that performing a physical examination on a PWA carried a
moderate to high risk of contracting the disease (Imperato, Feldman, Nayeri & Dehory, 1988).

The above suggests that the present fear and distrust surrounding AIDS is not easily attributable to a simple problem of a lack of information. This is not to denigrate the importance of education in stopping the spread of the disease. For example, (even though the U.S. has not yet launched a coordinated educational campaign) the existing educational programs have been instrumental in all but eliminating new HIV infections in gay men (Shilts, 1988). Rather, the argument is that something other than mere ignorance underlies the present attitudes surrounding the disease.

The negative attitudes surrounding AIDS are not necessarily due to ignorance. Cultural reactions to AIDS are shaped by many factors; one cluster of factors, concerns about sexuality in general and homosexuality in particular, has had a strong influence in generating fear and distrust.

Some commentators maintain that the fear of self exposure, or homophobic feelings, underlie the fear of both gays and AIDS. As Nichols (1984) comments:
When panic is experienced by persons not at risk, it may be derived from the old fear of exposure, that is the fear of discovering homosexual feelings, and not of contact with the putative AIDS agent. Since the defense against our own homoerotic feelings require that homosexuals be regarded as different, they are likely to be seen as inferior or even less human in some essential way. In troubled times they become ready targets for scapegoating. (pp.90-91)

Stevens and Muskin (1987) take a psychodynamic approach in explaining the homophobic related anxieties people experience around PWAs. "The panic related to AIDS is an unconscious fear of loss of control of powerful primitive impulses concerning pleasure and the fear of acting of Oedipal wishes" (p.542). In this schema, unconscious identification and repression leads to the externalization of, and a reaction formation to, the feared wishes.

Others maintain that the stigmatization of gays and AIDS is linked with feelings of moral repugnance. Gays who contract AIDS by engaging in so-called socially deviant activities are seen as simply reaping
the rewards of their past sins (see Durham, 1987). "Many have interpreted the disease as the physical
defilement of the sufferer's moral defilement" (Eisenberg, 1986, p.245). It is interesting to note
that the American legal system has partially
legitimized these feelings. As recently as 1986, the
U.S. Supreme Court (in Hardwick vs. Georgia) ruled that
Americans have no constitutionally protected right to
engage in all homosexual behaviours, even in the
privacy of their own homes (Eisenberg, 1986).

Engaging in a homosexual act, in and of itself, is
not the only cause for the feelings of moral
indignation. One may also perceive homosexuality as
deserving of moral outrage since it constitutes a
serious threat to traditional morality, by symbolizing
the sexual revolution and non-traditional family
values. For heterosexuals, the sexual revolution has
been marked by readily available antibiotics, more
effective birth control, semi-legalized abortion, and
the acceptance of divorce. Homosexuality is even more
revolutionary in that it questions the very existence
of the traditional family unit.
It is important to note that the disease first erupted during the era of the New Right (i.e., Reaganism, Thatcherism, etc.), with its strong sense of nostalgia, the desire to return to traditional moral values and its emphasis on the importance of the family. Given this zeitgeist, one can understand that "the reactions to AIDS [may] have been shaped by the pull of the social tides of revolution and reaction" (Nichols, 1984, p.90).

Reacting to the AIDS epidemic with moral outrage may be understood as a reaction against the so-called "permissive" society, as if permissiveness itself is to blame for the AIDS epidemic. Support for this hypothesis comes from a poll in Britain in 1987, which showed that almost half the adult population believed that the AIDS problem would not have arisen but for the "permissive" society (Markova & Wilkie, 1987). Indirect evidence for the permissive society hypothesis is provided by a study attempting to measure the correlation between religious beliefs and attitudes towards AIDS. Johnson (1987) found a higher correlation between people who were conservative fundamentalists and feelings of intolerance towards
those suffering from AIDS, than between non-fundamentalists and intolerance.

Other factors which have helped shape cultural reactions to AIDS involve a fear of uncertainty. People often fight the realization that the world is an uncertain place with a desire to hold tightly onto prevailing myths. This situation has been exacerbated by several factors. First, there has been a general decline in the authority of experts (Brandt, 1987). The AIDS epidemic arrived at a time of erosion of public confidence in scientific authority, as it came right after "Watergate, the crash program for influenza immunization ...[instituted in order] to prevent an epidemic which never arrived, and also the Three Mile Island disaster, an event that 'experts' had told the public was so unlikely that the surrounding population was at no risk" (Eisenberg, 1986, pp.246-247). Second, there has been a decline in the authority of medical experts in particular. The onset of AIDS occurred when many believed modern medicine to be well on the way to abolishing epidemic diseases. "AIDS revealed the limits of modern medicine and shown [sic] us an emperor without clothes" (Altman, 1986,
p.45). Third, there has been an increase in the fear of the unknown, given all of the unanswered questions concerning AIDS, especially the lack of vaccine or cure. Fourth, there has been an increase in the public desire for absolute scientific evidence regarding the cause of AIDS. This is associated with the poor public understanding of the provisional nature of scientific truth and of the probabilistic bases for scientific conclusions (Eisenberg, 1986). Fifth, there has been an increasing focus on feelings surrounding terminal illness, that is fears of death and dying (Dunkel & Hatfield, 1986). The final factor concerns the denial of helplessness, as it is difficult to acknowledge that there is nothing one can personally do (Dunkel & Hatfield, 1986). As one author states, with a disease so mysterious and dramatic, who can blame the parent who decides 'Better safe than sorry' as he or she acts to quarantine the one source of AIDS [he or] she can control, the child with AIDS who wishes to attend school. (Davis, 1987, p.103)
Construction of Disease: An Historical Overview

Despite the claim to objectivity about AIDS, little objectivity actually underlies many AIDS-related attitudes. The interpretation of and reaction towards AIDS has been based on particular social constructions, in which political, psychological, and moral values have been more decisive than empirical data (Eisenberg, 1986). One can say that this is true in the construction of many diseases. The particular symbols which society has come to associate with many diseases and their victims, reflect social values, that is, patterns of judgment about what is good or bad that guide perceptions and practice. "In this light, [the practice of] medicine is not just affected by social, economic, and political variables, it is embedded in them" (Brandt, 1987, p.5).

The central role of morality in the social construction of disease is evident as one realizes that most epidemics have been perceived as being a punishment for those individuals who were sexually irresponsible (Brandt, 1986).

(Throughout history) the public identification of metaphors [or social constructions] with specific
illnesses has become so entrenched as to interfere with attempts to displace them with more accurate information. This is especially true when the metaphors are associated with personal values, such as morality. (Valdiserri, 1987, p.98)

In addition, there is a powerful tradition of seeing epidemics resulting from general social collapse and degeneracy (Altman, 1986). By presenting some historical examples other than AIDS, the generalizability of these processes by which diseases are often perceived and judged can be established.

During the late nineteenth and early twentieth centuries, "venereal disease was viewed as an affliction of those who wilfully violated the moral code and as a punishment for sexual irresponsibility" (Markova & Wilkie, 1987, p.403). In the perceived high rates of venereal disease, physicians saw not only dangers to the family, but a more general and ominous collapse of late-Victorian morality. Thus, "educational programs were designed less to enlighten than to shore up standards [which physicians] considered under attack" (Brandt, 1987, p.31). Potential sufferers were not always educated as to
prevention or treatment possibilities. For example, during World War I, the U.S. Secretary of the Navy, Josephus Daniels, forbade the use of individual prophylaxis in the Navy, believing them to be immoral. Instead, sexual abstinence became the precept of many of the educational efforts. Abstaining from certain sexual relations was even legislated in some American states. "Fornication laws that made intercourse between unmarried couples illegal were enacted, although they proved difficult to enforce" (Brandt, 1987, p.76).

It is unclear whether many prominent members of society even aspired to the eradication of venereal disease since it was believed that fear of the diseases served as a powerful deterrent to sexual licentiousness. As one well known social hygiene reformer, Howard Kelly, said in 1910:

If we could in an instant eradicate the diseases, we would also forget at once the moral side of the question, and would then, in one short generation, fall wholly under the domination of the animal passions, becoming grossly and universally immoral. (Eisenberg, 1986, p.246)
Fifty years later, a well known professor of dermatology, John Stokes, restated Kelly's position, fearing that penicillin would eradicate the diseases (Eisenberg, 1986, p.246).

Societal reactions to venereal disease had the effect of scapegoating some groups who were already stigmatized. During World War I, "social hygiene reformers and physicians assumed that venereal disease could only be transmitted in one direction, that women bore the sole responsibility for the diseases" (Brandt, 1987, p.92). Programs were instituted that were directed exclusively at the arrest, examination and detention of women believed to be spreading the diseases. "Between 1918 and 1920, more than 18,000 women suspected of engaging in promiscuous sexual activity with soldiers during the war were committed to institutions [for an average of six weeks]" (Brandt, 1987, p.89). In addition to women, the lower economic classes were also given special consideration. During the 1930s, U.S. city and state health officials passed many ordinances requiring the examination for venereal disease of domestic and food handlers,
although it was well-known that infections were rarely, if ever, transmitted without sexual contact.... Such ordinances stereotyped venereal victims, encouraging fears of social contact between social classes and ethnic groups. (Brandt, 1987, p.156-157)

The association here between the social construction of VD and AIDS is particularly striking. As Brandt explains:

Just as syphilis in the early twentieth century was thought to bring the 'respectable middle class' in contact with a deviant ethnic working-class 'sexual underworld', now AIDS threatens the heterosexual culture with homosexual contamination. (1987, p.193)

There exist examples other than venereal disease where societal attitudes and behaviours have been shaped by more than purely medical considerations. For example, during the middle ages, physicians believed that leprosy could be spread by illicit sexual intercourse. Gradually, the victims themselves were viewed as impure. "Leprosy was eventually considered to be a divine punishment for moral misconduct"
(Valdiserri, 1987, p.98). In a related vein, Black Death (in the middle ages) and American cholera epidemic (in the nineteenth century) were also understood as legitimate punishment for the existence of widespread sin (Altman, 1986).

More recently, diseases such as tuberculosis and cancer have taken on a whole set of non-medical overtones and have become markers of personality and character flaws, rather than problems of medicine. An individual with tuberculosis is often thought of as being a romantic, a dropout, a wanderer, someone both passionate and repressed, whereas a person with cancer is generally believed to be weak, repugnant, and without a soul (Sontag, 1978).

Relationship Between Lay Epistemology and Negative Attitudes

Several hypotheses have been proposed to account for the negative/discriminatory attitudes towards AIDS. As stated previously, these hypotheses appear to be related on a meta level, that is, on the level of an individual's general belief system. Using Unger's (1986) classificatory scheme and terminology, the
particular belief system or lay epistemology which underlies the negative/discriminatory attitudes towards AIDS is consistent with the logical positivist position. Prior to elucidating how logical positivism appears to be congruent with such hypotheses, some of the major tenets of this paradigm will be described. For the sake of simplicity, both logical positivism and social constructionism will be conceptualized as if they were two discrete entities, though it would be more appropriate to consider these two orientations as existing along a continuum. The assumption of overlap between the two orientations is maintained in the statistical analysis of the data of Unger's Attitudes about Reality Scale.

The positivist model appears to be consistent with the notion that "reality constructs the person". Reality, in the form of universal laws of psychological functioning, is thought to precede the existence of the individuals to whom the laws refer. Thus, these laws are believed to be stable, irreversible and deterministic. These laws often manifest themselves through individual action, hence a preference for attributing events to biological or intrapsychic
causes. A crucial assumption within this perspective is that science is value free; scientists merely describe reality as it is. The role of theory would be the uncovering of transhistorical laws by gathering data with the goal of verifying hypotheses which correspond to the existing facts. There exists an implicit acceptance of the facts which already exist, or of the status quo. New theories or facts supplement rather than replace existing knowledge. Knowledge is understood as being cumulative, with the ultimate goal being universal agreement with respect to the laws or principles governing all of psychological functioning.

It seems that a logical-positivist position would be consistent with the belief that an epidemic never appears unless there is a definite reason for it. Henry Miller has argued that it is a human trait to want to ascribe meaning to events; we find it hard to tolerate the idea that there is no sense or purpose to what happens in our lives. [Therefore] throughout human history, epidemics have been viewed as divine judgments, somehow merited by those who suffer. (cited in Altman, 1986, p.192)
From a logical positivist position, the reasoning which has applied to past epidemics might easily apply to the AIDS epidemic. From this perspective, it would be logical to assume that fixed, tranhistorical meanings inhere in all epidemics. Without any clear evidence to the contrary, the principles which have been used to ascribe causation with regard to past plagues should therefore be suitable in explaining the AIDS plague. Further, the belief that the victims of plagues (including AIDS) have brought the scourge upon themselves would be consistent with an intrapsychic or biological theory of causality. The issue of the moral implications of such a theory need not be questioned, since science is believed to be value-free. This theory would merely reflect a universal law of reality.

Those individuals who possess a social constructionist lay epistemology would have more humane attitudes with respect to AIDS-related issues. Again, a brief summary of this paradigm appears to be in order (Unger et al, 1986. See also Minton, 1986; Sullivan, 1984; Gergen, 1982, 1985; and Markova & Wilkie, 1987).

The social constructionist model appears to be consistent with the notion that "the person constructs
reality". Interpretations of reality are believed to be socially derived. Notions about the nature of reality are unintelligible apart from the social process whence they emerge. Facts or principles do not exist apart from social experience. Facts can be conceptualized as being collective mental representations which result from a dynamic interplay between the individual and society; they are contextually embedded within a particular culture and history. From this perspective, science is value laden, since the interpretation of reality is nothing other than what society (to which the scientific establishment belongs) deems it to be. This model presumes that science should adopt a system of values which promotes critical evaluation of the normative social order. These values are emancipatory in nature; implicit in the theory is an inclination to denounce the dominant power structures which maintain the status quo, given the notion that interpretations of reality should be flexible, reflecting the changing needs of society.

As previously mentioned, an individual with a social constructionist perspective might be more
sensitive to the subtleties of social experience. An individual with this view might believe that the ways in which AIDS has been constructed to date do not have the force of universal truth. Rather, with an understanding that meaning is largely a matter of cultural and social definition, there would be a reluctance to blindly accept society's constructs concerning AIDS, which may merely serve to maintain the status quo of the dominant power structures. More congruent with this perspective might be the demonstration of more flexible attitudes. There would be less likelihood of attributing the disease to the fault of the person; instead, the emphasis would be in believing in environmental causality for understanding the epidemic.

Hypotheses

The point has been made that in order to combat the apprehension surrounding AIDS, it is not sufficient to educate the public regarding present scientific knowledge about AIDS. An individual's underlying values (or lay epistemology) may be a more crucial determinant in the formation of attitudes towards AIDS
and PWAs. Instead of limiting one's energy to the presentation of the scientific facts, it might be more effective to help develop belief systems that would encourage more humane attitudes. It is argued here that the social constructionist position is most consistent with the demonstration of humane attitudes.

Two hypotheses inhere in this formulation. The first hypothesis is:

There is a relationship between lay epistemology and attitudes towards AIDS, so that social constructionism will be related to humane attitudes towards AIDS, and logical positivism will be related to negative attitudes.

Scientific knowledge, in and of itself, does not necessarily translate into positive attitudes towards AIDS. More important is the individual's underlying value orientation. Therefore, the second hypothesis is:

Lay epistemology and knowledge of AIDS predict attitudes towards AIDS. However, a larger proportion of the variance in attitudes towards AIDS is explained by epistemology than by knowledge of AIDS.
Chapter 2

Method

Subjects

Subjects consisted of 202 undergraduate students at the University of Windsor, who completed a questionnaire booklet for extra course credit in Psychology courses. (The demographic breakdown of the sample is reported in the Results Chapter.)

Instruments

Attitudes towards AIDS Scale (ATAS; Edwards and Hiday, 1987) (Appendices A & B). This scale contains 18 declarative opinion statements, each of which is designed to measure an individual's attitudes towards PWAs. Items for this scale were initially derived from statements of attitudes towards PWAs and AIDS related issues, contained in press releases and from modified items on mental health inventories (Edwards and Hiday, 1987). Using a five point Likert-type scale, respondents indicated the degree to which they agreed or disagreed with each item. High total scores indicate a more humane attitude towards PWAs and AIDS
related issues, while lower scores indicate less humane attitudes.

The scale has high internal reliability (alpha coefficient = .93). The scale items, along with each item's mean score, standard deviation, correlation, and judges' ratings of direction (based on Edwards and Hiday's data) are presented in Appendices A and B.

Edwards and Hiday maintain that the scale's validity is achieved by the instrument's face validity, and by the plan and procedures of item/scale construction; 18 representative items were chosen from an initial pool of 30 items, and they were each edited for clarity, singularity of meaning, redundancy and directionality. Additionally, they obtained content validity from a judging panel, and criterion-related validity from the instrument's ability to discriminate between their student sample and a group with some expertise in problems associated with AIDS (p < .01, t test).

*Attitudes About Reality Scale* (AARS; Unger, Draper, and Pendergrass, 1986) (Appendix C). The AARS was administered in order to distinguish respondents on the basis of their epistemological orientations, i.e.,
logical-positivist and social constructionist positions.

This rationally constructed scale contains 40 declarative statements, each of which is designed to sample an individual's lay epistemological orientation. Using a seven point Likert-type scale, respondents indicated the degree to which they agreed or disagreed with each item. The direction for scoring each item, as indicated by Unger et. al, is also presented in Appendix C. High total scores indicate a more logical positivist view of reality and lower scores indicate a more social constructionist view (as defined in the Introduction).

Unger et. al, (1986) report that the distribution of total scale scores for their full sample (n=307) was basically normal, with a mean of 141.4, a standard deviation of 16.6, and a range from 78 to 179. The test-retest reliability for a subsample of respondents over a three month period was .73. In addition, the scale yielded a measure of internal consistency (coefficient alpha) of .72.

There has been some concern related to the scale's content validity (Draper, personal communication,
1988). Originally, the items were intended to sample four related content domains: 1) the source of power (conferred by society or resulting from personal characteristics), 2) causality of group differences (environmental versus biological), 3) relationship between the individual and society (legitimacy and efficacy of individual efforts to produce social change versus approval of the status quo), and 4) the role of science as a major force in today's society (subjective and relativistic versus objective and value free).

However, Unger et. al, (1986) performed a factor analysis on their AARS data, using alpha-imaging and a Kaiser normalization criterion and found four factors, which accounted for only 30 per cent of the variance, and were difficult to interpret. This state of affairs led them to argue against any meaningful subscale structure.

In a further exploration of the scale's content validity, Jackson and Jeffers (1988), using a different sample, obtained discrepant results. A principal factor analysis revealed three factors which accounted for 51 per cent of the variance. The factors, which they deemed interpretable, were labelled as follows:
1) The Social Determinism Dimension (eigenvalue = 3.71): society's rules are inherently legitimate and deterministic, 2) The Individual Determinism Dimension (eigenvalue = 1.79): personal striving determines individual and societal outcomes, and 3) The Variable Determinism Dimension (eigenvalue = 1.19): variable determination of individual and societal outcomes.

Jackson and Jeffers (1988) computed composite scores for the Societal Determinism, Individual Determinism, and Variable Determinism dimensions (coefficient alphas >.69, .65, and .50, respectively). 25 items (out of the 40 items for the AARS) were used in constructing these three dimensions or subscales. The subscale items, and their factor loadings, are presented in Appendix D.

The scores for each of these three subscales, as well as the sum scores for all 40 items, are considered in subsequent analyses.

Knowledge of AIDS Scale (KOAS; Edwards and Hiday, 1987) (Appendix E). (Minor changes that are made to the text are indicated by an asterisk in the Appendix.) This scale contains 15 true-false items based on information relating to AIDS, e.g. agent of infection, mode of
transmission, preventive measures, progress, diagnosis, and treatment. Edwards and Hiday obtained their information from publications likely to be read by students such as campus and local newspapers. They consulted the physician on their university AIDS task force to insure the accuracy of each item. The scale items, along with the mean number of correct answers, the standard deviation, and the distribution of responses, based on Edwards and Hiday's data, are presented in Appendix E.

Additional Measures

Attitudes Toward Homosexuality Scale (ATHS; Black and Stevenson's 1984 adaptation of Millham, San Miguel, and Kellogg, 1976) (Appendix F). (Minor changes that are made to the text are indicated by an asterisk in the Appendix.) The ATHS appears to be conceptually related to both the ATAS and the AARS. Individuals who hold more humane attitudes towards AIDS, and are social constructionistic in orientation would most likely hold more humane attitudes towards homosexuals. Therefore, the present use of the ATHS is designed to lend additional validity to these two scales, as well as to serve as a theoretical bridge between them, i.e.,
between an individual's metatheoretical orientation (as measured by the AARS) and his or her attitudes concerning a very specific topic (attitudes towards AIDS).

This scale contains 20 declarative statements, each of which is designed to measure an individual's attitudes towards homosexuals. There are no particular validity studies for this adaptation of the scale. The authors attempted to achieve face validity by selecting items that were designed to fall into three content domains, which Millham et al. (1976) labelled personal anxiety in the presence of homosexuals (PA); ideas of moral reprobation (MR); and belief in the need for repression of homosexual behaviour and that homosexuals are dangerous (RD). These labels appear next to the items in the appendix.

Items are stated so that there are equal numbers of positive and negative statements about homosexuals, thus controlling for a possible agreement bias. Millham et al. (1976) originally asked subjects to indicate whether they either agreed or disagreed with the declarative statement. Black and Stevenson (1984) permitted the possibility of a third, uncertain, or
undecided response. The present adaptation of the scale uses a five point Likert-type scale, where respondents indicate the degree to which they agree or disagree with each item, allowing for even greater variability in scores, and greater possibility for a more accurate portrayal of attitudes.

To tap the bias of the respondents, the scale items purposely did not refer to either male homosexuals or lesbians. To determine the subjects' mindset, the authors asked the subjects which group of homosexuals they were primarily thinking about, while completing the questionnaire. In the Black and Stevenson (1984) sample, 73 per cent of males reported that "homosexual" for them referred to males, with 27 per cent understanding the term as referring to both sexes. Thirty seven per cent of females reported that they were thinking primarily of males, while 62 per cent indicated that they were thinking of both sexes about equally.

Rotter's Internal-External Locus of Control Scale (I-E; Rotter, 1966) (Appendix G). The rationale for using the I-E rests on the conceptual relationship between the I-E and the AARS. In general, it seems logical to
assume that individuals who are more logical positivist in their view of reality (i.e., generally accept the existence of universal, deterministic laws, and thus feel unable to exert personal control over their environment), will be more external in their locus of control (e.g. believe that outcomes are contingent on the control of powerful others). Conversely, individuals who are more social constructionist in their view of reality will be more internal in their locus of control.

In particular, the present use of the I-E is designed to lend validity to the AARS, using factor measures of both attitudes about reality and locus of control. This is a replication and extension of Jackson and Jeffers (1988), who in their analysis treated the I-E as a monolithic measure, though they did consider the AARS as consisting of somewhat distinct factors.

This rationally constructed scale consists of 23 statement pairs and six filler pairs. This scale measures perceptions of the relationship between an individual's behaviour and his or her outcomes. The score is equal to the number of external items
endorsed; therefore, a higher score indicates a more external locus of control.

Rotter (1966) has reported an obtained internal consistency (coefficient alpha) of .70 for the I-E. The low correlations with such variables as intelligence, social desirability, and political affiliation are an indication of good discriminant validity (see Joe, 1971, for additional reliability and validity data).

Jackson and Jeffers (1988) found the total I-E scores to be unrelated to the total AARS scores. However, they found that the Societal Determinism subscale scores were positively correlated with the total I-E scores ($r = .13, p < .01$), whereas the Individual Determinism subscale scores were negatively correlated with the I-E scores ($r = -.16, p < .01$). Thus, they obtained partial support for the contention that the more the respondent believed that society determined outcomes, the more external he or she was in personal locus of control, and conversely, the more the individual believed that individuals determined outcomes, the more internal she or he was in personal locus of control.
Jackson and Jeffers (1988) did not use I-E factors in their analysis. The present logic was that a comparison of the AARS and its subscales with I-E factors might supply additional support for the existence of an empirical relationship between the AARS and the I-E, thus lending additional validity to the AARS.

Hrycenko and Minton (1974), in replicating a study by Mirels (1970), found two distinct I-E factors, which appear to be conceptually relevant to the present study. They performed a principal components analysis, with a varimax rotation, on the I-E. The two conceptually distinct factors, which accounted for approximately 11 percent and 15 percent of the variance, respectively, were: Factor 1 (labelled Personal Control) whose items referred to the personal context of locus of control, and Factor 2 (labelled System Modifiability) whose items referred to the sociopolitical context of locus of control. Using a comparable sample (Minton, 1972, as cited in Hrycenko and Minton, 1974), a second factor analysis of the I-E found that the items with high loadings on Factor 1 in the first study were split between two factors, one
with items phrased in the first person and the other with items phrased in the third person. More important to the present study was the finding that items with high loadings on Factor 2 were consistent across both factor analyses. The items which make up these two factors are also presented in Appendix G.

Given the social dimension of the AARS, it is reasonable to assume that a stronger relationship would exist between the total AARS score and Factor 2 (the context being the socio-political environment) of the I-E, than between the total AARS score and Factor 1 (items which reflect a personal context) of the I-E.

As previously mentioned, Jackson and Jeffers (1988) found that the Societal Determinism subscale scores were positively correlated with the total I-E scores, and that the Individual Determinism subscale scores were negatively correlated with the total I-E scores. The present study attempted to replicate this finding, and also explored the relationship between the I-E factor scores and the AAR subscale scores. In particular, it was proposed that the Societal Determinism subscale score (of the AAR) would be significantly related to Factor 2 of I-E (the socio-
political control factor), and that the Individual Determinism subscale score (of the AAR) would be significantly related to Factor 1 of the I-E (the personal control factor).

Demographic Questionnaire (Appendix H). The rationale for administering this questionnaire was twofold: To examine the generalizability of the results and to see if the demographic breakdown in the sample is related to the other measures.

This questionnaire was designed for this study and consisted of a request for demographic information, including age, gender, sexual orientation, ethnic, cultural, and religious affiliation, and political party preference.

Procedure

The questionnaire booklets were administered in group sessions. Each booklet contained all six of the above mentioned instruments, i.e., the AARS, the I-E, the ATHS, the ATAS, the KAOS, and the Demographic Questionnaire, in that order.

The instructions, which were read aloud, appeared on the cover sheet of the questionnaire booklet (see
Appendix I).
Chapter 3

Results

The results are presented in five sections. Section One deals with some of the demographic characteristics of the subjects. Section Two presents some descriptive statistics for the remaining predictor variables and the criterion variable, attitudes towards AIDS. Section Three addresses the two main hypotheses concerning attitudes towards AIDS: 1) that there is a relationship between lay epistemology and attitudes towards AIDS so that social constructionism will be related to humane attitudes towards AIDS and logical positivism will be related to negative attitudes towards AIDS, and 2) that lay epistemology and knowledge of AIDS will both predict attitudes towards AIDS, but that a larger proportion of the variance in attitudes towards AIDS will be explained by lay epistemology than by knowledge of AIDS. In section Four, different regression models are presented, using the demographic variables, attitudes towards homosexuals, attitudes about reality and knowledge about AIDS, to predict attitudes towards AIDS. Section
Five deals with the validity of the Attitude about Reality Scale.

Description of the sample

The final sample consisted of 202 students from the University of Windsor. Although there were no dropouts or nonrespondents, 23 questionnaires were spoiled. There were 145 females and 56 males, ranging in age from 17 to 55 years, with an average age of 25. Ninety six percent of the sample described their sexual orientation as heterosexual. The remaining four percent indicated different orientations, such as male homosexual, bisexual, and don't know. Seventy eight percent of the sample indicated a conventional Christian affiliation, that is, either Roman Catholic or Protestant. Eleven percent of the respondents said that they had no religious affiliation. The remaining eleven percent of the sample were divided among many groups, such as Hindu, Buddhist, Moslem, Jewish, etc..

Politically, 43 percent of the respondents indicated a preference for the Liberal Party, 22 percent favoured the New Democrats, and 18 percent favoured the Progressive Conservatives. The remaining
sixteen per cent of the sample were split between many small political groups along the political spectrum, or they stated no political preference. The sample was quite heterogeneous with respect to ethnic/racial origin; 25 nationalities were represented, with the British having the highest representation, at 27 percent of the total. Twenty percent of the sample identified themselves as Canadian, 13 percent as Italian, ten percent as French, and the remaining 30 percent were split among 21 other nationalities. Table 1 (pp. 60-61) summarizes the demographic variables.

In many respects, it would appear that this sample is not reflective of Canadian society. The problems inherent in restricting the subject pool to students were foreseeable. What was not foreseen however, was the group's particular political bias in favor of Liberals, the large number of women respondents, or the overwhelming percentage of self-described heterosexuals, given the anonymous nature of the questionnaire.

The following demographic variables, gender, age, political party preference, and religion, but not ethnic/racial origin and sexual orientation, were used
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<tr>
<td>Other political preferences</td>
<td>33</td>
<td>16</td>
</tr>
<tr>
<td><strong>Sexual Orientation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterosexual</td>
<td>192</td>
<td>96</td>
</tr>
<tr>
<td>Other sexual orientations</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
<td>%</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----</td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protestant</td>
<td>67</td>
<td>33</td>
</tr>
<tr>
<td>Roman Catholic</td>
<td>91</td>
<td>45</td>
</tr>
<tr>
<td>Other religious</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td>denominations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td><strong>Ethnic/racial origin</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>British Isles</td>
<td>54</td>
<td>27</td>
</tr>
<tr>
<td>French</td>
<td>21</td>
<td>10</td>
</tr>
<tr>
<td>Canadian</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>Italian</td>
<td>27</td>
<td>13</td>
</tr>
<tr>
<td>Other ethnic/racial</td>
<td>60</td>
<td>30</td>
</tr>
<tr>
<td>origins</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
in subsequent multiple regression analyses. With respect to the ethnic/racial origin variable, the subjects' responses proved to be uninterpretable, due to the heterogeneous nature of the sample, and the large number of multiple responses. There was not enough variance in sexual orientation to warrant its inclusion.

The criterion and the predictor variables

Reliability Estimates. The reliability coefficients obtained for the criterion variable, Attitude towards AIDS Scale (ATAS), and the predictor variables, the Attitudes about Reality Scale (AARS and its subscales), and the Attitudes towards Homosexuals Scale (ATHS), are presented in Table 2. The present use of the AARS yielded a slightly higher alpha coefficient (.79) than Unger's (1986) reported .72 (With respect to the comparisons made in this and in the next section, the first stated statistic refers to the present sample, and the second refers to the normative sample). The AAR subscale coefficients are also comparable to those reported by Jackson and Jeffers (1988). The present
Table 2

**Alpha Coefficients for the AARS, AAR Subscales, the ATHS and the ATAS**

<table>
<thead>
<tr>
<th>Scale</th>
<th># of items</th>
<th>Alpha coef.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AARS</td>
<td>40</td>
<td>.79</td>
</tr>
<tr>
<td>Social determinism subscale</td>
<td>7</td>
<td>.72</td>
</tr>
<tr>
<td>Individual determinism subscale</td>
<td>11</td>
<td>.71</td>
</tr>
<tr>
<td>Variable determinism subscale</td>
<td>7</td>
<td>.43</td>
</tr>
<tr>
<td>ATHS</td>
<td>20</td>
<td>.92</td>
</tr>
<tr>
<td>ATAS</td>
<td>18</td>
<td>.90</td>
</tr>
</tbody>
</table>

**NOTE:** AARS = Attitudes About Reality Scale, ATHS = Attitudes Towards Homosexuals Scale, ATAS = Attitudes Towards AIDS Scale
alpha coefficient for the ATAS was also similar to the one reported by Edward and Hiday (.90 compared to .93). The statistical and descriptive properties of Black and Stevenson's (1984) adaptation of the ATHS are unavailable.

**Descriptive Statistics** The means and the standard deviations for the ATAS, the AARS and its subscales, the ATHS, and the KOAS (Knowledge of AIDS scale, another one of the predictor variables), are presented in Table 3. With respect to the ATHS, a majority of respondents (62%) said that they were thinking primarily about male homosexuals while filling out the questionnaire. Only one subject said that she was thinking primarily about female homosexuals, while 37 per cent of subjects said that they were thinking about both equally.

With respect to the ATAS, the difference in scores between the present respondents and Unger's (1986) sample is significant (the comparable means are 154.3 and 141.4, t [507] =34.3, p <.01). Given the direction of significance, the mean score for the present group is higher in the logical positivist direction (using Unger's [1986] terminology).
Table 3

Means and Standard Deviations for the AARS, the AAR Subscales, the ATHS, the ATAS and the KOAS

<table>
<thead>
<tr>
<th>Scale</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>AARS</td>
<td>154.30</td>
<td>19.22</td>
</tr>
<tr>
<td>Social determinism subscale</td>
<td>26.11</td>
<td>6.57</td>
</tr>
<tr>
<td>Individual determinism subscale</td>
<td>50.53</td>
<td>8.03</td>
</tr>
<tr>
<td>Variable determinism subscale</td>
<td>18.78</td>
<td>4.20</td>
</tr>
<tr>
<td>ATHS</td>
<td>53.80</td>
<td>16.25</td>
</tr>
<tr>
<td>ATAS</td>
<td>51.86</td>
<td>13.26</td>
</tr>
<tr>
<td>KOAS (# incorrect)</td>
<td>6.36</td>
<td>2.50</td>
</tr>
</tbody>
</table>

NOTE: AARS = Attitudes About Reality Scale, ATHS = Attitudes Towards Homosexuals Scale, ATAS = Attitudes Towards AIDS Scale, KOAS = Knowledge of AIDS Scale. Higher scores reflect a more logical positivist orientation (AARS), less humane attitudes towards homosexuals (ATHS), more humane attitudes towards AIDS (ATAS), and less knowledge about AIDS (KOAS). For the sake of consistency, the ATAS will be scored in the reverse direction, so that a higher ATAS score would reflect less humane attitudes towards AIDS.
The difference in ATAS scores between the present respondents and Edward and Hiday's (1987) sample also appear to be significant (the comparable means are 51.9 and 62.6. A "t statistic" could not be computed since the standard deviation for Edward and Hiday's sample was unavailable). Given the direction of the difference, the mean score in Edward and Hiday's group appears to indicate more humane attitudes towards AIDS. However, with respect to the KOAS, the mean score for the present group indicates greater knowledge about AIDS. (Mean number of incorrect answers are 6.4 compared to 7.1, t [317] =4, p <.01). The distribution of KOAS responses are presented in Table 4 (pp. 67-69).

**The major hypotheses involving attitudes towards AIDS**

There were two main hypotheses involving attitudes towards AIDS. First:

There is a relationship between lay epistemology (as measured by the AARS) and attitudes towards AIDS (as measured by the ATAS), so that social constructionism will be related to humane attitudes towards AIDS, and logical positivism will be related to negative attitudes.
Table 4

Distribution of Responses on the Knowledge of AIDS Scale

<table>
<thead>
<tr>
<th>True N</th>
<th>False N</th>
<th>DK N</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
</tbody>
</table>

1) Today, blood donations are no longer screened for evidence of AIDS virus.  

10 5 176* 87 16 8

2) AIDS is caused by a virus. 152 75 27 13 11 11

3) Research indicates that AIDS is not spread through casual contact, such as the sharing of a drinking glass. 163 81 28 14 11 5

4) The use of condoms during sex greatly increases the risk of transmitting AIDS, 13 6 180 89 9 5 though at present it is not known why this is so.

5) At the present time, there is no cure for AIDS. 186 92 9 5 7 4

6) Kaposi's sarcoma is rarely seen in persons with AIDS. 7 4 40 20 155 77

7) AIDS is contracted through giving blood. 50 25 141 70 11 5

*correct answers are underlined
8) AIDS is the abbreviation for Associated-Immune Deficiency Syndrome.  
   | True | False | DK  |
   | N   | %    | N   | %    | N   | %    |
   | 80  | 40   | 98* | 49   | 24  | 12   |

9) A diagnosis of AIDS, as defined by the Centre for Disease Control (in Atlanta, Georgia), requires the presence of an opportunistic infection or Kaposi's sarcoma.

10) In Eastern Africa, AIDS has struck primarily homosexuals.

11) The Red Cross does not collect blood donations in the cities with the highest incidence of AIDS.

12) The test for evidence of AIDS infection which has been used to protect the nation’s blood supply is mainly a diagnostic tool, useful in diagnosing individual cases.

13) Regular use of the inhalant drug amyl nitrate has been shown to reduce the risk of getting AIDS.

* correct answers are underlined
14) AIDS can be spread from a mother to her unborn child.

15) AIDS is more common among female homosexuals than among male homosexuals.

* Correct answers are underlined.

NOTE: Mean # of correct answers is 9.64, standard deviation is 2.50.
Also, scientific knowledge, in and of itself, does not necessarily translate into positive attitudes towards AIDS. More important to the development of humane attitudes is the individual's underlying value orientation. Thus, the second hypothesis is:

Lay epistemology (as measured by the AARS) and knowledge about AIDS (as measured by the KOAS) predict attitudes towards AIDS (as measured by the ATAS). However, a larger proportion of the variance in attitudes towards AIDS is explained by epistemology than by knowledge.

To test the first hypothesis (H1), a correlation was calculated between the AARS scores and the ATAS scores. An obtained Pearson-product moment correlation coefficient of .42 (p < .01) was significant and in the expected direction; that is, there was a positive association between epistemology and attitudes towards AIDS. A social constructionist position correlated with positive attitudes towards AIDS and a logical positivist position correlated with negative attitudes towards AIDS. Thus, it appears that the first hypothesis was clearly supported by the data.
To test the second hypothesis (H2), an ordinary least squares, standard multiple regression analysis\(^5\) was performed, using lay epistemology (AARS scores), and knowledge of AIDS (KOAS scores) as the independent variables, and attitudes towards AIDS (ATAS scores) as the dependent variable. The results of this regression analysis (Table 5) are promising, though not as expected. As is evident from their respective beta weights, both knowledge of AIDS and attitudes about reality are significant predictors of attitudes towards AIDS. Contrary to the hypothesis though, the two values are weighted similarly.

**Multiple regression models utilizing the demographic variables, the AARS, the KOAS and the ATHS**

In this section, first the relationship between the demographic information and the ATAS scores were explored. Next, regression models were used, employing the demographics, along with the AARS and the KCAS scores, to predict attitudes towards AIDS. Finally, the ATHS scores were added to the regression models.

---

\(^5\)This particular technique was used in all of the regression analyses in this study.
Table 5

Multiple Regression for ATAS using the KOAS and the AARS as Predictors

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>9917.38</td>
<td>2</td>
<td>4958.69</td>
<td>38.78*</td>
</tr>
<tr>
<td>Error</td>
<td>25444.74</td>
<td>199</td>
<td>127.86</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>35362.12</td>
<td>201</td>
<td></td>
<td>R² = .28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Beta</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>KOAS</td>
<td>.34</td>
<td>5.39*</td>
</tr>
<tr>
<td>AARS</td>
<td>.31</td>
<td>4.94*</td>
</tr>
</tbody>
</table>

*p<.01
A) The demographics

Four demographic measures were included in the multiple regression (MR) analyses: age, gender, political party preference and religious affiliation. Table 6 presents the correlations among the demographic variables, the AARS, the KOAS, and the ATAS scores.

Five of the demographic categories correlated significantly with the ATAS. Logical positivism (as signified by a higher AARS score) was correlated with being male, preferring the Liberal party, and having no religious affiliation. In addition, it was negatively correlated with preferring the New Democratic party and with age (the younger the subject, the more likely he or she scored highly in the direction of logical positivism). Separate multiple regression analyses, using only religious affiliation and political party preference categories as predictors, and ATAS scores as the criterion, partially confirmed these relationships (Tables 7 & 8). Religious affiliation, as a group, did not significantly predict the ATAS scores ($R^2 = .02, F (3, 198) = 1.62$), while political party preference was a significant predictor of the ATAS scores ($R^2 = .08, F (3, 198) = 5.68, p<.01$).
Table 6

Correlation Coefficients among the Demographic Variables and the AARS, the KOAS, and the ATAS Scores

<table>
<thead>
<tr>
<th></th>
<th>POLITICAL PARTY</th>
<th>RELIGION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ATAS</td>
<td>KOAS</td>
</tr>
<tr>
<td>ATAS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KGA</td>
<td>.44**</td>
<td></td>
</tr>
<tr>
<td>AARS</td>
<td>.42**</td>
<td>.31**</td>
</tr>
<tr>
<td>AGE</td>
<td>-.16*</td>
<td>-.21**</td>
</tr>
<tr>
<td>GENDER</td>
<td>.14*</td>
<td>-.06</td>
</tr>
<tr>
<td>LIB</td>
<td>.24**</td>
<td>.20**</td>
</tr>
<tr>
<td>NDP</td>
<td>-.24**</td>
<td>-.07</td>
</tr>
<tr>
<td>PC</td>
<td>.00</td>
<td>-.05</td>
</tr>
<tr>
<td>RC</td>
<td>-.02</td>
<td>.16*</td>
</tr>
<tr>
<td>PROT</td>
<td>.05</td>
<td>-.02</td>
</tr>
<tr>
<td>NONE</td>
<td>.13*</td>
<td>-.19**</td>
</tr>
</tbody>
</table>

LIB = Liberal Party  NDP = New Democrat Party  PC = Progressive Conservative Party  RC = Roman Catholic  PROT = Protestant  NONE = No religious affiliation

* p < .05  ** p < .01
Table 7

**Multiple Regression for ATAS using Religious Affiliations as Predictors**

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>849.47</td>
<td>3</td>
<td>283.16</td>
<td>1.62</td>
</tr>
<tr>
<td>Error</td>
<td>34512.65</td>
<td>198</td>
<td>174.31</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>35362.12</td>
<td>201</td>
<td></td>
<td>$R^2 = .02$</td>
</tr>
</tbody>
</table>

**Predictor** | **Beta** | **t**
---|---|---
None | -.20 | -2.08* |
PROT | -.09 | -.74 |
RC   | -.14 | -1.18 |

*p < .05*
**Table 8**

*Multiple Regression for ATAS using Political Party Preference as Predictors*

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>2800.03</td>
<td>3</td>
<td>933.34</td>
<td>5.68*</td>
</tr>
<tr>
<td>Error</td>
<td>32562.08</td>
<td>198</td>
<td>164.45</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>34362.11</td>
<td>201</td>
<td></td>
<td>R^2 = .08</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Beta</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIB</td>
<td>.19</td>
<td>1.97</td>
</tr>
<tr>
<td>PC</td>
<td>.05</td>
<td>.51</td>
</tr>
<tr>
<td>NDP</td>
<td>-.14</td>
<td>-1.49</td>
</tr>
</tbody>
</table>

*p<.01*
Table 9 presents the results of the MR analysis using all of the demographic variables as predictors of the ATAS scores. As a group, the demographic variables significantly predicted ATAS scores ($R^2 = .13, p<.01$). However, no individual predictor had a significant beta weight.

B) The demographics and the AARS and the KOAS

The model which included the AARS and the KOAS scores (Table 5, p. 73) accounted for approximately twice as much of the variance within the ATAS scores than did the model with the demographic variables alone (Table 9). While the demographic model explained 13 percent of the variance, the combined KOAS and AARS model accounted for 28 percent. Thus, it appears that compared to the demographic information, knowledge of AIDS and attitudes about reality together are much more important determinants of respondent’s attitudes towards AIDS.

The beta weights associated with the KOAS scores and gender (Table 10) and the AARS scores (Table 11) are significant whereas the beta weights associated with any of the other demographic variables are not significant. The amount of overlap, or shared
Table 9

**Multiple Regression for ATAS using All of the Demographics as Predictors**

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>4544.69</td>
<td>8</td>
<td>568.08</td>
<td>3.58*</td>
</tr>
<tr>
<td>Error</td>
<td>30459.91</td>
<td>192</td>
<td>158.65</td>
<td></td>
</tr>
</tbody>
</table>

| Total   | 35004.60 | 200 |        | $R^2 = .13$ |

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Beta</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROT</td>
<td>-.04</td>
<td>-.35</td>
</tr>
<tr>
<td>RC</td>
<td>-.13</td>
<td>-1.14</td>
</tr>
<tr>
<td>None</td>
<td>-.17</td>
<td>-1.82</td>
</tr>
<tr>
<td>PC</td>
<td>-.00</td>
<td>-.04</td>
</tr>
<tr>
<td>NDP</td>
<td>-.11</td>
<td>-1.27</td>
</tr>
<tr>
<td>LIB</td>
<td>.18</td>
<td>1.87</td>
</tr>
<tr>
<td>Age</td>
<td>-.09</td>
<td>-1.33</td>
</tr>
<tr>
<td>Gender</td>
<td>.14</td>
<td>1.94</td>
</tr>
</tbody>
</table>

*p<.01*
Table 10

Multiple Regression for ATAS using All of the Demographics and the KOAS as Predictors

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>9727.23</td>
<td>9</td>
<td>1080.80</td>
<td>8.17**</td>
</tr>
<tr>
<td>Error</td>
<td>25277.36</td>
<td>191</td>
<td>132.34</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>35004.59</td>
<td>200</td>
<td></td>
<td>$R^2 = .27$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Beta</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROT</td>
<td>-.06</td>
<td>-.60</td>
</tr>
<tr>
<td>RC</td>
<td>-.18</td>
<td>-1.69</td>
</tr>
<tr>
<td>None</td>
<td>-.12</td>
<td>-1.47</td>
</tr>
<tr>
<td>PC</td>
<td>-.02</td>
<td>-.29</td>
</tr>
<tr>
<td>NDP -</td>
<td>-.16</td>
<td>-1.89</td>
</tr>
<tr>
<td>LIB</td>
<td>.09</td>
<td>1.00</td>
</tr>
<tr>
<td>Age</td>
<td>-.02</td>
<td>-.27</td>
</tr>
<tr>
<td>Gender</td>
<td>.15</td>
<td>2.31*</td>
</tr>
<tr>
<td>KOAS</td>
<td>.41</td>
<td>6.26**</td>
</tr>
</tbody>
</table>

*p<.05   **p<.01
Table 11

Multiple Regression for ATAS using All of the Demographics and the AARS as Predictors

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>8177.41</td>
<td>9</td>
<td>908.60</td>
<td>6.47*</td>
</tr>
<tr>
<td>Error</td>
<td>26827.18</td>
<td>191</td>
<td>140.46</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>35004.59</td>
<td>200</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ R^2 = .23 \]

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Beta</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROT</td>
<td>-.06</td>
<td>-.58</td>
</tr>
<tr>
<td>RC</td>
<td>-.14</td>
<td>-1.29</td>
</tr>
<tr>
<td>None</td>
<td>-.14</td>
<td>-1.67</td>
</tr>
<tr>
<td>PC</td>
<td>.01</td>
<td>.16</td>
</tr>
<tr>
<td>NDP</td>
<td>-.03</td>
<td>-.38</td>
</tr>
<tr>
<td>LIB</td>
<td>.16</td>
<td>1.73</td>
</tr>
<tr>
<td>Age</td>
<td>-.05</td>
<td>-.69</td>
</tr>
<tr>
<td>Gender</td>
<td>.12</td>
<td>1.83</td>
</tr>
<tr>
<td>AARS</td>
<td>.35</td>
<td>5.09*</td>
</tr>
</tbody>
</table>

*p<.01
variance, can be estimated from the change in R squared statistic. Given the demographics in the model, the addition of the KOAS scores help explain nine per cent more variance \( (F (1, 199) = 27.41, p < .01) \), whereas the AARS scores help explain only five per cent more variance \( (F (1, 199) = 14.85, p < .01) \).

Table 12 illustrates the model which uses as predictors the demographics as well as the KOAS and the AARS scores. Though both the KOAS and the AARS are significant predictors of the ATAS scores (with gender being the only other significant variable at the .05 level), the KOAS seems to be by far the most important determinant of attitudes towards AIDS; its beta weight is over 30 per cent larger than that of the AARS.

C) ATHS and its relation to the ATAS

In North America, it makes sense to hypothesize the existence of a strong relationship between attitudes towards homosexuals and attitudes towards AIDS. This relationship was borne out empirically: an obtained correlation coefficient between the ATHS scores and the ATAS scores of .64 \( (p < .01) \) was in the expected direction. That is, humane attitudes towards homosexuals correlated with humane attitudes towards
Table 12

Multiple Regression for ATAS using All of the Demographics, the KOAS and the AARS as Predictors

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
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<tr>
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<td>10</td>
<td>1156.00</td>
<td>9.37**</td>
</tr>
<tr>
<td>Error</td>
<td>23444.59</td>
<td>190</td>
<td>123.39</td>
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Total

<table>
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<tr>
<td>RC</td>
<td>-.18</td>
<td>-1.74</td>
</tr>
<tr>
<td>None</td>
<td>-.11</td>
<td>-1.42</td>
</tr>
<tr>
<td>PC</td>
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<td>-.10</td>
</tr>
<tr>
<td>NDP</td>
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<td>-1.09</td>
</tr>
<tr>
<td>LIB</td>
<td>.09</td>
<td>1.01</td>
</tr>
<tr>
<td>Age</td>
<td>.01</td>
<td>.07</td>
</tr>
<tr>
<td>Gender</td>
<td>.14</td>
<td>2.17*</td>
</tr>
<tr>
<td>AARS</td>
<td>.25</td>
<td>3.85**</td>
</tr>
<tr>
<td>KOAS</td>
<td>.34</td>
<td>5.24**</td>
</tr>
</tbody>
</table>

*p < .05    **p < .01
AIDS. Of all the considered predictors, the ATHS has the highest correlation with the ATAS.

By itself, the ATHS scores accounted for 41 per cent of the variance within the ATAS scores, given the previously reported ATHS-ATAS correlation of .64. This percentage is larger than that of any other model considered so far. In comparison, all of the other predictors combined accounted for only 33 per cent of the ATAS score variance (see Table 12, p.82).

The inclusion of the demographic variables to the ATHS, as predictors, added little predictive power to the model (Table 13). This particular model explains approximately two per cent more ATAS variance, compared to the model with the ATHS as the sole predictor ($R^2$ change = .02, $F(8, 192) = .94$). One can infer in predicting attitudes towards AIDS, that most of the demographic information becomes redundant once the ATHS scores are known.

One of the reasons for this redundancy is the large number of significant correlations between the ATHS and the other predictor variables (Table 14). Seven of the ten previously mentioned predictors correlated significantly with the ATHS. Less humane
### Table 13

**Multiple Regression for ATAS using All of the Demographics and the ATHS as Predictors**

<table>
<thead>
<tr>
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<th>F</th>
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<td>9</td>
<td>1691.22</td>
<td>16.33**</td>
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<tr>
<td>Error</td>
<td>19783.63</td>
<td>191</td>
<td>103.58</td>
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<tr>
<td>Total</td>
<td>35004.60</td>
<td>200</td>
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<td>$R^2= .44$</td>
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<table>
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</thead>
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<tr>
<td>RC</td>
<td>-.09</td>
<td>-.92</td>
</tr>
<tr>
<td>None</td>
<td>-.03</td>
<td>-.34</td>
</tr>
<tr>
<td>PC</td>
<td>-.05</td>
<td>.63</td>
</tr>
<tr>
<td>NDP</td>
<td>.09</td>
<td>1.13</td>
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<td>LIB</td>
<td>.18</td>
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</tr>
<tr>
<td>Age</td>
<td>-.04</td>
<td>-.73</td>
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<tr>
<td>Gender</td>
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<td>-.09</td>
</tr>
<tr>
<td>ATHS</td>
<td>.63</td>
<td>10.15**</td>
</tr>
</tbody>
</table>

*p<.05  **p<0.01
Table 14

Correlation Coefficients between the ATHS and the demographics, the AARS, and the KOAS scores

<table>
<thead>
<tr>
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<th>ATHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>KOAS</td>
<td>.27*</td>
</tr>
<tr>
<td>AARS</td>
<td>.50*</td>
</tr>
<tr>
<td>Age</td>
<td>-.18*</td>
</tr>
<tr>
<td>Gender</td>
<td>.23*</td>
</tr>
<tr>
<td>LIB</td>
<td>.21*</td>
</tr>
<tr>
<td>NDP</td>
<td>-.36*</td>
</tr>
<tr>
<td>PC</td>
<td>.05</td>
</tr>
<tr>
<td>RC</td>
<td>.01</td>
</tr>
<tr>
<td>PROT</td>
<td>.05</td>
</tr>
<tr>
<td>None</td>
<td>-.19*</td>
</tr>
</tbody>
</table>

LIB=Liberal Party  NDP=New Democrat Party  
PC=Progressive Conservative Party  RC=Roman Catholic  
PROT=Protestant  None=No religious affiliation  
* p<.01
attitudes towards homosexuals (as indicated by a higher score on the ATHS) was correlated with logical positivism, with having little knowledge of AIDS, with being male, preferring the Liberal party and having no religious affiliation. In addition, it was negatively correlated with preferring the New Democratic party and with age. This is exactly the same relationship which the ATAS has with these predictor variables.

It appears that once the ATHS scores are known, the AARS scores become much less important as well. Starting with the ATHS scores as the sole predictor of the AARS scores, the addition of the AARS scores help explain only one per cent more variance ($F (1, 199) = 4.45, p < .05$). When the demographics are initially in the model as well, the import of the AARS scores become insignificant ($R^2$ change = .00, $F (1, 199) = 1.02$).

In contrast, the KOAS is still a significant predictor of the ATAS scores, given the ATHS scores ($R^2$ change = .07, $F (1, 199) = 22.01, p < .01$). Table 15 presents the regression model, using all of the aforementioned variables as predictors.

One implication of the above analyses is that great overlap exists between the AARS and the ATHS
Table 15

Multiple Regression for ATAS using All of the Demographics, the ATHS, the KOAS the AARS as Predictors

<table>
<thead>
<tr>
<th>Source</th>
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<th>df</th>
<th>MS</th>
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<td>1597.82</td>
<td>17.33*</td>
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<tr>
<td>Error</td>
<td>17428.58</td>
<td>189</td>
<td>92.21</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>35004.59</td>
<td>200</td>
<td></td>
<td>R²=.50</td>
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<table>
<thead>
<tr>
<th>Predictor</th>
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<th>T</th>
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</thead>
<tbody>
<tr>
<td>PROT</td>
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<td>-.61</td>
</tr>
<tr>
<td>RC</td>
<td>-.13</td>
<td>-1.43</td>
</tr>
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<td>-.23</td>
</tr>
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<td>PC</td>
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<td>.40</td>
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<tr>
<td>NDP</td>
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<td>.56</td>
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<tr>
<td>LIB</td>
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<td>1.52</td>
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<td>4.69*</td>
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<tr>
<td>ATHS</td>
<td>.53</td>
<td>8.08*</td>
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</table>

*p<.01
scores. In fact, the pearson-product moment correlation coefficient between the ATHS and the AARS is .50, p< .01. Knowledge of AIDS appears to be somewhat more independent of the other predictor variables, including attitudes about homosexuals, since the KOAS still contributed significantly to the model which contained all of the predictor variables (Beta = .27, T (11,189) = 8.08 ,p < .01). However, the KOAS and the ATHS are still highly correlated (r = .27, p < .01).

Validity of the Attitudes About Reality Scale

In an attempt to lend validity to the AARS, correlations were calculated between the AARS scores (and it's three subscales) and I-E (and it's two dimensions, as given by Hrycenko and Minton, 1974). Given the conceptual affiliation between the two scales (outlined in the Method Chapter), a significant correlation was expected between the total AARS scores and the total I-E scores, and, in particular, between the AARS scores and the I-E Factor 2 scores. In addition, a significant correlation was expected to exist between Factor 1 of the I-E (the personal control factor) and the Individual Determinism factor of the
AARS, and between Factor 2 of the I-E (the socio-political factor) and the Social Determinism factor of the AARS. Table 16 presents the obtained correlations.

None of the correlations between the total AARS and the I-E or its two factors were significant. However, the significant correlations between the subscales were those that were predicted: The correlation coefficient between Factor 1 of the I-E scale (labelled Personal Control) and the Individual Determinism subscale of the AARS was -.13 (p < .05) (which is in the expected direction, given the fact that the I-E is calculated so that a larger score indicates an external locus of control), and the correlation coefficient between Factor 2 of the I-E and the Social Determinism subscale of the AARS was .25 (p < .01).
Table 16

Correlation Coefficients between the AARS and its subscales and the I-E and its factors

<table>
<thead>
<tr>
<th></th>
<th>AARS</th>
<th>SOCDET</th>
<th>INDDET</th>
<th>VARDET</th>
<th>I-E</th>
<th>PERCON</th>
</tr>
</thead>
<tbody>
<tr>
<td>AARS</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>INDDET</td>
<td>.83**</td>
<td>.57**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VARDET</td>
<td>.35**</td>
<td>.08</td>
<td>.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-E</td>
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<td>.22**</td>
<td>-.12</td>
<td>.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PERCON</td>
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<td>.11</td>
<td>-.13*</td>
<td>.10</td>
<td>.56**</td>
<td></td>
</tr>
<tr>
<td>SYSMOD</td>
<td>.07</td>
<td>.25**</td>
<td>-.08</td>
<td>.07</td>
<td>.88**</td>
<td>.47**</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01

NOTE: SOCDET=Social Determinism subscale,

INDDET=Individual Determinism subscale, VARDET=Variable Determinism subscale, PERCON=Factor 1 (Personal Control), SYSMOD=Factor 2 (System Modifiability)
Chapter 4
Discussion

A constructionist position maintains that the way in which an individual interprets his or her experience is as important as having the experience itself, in the formation of beliefs or attitudes relevant to that experience. For example, this position holds that no objective relationship exists between the acquisition of knowledge and the development of related attitudes. All knowledge must be interpreted by the knower. The interpretation of incoming knowledge necessarily subjectifies it, making related attitudes dependent upon the individual's interpretive lens.

The main thesis of the present study is that increased knowledge about AIDS does not necessarily translate into more humane attitudes concerning AIDS related issues. The transformation of acquired knowledge about AIDS into more humane attitudes concerning AIDS is crucially dependent on the way in which the individual interprets the knowledge. The argument is that an individual's general belief or value system underlies the way in which knowledge about AIDS is interpreted and attitudes towards AIDS are
formed. In particular, a social constructionist orientation is associated with the development of more positive attitudes towards AIDS while a logical positivist position is more closely linked with more negative attitudes. Following Unger's (1986) classificatory scheme, the terms social constructionism and logical positivism are used to refer to the two general systems.

The empirical evidence has largely supported this claim. Within the present sample, a positive correlation was found to exist between knowledge of AIDS and attitudes towards AIDS, with greater knowledge correlating with more humane attitudes. Based upon these particular results, one might wish to conclude that the dissemination of accurate scientific knowledge about AIDS is sufficient to encourage more humane attitudes towards AIDS.

However, this simple correlation does not rule out the possibility that one's meta-theoretical framework acts as a moderating variable, affecting both the acquisition of new knowledge concerning AIDS and the development of humane attitudes towards AIDS. In addition, in comparing the mean scores between the
present group and Edwards and Hiday's group (1987), this sample appears to be more knowledgeable about AIDS while holding less humane attitudes. Therefore, though increased knowledge of AIDS and more humane attitudes towards AIDS appear to be related, the correlation is by no means all explanatory.

There may be many possible reasons why knowledge of AIDS and attitudes towards AIDS are not perfectly related. The discussion of some of these reasons will, for the most part, follow the order of the previous chapter. Section One deals with some possible effects of the demographic makeup of the subject pool. Section Two addresses the major thesis of this paper, that attitudes about reality (or an individual's meta-theoretical orientation) are associated with attitudes towards AIDS. That is, attitudes about reality can play a crucial role in determining how an individual interprets his or her experiences, including the acquisition of new knowledge of AIDS, and in translating this knowledge into humane attitudes. Alternatively, the humane attitudes may stem directly from one's meta-theoretical orientation, without the intervention of a third variable (having all of the
scientific facts of AIDS). Section Three explores the possibility that these and other related factors overlap in helping shape one's attitudes towards AIDS, i.e., the demographic characteristics, attitudes about reality, attitudes towards homosexuals and knowledge of AIDS. Section Four deals with a separate issue, it examines the validity of the Attitudes about Reality Scale.

The demographic characteristics

A frequently mentioned criticism of psychological research is that it often employs undergraduate psychology students as its subjects. This research is no exception. Insofar as a group of students is different from a random sample of the general population with respect to the issues in question (the relationship between lay epistemology and knowledge of AIDS and attitudes towards AIDS), these results would not be generalizable, and hence, of little ultimate value.

At this time, it is impossible to measure the effect of using students in this kind of research,
since no comparable work has been done, using other subject groups and the Attitudes About Reality Scale.

In general terms, the argument that undergraduate psychology students are somehow unrepresentative of the general population would be quite powerful if these students somehow acted as an undifferentiated mass, with little variability among them, or if variability did exist among them, that it was systematic in nature. What is interesting to note about the present results is that, when compared to another group of undergraduate psychology students (Edwards and Hiday, 1987), a somewhat different relationship between knowledge of AIDS and attitudes towards AIDS emerged. The mean score for the University of Windsor group was higher in the direction of more knowledge about AIDS than was their North Carolina State University counterparts, while at the same time, the mean score for the University of Windsor group was lower in the direction of less humane attitudes towards AIDS. This anomaly, along with the observed within group variability with respect to political party orientation, ethnic/racial origin, and age (ranging from 17 to 55 with an average of 25, which may be
partially attributed to the fact that the data was collected during the summer semester, when a greater proportion of mature, part-time students are registered), all argue against the undifferentiated mass theory. On the other hand, there was an overwhelming number of women respondents and self-described heterosexuals, constraining the generalizability and hence, forcefulness of the subsequent conclusions.

Accepting the validity of using psychology students as subjects, one might wish to hypothesize that the differences between the University of Windsor sample and the North Carolina State University sample with respect to knowledge about and attitudes towards AIDS are partly attributable to the differences in demographic characteristics between the two groups. However, an examination of the available comparisons (with respect to demographics, Edwards and Hiday (1986) reported only the age and gender of their sample), reveals no apparent demographically based reasons for the differences. For example, in the University of Windsor sample, both age and gender correlated significantly with attitudes towards AIDS (older
individuals and women were more likely to hold more humane attitudes with respect to AIDS related issues; only age correlated significantly with knowledge of AIDS (with older individuals being more knowledgeable about AIDS). Based on these empirical relationships, one would predict that the University of Windsor sample, which has a larger proportion of women (72% of the total sample, compared to approximately 55% for the North Carolina sample) and probably has an older average age (an average age of 25, compared to 82.1% of the North Carolina sample being between the ages of 18 and 24), would have a higher mean score in the direction of humane attitudes before one would predict that they would have a higher mean score in the direction of more knowledge. However, in reality, the North Carolina sample's mean score was higher in the direction of more humane attitudes and the Windsor sample's mean score was higher in the direction of more knowledge.

A more likely cause for the observed difference in knowledge of AIDS between the two samples is that the present questionnaire was conducted three years after Edwards and Hiday originally administered their
questionnaire (Summer 1989, vs. Spring 1986). As mentioned in the Introduction Chapter, during the past three years, the proliferation of AIDS action committees, government advertisements and media attention have probably contributed to a better informed public with respect to the medical aspects of AIDS. Hence, the fact that the Windsor sample proved to have a higher mean score in the direction of more knowledge is probably due to a general increase in the base rate level of knowledge.

If one's attitudes are solely dependent on one's level of knowledge, than an increase in the base rate level of knowledge should lead to a comparable change in attitudes. Based on a comparison of these two groups, it appears that this analogous change in attitudes has not taken place. Thus, the fact that the base rate level of knowledge might have recently increased still leaves the second part of the question unresolved; that is, that the North Carolina sample's mean score was higher in the direction of more humane attitudes than was the Windsor sample, even though, with respect to the KOAS, the North Carolina sample's
mean score was lower in the direction of less knowledge.

Though the available statistics on the demographic characteristics of the North Carolina State University sample are sparse, it is probably legitimate to dismiss the contention that the difference in attitudes between the two groups is solely attributable to the differences between their respective demographic makeups (e.g. political association, religious/ethnic affiliation, age, gender). In the present study, the demographic variables, as a group, accounted for only 13% of the variance within the attitudes towards AIDS scores. Given this relatively small effect on attitudes towards AIDS, it is unlikely that the differences in these predictor variables between the two groups are sufficient to fully account for the differences in the kind of observed relationships between the attitudes towards AIDS scores and the knowledge of AIDS scores. More likely, something other than these traditional measures are serving to differentiate these two groups.
Attitudes towards AIDS: Its relationship with attitudes about reality and knowledge of AIDS

With respect to the University of Windsor sample, a highly significant correlation was found to exist between attitudes about reality and attitudes towards AIDS. A more social constructionist position correlated more highly with positive attitudes towards AIDS than a position which was more logical positivist in character. This finding supports the general contention that the way in which AIDS has been constructed contributes to the negative attitudes surrounding the disease (e.g. that AIDS is the wrath of God, deserved punishment for immoral sinners).

A direct comparison between the University of Windsor and the North Carolina State University sample with respect to the relationship between attitudes about reality and attitudes towards AIDS is presently impossible, since the Attitudes About Reality Scale was not employed in the North Carolina study. However, if the present thesis is correct, that attitudes about reality is associated with attitudes towards AIDS, then the North Carolina State sample, by virtue of it having more humane attitudes towards AIDS, would also be more
social constructionist in its general orientation. This may be a question for a future researcher to study.

In the present study, as in Edwards and Hiday's (1986) study, knowledge about AIDS correlated highly with attitudes about AIDS. This relationship was to be expected for the same reasons which Edwards and Hiday mention: 1) knowledgeable persons would be aware that AIDS cannot be spread by casual contact, and thus, would not be afraid of PWAs; 2) those who perceive that AIDS has affected immoral and degenerate people might not be predisposed to absorb accurate information about AIDS; and 3) members of risk groups along with their families and friends might have greater knowledge of AIDS and greater sympathy towards PWAs.

What was originally predicted was that the Attitudes about Reality Scale would explain more of the variance within the Attitudes towards AIDS Scale than would the Knowledge of AIDS Scale. Empirically, this prediction was not supported. However, the correlation between attitudes towards AIDS and knowledge of AIDS was essentially equivalent.
Given the equivalence of these two sets of correlations, these results may still be perceived as supporting the original thesis that it is not sufficient to educate the public regarding present scientific knowledge about AIDS, but that underlying values must also be addressed in order to deal with AIDS humanely. Even if it is not the most important variable, attitudes about reality still have a significant effect on the formation of attitudes towards AIDS, as significant an effect that knowledge of AIDS has on attitudes towards AIDS.

A further point is that these simple correlations do not take into account the overlap or shared variance between attitudes towards reality and knowledge of AIDS. Given the high correlation between the scores on the attitude about reality and knowledge of AIDS scales (e.g., between a social constructionist position and possessing more knowledge about AIDS), one might wish to hypothesize that individuals with a more social constructionist orientation would be more interested in issues of social injustice (than would those with more of a logical positivist orientation) and therefore be more prone to educate themselves about socially
relevant issues, including AIDS. Conversely, it is also possible that having more education (which, among other things, may include being more knowledgeable about AIDS) may lead one to question the shortcomings of present traditional understandings, and hence, develop a greater affinity for the social constructionist position. In support of this second possibility, Unger (1986) found that grade point average correlated significantly with the AARS, though she found no significant correlation between AARS scores and educational level.

Whichever of the above possibilities are correct, it is clear that attitudes about reality and knowledge of AIDS might not be independent phenomena. Given the conceptual and empirical association between knowledge of AIDS and attitudes towards AIDS, the observed empirical relationship between knowledge of AIDS and attitudes about reality lends further support to the present thesis, that attitudes towards AIDS are associated with attitudes about reality.
Attitudes towards AIDS: Its relationship with the demographics, attitudes about reality, attitudes towards homosexuals, and knowledge of AIDS

There are many significant correlations between the predictor variables and the criterion variable, i.e., attitudes towards AIDS. Of all the predictor variables, attitudes towards homosexuals has the highest correlation with attitudes towards AIDS. This is not a surprising result in a sample from North America, where over 70 per cent of FWAAs are gay. In the Introduction Chapter, the suggestion was made that having a positive attitude towards AIDS, in effect, means accepting homosexuality, something which is not necessarily taken for granted, given the many forms of discrimination against this already stigmatized group. The empirical evidence has supported this suggested relationship, that attitudes towards homosexuality and attitudes towards AIDS are intricately linked.

The relationship between the other predictor variables and attitudes towards AIDS have already been discussed. What has not yet been addressed is the inter-relationship between the predictor variables themselves (except for the one between knowledge of
AIDS and attitudes towards AIDS), and the potential effect of these interactions on their ability to predict attitudes towards AIDS.

A predictable pattern appears to have emerged, in that there are significant correlations between most of the so-called urban, left leaning, intellectual type variables, eg. being affiliated with left of center political parties (the New Democratic Party in Canada), having no particular religious affiliation, holding constructionist views which are emancipatory in nature (the Social Constructionist position), being informed as to the latest scientific information about a politically correct issue, namely AIDS, and holding humane attitudes toward both homosexuals and AIDS. That all of these variables are here empirically related is no surprise. In fact, these correlations only help confirm the construct validity of the scales which purport to measure the phenomena in question.

What was not expected is the relative strength of the correlations between the scales. In particular, the correlation between the scores on the attitudes towards homosexuals scale and those on the attitudes towards reality scale is almost twice as large as the
one between the scores on the attitudes towards homosexuals scale and the scores on the knowledge of AIDS scale. There are at least two reasons which may account for this difference: 1) scales which attempt to tap a similar cognitive domain, i.e., attitudes, might correlate more highly than scales which deal with different domains, i.e., attitudes and knowledge, 2) scales which attempt to measure relatively general systems (attitudes towards reality and attitudes towards homosexuals) might correlate more highly than a scale which deals with a relatively broad system (attitudes towards homosexuals) and another which deals with a relatively specific system (knowledge of AIDS).

Given the relative correlations among these predictor variables, it is not surprising that the inclusion of the Attitudes Towards Homosexual Scale as a predictor variable almost totally washes out the effect of the Attitudes About Reality Scale in predicting the criterion variable, attitudes towards AIDS, while at the same time leaving the Knowledge of AIDS Scale as a significant predictor.

Probably the most important implication of the above discussion is that more positive attitudes
towards AIDS may result, given a social constructionist orientation, that is, a less rigid and deterministic perspective, and a muted desire to ascribe definite meaning to events. This is not to downplay the importance of disseminating accurate scientific information concerning the dangers of AIDS. Rather, the evidence seems to suggest that both are important in combatting the prejudices surrounding AIDS. The implications for the educational system are obvious. The most successful approach in combatting the fear and distrust surrounding the disease might include both an emphasis on student's general belief systems as well as on their specific knowledge of AIDS.

**The validity of the Attitudes About Reality Scale**

One can discern two main uses for the demographic information, the Attitudes About Reality Scale, the Attitudes About Homosexuality Scale, and the Knowledge of AIDS Scale: 1) as predictor variables of attitudes towards AIDS, 2) as variables useful in measuring the construct validity of the Attitudes About Reality Scale. The scales' first application has been considered above. With respect to their second
function, the expected constellation of inter-scale correlations (see page 105 & 106) appears to have achieved the purpose of their lending construct validity to the Attitudes About Reality Scale.

An additional scale, Rotter's Internal-External Locus of Control Scale was administered, in an attempt to lend further validity to the AARS. This attempt was somewhat unsuccessful; some of the results were similar to those obtained by Jackson and Jeffer's (1988). That is, none of the correlations between the total AARS and the I-E were significant.

There has been some suggestion that validity research using the I-E factors may be more effective than using the total I-E scale, given the multidimensional nature of the locus of control measure, in that there is less than total consistency in the way people perceive events (Leftcourt, 1976).
factor of the I-E and the Individual Determinism subscale of the AARS, and between the System Modifiability factor and the Social Determinism subscale.

These results are somewhat promising, adding to the potential utility of certain components of the AARS. In particular, the present work appears to lend greater validity to the AAR subscales than to the total AARS itself. Future researchers may be advised to take these results into account in their utilization of the AARS, by making greater use of the AAR subscales, given the multidimensional nature of the total scale.

**Summary**

First, as expected, a social constructionist position (as measured by the AARS) correlated with positive attitudes towards AIDS (as measured by the ATAS). Second, lay epistemology (as measured by the AARS) and knowledge of AIDS (as measured by the KOAS), predicted the criterion variable, attitudes towards AIDS (as measured by the ATAS). Contrary to the hypothesis though, the two appeared to be essentially equal in their predictive power. Still, this finding
implies an important contributing role for epistemology in the formation of attitudes towards AIDS. Third, the construct of personal epistemology, as measured by the AARS, attained some degree of validity; the finding of significant correlations among the demographic information, the Attitudes Towards Homosexual Scale, the Knowledge of AIDS Scale, and the AARS, and between the I-E factors and the AAR subscales, all helped in lending validity to the AARS.

Some of the limits of the study inhere in the recommendations made above with respect to avenues for possible future research. To reiterate some of these suggestions: use individuals other than students as subjects, to further legitimize the results. Examine the directionality of the relationship between lay epistemology and knowledge of AIDS. Given the added validity of the Attitude About Reality subscales, further explore the possibility of a meaningful subscale structure for the AARS.

Another technical limitation concerns the issue of item overlap between the Knowledge of AIDS Scale and the Attitudes Towards AIDS Scale. For some of the items, to answer a specific way on the attitude scale
may have necessitated certain knowledge of AIDS (such knowledge being demonstrated on the knowledge scale). Therefore, further develop knowledge and attitude scales which are more independent of each other. Finally, and most importantly, I would urge future educators to implement these findings in educational strategies, to see whether paper and pencil attitudinal relationships can be translated into real world action.
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schools: The ethical issues. Journal of Medical
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APPENDIX A

Attitudes towards AIDS Scale

Please answer each item using a 5-point scale in which A = Agree almost completely, B = Generally agree, C = Neither agree nor disagree, D = Generally disagree, E = Disagree almost completely.

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean (mean)</th>
<th>SD (sd)</th>
<th>Correlation (Corr.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) I would allow my child to attend school where I knew that there was a child with AIDS.</td>
<td>3.24</td>
<td>1.03</td>
<td>.565</td>
</tr>
<tr>
<td>2) I would attend a concert which was intended to raise money for persons with AIDS.</td>
<td>3.56</td>
<td>1.17</td>
<td>.517</td>
</tr>
<tr>
<td>3) Persons with AIDS deserve to die.</td>
<td>4.31</td>
<td>.86</td>
<td>.588</td>
</tr>
<tr>
<td>4) Research on AIDS should be funded by the federal government.</td>
<td>3.70</td>
<td>1.01</td>
<td>.425</td>
</tr>
<tr>
<td>5) Good people don't get AIDS.</td>
<td>4.38</td>
<td>.67</td>
<td>.443</td>
</tr>
<tr>
<td>6) Persons with AIDS should not be allowed to work in restaurants.</td>
<td>2.41</td>
<td>1.01</td>
<td>.500</td>
</tr>
<tr>
<td>7) I would shake hands with a person who has AIDS.</td>
<td>3.19</td>
<td>1.13</td>
<td>.760</td>
</tr>
<tr>
<td>8) People get AIDS because they are immoral.</td>
<td>4.04</td>
<td>.96</td>
<td>.438</td>
</tr>
<tr>
<td>9) I would not eat in a restaurant where I suspected that someone with AIDS worked.</td>
<td>2.64</td>
<td>.99</td>
<td>.650</td>
</tr>
</tbody>
</table>

---

*These statistics are based on Edwards and Hiday's (1987) data.*
10) I would not object to working in an office where someone with AIDS worked.

11) I would not touch a person with AIDS.

12) I would continue to visit a friend who got AIDS.

13) I would fire an employee who got AIDS.

14) Persons with AIDS should be quarantined.

15) I would eat in a restaurant where someone with AIDS is eating.

16) I would not continue to live with a roommate who got AIDS.

17) Persons with AIDS should not be allowed to teach school.

18) Having AIDS should not be something to be ashamed of.

\[ \text{N}=117, \text{ range}=18-90, \text{ midpoint}=58, \text{ Cronbach's alpha}=.9303. \] \[ \text{Mean of Index}=62.6. \]
APPENDIX B

Attitudes towards AIDS Scale

Judge's Ratings of Directionality of Items

<table>
<thead>
<tr>
<th>Negative</th>
<th>Neutral</th>
<th>Non-Neg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) I would allow my child to attend school where I knew that there was a child with AIDS.</td>
<td>.08</td>
<td>.15</td>
</tr>
<tr>
<td>2) I would attend a concert which was intended to raise money for persons with AIDS.</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>3) Persons with AIDS deserve to die.</td>
<td>1.00</td>
<td>.00</td>
</tr>
<tr>
<td>4) Research on AIDS should be funded by the federal government.</td>
<td>.08</td>
<td>.53</td>
</tr>
<tr>
<td>5) <strong>Good people don't get AIDS.</strong></td>
<td>1.00</td>
<td>.00</td>
</tr>
<tr>
<td>6) Persons with AIDS should not be allowed to work in restaurants.</td>
<td>.62</td>
<td>.15</td>
</tr>
<tr>
<td>7) I would shake hands with a person who has AIDS.</td>
<td>.15</td>
<td>.16</td>
</tr>
<tr>
<td>8) People get AIDS because they are immoral.</td>
<td>.92</td>
<td>.00</td>
</tr>
<tr>
<td>9) I would not eat in a restaurant where I suspected that someone with AIDS worked.</td>
<td>.69</td>
<td>.23</td>
</tr>
<tr>
<td>10) I would not object to working in an office where someone with AIDS worked.</td>
<td>.16</td>
<td>.23</td>
</tr>
</tbody>
</table>

---

These statistics are based on Edwards and Hiday's (1987) data.
11) I would not touch a person with AIDS.         .92  .08  .00
12) I would continue to visit a friend who got AIDS.  .00  .08  .92
13) I would fire an employee who got AIDS.         .92  .08  .00
14) Persons with AIDS should be quarantined.        .85  .00  .15
15) I would eat in a restaurant where someone with AIDS is eating. .69  .08  .23
16) I would not continue to live with a roommate who got AIDS. .69  .08  .08
17) Persons with AIDS should not be allowed to teach school. .85  .08  .08
18) Having AIDS should not be something to be ashamed of. .08  .30  .62
APPENDIX C

Attitudes About Reality Scale

NOTE. Each item is answered on a 7-point scale in which A = Agree almost completely, B = Agree very much, C = Agree somewhat, D = Neither agree nor disagree, E = Disagree somewhat, F = Disagree very much, and G = Disagree almost completely. Items are scored with A =7 through G = 1, except for items marked with an asterisk, in which scoring is in the reverse direction.

*1. Who has power is a central issue in understanding how society works.

2. It is maladaptive to refuse to conform to the demands of society.

3. Science has underestimated the extent to which genes affect human behaviour.

*4. Some nonconformity is necessary for social change to occur.

*5. The way scientists choose to investigate problems is influenced by the values of their society.

6. If one works hard at solving a problem, one can usually find the answer.

7. If everyone learns what is important to them, the rest would take care of itself.

8. Most sex differences have an evolutionary purpose.

9. People who achieve success usually deserve it.
10. The saying "You shall know the truth and the truth shall make you free" is still valid today.

11. The more technology we develop the better our science will be.

12. Accidental solutions to problems are very rare.

13. At the present time, people are recognized for their achievements, regardless of their race, sex, or social class.

14. People cannot be trained to be creative, they are either born that way or not.

15. People who demand social change are usually those who have been ineffectual in present society.

*16. The facts of science change over time.

17. The United States his the most equal society in the world.

18. Once a scientific fact is discovered, it remains part of that science from then on.

*19. We communicate much more information to each other than we are aware of doing.

20. Personality characteristics account for most differences in human behaviour.

21. Important ideas are most likely to originate from prestigious institutions.

22. Effort can often make up for an absence of talent in an area.

23. It is more important to be liked than to be powerful.
24. Biological sex, sex role, and sexual preference are highly related to each other in normal people.

25. The mother-infant relationship is a key to understanding adult behaviour.

26. People who are part of minority groups should not have to worry about other people in these groups who are less successful than they are.

27. Unconscious motivations are very important for understanding human behaviour.

28. Deviance is not a particular kind of behaviour, but a perception by others that that behaviour is socially unacceptable.

29. Society must protect itself from those who do not accept its rules.

30. Famous people's research is frequently cited in order to lend prestige to the findings of less renowned researchers.

31. Most people would cooperate with each other if only they understood that everyone would benefit by such actions.

32. Scientific merit is determined by the excellence of the work done.

33. It is important to decrease the distance between the "real world" and the scientific laboratory.

34. A great deal can be learned about human behaviour by studying animals.

35. Those who are non-conformists during one period of history are often found to be innovators by future eras.
*36. The acceptability of evidence is related to the importance of the person who discovers it.

37. It is better not to know too much about things that cannot be changed.

38. Physiological differences limit the degree to which males and females can learn to be similar to each other.

*39. People who have the least to lose in a relationship will be more likely to get their way in that relationship.

40. Most social problems are solved by a few very qualified individuals.
APPENDIX D

Factor Analysis of the Attitudes About Reality Scale

(40 items, n=398)

Factor 1: Societal Determinism  (28.5% of the variance).

#2) It is not good for a person to refuse to go along with the rules of society.  .38
#15) People who demand social change are usually those who have been unsuccessful.  .36
#21) Important ideas are most likely to originate from prestigious institutions.  .49
#29) Society must protect itself from those who do not accept its rules.  .39
#37) It is better not to know too much about things that cannot be changed.  .54
#38) Biological differences limit the degree to which males and females can learn to be similar to each other.  .41
#40) Most social problems are solved by a very few qualified individuals.  .47

______________________________

*These loadings are based on Jackson and Jeffers' (1988) data.*
Factor 2: Individual Determinism (13.6% of the variance)

#6) If one works hard at solving a problem, one can usually find the answer. .44
#7) If everyone learns what is important to them, the world would take care of itself. .32
#9) People who achieve success usually deserve it. .46
#11) The more technology we develop the better our science will be. .50
#13) At the present time people are recognized for their achievements regardless of their race, sex, or social class. .38
#17) The United States is the most equal society in the world. .37
#20) Personality characteristics account for most differences in human behaviour. .32
#22) Effort can often make up for a lack of talent in an area. .36
#25) The mother-infant relationship is a key to understanding later adult development. .34
#31) Most people would cooperate with each other if only they understood that everyone would benefit by such behaviour. .38
#32) Scientific merit is determined by the excellence of the work done. .38
Factor 3: Variable Determinism (9.1% of the variance)

#4) Sometimes going against society's rules is necessary for social change to occur.

#5) The way scientists choose to investigate problems is influenced by the values of their society.

#19) We communicate much more information to each other than we are aware of doing.

#27) Unconscious motivations are very important for understanding human behaviour.

#30) Famous people's research is frequently mentioned by less well known others to add prestige to their own findings.

#35) Those who go against society's rules during one period of history are often found to be leaders of social change later on.

#39) People who have the least to lose in a relationship will be more likely to get their way in that relationship.
APPENDIX E

Knowledge of AIDS Scale

<table>
<thead>
<tr>
<th>Correct answers are underlined.</th>
<th>True</th>
<th>False</th>
<th>DK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean # correct= 7.9, s.d.= 2.74</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>1) Today, blood donations are no</td>
<td>3</td>
<td>3</td>
<td>94</td>
</tr>
<tr>
<td>longer screened for evidence of</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIDS infection.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2) AIDS is caused by a virus.</td>
<td>76</td>
<td>66</td>
<td>13</td>
</tr>
<tr>
<td>3) Research indicates that AIDS is</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>not spread through casual contact,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>such as the sharing of a drinking glass.</td>
<td>70</td>
<td>60</td>
<td>18</td>
</tr>
<tr>
<td>4) The use of condoms during sex greatly increases the risk of transmitting AIDS, 2</td>
<td>2</td>
<td>88</td>
<td>76</td>
</tr>
<tr>
<td>though at present it is not known why this is so.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*5) At the present time, there is no cure for AIDS.</td>
<td>100</td>
<td>86</td>
<td>3</td>
</tr>
<tr>
<td>6) Kaposi's sarcoma is rarely seen in persons with AIDS.</td>
<td>3</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>7) AIDS is contracted through giving blood.</td>
<td>50</td>
<td>43</td>
<td>53</td>
</tr>
</tbody>
</table>

---

9 These statistics are based on Edwards and Hiday's (1987) data.
8) AIDS is the abbreviation for Associated-Immune Deficiency Syndrome.  

<table>
<thead>
<tr>
<th>True</th>
<th>False</th>
<th>DK</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>48</td>
<td>41</td>
<td>45</td>
</tr>
</tbody>
</table>

9) A diagnosis of AIDS, as defined by the Centre for Disease Control, requires the presence of an opportunistic infection or Kaposi's sarcoma.  

<p>| | | | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>8</td>
<td>7</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

10) In Eastern Africa, AIDS has struck primarily homosexuals.  

<p>| | | | |</p>
<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>20</td>
<td>17</td>
<td>21</td>
<td>18</td>
</tr>
</tbody>
</table>

11) The Red Cross does not collect blood donations in the cities with the highest incidence of AIDS.  

<p>| | | | |</p>
<table>
<thead>
<tr>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>9</td>
<td>8</td>
<td>52</td>
<td>45</td>
</tr>
</tbody>
</table>

12) The test for evidence of AIDS infection which has been used to protect the nation's blood supply is mainly a diagnostic tool, useful in diagnosing individual cases.  

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>30</td>
<td>26</td>
<td>16</td>
<td>14</td>
</tr>
</tbody>
</table>

13) Regular use of the inhalant drug amyl nitrate has been shown to reduce the risk of getting AIDS.  

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>26</td>
<td>23</td>
</tr>
</tbody>
</table>

14) AIDS can be spread from a mother to her unborn child.  

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>77</td>
<td>67</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>
15) AIDS is more common among female homosexuals than among male homosexuals.

<table>
<thead>
<tr>
<th></th>
<th>True</th>
<th>False</th>
<th>DK</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>1</td>
<td>85</td>
<td>30</td>
</tr>
<tr>
<td>%</td>
<td>1</td>
<td>73</td>
<td>26</td>
</tr>
</tbody>
</table>

*#5-The words "at present" were added to the original, to emphasize the changing nature of the knowledge concerning the disease.

#8-Auto-Immune was changed to Associated-Immune, since Auto-Immune is used among some scientific circles as a synonym for AIDS.

#11-The correct response to this question is now false, contrary to the true response when this test was first constructed.
APPENDIX F

Attitudes towards Homosexuality Scale

NOTE. Each item is answered on a 5-point scale in which A = Agree almost completely, B = Generally agree, C = Neither agree nor disagree, D = Generally disagree, E = Disagree almost completely.

*1) The growing number of homosexuals indicates a decline in North American morals. (MR)\(^{10}\)

2) Laws regulating homosexual behaviour should be loosened. (MR/rd)

3) Homosexuals are sick. (MR/PA)

4) There is nothing particularly wrong with homosexual behaviour. (MR)

5) Homosexuals are no more likely to commit crime (nonsexual) than are heterosexuals. (RD)

6) It would be very easy for me to have a conversation with someone I know to be a homosexual. (PA)

7) Homosexuals should be required to undergo psychotherapy. (RD)

8) Homosexuality is a sin. (MR)

9) Just as in other species, homosexuality is a natural expression of sexuality in humans. (MR)

10) I would like to have homosexual friends. (PA)

11) I won't associate with known homosexuals if I can help it. (PA)

\(^{10}\)MR = ideas of moral reprobation  PA = personal anxiety in the presence of homosexuals  RD = belief of the need for repression of homosexual behaviour and that homosexuals are dangerous. These abbreviations were used by Black and Stevenson (1984).
12) I do not think homosexuals are disgusting. (MR/PA)
13) Homosexuals do not use physical injury as a usual part of their sexual behaviour. (RD)
*14) Homosexuals should be made to take examinations for sexually transmitted diseases regularly. (RD)
15) Bars that cater solely to homosexuals should be placed in one specific and known part of town. (RD)
16) If a family member or best friend told me that they were homosexual, it would distress me greatly. (PA)
17) Homosexuals should be required to register with the police department where they live. (RD)
18) Homosexuals are no more likely to try to seduce young people than are heterosexuals. (RD)
19) Homosexuality is a perversion. (MR/PA)
20) Homosexuals have as much right as heterosexuals to teach young children. (PA)
21) In filling out this questionnaire, were you thinking primarily about
A) Male homosexuals
B) Female homosexuals
C) Both equally

* In the original questionnaire, question #1 read American instead of North American, and question #14 read VD instead of sexually transmitted diseases.
APPENDIX G

Internal-External Locus of Control Scale

Each item consists of a pair of alternatives lettered a or b. Please select the one statement of each pair (and only one) which you more strongly believe to be the case as far as you're concerned.

In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the one you more strongly believe to be the case as far as you're concerned.

The items which load on the Personal Control Subscale are indicated with a (PC) prior to the item.

The items which load on the Socio-political Subscale are indicated with an (SC) prior to the item.

1.a. Children get into trouble because their parents punish them too much.

   b. The trouble with most children nowadays is that their parents are too easy with them.

(PC)

2.a. Many of the unhappy things in people's lives are partly due to bad luck.

   b. People's misfortunes result from the mistakes they make.
3.a. One of the major reasons we have wars is because people don't take enough interests in politics.
   b. There will always be wars, no matter how hard people try to prevent them.

4.a. In the long run people get the respect they deserve in this world.
   b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.

5.a. The idea that teachers are unfair to students is nonsense.
   b. Most student's don't realize the extent to which their grades are influenced by accidental happenings.

6.a. Without the right breaks one cannot be an effective leader.
   b. Capable people who fail to become leaders have not taken advantage of their opportunities.

7.a. No matter how hard you try some people just don't like you.
   b. People who can't get others to like them don't understand how to get along with others.

8.a. Heredity plays the major role in determining one's personality.
   b. It is one's experiences in life which determine what one is like.
9a. I have often found that what is going to happen will happen.

b. Trusting to fate has never turned out as well for me as making a
decision to take a definite course of action.

(SC)

10a. In the case of the well prepared student there is rarely if ever
such a thing as an unfair test.

b. Many times exam questions tend to be so unrelated to course work
that studying is really useless.

(PC)

11a. Becoming a success is a matter of hard work, luck has little or
nothing to do with it.

b. Getting a good job depends mainly on being in the right place at
the right time.

(SC)

12a. The average citizen can have an influence in government decisions.

b. This world is run by the few people in power, and there is not
much the little guy can do about it.

(SC)

13a. When I make plans, I am almost certain that I can make them work.

b. It is not always wise to plan too far ahead because many things
turn out to be a matter of good or bad fortune anyhow.

14a. There are certain people who are just no good.

b. There is some good in everybody.
15a. In my case getting what I want has little or nothing to do with luck.
   b. Many times we might just as well decide what to do by flipping a coin.

16a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
   b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.

17a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
   b. By taking an active part in political and social affairs the people can control world events.

18a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
   b. There really is no such thing as "luck".

19a. One should always be willing to admit mistakes.
   b. It is usually best to cover up one's mistakes.
20a. It is hard to know whether or not a person really likes you.
   b. How many friends you have depends on how nice a person you are.

21a. In the long run the bad things that happen to us are balanced by the good ones.
   b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

22a. With enough effort we can wipe out political corruption.
   b. It is difficult for people to have much control over the things politicians do in office.

23a. Sometimes I can't understand how teachers arrive at the grades they give.
   b. There is a direct connection between how hard I study and the grades I get.

24a. A good leader expects people to decide for themselves what they should do.
   b. A good leader makes it clear to everybody what their jobs are.
25a. Many times I feel that I have little influence over the things that happen to me.
   b. It is impossible for me too believe that chance or luck plays an important role in my life.

26a. People are lonely because they don't try to be friendly.
   b. There's not much use in trying too hard to please people, if they like you, they like you.

27a. There is too much emphasis on athletics in high school.
   b. Team sports are an excellent way to build character.

28a. What happens to me is my own doing.
   b. Sometimes I feel that I don't have enough control over the direction my life is taking.

29a. Most of the time I can't understand why politicians behave the way they do.
   b. In the long run the people are responsible for bad government on a national as well as on a local level.
APPENDIX H

Demographic Questionnaire

1) What is your age in years?

2) What is your gender?
   A) Female       B) Male

3) What is your present religion?
   A) Protestant
   (Please specify denomination)
   B) Roman Catholic
   C) Greek Orthodox
   D) Jewish
   E) Moslem
   F) Hindu
   G) Buddhist
   H) Other
   (Please specify)

4) What is your ethnic/racial origin?
   A) British
   B) French
   C) Portuguese
   D) Hispanic
   E) Arab
   F) East Indian
   G) Chinese
   H) Native Indian
   I) Black
   J) Other
   (Please specify)

5) What is your political party preference?
   A) Liberal
   B) New Democratic
   C) Progressive Conservative
   D) Other
   (Please specify)

6) What is your sexual orientation?
   A) Heterosexual
   B) Homosexual
   C) Bisexual
   D) Don't know
   E) Won't say
APPENDIX I
Instructions to Subjects

The following set of instructions will be read aloud, in addition to being attached to the cover sheet of the questionnaire booklet. "I am gathering normative data concerning an individual's general beliefs and values, as well as norms on more specific measures of attitudes and knowledge of AIDS.

To preserve anonymity, a code number (and not your name) will be assigned to the data. Any data being gathered will be used solely for research purposes.

You are free to refuse to participate in the study, to answer any specific question, and to withdraw from the study at any time without prejudice. A more complete explanation of the purposes and results of the study will be provided if requested, following the termination of the study.

The second, third and fourth questionnaires concern individual attitudes. In responding to these questionnaires, please be sure to select the response which you actually believe to be more true, rather than the response you think you should choose, or the one you would like to be true. These three are measures of personal beliefs. Obviously, there are no right or wrong answers.
Attached to the questionnaire booklet is a computer scored, multiple choice answer sheet. Be sure to bubble (mark), with a pencil, your responses on the answer sheet. Thank you for your participation."
APPENDIX J

DATA

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Vita Auctoris

Peter Cobrin was born to Ruby and Gertrude Cobrin on September 5, 1960, in Montreal, Quebec. In 1977 he graduated from Herzliah High School in Montreal. He received his Bachelor of Arts degree in Political Science in June, 1982 from the University of Toronto. Since September, 1987, he has been a graduate student in clinical psychology at the University of Windsor.