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The impact of AIDS-related information sources on homophobia: a social learning perspective

Brian E. Magruder
Iowa State University

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The impact of AIDS-related information sources on homophobia:
A social learning perspective

by

Brian E. Magruder

A Thesis Submitted to the
Graduate Faculty in Partial Fulfillment of the
Requirements for the Degree of
MASTER OF SCIENCE

Department: Sociology and Anthropology
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Signatures have been redacted for privacy

Iowa State University
Ames, Iowa
1990
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CHAPTER ONE

Introduction

This thesis will examine the effects of Acquired Immune Deficiency Syndrome on college students' attitudes toward homosexuals. This research investigation will also assess the impact of informational sources related to AIDS on contemporary homophobic attitudes. Cognitive social learning theory will be used to explain the relationships between sources of information and attitudes towards homosexuals. It is believed certain information sources on AIDS may vicariously reinforce homophobia. It is also anticipated college students may develop homophobic attitudes by modeling potentially homophobic reference groups which contribute to their knowledge on AIDS. There is a tendency to assume AIDS is generally a consequence of "unnatural" sexual behavior (i.e., homosexuality). Beliefs such as this may indirectly support the notion homosexuals are responsible for the epidemic of AIDS, and in turn, reinforce a collective homophobic attitude in American society.

Literature Review

Homophobia

Homosexuality is either a feeling of sexual desire for persons of one's own sex or sexual relations with a member of one's own sex, or both (Thio, 1983). Homosexuality and its attitudinal counterpart, homophobia, have been controversial issues in the United States for several decades. Homophobia may be
defined as an irrational fear, hatred, or prejudice of homosexuals. From a psychological definition, homophobia is defined as an irrational fear of homosexuals, and in some cases viewed as a mental disorder. But for the implementation of this thesis, homophobia will be operationalized as a general negative attitude toward homosexuality. During the 1950s, there was no organized opposition to the victimization of homosexuals and prejudice towards homosexuals was rampant. The Gay Rights Movement of the mid-seventies slightly altered the sexual climate of the United States, and discrimination towards homosexuals became less acceptable. However, the anti-discrimination policies initiated by the Gay Rights Movement were not effectively implemented; and if implemented, they were not enforced (Sullivan, 1988).

Historically, homophobia has also been dramatically prevalent throughout the social sciences. Prior to the early seventies, systematic research on homosexuality confirmed several misconceptions surrounding gay men and lesbians. East in 1946 declared early homosexual experiences predisposed an individual to a same-sex inclination (East, 1946). Not only did he suggest the possibility of an environmental determinant, but his conclusions supported the myth of homosexual pedophilia as a causal factor of homosexuality. In 1962, Bieber et al. found a common family pattern involving a dominant, possessive mother and a weak or absent father as a determinant for a homosexual orientation. (Bieber, Dain, Dince, Drellech, Grand, Grundlach, Kremer, Ritkin, Wilbur and Bieber; 1962). According to Bieber and his colleagues, many children from single parent families (ninety percent of single parent families are headed by women) would develop into gay adults. In 1964, Konopka claimed many homosexuals had been adversely conditioned against heterosexual behavior, and
thus lacked in adequate heterosexual experience (Konopka, 1964). Even the American Psychological Association entertained serious misgivings on the topic of homosexuality. For it wasn’t until December of 1973, that the APA dismissed homosexuality from its list of recognized mental disorders. This dismissal was partially due to the recognition of psychologically stable homosexuals, who were mainstreamed in the general population.

It is imperative to understand the homophobic ideology which had dominated the scientific community prior to the 1980s, for it established the norm of homophobia in the United States. In 1981, Bell et al. confronted many of the aforementioned misconceptions. Their series of empirical investigations provided a sense of “normalcy” to the issue of homosexuality (Bell, Weinberg and Hammersmith, 1981). Bell et al. concluded homosexuality was determined prior to adolescence, dispelling the myth homosexuals seduce others into their lifestyle. It was also found the family, as a determinant of homosexual orientation, was weak in explaining the sexual development of their sample.

Homophobia is a cultural phenomenon. It pervades our societal response to homosexuality and, until recently, it has guided scientific inquiry. However, a variety of sociocultural factors may markedly influence homophobia in a given culture. These sociocultural factors include the specificity of expected role behaviors, and the severity of social sanctions for deviation from the heterosexual norm. For example, Davenport (1965) described the sexual mores of the Melanesians in the South Pacific as being deviant on the surface. All unmarried males engaged in homosexual relations with the full acceptance of the community; but after marriage, the males were expected to adopt a heterosexual orientation. In the case of the Melanesians, homosexuality was a prescribed norm
for their culture, and homophobia was an unknown concept, due to the acceptability of homosexual relationships. As structural and cultural factors are determinants in the acceptance of homophobia, sociocultural factors are also evident in an individual's acquisition of a sexual identity. The homosexual identity is conceptualized as a developmental process spanning throughout one's lifetime. This process should lead to a positive self-image and a coherent personal identity associated with homosexuality (Minton and McDonald, 1984).

Heterosexual identity on the other hand is linked to a derogatory attitude toward homosexuality. Those who engage in homosexual-related behaviors (such as a male who may appear effeminate) are perceived as being homosexual (Hencken, 1984). The dichotomy between these sexual identities suggests the formation of a heterosexual identity is dependent on conforming to the prescribed homophobic climate of a given culture.

Both macrolevel and microlevel factors are responsible for homophobia. On a microlevel, homophobia may be the result of a deeply rooted insecurity about one's sexuality and gender identity (Marmor, 1980). In other words, an individual may utilize homophobia as a defense mechanism to protect a fragile heterosexual identity. Marmor also suggests an individual may advocate homophobia out of sheer ignorance about homosexuality. Thus, an individual who is mislead on the factual nature of homosexuality may adhere to certain cultural misconceptions.

Some origins of homophobia are dependent upon the macrolevel or institutional convictions against homosexuality. The social institutions of religion and politics are notorious for homophobic ideologies, as illustrated in the following examples. Fundamentalist religious organizations perpetuate homophobia. Their doctrines, as many religious doctrines, declare that
homosexuality is a moral evil and that those who participate in homosexual behaviors are sinners (Marmor, 1980). In addition to religion as an institutional force of homophobia, political and economic structures may be key sources of homophobia. Homophobia has been manipulated by certain Cuban groups of various political affiliations. Cuban homosexuals, lacking in monetary or political power, were repressed into low-paying jobs where strict "closeting" was essential for safety and economic survival (Rich and Arguelles, 1985). The origins of homophobia are derived from both individual presumptions on homosexuality, and the given macrostructure dictating homophobia as a sexual norm.

In general, males tend to be more homophobic than females. Yet diversity in personality traits (typically associated with gender) may affect individual attitudes on homosexuality. Females with instrumental characteristics are more accepting of homosexuality (Black and Stevenson, 1984). In other words, women who are more career-oriented and assertive tolerate homosexuality, more so than men who are passive and nurturing. Thus men with passive gender traits reject homosexuality for fear of being labeled as a homosexual. Herek (1984) reported homophobic individuals are more likely to be older, and usually are less educated when compared to nonhomophobic individuals. He further suggested that homophobic individuals tend to be traditional and repressed about their sexuality, while simultaneously harboring feelings of guilt on sexual behaviors. The majority of homophobic individuals believe homosexuality is a preferred or chosen lifestyle (Aguero, Bloch and Byrne, 1984).

The process to eliminate homophobia is complex. Serdahely and Ziemba (1984) recommend education as a means to decrease the homophobic attitudes of college students. Herek (1984) successfully implemented an alternative Biblical
interpretation of homosexuality to decrease homophobic attitudes based on religious convictions. Herek further asserts that positive portrayals of homosexuals, and interactions with homosexuals which emphasize common group membership may encourage insight into homosexuality.

AIDS

In 1981, American physicians identified a mysterious, new disease that attacks an individual’s immune system, rendering one susceptible to any opportunistic infection or virus. The condition of AIDS (Acquired Immune Deficiency Syndrome) actively destroys particular blood cells essential for the body’s protection against infection. Epidemiologists believe AIDS is primarily spread through sexual activity, in which an exchange of bodily fluids are present. The sexually-transmitted nature of the disease, coupled with the long latency period between the exposure to the AIDS virus and the onset of symptoms related to the disease, has hindered any attempt to control the epidemic. Currently there is no known cure or vaccine to prevent the transmission of AIDS.

AIDS, as a summative phenomenon, appears to be culturally linked, as solely opposed to a biological event. Hunt (1988) discovered the spread of AIDS in East Africa was historically associated with the unique social and economic environment of the country. In this particular culture, the majority of AIDS cases consisted of black, economically deprived, sexually active, heterosexual men. An examination of the AIDS cases reported in New York City (a community wherein the vast majority of AIDS cases have been reported in the United States) suggest the disease is particular to homosexual or bisexual men, many of whom had been quite sexually active (Joseph, 1987). In Brazil, the sharp dichotomy between
heterosexuality and homosexuality is a relatively foreign concept. Instead, there only exists a contrast between "active" and "passive" sexual roles. Further, anal intercourse is a widespread practice between males, and males and females. Perhaps it is this pattern of sexual attitudes that has contributed to the extensive number of cases reported in Brazil (Parker, 1987). This cultural analysis illustrates how AIDS is a social phenomenon, associated with the sexual disposition of each society.

Currently, in the United States, an estimated 1.5-2 million people have been exposed to the AIDS virus. Male homosexuals, bisexuals, prostitutes, intravenous drug-users, and hemophiliacs comprise the groups highest at risk for contracting the disease. It has been estimated the infection rate in the United States has somewhat stabilized due to the changes in sexual practices of homosexual men (Romanowski and Brown, 1986). The disease rate, however, will continue to increase as a result of the large number of heterosexuals already infected (but currently asymptomatic) or uneducated on the nature of AIDS. By 1991, the United States Health Service projects an estimation of 270,000 AIDS-related cases will be reported, and over 190,000 deaths will result due to the epidemic (Strong and DeVault, 1988).

Information Sources on AIDS

By August of 1986, 99% of Americans claimed to have heard or read about Acquired Immune Deficiency Syndrome (Singer, Rogers and Corcoron, 1987). Yet knowledge of AIDS does not imply concern of infection, or the social ramifications of the epidemic. In general, only those greatest at risk and the highly educated have been motivated to change their sexual behavior (Singer et al., 1987).
Americans have expressed a range of knowledge pertaining to the transmission of the AIDS virus. Many people understand the sexual transmission component of the epidemic, and no one believes AIDS may be passed by simply being in the same locality of an AIDS victim. However, Americans are polarized in their knowledge on intermediate modes of transmission, such a casual or “wet” contact (Singer et al., 1987). In other words, many people are unsure of what are considered safe behaviors when dealing with bodily fluids.

According to C. Everett Koop, the Surgeon General during the bulk of the epidemic, education of the public is the only defense against AIDS at this point in time. The best protection for young people is to educate them accurately and sensitively about human sexuality and AIDS (Koop, 1987). Education about AIDS may be accomplished through several information sources including: the family, the peer group, education, religion, and mass media (books, periodicals, television, etc.). These information sources represent another dimension of the sociocultural influences on the public conception of AIDS. Information sources on AIDS serve two functions: (1) to provide accurate information on AIDS, (2) to enlighten the general public on concern for contracting the lethal disease.

The mass media’s coverage of AIDS has induced multiple connotations. Presentations on Public Television and the television show “60 Minutes” have been moderately successful in providing the public with accurate information; but prime time television series have portrayed AIDS with shadows of guilt and blame for certain populations highest at risk (Kemp, 1988). Stigmatizations and discrimination plague magazines reporting on the AIDS phenomenon. There is also a tendency, on the part of the media, to highlight the stigmatized lifestyles of AIDS victims (homosexuals, drug addicts, etc.). The media attributes degrees of
responsibility for personal illness to an individual's involvement in nonnormative activities (Albert, 1984) Albert further indicates the mass media, in general coverage of AIDS, has drawn sharp distinctions between "at risk" groups and the rest of the population. For example, during a rebroadcast of "The Best of Oprah Winfrey" on August 19, 1989 (a popular television talk show), the town of Williamson, West Virginia was profiled regarding their reaction towards AIDS. One male citizen asserted homosexuals deserve AIDS because homosexuality is "not an alright thing with the Lord". From this example, it is apparent that not only is the media educating the American public on the rudiments of the disease; but it is also influencing the public's conception of certain categories of people.

Educational programs on human sexuality have initiated progressive measures to provide accurate information on AIDS to students. However, more educational programs on AIDS are still necessary. Richard Keeling (1987) asserts the necessity of informing college students on AIDS, for they represent a population significantly at risk for acquiring the disease. In response, many colleges and universities have undertaken the task to provide college students with information on Acquired Immune Deficiency Syndrome. Several researchers have noted significant complications on the effectiveness of AIDS education on college students. Jonathan Silin (1987) claimed sex educators have not properly defined AIDS in a manner which students can internalize concern. Edward Kain (1987) noted significant college minorities are misinformed about AIDS; consequently, he advocated the need for increased education about AIDS in courses of human sexuality.

The progress of the media, educational systems, and other information systems on AIDS may be measured by the general alterations in sexual activity
among the American population. Several research findings have indicated these information agents may only be moderately functional in providing effective information on AIDS, and instilling concern on the possibility of contracting the disease. A recent examination of student knowledge on AIDS transmission at San Diego State University suggested that few students feared transmission of the virus from "dry" contact, but the majority of students proved fearful of "wet" contact (Winslow, 1988). Though knowledge of AIDS transmission has relatively increased over the past few years at the University of Maryland, few students demonstrated any behavioral changes associated with the sexual nature of the disease (Freimuth, 1987). Concern of AIDS and knowledge of AIDS bear a similar association, when comparing the impact of the AIDS virus on behavioral changes. Nearly half the students at the University of Rhode Island claimed concern over AIDS has affected their sexual behavior; however, such reported effects were not correlated with independent measures of behavior (Carroll, 1988). Overall, information sources on AIDS have been, at best, only moderately understood by the American public (Warwick, Aggleton and Homans; 1988).

**AIDS and Homophobia**

The social reaction to Acquired Immune Deficiency Syndrome in the United States is structured by the virus' particular social features, such as the deadly nature of the disease and the sexually transmitted contagion. The spread of AIDS through sexual contact among homosexual and bisexual men has directly, or indirectly, reinforced homophobia. As a result, gay males (who comprise the group highest at risk for infection of the disease in the United States) face a triple stigmatization: the menace of a lethal disease, the nature of their unacceptable
sexual lifestyle, and discrimination. Society’s fear of AIDS, coupled with American sexual morality, instigate a stigmatization, characterized by despair and isolation, attached to those people suffering from AIDS.

There is a tendency to assume AIDS is generally a consequence of “unnatural” sexual behaviors (promiscuity, homosexuality, etc.). Thus, the spread of AIDS through sexual contact among homosexuals has reinforced society’s stereotype of the promiscuous gay male (Kowalewski, 1988). Fisher (1985) asserts that the impact the AIDS epidemic has had on the homosexual population in the United States was a significant contributor to the resurgence of homophobia in Great Britain. Therefore, homophobia as a result of AIDS has become an international ramification of the disease.

In the United States, reported AIDS cases and homophobia are positively associated; as the number of AIDS cases have increased, so have the homophobic attitudes of the American public. For example; in 1983, 1985, and 1986 the Gallup Poll found a small, but steady, increase in the percentage of Americans stating they or people they know actively avoid homosexuals and/or stay away from places they suspect homosexuals may be present (Singer et al., 1987). Approximately one quarter of Americans believe the epidemic is “God’s punishment for homosexuality”; similarly, patients suffering from AIDS were “getting what they deserve” (cited in Strong and DeVault, 1989). On a structural level, medical and governmental health programs on AIDS were at first hindered due to the homosexual association with the disease (Altman, 1985). In general, the symbolic nature of AIDS has instigated widespread homophobia, in which the epidemic has been perceived as retribution for the variant sexual practices of homosexuals.
A Cognitive Social Learning Perspective

Historically, there have been two schools of thought concerning social learning theory. Students of the behaviorist school, assume people's actions are under the exclusive control of uninterpreted environmental forces. Behaviorist social learning theory operates on a fundamental stimulus - response model. In this model, people are regarded as reactive victims of external rewards and punishments, with very little capacity for self-modification. In general, the theory states externally rewarded behavior patterns develop and persist, and negatively reinforced actions deteriorate over time.

In contrast to the behaviorist school, cognitive social learning theory assumes human cognitive and interpretative processes shape external reality. Cognitive social learning theory utilizes a stimulus-organism-response model to explain human behavior. Subdivisions exist in cognitive social learning theory. According to Leonard Doob (1947), attitudes are the product of external rewards and punishments, assuming attitudes are formed and controlled by external forces.

Other cognitive learning theories emphasize human determinism. For example, Bandura’s social learning theory acknowledges goal-obtainment and self-reinforcement. Bandura’s theory asserts environmental rewards and punishments are not more than interpretative or symbolic representations. From Bandura’s perspective, reinforcement has two important functions: information and motivation. The informational function is a process by which one defines and differentiates the consequences of behaviors. In other words, individuals learn some behaviors produce favorable effects, and other behaviors produce
undesirable effects. On the basis of prior reinforcement, individuals develop expectations about actions promising valued outcomes, and those actions warranting undesirable consequences (Bandura, 1977).

According to Bandura and other cognitive social learning theorists, sources of reinforcement can stem from external, internal, and vicarious information. External sources of reinforcement primarily occur through modeling, or observational learning. Modeling arises when one observes, through personal interaction or media attendance positive or negative outcomes for certain behaviors. Modeling depends on motivational factors. In other words, not only must an individual experience an outcome of a behavior, but they must also develop an attitude toward the behavior with regard to desired expectations. In summarizing modeling, people learn behaviors indirectly through observing others.

Internal reinforcement focuses on self-monitoring systems or self-reinforcement systems. Individuals establish internal values to measure their own behavior. These internal standards guide self-direction, and eventually shape attitudes based on such internalized values. Individuals learn now certain behaviors may be externally rewarded or punished. These behaviors lead to the formation of attitudes and internal values, sculptured by the perceived outcome of the external reinforcement (Bandura, 1977).

It is not necessary to enact particular behaviors in order to learn their consequences. Vicarious learning (or reinforcement), as well as the direct outcomes of a behavior, affect subsequent behaviors. Information that alters an individual's anticipation of a probable outcome to which a behavior will lead, should also change the probability that the individual will engage in the
prescribed behavior. Vicarious experiences may also encourage strong conditioned emotional reactions (Berger, 1962). In an experiment conducted by Bandura and Rosenthal (1966), adults repeatedly observed the sounding of a buzzer paired with fearful responses simulated by confederates. Gradually the observers developed a conditioned fearful response to the sound of the buzzer. Thus, an external reinforcement, when paired with a neutral occurrence over a given period of time, may connotate a strong emotional reaction to the neutral stimulus.

From a cognitive social learning perspective, as sexual orientation may be conceived as a learning process via rewards and punishments, so vicariously conditioned may be the attitude one maintains toward homosexuality. The balance of rewards and punishments in the United States heavily favor a heterosexual orientation. For example, a father may praise his son (an external reward) for dating an attractive young girl. Or a homosexual may be dismissed from his/her occupation (an external punishment) based on their sexual lifestyle. Thus specific rewards and punishments, as perceived by individuals, could vicariously reinforce homophobic attitudes. And through modeling, or observational learning, individuals may learn homosexual behaviors produce undesirable outcomes. These outcomes are then internalized by a self-reinforcement (or internal reinforcement) process, in which individuals develop homophobic values associated with homosexual behaviors.

American attitudes toward homosexuality, generally speaking, have been negative. The United States, as many societies, insist on some conformity to a heterosexual norm. The reason for this conformity lies in the Western moral tradition which tolerates sexual acts only if they occur within the bonds of
marriage, or lead to reproduction. The manner which an individual will conform to the norm of heterosexuality is a socially learned response to various sexual stimuli. An individual may start with a basic, undirected sexual drive and learn through the socialization process to recognize some stimuli as nonsexual, some as sexual and appropriate, and some stimuli as potentially sexual but inappropriate or taboo. Homophobia may be internalized through this socialization process (characterized by external reinforcement) as a conditioned emotional response.

From Doob’s perspective of social learning theory, AIDS may be perceived as a punishment (a negative external force) affecting attitudes toward homosexuality. The stigmatization associated with AIDS serve as another external punishment, which in turn, mediates derogatory attitudes toward homosexuals. AIDS confers many negative ramifications on its victims, such as discrimination, harassment, and isolation. Considering the majority of AIDS cases in the United States are homosexual men, the stigmatization associated with AIDS not only reinforces heterosexuality as a cultural norm, but may encourage homophobic attitudes as a learned consequence.

From Bandura’s perspective of cognitive social learning theory, AIDS fulfills the two necessary functions as a reinforcement of homophobia associated with the epidemic. Through certain informational sources on AIDS, an individual can define and differentiate potential consequences attached to the disease. For example, an individual may learn through the media homosexual men are the primary carriers of the AIDS virus. Thus, they learn avoiding homosexuals may reduce their possibility of contracting the disease and direct contact with homosexuals may increase the probability of contracting AIDS. From a motivational function, individuals will develop expectations associated with AIDS
and homosexual behavior. An individual may adhere to the belief homosexuals are getting what they deserve for their participation in homosexual behaviors, since AIDS and homosexuality are closely associated.

With regard to vicarious reinforcement, or learning, information on AIDS that alters an individual’s anticipation of a probable outcome to which a behavior will lead should also change the probability that the individual will engage in the behavior. In other words, individuals receiving information on AIDS that presents the disease as a homosexual epidemic, may lead individuals to more openly avoid homosexuals. Because vicarious learning can lead to strong conditioned emotional responses, individuals may also adopt homophobic attitudes through such vicarious pairing of homosexuality and AIDS as presented in several information sources utilized in the United States.

In summary, since information on AIDS has, at best, only been moderately understood by the American public, it is believed certain sources of information may encourage or reinforce homophobic attitudes. This reinforcement is possible through vicarious reinforcement, external reinforcement leading to self-reinforcement, or through individual interpretations of the pairing between homosexuality and AIDS.

Hypotheses

This research will explore how certain informational sources on AIDS have impacted on homophobia in the United States. Six information sources will be specifically noted: visual media, printed media, classes in school, church, discussions with friends, and discussions with parents. Each informational source
on AIDS will serve as an independent variable for this thesis. Each information agent on AIDS will be correlated to the dependent variable on homophobia, as mediated through the variables: knowledge of AIDS, and the belief homosexuals are responsible for AIDS. The following model illustrates the associations between the variables.

This thesis will examine the gender and regional differences between Iowa and California, concerning the effect of AIDS-related information sources on homophobia. As was cited earlier in the literature review, males tend to be more homophobic than females. Therefore, the proposed model should explain a greater percentage of the total variance for male respondents in this study.

Regarding regional differences, current research demonstrates the geographical density of reported AIDS cases may affect attitudes on AIDS (Ishii-Kuntz, Whitbeck and Simons, 1988). Thus, it is believed California (since California has substantially more AIDS cases than Iowa) and Iowa will significantly differ in

Figure 1. Path Model of Information Sources on AIDS, Knowledge on AIDS, and Belief Homosexuals are Responsible for AIDS on Homophobia
regard to the variables utilized in this study.

1) It is expected a strong contribution from visual media (television programming) on an individual’s repertoire of knowledge concerning the AIDS virus will be positively correlated with the accuracy and certainty regarding knowledge on AIDS (1a) Yet, it is also believed visual media will be positively correlated with the belief homosexuals are responsible for AIDS (1b); consequently, it is anticipated visual media will be positively correlated with overall homophobia (1c).

Recently public health officials have blitzed visual media with a series of public service announcements, providing information on AIDS. Thus, television programming may increase an individual’s knowledge on AIDS. Yet as depicted in past literature, television programming on AIDS has profiled victims of AIDS with shadows of guilt and blame. Even though visual media may increase a viewer’s knowledge on AIDS, it may also vicariously reinforce the belief homosexuals are responsible for AIDS, which would lead to an increase of homophobia.

2) It is expected that printed media (periodicals, pamphlets, etc.) will significantly increase knowledge on AIDS (2a). However, it is anticipated printed media will significantly decrease the belief homosexuals are responsible for AIDS (2b); and the contribution of printed media on an individual’s knowledge about AIDS will significantly decrease homophobic attitudes (2c).

According to a cognitive social learning perspective, reinforcements are dependent on interpretative and symbolic factors attributed to the reinforcement by the individual. Though printed media may increase homophobic attitudes due to vicarious learning (as with visual media). It is believed printed media has
focused on the factual nature of AIDS, leaving little symbolic input on the part of
the individual, whereas television programming may involve dramatic license in
its portrayal of AIDS, requiring symbolic or interpretative input. Printed media,
may fulfill the motivational function as a reinforcement by decreasing
homophobic attitudes. These particular hypotheses are exploratory, for there are
no documented research findings on the printed media’s portrayal of AIDS.

3) It is expected classes in school, as contributing influence to an
individual’s knowledge of AIDS, will significantly increase the accuracy and
certainty of AIDS related knowledge (3a). However, it is believed classes in
school informing individuals on AIDS will increase a student’s belief homosexuals
are responsible for AIDS (3b); similarly, it is also anticipated classes in school will
significantly increase overall homophobia (3c).

As cited earlier in the literature review, education is the strongest
prevention against the spread of AIDS. It was also found education, as a
contributor to an individual’s knowledge on AIDS, needs to present AIDS in an
accurate and sensitive manner in order to be effective. It is anticipated classes in
school may satisfy the information function as a reinforcement, altering the
possibility of students performing certain behaviors. However, it is believed
classes in school may vicariously reinforce homophobic attitudes, if the issue of
AIDS is not presented in a sensitive and accurate manner. And educators on
AIDS may externally reinforce homophobia by presenting biased or inaccurate
information on AIDS.

4) It is expected that church, as an informational source on AIDS, will
decrease an individual’s knowledge on AIDS (4a). It is also believed religion, or
church, will significantly increase the belief homosexuals are responsible for AIDS
(4b); consequently, it is anticipated that church, as an AIDS-related information source, will significantly increase homophobia among congregational members which will be reflected in this study (4c).

From Doob’s perspective of cognitive social learning theory, religion (as an educator of AIDS) will externally reinforce homophobia through its symbolic or interpretative usage of AIDS as God’s wrath on homosexual behavior. Thus, it is believed such homophobic convictions will be internalized by congregational members. Church may also present conflicting or inaccurate information on AIDS to maintain its moral or normative stand on sexuality linked to reproduction.

5) It is expected discussion with friends, as an AIDS related information source, will significantly decrease knowledge of AIDS (5a). Discussions with friends will also significantly increase the belief homosexuals are responsible for AIDS (5b). It is expected discussions with friends, in which information on AIDS is exchanged, will significantly increase the likelihood of overall homophobia (5c).

Second-hand knowledge is usually more inaccurate than first-hand knowledge. Since discussions with friends on AIDS is second-hand knowledge, it is likely that knowledge on AIDS obtained through friends has a high probability of being inaccurate. Second-hand knowledge on AIDS is dependent on the symbolic manner in which the information had been initially internalized. Therefore, observational learning (or modeling) may occur within the peer group regarding information on AIDS and homophobia. In other words, if a friend has internalized (or self-reinforced) AIDS as consequence of homosexual behaviors, and develops homophobic attitudes based on this internalization, the information the individual transmits may encourage homophobic attitudes among his/her
friends based upon Bandura's principle of modeling.

6) It is expected that discussions with parents, which contribute to an individual's knowledge on AIDS, will decrease the accuracy and certainty of the individual's knowledge on AIDS (6a). It is expected discussions with parents will significantly increase the belief homosexuals are responsible for AIDS (6b); and similarly, discussions with parents as an AIDS-related information sources will significantly increase homophobia (6c).

The rationale for the hypothesized role of parents in decreasing accurate and certain knowledge on AIDS and increasing homophobic attitudes, is based on the same principle as information obtained from friends. Through external reinforcement (modeling), internal reinforcement, and vicarious learning parents may transmit symbolically homophobic values during discussions with their children on AIDS.

7) It is anticipated that the more accurate and certain knowledge an individual has on AIDS, the less likely he or she will believe homosexuals are responsible for AIDS.

8) It is expected that the more likely an individual believes homosexuals are responsible for AIDS, the more likely he or she will be, in general, homophobic. In the United States, homosexuality and AIDS are mutually paired. Therefore, the belief homosexuals are responsible for AIDS will serve as a positive reinforcer to an individual's homophobic attitudes by internally reinforcing current homophobic beliefs.

In selecting this particular model, several possible models were considered. One such alternative model proposed homophobia was a key variable in the selection of AIDS-related information sources, which would impact on knowledge
about AIDS. After careful deliberation, the model of AIDS-related information sources impacting on homophobia through knowledge about AIDS, and the belief homosexuals are responsible for AIDS was chosen. Theoretically, the latter path model would isolate reinforcement effects whereas the first model would not. It should be stressed that neither model was considered superior. The latter model seemed more appropriate in the explanation of AIDS-related information sources impacting as reinforcers toward homophobia.

These postulated relationships will be investigated by a path analytical model; separate models will be used to distinguish differences between California and Iowa, and gender differences between males and females. Path analysis will assess the associations between certain AIDS-related information sources and homophobic attitudes, through the mediation of an individual’s knowledge on AIDS and the belief homosexuals are responsible for AIDS.
CHAPTER TWO

Methodology

Sample

The data for this thesis were obtained from surveys administered during the winter of 1988 at Iowa State University, and the University of California at Riverside. The first subsample initially consisted of 450 undergraduate students enrolled in several sociology courses at the University of California. This subsample was comprised of 197 males and 251 females. Seventy percent of the California respondents were underclassmen (freshmen or sophomores). Students majoring in Agriculture or Home Economics and Art or Design composed slightly less than 10% of the sample, whereas 40% of the respondents were considering a major in either the Social Sciences or Education. Students majoring in the Natural Sciences (math, engineering, etc.) and students majoring in Business respectively comprised 16% and 35% of the sample. Approximately sixty percent of the respondents from California were from urban centers, and 38% of the students were either from rural centers or small towns. Roughly half of the respondents were between the ages of 19 and 20. One-fourth of the students were between the ages of 21 and 24. Approximately 20% of the respondents from California were under the age of 19; the remaining 5% were over the age of 25. Regarding homosexual tendencies among the California sample, 12% of the respondents had either thought about, or experienced a homosexual relation, whereas, 88% of the California students had never considered a homosexual association. Table 1 illustrates the compatibility between the two samples.

The second subsample consisted of 464 undergraduate students enrolled in
TABLE 1. Breakdown of Demographic Variables by Iowa and California

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>California</th>
<th>Iowa</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>44%</td>
<td>41%</td>
</tr>
<tr>
<td>Females</td>
<td>56%</td>
<td>59%</td>
</tr>
<tr>
<td><strong>Year in College</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshman</td>
<td>33%</td>
<td>21%</td>
</tr>
<tr>
<td>Sophomore</td>
<td>37%</td>
<td>30%</td>
</tr>
<tr>
<td>Junior</td>
<td>20%</td>
<td>26%</td>
</tr>
<tr>
<td>Senior</td>
<td>10%</td>
<td>23%</td>
</tr>
<tr>
<td><strong>Major</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture or Home Economics</td>
<td>4%</td>
<td>14%</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>16%</td>
<td>17%</td>
</tr>
<tr>
<td>Social Sciences or Education</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>Art or Design</td>
<td>5%</td>
<td>14%</td>
</tr>
<tr>
<td>Business</td>
<td>35%</td>
<td>35%</td>
</tr>
<tr>
<td><strong>Geographical Background</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>10%</td>
<td>22%</td>
</tr>
<tr>
<td>Small town</td>
<td>28%</td>
<td>29%</td>
</tr>
<tr>
<td>Urban - Suburban</td>
<td>62%</td>
<td>49%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 or younger</td>
<td>19%</td>
<td>12%</td>
</tr>
<tr>
<td>19-20</td>
<td>51%</td>
<td>42%</td>
</tr>
<tr>
<td>21-24</td>
<td>25%</td>
<td>42%</td>
</tr>
<tr>
<td>25-30</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>31 or older</td>
<td>2%</td>
<td>1%</td>
</tr>
</tbody>
</table>
Courtship and Marriage courses at Iowa State University. The Iowa State sample was composed of 189 males and 275 females. Approximately half of the Iowa respondents were underclassmen, and half were upperclassmen. Thirty-five percent of the respondents were majoring in Business. Twenty percent of the students were majoring in the Social Sciences or Education, Agriculture or Home Economics, Natural Sciences, and Art or Design each made up approximately 15% of the remaining sample. Slightly under half the Iowa respondents were from urban centers, and the other half were from either rural communities and small towns. Forty-two percent of the students were between the ages of 19 and 20, and 42% of the students were between the ages of 21 and 24. However, California respondents were roughly two years younger than the Iowa respondents. Only 4% of the respondents were older than 24, and 12% of the sample was younger than 19. Regarding sexual orientation, just under ten percent of the Iowa respondents had considered or experienced homosexual relations.

In comparing the two samples, it appears both samples are similar in gender composition. The Iowa sample was relatively normally distributed among college classifications, whereas the California sample was slightly skewed toward underclassmen. Twice as many Social Science majors composed the California sample compared to the Iowa sample. And approximately three times as many Art or Design and Agriculture or Home Economics majors were in the Iowa sample versus the California sample. Yet, with regard to Business and Natural Science majors, the Iowa and California samples were roughly equal. Twice as many Iowa respondents were from rural centers, whereas 13% more California respondents were from urban centers. The bulk of both samples (approximately 85%) fell within the age category of 19 to 24. In general, the two samples are
compatible, although the California sample may be considered to be more urban, and the Iowa sample could be considered more rural and slightly older.

Though this was a nonrandom selection framework, at the University of California a random number table was consulted in the selection of classes from a departmental roster in which to administer the questionnaire. At Iowa State University, departmental restrictions prevented a random sample and all subjects were from undergraduate Courtship and Marriage sections. The respondents were asked to complete the questionnaire during a class period of the selected sociology course (the students who responded to the questionnaire were volunteers). The survey was proctored (as an exam) by teaching assistants and course instructors to assure confidentiality. The initial survey was approved by the Human Subjects Review Committee at both universities.

It should be noted that undergraduate students, who are registered for elective sociology courses, may unduly express more concern for social issues. Also, Courtship and Marriage students may be considered as being more focused or sophisticated in their knowledge of human sexuality. Thus, students who are socially conscious about AIDS and homophobia may be more apt to express their perspectives on the subject. The sample composition, therefore, may present some threat to the external validity of the design. Because only college students, and those college students studying social issues, were targeted, the finding of this research may not be generalized to the American population as a whole. The bulk of the questionnaires were administered in sociology courses dealing (directly or indirectly) with human sexuality; consequently, the result of this survey should reflect a more educated, liberal response to differences on sexual orientation. Findings of homophobic attitudes and ignorance of AIDS should be less expected
in these samples than in the general population.

The variables in this investigation include: the strength of AIDS informational sources contributing to the respondents' knowledge of AIDS, accurate and certain knowledge on AIDS, attitudes about homosexuals being responsible for AIDS virus, and overall homophobia not attributed to the AIDS epidemic.

**Information Sources on AIDS**

Information sources on AIDS were broken into six distinct categories, including: visual media (television news or other programming), printed media (magazines and newspapers), discussions with parents, discussions with friends, classes in school, and church. Each respondent was asked to indicate the degree of strength each information source had contributed to their knowledge on the AIDS virus. The contribution of each score was measured on a 4-point scale, ranging from 1= "strongly contributed" to 4= "contributed nothing". The data were recoded as to provide direction and strength in the analysis of the associations.

**Knowledge of AIDS**

The knowledge of AIDS scale used for this thesis was based on "AIDS: What Young Adults Need to Know" (Yarger, 1987: 28-32). The scale consisted of the following nine items.

1. Aids can be transmitted by sexual intercourse between a man and a woman.
2. One can carry the AIDS virus and not develop AIDS.
3. One can get AIDS from deep or "French" kissing.
4. AIDS can be transmitted by contact with carriers' blood.
5. AIDS can be transmitted by semen.
6. AIDS can be transmitted by mosquitos.
7. AIDS can be transmitted by saliva.
8. AIDS can be transmitted through sharing needles used to inject drugs.
9. AIDS can be transmitted by vaginal fluid.

The knowledge scale measured a continuum of certainty on each item by a 4-point scale. Response categories were: 1= "I know this to be true", 2= "I believe this to be true but I am not sure", 3= "I believe this to be false but I am not sure", and 4= "I know this to be false". Certain items on the scale were recoded to provide consistency in the scale. The higher the respondent’s score, the more accurate and certain the knowledge about AIDS. The knowledge scale yielded a Cronbach’s alpha coefficient of .63.

Attitude Regarding Homosexuals’ Responsibility for AIDS

The attitude that homosexuals are responsible for AIDS was measured on a 5-point Likert scale, ranging from 1= “strongly agree” to 5= “strongly disagree”. Respondents were asked to indicated the degree to which they agreed or disagreed with the statement: “homosexuals are responsible for AIDS”. The results were recoded to provide consistency regarding direction in the path analysis.

The attitude that homosexuals are responsible for AIDS was not included with the dependent measure of homophobia, because it is directly associated with the AIDS epidemic. Because this new fear is a product of the recent social concern about AIDS, it is considered independently of an overall attitude of homophobia.
Homophobia

Attitudes toward homosexuality were assessed by asking the respondents about certain beliefs and perceptions associated with homosexuals. Three questions were utilized to construct a homophobia scale. The first question ascertained an overall attitude toward homosexuality by asking respondents to choose one of the following four response categories.

1. Prefer homosexual relations.
2. There is nothing wrong with it; there is an element of homosexuality in everyone.
3. I do not care to engage in homosexual relations, but I think it is a matter of individual choice.
4. It is a mental illness, a perversion and should be suppressed.

The last two items on the homophobia scale were situational questions which assessed students' moral perceptions of homosexuality. The second item in the homophobia scale asked to students if they believed "being a homosexual or lesbian should disqualify a person from being a school teacher." Respondents were asked to endorse one of four categories. The categories ranged from 1= "agree" to 4= "disagree". This particular item in the homophobia scale was recoded to provide consistency with the other measures of homophobia.

The last item on the homophobia scale assessed students' attitudes toward the question: "University classes should present positive portrayals of homosexuals and lesbians." Respondents were asked to select from one of four categories. The categories ranged from 1="agree" to 4="disagree."

The three items were summed to comprise a scale of homophobia (operationally defined as an overall negative attitude toward homosexuality). The
homophobia scale yielded a Cronbach’s alpha of .66. Low scores on the scale indicated more favorable attitudes, whereas, higher scores on the scale are indicative of homophobic attitudes.

Statistical Analysis

A Pearson’s correlation matrix was computed, incorporating all the independent measures involved in the study. There was a .3115 correlation between the contribution from printed media and visual media. And a .2359 correlation between discussions with parents and church as informational agents concerning knowledge of AIDS. By using a stepwise regression technique for model building, interaction terms between discussions with parents and church, visual and printed media were tested in the complete model. Both interaction terms proved to be insignificant. In addition, a residual scatterplot of each variable was computed. Both processes suggested minimal effects of multicollinearity.

The data were analyzed by region (California and Iowa) and by sex. First, an analysis of variance between the means of knowledge on AIDS, the belief homosexuals are responsible for AIDS, and overall homophobia were computed for each region and each sex. Second, correlations were identified between California and Iowa students with respect to the independent variables used in the complete model. Third, the two regions were broken down by sex, and regression analyses were employed to distinguish gender differences. Then path analysis was used to test the hypotheses of this thesis. The implementation of path analysis was considered as a statistical technique to evaluate the strength of
the bonds between key variables. For this thesis, a path analytic model was constructed for the hypothesized relationships. A number of independent variables were incorporated in this model (contribution of parents, school, church, friends, visual media, and printed media to an individual's knowledge on AIDS). The independent variables were then examined as to their impact on homophobia through the mediating variables, extent of accurate knowledge on AIDS and the belief homosexuals are responsible for AIDS.
CHAPTER THREE

Results

The degree of contribution from each information source, pertaining to the respondents' knowledge of AIDS, were determined for both males and females in each region (see Tables 2 and 3). California respondents relied quite heavily on the media (both printed and visual) for their knowledge of the AIDS epidemic. Fifty-three percent of males and 55% of females reported television programming and other visual media strongly contributed to their knowledge on AIDS. Only 1% of males and 2% of females, from the California sample, acknowledged visual media contributed nothing to their knowledge on AIDS. The contribution of printed media was slightly less than visual media for the California sample, 44% of males and 48% of females reported printed media strongly contributed to their knowledge of the epidemic. Only a small minority (4% of males and 2% of females) claimed printed media contributed nothing to their knowledge of AIDS.

It is evident few respondents relied on their church or discussions with their parents regarding information about AIDS. Only 8% of males and 16% of females reported that discussions with their parents strongly contributed to their knowledge on AIDS. Over half the California sample claimed discussions with their parents had contributed nothing to their knowledge on AIDS. Similarly, 4% of males and 3% of females reported that their church had strongly contributed to their knowledge of AIDS. More than 75% of the California sample reported their church contributed nothing to their present knowledge of AIDS.
Table 2. Contribution of AIDS-Related Information Sources to California Respondents' Knowledge on AIDS

<table>
<thead>
<tr>
<th>AIDS-Related Information Sources</th>
<th>Degree of Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>contributing nothing</td>
</tr>
<tr>
<td></td>
<td>Males</td>
</tr>
<tr>
<td>Visual Media</td>
<td>1%</td>
</tr>
<tr>
<td>Printed Media</td>
<td>4%</td>
</tr>
<tr>
<td>Discussions with Parents</td>
<td>53%</td>
</tr>
<tr>
<td>Church</td>
<td>77%</td>
</tr>
<tr>
<td>Classes in School</td>
<td>30%</td>
</tr>
<tr>
<td>Discussions with Friends</td>
<td>13%</td>
</tr>
</tbody>
</table>

Eighteen percent of males and twenty-one percent of females from the California sample acknowledged classes in school had strongly contributed to their knowledge on AIDS. However, approximately 30% of the California respondents claimed classes in school had contributed nothing to their knowledge.
on AIDS. Thus, it appears classes in school, for the California sample, varied in degree of contribution to students' knowledge about AIDS.

It was concluded that discussions with friends slightly or somewhat contributed to a majority of the California respondents, regarding their knowledge on AIDS. Forty percent of males and 36% of females reported discussions with friends had slightly contributed to their knowledge about AIDS. And approximately 35% of the California respondents claimed discussions with friends had somewhat contributed to their knowledge on AIDS. Thirteen percent of males declared discussions with friends had either strongly contributed or contributed nothing to their knowledge of AIDS. Similarly, 15% of females from the California sample reported discussions with friends had either strongly contributed or contributed nothing to their knowledge of AIDS.

Regarding the Iowa sample, 70% of males and 62% of females reported visual media had strongly contributed to their knowledge on AIDS. None of the Iowa respondents had claimed visual media contributed nothing to their knowledge on the epidemic. Forty-one percent of males and slightly over half the females in the Iowa sample declared printed media had strongly contributed to their knowledge about AIDS. None of the males and only 2% of the females from the Iowa sample claimed printed media did not contribute to their knowledge on AIDS.

Sixty-one percent of males and 48% of females from the Iowa sample reported discussions with parents had not contributed to their knowledge on AIDS, whereas, only 5% of females and 2% of males claimed discussions with parents strongly contributed to their knowledge. Approximately 86% of the Iowa respondents acknowledged their church contributed nothing to their knowledge.
Table 3. Contribution of AIDS-Related Information Sources to Iowa Respondents' Knowledge on AIDS

<table>
<thead>
<tr>
<th>AIDS-Related Information Sources</th>
<th>Degree of Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>contributing nothing</td>
</tr>
<tr>
<td>Visual Media</td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>0%</td>
</tr>
<tr>
<td>Females</td>
<td>0%</td>
</tr>
<tr>
<td>Printed Media</td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>0%</td>
</tr>
<tr>
<td>Females</td>
<td>2%</td>
</tr>
<tr>
<td>Discussions with Parents</td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>61%</td>
</tr>
<tr>
<td>Females</td>
<td>48%</td>
</tr>
<tr>
<td>Church</td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>84%</td>
</tr>
<tr>
<td>Females</td>
<td>88%</td>
</tr>
<tr>
<td>Classes in School</td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>32%</td>
</tr>
<tr>
<td>Females</td>
<td>30%</td>
</tr>
<tr>
<td>Discussions with Friends</td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>8%</td>
</tr>
<tr>
<td>Females</td>
<td>8%</td>
</tr>
</tbody>
</table>

about AIDS. Consequently, none of the males and only 1% of the females reported their church strongly contributed to their knowledge on the AIDS virus. Classes in school had strongly contributed to knowledge on AIDS for approximately 11% of the Iowa respondents. And approximately 31% of the Iowa
respondents claimed classes in school had contributed nothing to their knowledge about AIDS. However, 34% of males and 36% of females reported classes in school slightly contributed to their knowledge.

The majority of the Iowa respondents declared discussions with friends had either slightly or somewhat contributed to their knowledge of AIDS. Only 10% of males and 17% of females claimed discussions with friends had contributed to their understanding about AIDS. Consequently, only 8% of the Iowa respondents acknowledged discussions with friends had not contributed to their knowledge of AIDS.

It appears respondents from both samples relied quite heavily on visual and printed media for their knowledge on AIDS. However, the contribution of printed media was slightly less than visual media for both California and Iowa respondents. It is evident few respondents relied on their church or discussions with their parents regarding information about AIDS. And the majority of respondents acknowledged classes in school and discussions with friends had either slightly or somewhat contributed to their understanding of the AIDS epidemic.

The means were calculated for each region and sex to determine any significant differences with regard to the key variables in this study (the contribution of AIDS-related information sources to a respondent’s knowledge on AIDS, the accuracy and certainty regarding the respondent’s knowledge about AIDS, the belief homosexuals are responsible for AIDS, and homophobia). The breakdown of means for each variable in the study by region and by sex appears in Tables 4, 5, and 6.

An analysis of the variance between the mean scores for each key variable in
this study indicated significant regional differences. It appears the Iowa respondents utilized visual media in obtaining their information about AIDS more so than California residents. Regarding printed media and discussions with parents as AIDS-related information sources, there were no significant differences in the utilization of these sources for both samples. However, Iowa residents cited discussions with friends as an information source on AIDS more so than the California respondents. Classes in school and church, as AIDS information sources, significantly contributed more to the California residents’ knowledge on AIDS than the Iowa residents.

Though significant regional differences were apparent, regarding the contribution of the various information sources on AIDS, both the California sample and the Iowa sample yielded approximately the same mean score for accuracy and certainty of knowledge on AIDS. The accuracy and certainty of the respondents’ knowledge on the transmission of the AIDS virus had a possible range of completely inaccurate and uncertain knowledge on AIDS (which would yield a score of 9) to completely accurate and certain knowledge on AIDS (which would yield a score of 36). In general, the mean score of all the respondents in the study was 30.44. It should be noted that this mean is within the upper-quartile range.

It was expected that California respondents would express more accurate knowledge on AIDS than Iowa respondents; however, both samples had achieved approximately the same mean score on the knowledge scale. It should be noted the California sample, in general, were two years younger than the Iowa sample. Accounting for this age lag between the two samples, perhaps explains the similarity in mean score.
Table 4. Comparison of Means for AIDS-Related Information Sources, Knowledge on AIDS, Belief Homosexuals Are Responsible for AIDS, and Homophobia for College Students in California and Iowa

<table>
<thead>
<tr>
<th>Variables</th>
<th>California</th>
<th>Iowa</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual Media 3.407</td>
<td>3.600</td>
<td>18.888***</td>
<td></td>
</tr>
<tr>
<td>Printed Media 3.279</td>
<td>3.358</td>
<td>2.562</td>
<td></td>
</tr>
<tr>
<td>Discussions with Parents 1.733</td>
<td>1.665</td>
<td>.828</td>
<td></td>
</tr>
<tr>
<td>Church 1.315</td>
<td>1.186</td>
<td>5.692*</td>
<td></td>
</tr>
<tr>
<td>Classes in School 2.368</td>
<td>2.134</td>
<td>10.731***</td>
<td></td>
</tr>
<tr>
<td>Discussions with Friends 2.501</td>
<td>2.631</td>
<td>5.114*</td>
<td></td>
</tr>
<tr>
<td>Knowledge on AIDS 30.448</td>
<td>30.444</td>
<td>.001</td>
<td></td>
</tr>
<tr>
<td>Belief Homosexuals are Responsible for AIDS 2.761</td>
<td>2.913</td>
<td>3.312</td>
<td></td>
</tr>
<tr>
<td>Homophobia 7.814</td>
<td>8.154</td>
<td>5.363*</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05 level.
***Significant at .001 level.

Regarding the belief that homosexuals are responsible for AIDS, there was no significant difference between Iowa and California. The mean score for the California sample was 2.761, and the mean score for the Iowa sample was 2.913. In general, the respondents maintained neutral opinions toward the statement homosexuals are responsible for AIDS.

The Iowa respondents were significantly more homophobic than the California respondents. It should be noted the homophobia scale produced a
possible score ranging from 3 to 12, signifying a continuum of homophobia. The mean score for California was 7.814; the mean score for the Iowa sample was 8.154. An analysis of the variance between the mean scores for each sex in the California sample yielded few significant differences for the key variables in this study. There were no significant differences between males and females regarding the contribution of various information sources on AIDS. In other words, males and females were inclined to use (or not use) the same information sources in

Table 5. Comparison of Means for AIDS-Related Information Sources, Knowledge on AIDS, Belief Homosexuals Are Responsible for AIDS, and Homophobia for Males and Females in California

<table>
<thead>
<tr>
<th>Variables</th>
<th>Males</th>
<th>Females</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual Media 3.429</td>
<td>3.392</td>
<td>.283</td>
<td></td>
</tr>
<tr>
<td>Printed Media</td>
<td>3.245</td>
<td>3.306</td>
<td>.639</td>
</tr>
<tr>
<td>Discussions with Parents</td>
<td>1.759</td>
<td>1.712</td>
<td>.276</td>
</tr>
<tr>
<td>Church</td>
<td>1.367</td>
<td>1.271</td>
<td>1.783</td>
</tr>
<tr>
<td>Classes in School</td>
<td>2.347</td>
<td>2.377</td>
<td>.076</td>
</tr>
<tr>
<td>Discussions with Friends</td>
<td>2.471</td>
<td>2.522</td>
<td>.348</td>
</tr>
<tr>
<td>Knowledge on Aids</td>
<td>30.330</td>
<td>30.537</td>
<td>.704</td>
</tr>
<tr>
<td>Belief Homosexuals are</td>
<td>2.931</td>
<td>2.629</td>
<td>6.125*</td>
</tr>
<tr>
<td>Responsible for AIDS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homophobia 8.374</td>
<td>7.372</td>
<td>20.971***</td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05 level.
***Significant at .001 level.
Table 6. Comparison of Means for AIDS-Related Information Sources, Knowledge on AIDS, Belief Homosexuals Are Responsible for AIDS, and Homophobia for Males and Females in Iowa

<table>
<thead>
<tr>
<th>Variables</th>
<th>Males</th>
<th>Females</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual Media</td>
<td>3.677</td>
<td>3.547</td>
<td></td>
</tr>
<tr>
<td>Printed Media</td>
<td>3.302</td>
<td>3.396</td>
<td>2.117</td>
</tr>
<tr>
<td>Discussions with Parents</td>
<td>1.524</td>
<td>1.763</td>
<td>9.181**</td>
</tr>
<tr>
<td>Church</td>
<td>1.207</td>
<td>1.171</td>
<td>.552</td>
</tr>
<tr>
<td>Classes in School</td>
<td>2.111</td>
<td>2.150</td>
<td>.173</td>
</tr>
<tr>
<td>Discussions with Friends</td>
<td>2.556</td>
<td>2.684</td>
<td>2.702</td>
</tr>
<tr>
<td>Knowledge on Aids</td>
<td>29.978</td>
<td>30.761</td>
<td>9.017**</td>
</tr>
<tr>
<td>Belief Homosexuals are Responsible for AIDS</td>
<td>3.238</td>
<td>2.688</td>
<td>23.204***</td>
</tr>
<tr>
<td>Homophobia</td>
<td>8.878</td>
<td>7.643</td>
<td>42.955***</td>
</tr>
</tbody>
</table>

*Significant at .05 level.
**Significant at .01 level.
***Significant at .001 level.

obtaining their knowledge on AIDS. It also appears both sexes internalized the same amount of information regarding their accuracy and certainty of knowledge on AIDS. However, males from the California sample were significantly more inclined to believe homosexuals are responsible for AIDS than females. Consequently, males also were significantly more homophobic than females in the California sample.

An analysis of the variance between the mean scores for each sex in the
Iowa sample yielded significant differences for the key variables in this study. Males from the Iowa sample significantly reported a stronger contribution from visual media to their knowledge on AIDS than females. However, females from the Iowa sample reported discussions with their parents contributed more to their knowledge on AIDS than males. Females were more accurate and certain regarding their knowledge on the transmission of the AIDS virus than males in the Iowa sample. Perhaps it is this difference in knowledge about AIDS that explains why males were significantly more inclined to believe AIDS is the responsibility of homosexuals, and why males from the Iowa sample were significantly more homophobic than females.

In summarizing the differences between the sexes in both regions, three significant results are quite clear. Males from Iowa are more likely than Iowa females and California respondents to obtain their information on AIDS through visual media. Males from both California and Iowa are more inclined to believe homosexuals are responsible for AIDS than female respondents. And males from Iowa tend to be the most homophobic, and females from California tend to be the least homophobic.

The bivariate correlations were computed for each independent variable's association with the dependent variables used in this study. The two regions were separately analyzed by males and females. For males in the Iowa sample, classes in school (as an AIDS-related information source) were significantly correlated with homophobia ($r = .209$). Thus the stronger the contribution of classes in school to a male student's knowledge of AIDS, the more likely he is to be homophobic. Discussions with friends was also positively related to homophobia for Iowa males ($r = .149$). This significant correlation infers
information on AIDS obtained through discussions with friends is more likely to reflect homophobic attitudes. Finally, for Iowa males, church (as an AIDS-related information source) was found to be significantly associated with homophobia ($r = .166$).

With regard to the belief homosexuals are responsible for AIDS, the only significant correlation among the independent variables was classes in school which strongly contribute to a student’s knowledge on AIDS and also contribute to his/her belief homosexuals are responsible for AIDS. For Iowa males, only two sources of AIDS-related information sources were significantly correlated with accuracy of knowledge on AIDS. Visual media significantly increased accurate and certain knowledge on AIDS ($r = .177$); church, as an information source on AIDS, significantly decreased accurate knowledge on AIDS ($r = -.149$).

For females from the Iowa sample, only church (as an information source on AIDS) was significantly correlated with homophobia ($r = .123$). It appears Iowa females who report the church had strongly contributed to their knowledge on AIDS are more inclined to be homophobic. Both classes in school ($r = .121$) and discussions with friends ($r = .136$), as sources of aids-related information, were significantly associated with the belief homosexuals are responsible for AIDS. However, only visual media were significantly correlated with accurate knowledge on AIDS for Iowa females ($r = .137$).

To summarize the bivariate correlations for the Iowa sample (regarding the association between each AIDS-related source of information and the dependent variables in the study), it appears church was significantly correlated with homophobia for both males and females. For both sexes, classes in school were
significantly associated with the belief homosexuals are responsible for AIDS. Visual media were the only information source pertaining to AIDS which significantly increased both sexes’ knowledge about AIDS.

The bivariate correlations for males from the California sample produced results similar to the Iowa sample. Information on AIDS obtained from church was significantly correlated with homophobia ($r = .159$). Visual media (as an AIDS-related information source) significantly increased California males’ belief homosexuals are responsible for AIDS ($r = .248$). However, there were no significant correlations between the accuracy of AIDS knowledge and any of the AIDS-related information sources.

For females in the California sample, church as an information source on AIDS significantly increased homophobic attitudes ($r = .169$); and visual media significantly contributed to homophobia ($r = .129$). However, AIDS-related information obtained from printed media significantly decreased homophobic attitudes ($r = .219$). For females from the California sample, no significant correlations were found between any of the AIDS-related information sources and belief homosexuals are responsible for AIDS. Discussions with friends which contributed information on AIDS significantly decreased accurate knowledge on AIDS for California females ($r = -.207$).

For the California sample, information on AIDS obtained through the church significantly increased homophobic attitudes for both males and females. Not only is church, as an AIDS-related information source, significantly correlated with homophobia in the California sample, information on AIDS obtained through the church is significantly correlated with homophobia in both regional samples. Some regional differences exist regarding the bivariate correlations. For example, in the Iowa sample classes in school were positively correlated with the
Table 7. Bivariate Correlations: AIDS-Related Information Sources, Knowledge on AIDS, Belief Homosexuals are Responsible for AIDS, and Homophobia for California College Students

<table>
<thead>
<tr>
<th></th>
<th>Homophobia</th>
<th>Homosexuals are Responsible for AIDS</th>
<th>Knowledge on AIDS</th>
<th>Visual Media</th>
<th>Printed Media</th>
<th>Discussions with Parents</th>
<th>Classes in School</th>
<th>Church</th>
<th>Discussions with Friends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homophobia</td>
<td>—</td>
<td>.553*</td>
<td>-</td>
<td>.192*</td>
<td>.019</td>
<td>-.083</td>
<td>-.015</td>
<td>.090</td>
<td>.159*</td>
</tr>
<tr>
<td>Homosexuals are</td>
<td>.549*</td>
<td>—</td>
<td>-</td>
<td>-.142</td>
<td>.248*</td>
<td>.049</td>
<td>.051</td>
<td>-.044</td>
<td>.142</td>
</tr>
<tr>
<td>Responsible for AIDS</td>
<td>- .182*</td>
<td>- .239*</td>
<td>-</td>
<td>-.102</td>
<td>.067</td>
<td>.046</td>
<td>.043</td>
<td>-.057</td>
<td>-.007</td>
</tr>
<tr>
<td>AIDS Knowledge on</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIDS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual Media</td>
<td>.129*</td>
<td>.077</td>
<td>-.020</td>
<td>—</td>
<td>.412*</td>
<td>-.113</td>
<td>-.011</td>
<td>.091</td>
<td>.137</td>
</tr>
<tr>
<td>Printed Media</td>
<td>-.219*</td>
<td>-.098</td>
<td>.109</td>
<td>.312*</td>
<td>—</td>
<td>.027</td>
<td>.018</td>
<td>-.069</td>
<td>.251*</td>
</tr>
<tr>
<td>Discussions</td>
<td>-.003</td>
<td>-.023</td>
<td>.009</td>
<td>.093</td>
<td>.139*</td>
<td>—</td>
<td>.186*</td>
<td>.317*</td>
<td>.191*</td>
</tr>
<tr>
<td>with Parents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classes in School</td>
<td>-.061</td>
<td>.004</td>
<td>.026</td>
<td>-.286*</td>
<td>-.132*</td>
<td>.063</td>
<td>—</td>
<td>.119</td>
<td>.156*</td>
</tr>
<tr>
<td>Church</td>
<td>.169*</td>
<td>.057</td>
<td>-.108</td>
<td>.043</td>
<td>-.102</td>
<td>.140*</td>
<td>.103</td>
<td>—</td>
<td>.118</td>
</tr>
<tr>
<td>Discussions</td>
<td>.093</td>
<td>.042</td>
<td>-.207*</td>
<td>.034</td>
<td>.010</td>
<td>.173*</td>
<td>.143*</td>
<td>.172*</td>
<td>—</td>
</tr>
<tr>
<td>with Friends</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¥Coefficients for males appear above the diagonal.
*Significant at .05 level.
Table 8. Bivariate Correlations: AIDS-Related Information Sources, Knowledge on AIDS, Belief Homosexuals are Responsible for AIDS, and Homophobia for Iowa College Students

<table>
<thead>
<tr>
<th></th>
<th>Homophobia</th>
<th>Homosexuals are Responsible for AIDS</th>
<th>Knowledge on AIDS</th>
<th>Visual Media</th>
<th>Printed Media</th>
<th>Discussions with Parents</th>
<th>Classes in School</th>
<th>Church</th>
<th>Discussions with Friends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homophobia</td>
<td>-</td>
<td>.472*</td>
<td>-.041</td>
<td>.017</td>
<td>.039</td>
<td>.010</td>
<td>.209*</td>
<td>.166*</td>
<td>.149*</td>
</tr>
<tr>
<td>Homosexuals are Responsible for AIDS</td>
<td>.441*</td>
<td>-</td>
<td>-.102</td>
<td>.076</td>
<td>.082</td>
<td>-.049</td>
<td>.147*</td>
<td>.105</td>
<td>.105</td>
</tr>
<tr>
<td>Knowledge on AIDS</td>
<td>.025</td>
<td>-.012</td>
<td>-</td>
<td>.177*</td>
<td>.116</td>
<td>-.121</td>
<td>-.016</td>
<td>-.149*</td>
<td>-.083</td>
</tr>
<tr>
<td>Visual Media</td>
<td>.055</td>
<td>-.017</td>
<td>.137*</td>
<td>-</td>
<td>.274*</td>
<td>-.092</td>
<td>-.053</td>
<td>-.029</td>
<td>-.001</td>
</tr>
<tr>
<td>Printed Media</td>
<td>-.052</td>
<td>-.055</td>
<td>.002</td>
<td>.251*</td>
<td>-</td>
<td>-.063</td>
<td>-.036</td>
<td>.049</td>
<td>-.090</td>
</tr>
<tr>
<td>Discussions with Parents</td>
<td>.050</td>
<td>.109</td>
<td>.044</td>
<td>.045</td>
<td>.112</td>
<td>-</td>
<td>.204*</td>
<td>.386*</td>
<td>.153*</td>
</tr>
<tr>
<td>Classes in School</td>
<td>-.034</td>
<td>.121*</td>
<td>-.084</td>
<td>.010</td>
<td>.083</td>
<td>.142*</td>
<td>-</td>
<td>.216*</td>
<td>.157*</td>
</tr>
<tr>
<td>Church</td>
<td>.123*</td>
<td>.070</td>
<td>-.072</td>
<td>.011</td>
<td>.030</td>
<td>.231*</td>
<td>.161*</td>
<td>-</td>
<td>.213*</td>
</tr>
<tr>
<td>Discussions with Friends</td>
<td>.067</td>
<td>.136*</td>
<td>.019</td>
<td>.092</td>
<td>.130*</td>
<td>.084</td>
<td>.224*</td>
<td>.091</td>
<td>-</td>
</tr>
</tbody>
</table>

*Coefficients for males appear above the diagonal.

*Significant at .05 level.
belief homosexuals are responsible for AIDS; however, this was not the case for the California sample. And gender differences are apparent with regard to the bivariate correlations. For example, printed media contributing information on AIDS was negatively correlated with homophobia for California females, but not so for California males.

Figures 2, 3, and 4 illustrate the path diagram of the proposed relationships with standardized regression coefficients. As previously noted, the path model posits accuracy of knowledge on AIDS is a consequence of each AIDS-related information source (visual media, printed media, discussions with parents, discussions with friends, classes in school, and church). Knowledge on AIDS is an antecedent to the belief homosexuals are responsible for AIDS, and such a belief is a factor to an overall attitude of homophobia.

A regional analysis of the path model indicates significant differences between California and Iowa (see Figure 2). For the California sample, printed media were the only AIDS-related information source that had a positive effect on the accuracy of knowledge on AIDS (beta=.119). However, discussions with friends had a negative effect on accuracy of knowledge on AIDS (beta=.138). In other words, California respondents were more likely to be certain and accurate regarding their knowledge about AIDS when printed media strongly contributed to their knowledge on AIDS. However, when discussions with friends strongly contributed to their information on AIDS, they were more likely to be uncertain and inaccurate regarding their knowledge on AIDS. The path model for the California respondents also suggests the more accurate knowledge on AIDS a respondent possessed, the less likely he/she was to believe homosexuals were responsible for AIDS (beta=-.169). However, visual media, regardless of the
Visual Media 
-0.084 (.126**)
Printed Media 
0.119* (.032)
Discussions with Parents 
0.043 (.045)
Discussions with Friends 
-0.138** (-.002)
Church 
0.055 (.034)
Classes in School 
0.003 (-.006)

Knowledge on AIDS 
-0.169* (-.068)
Belief Homosexuals are Responsible for AIDS 
0.518*** (.476***)
Homophobia

Coefficients for Iowa are in the parentheses.
*Significant at .05 level.
**Significant at .01 level.
***Significant at .001 level.

Figure 2. Regional Path Model of AIDS-Related Information Sources, Knowledge on AIDS, and Belief Homosexuals are Responsible for AIDS on Homophobia
accuracy of knowledge on AIDS, had a positive direct effect on the belief homosexuals are responsible for AIDS (beta=.153). The belief homosexuals are responsible for AIDS had a significantly strong positive effect on the California respondents’ overall homophobic attitude (beta=.518). Church as an AIDS-related information source, had a positive direct effect on homophobia (beta=.112). Though printed media did not directly decrease the belief homosexuals are responsible for AIDS, it did decrease overall homophobic attitudes for the California respondents (beta=.157).

When examining the path model for the Iowa sample, visual media had a positive effect on the accuracy of knowledge on AIDS (beta=.126); and Iowa respondents who obtained information on AIDS from church were more likely to report uncertain and inaccurate knowledge on AIDS (beta=-.117). Whereas knowledge about AIDS significantly decreased the belief homosexuals are responsible for AIDS for the California sample, this was not the case for the Iowa sample; accurate knowledge on AIDS did not significantly decrease the belief homosexuals are responsible for AIDS. However, classes in school had a direct positive effect on this belief (beta=.103). The belief homosexuals are responsible for AIDS significantly contributed to the Iowa respondents’ overall homophobic attitude (beta=.476); and church as an information source on AIDS independently increased homophobic attitudes (beta=.113). Information on AIDS obtained from church did not significantly affect the Iowa respondents’ knowledge on AIDS, or the belief homosexuals are responsible for AIDS; but the contribution of church to AIDS knowledge directly increased homophobic attitudes for the Iowa sample.

In summary, the path model explains 36% and 26% of the total variance in homophobic attitudes that is explained by the simultaneous predictive power of
all the variables for the California and Iowa sample, respectively.

Figure 3 demonstrates gender differences from the California sample with regard to the path model. For California males, no significant effects were found between the six AIDS-related information sources and their accuracy of knowledge on AIDS, although visual media does approach significance ($p<.077$). Thus, none of the informational agents on AIDS cited in this study impacted on California males' knowledge of AIDS; and consequently, knowledge on AIDS did not significantly and directly affect California males' belief homosexuals are responsible for AIDS ($\beta=.224$). Although visual media did increase the belief homosexuals are responsible for AIDS, it also had an independent negative effect on the homophobic attitudes of California males ($\beta=-.138$). Both classes in school and church, as information sources on AIDS, had a moderate positive effect on homophobia for the male respondents in the California sample ($\beta$=.132 and .120 respectively). Finally, California males who believed homosexuals are responsible for AIDS were more inclined to harbor homophobic attitudes ($\beta=.541$).

For the female respondents from the California sample, only discussions with friends, considering the sources of information on AIDS, proved to be significantly associated with knowledge on AIDS. For California females, discussions with friends detract from their accuracy and certainty regarding knowledge on AIDS ($\beta=-.223$). In contrast to California males, knowledge on AIDS had a significant negative effect on California females' belief homosexuals are responsible for AIDS ($\beta=.219$). In other words, the more knowledge about AIDS a female from California possesses, the less likely she believes homosexuals are responsible for AIDS. Yet the more likely she believes homosexuals are
responsible for AIDS, the stronger her homophobic convictions (beta=.512). With regard to the direct effects certain AIDS-related information sources have on homophobia, it appears both visual media and church positively affect homophobic attitudes for California females (betas=.131 and .107 respectively). However, printed media decreases homophobia among California females (beta= .200).

For the Iowa sample, visual media had a positive effect on knowledge on AIDS for Iowa males (beta=.153, see Figure 4). Visual media were also found to significantly increase knowledge on AIDS for Iowa females (beta=.138). For both sexes, knowledge on AIDS did not significantly affect the belief homosexuals are responsible for AIDS. The belief homosexuals are responsible for AIDS does have a positive effect on homophobia for both males and females (betas= .445 and .434, respectively). However, differences in direct effects of AIDS-related information sources were discovered. It appears classes in school had a moderately positive effect on homophobia for Iowa (beta=.115); and church, as an information source on AIDS, had a moderately positive effect on homophobia for Iowa females (beta=.107).

To summarize the findings of the path analysis for sex differences between the two regions, it appears the California path model explains more of the total variance in homophobic attitudes than are explained by the simultaneous predictive powers of all the variables employed in this study. The coefficient of multiple determination were computed for each regional model. It was found for the California sample, the coefficient of multiple determination was 37% and 38% for males and females respectively; whereas for the Iowa sample, the coefficient of multiple determination was 26% and 21% for males and females respectively.
Visual Media
-0.144 (-0.039)

Printed Media
0.127 (0.102)

Discussions with Parents
0.036 (0.035)

Discussions with Friends
-0.026 (-0.223**)

Church

Classes in School
0.043 (0.075)

Knowledge on AIDS

Belief Homosexuals are Responsible for AIDS

Homophobia

\( \text{Homophobia} = 0.541^{***} \)

\( \text{T} \) coefficients for females are in parentheses.

*Significant at .05 level.

**Significant at .01 level.

***Significant at .001 level.

Figure 3. California Path Model of AIDS-Related Information Sources, Knowledge on AIDS, and Belief Homosexuals are Responsible for AIDS on Homophobia
Discussions with Parents 
Knowledge on AIDS 
Belief Homosexuals are Responsible for AIDS 
Homophobia

Visual Media 
Printed Media 
Discussions with Friends 
Church 
Classes in School

.049 (.081) 
.076 (.039) 
.098 (.107*) 
.114 (.115*)

.153* (.138*) 
.046 (.031) 
-.129 (-.080) 
.042 (-.084)

-.038 (.056)**

.000 (-.035)

-.048 (-.005)

-.118 (.005)

-.114 (.115*)

***Significant at .001 level.

Figure 4. Iowa Path Model of AIDS-Related Information Sources, Knowledge on AIDS, and Belief Homosexuals are Responsible for AIDS on Homophobia

††Coefficients for females are in parentheses.

*Significant at .05 level.

**Significant at .001 level.
To conclude the results of this study, the major source of information on AIDS utilized by the respondents in this study were visual and printed media. Iowa respondents (males more so than females) reported visual media had contributed more to their knowledge on AIDS than the California respondents. Visual media were also significantly correlated with accurate knowledge about AIDS for the Iowa sample. However, visual media were significantly correlated with the belief homosexuals are responsible for AIDS for California males. The use of printed media, as an information source on AIDS, actually decreased homophobia among California females.

Discussions with parents and church contributed very little information to the respondents' knowledge on AIDS. However, California respondents were more likely to report church as a contributor to their knowledge on AIDS than Iowa respondents. The information on AIDS obtained through church was significantly correlated with homophobic attitudes for all the respondents in the study. In fact, for Iowa males, when the church did provide information on AIDS it significantly decreased their knowledge on AIDS. Thus, it appears information on AIDS obtained through the church has homophobic overtones, and for some respondents provided inaccurate information on the transmission of the AIDS virus. Iowa females were more likely than Iowa males to rely on discussions with their parents for information on AIDS, although it was found discussion with parents about AIDS was not significantly correlated to knowledge on AIDS, the belief homosexuals are responsible for AIDS, and overall homophobia.

Iowa respondents were more likely that California respondents to obtain their information on AIDS through discussions with friends. Yet, information on AIDS obtained through friends was significantly correlated with homophobia for
Iowa males, and significantly associated with the belief homosexuals are responsible for AIDS for Iowa females. Therefore, discussions with friends which contributed to the Iowa respondents' knowledge on AIDS tended to reflect homophobic attitudes (directly or indirectly) associated with AIDS. California respondents relied more heavily on classes in school for their information on AIDS than Iowa respondents. But the information on AIDS expressed in the Iowa schools appears to be homophobic in nature. Classes in school, as an information source on AIDS, were significantly correlated with the belief homosexuals are responsible for AIDS for all the Iowa respondents. They were also significantly correlated with overall homophobia for Iowa males.

In general, Iowa females possessed more accurate knowledge on the transmission of the AIDS virus than Iowa males. However, California and Iowa are approximately equal regarding knowledge on AIDS. Males respondents were more likely to believe homosexuals are responsible for AIDS than females respondents. Iowa males were the most homophobic, while California females were the least homophobic in general.

Regarding the associations between certain AIDS-related information sources on homophobia, as mediated through knowledge on AIDS and the belief homosexuals are responsible for AIDS, California females were more likely to obtain inaccurate knowledge on AIDS from discussions with friends. Yet the more knowledge California females had on AIDS, the less likely they were to believe homosexuals are responsible for AIDS. For California males, television programming on AIDS directly reinforced their belief homosexuals are responsible for AIDS. Information on AIDS presented in visual media and church increased homophobic attitudes for California females. Classes in school and
church which delivered information on AIDS increased homophobia in California males. Visual media also increased the belief homosexuals are responsible for AIDS for California males, yet visual media actually decreased homophobic attitudes for California males. For all the California respondents, the belief homosexuals are responsible for AIDS increased general homophobia for all the California respondents.

The path model, separately analyzed for the Iowa sample, indicated television programming and other visual media effectively increased all the Iowa respondents’ knowledge on AIDS. However the belief homosexuals are responsible for AIDS encouraged homophobic attitudes among all the Iowa respondents. Both church and classes in school directly increased homophobia for Iowa females.
CHAPTER FOUR

Discussion of the Results

This research has examined the contribution of AIDS-related information sources on homophobia. The theoretical perspective employed in this study predicted certain information sources on AIDS may contribute to homophobic attitudes via external reinforcement (either through modeling or vicarious reinforcement). It was also predicted the degree of homophobia produced by AIDS-related information sources would vary by region and gender. The main focus of theoretically explaining the results of this study is on the associations presented in the path model.

Regional Differences

Table 9 summarizes the differences between regions for the separate path analyses for California and Iowa Students. Regarding the degree of contribution made by each information source on AIDS, visual media proved to be the strongest contributor to the respondents' knowledge on AIDS. However, Iowa college students reported that visual media contributed significantly more to this knowledge than California students. Printed media also proved to be a strong contributor to the respondents' knowledge on AIDS. Both discussions with friends and classes in school contributed somewhat to the respondents' information on the epidemic. Though the contribution of classes in school was moderate, California college students perceived classes in school as a contributor more so than Iowa college students. Church and discussions with parents
contributed nothing or very little information on AIDS. In general, Iowa college students were found to be more homophobic than California college students.

It was concluded in the regional path model that visual media provided information on AIDS which significantly increased the Iowa respondents' knowledge on the transmission of the AIDS virus. However, this finding was not consistent with California college students. Printed media, covering the topic of AIDS, were found to significantly increase the knowledge of California college students, but not Iowa college students. From a cognitive social learning perspective, television and other visual programming (for Iowa college students), and magazines and periodicals (for California college students) fulfills the information function of a reinforcement. In other words, both visual and printed media define and differentiate the consequences of behaviors in which the AIDS virus may be transmitted from individual to individual. Regionally, no other information source on AIDS was found to significantly increase the respondents' knowledge on AIDS. In fact, certain AIDS-related information sources significantly decreased knowledge on AIDS. Church, as an AIDS-related information source, actually decreased knowledge for Iowa college students with regard to contagion of the AIDS virus.

Discussions with friends significantly decreased knowledge on AIDS for California college students. Thus, discussions with friends (for California college students) and church (for Iowa college students) tends to blur the consequences of behaviors linked with the transmission of the AIDS virus.

For California college students, knowledge about AIDS significantly decreased the belief homosexuals are responsible for AIDS. The more accurate information California college students possessed on the transmission of the AIDS
Table 9. Summary of Findings for Regional Path Model

<table>
<thead>
<tr>
<th>Information Sources</th>
<th>California</th>
<th>Iowa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Knowledge on AIDS</td>
<td>Belief Homosexuals are responsible for AIDS</td>
</tr>
<tr>
<td>Visual Media</td>
<td>0</td>
<td>+ 0</td>
</tr>
<tr>
<td>Printed Media</td>
<td>+ 0</td>
<td>- 0</td>
</tr>
<tr>
<td>Discussions with Parents</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Discussions with Friends</td>
<td>- 0</td>
<td>0</td>
</tr>
<tr>
<td>Church</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Classes in School</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

related information source significantly increased homophobic attitudes for all the respondents, regardless of region. The direct impact church and printed media have on homophobia represent a modeling effect between AIDS information sources and attitude formation on homosexual behaviors. Both church and printed media can be conceptualized as external reinforcements, in which college students observe either positive or negative outcomes for behaviors related to homosexuality; and thus, develop attitudes toward homosexuality with regard to the observed behaviors. Church appears to present negative outcomes associated with homosexual behaviors, when informing college students on AIDS. Printed media, on the other hand, tend to present a positive coverage of homosexuality, when informing California college students on AIDS. Since printed media do not significantly increase California students' knowledge on transmission of the AIDS
virus, printed media affect the college students in California empathetically or emotionally as opposed to intellectually.

Both church and printed media (for California college students) also encourage self-reinforcement or internal reinforcement regarding individual values and standards associated with homosexuality. The respondents who have relied on AIDS-related information from church or printed media have internalized certain informational elements presented in these two sources into their preexisting value system. Respondents, obtaining their information on AIDS from church, have internalized homophobic attitudes. It should be noted that this study did not consider the affect on AIDS-related information sources on previous homophobic convictions; therefore, church may also exacerbate previous homophobic attitudes by positively reinforcing existing homophobic value systems. For Iowa college students, church appears to be a very ineffective information source on AIDS, recalling that church significantly decreases accurate knowledge on the transmission of the AIDS virus among Iowa college students.

Information on AIDS obtained from periodicals (for California college students) reduces homophobic attitudes. In other words, printed media affect California college students on an attitudinal level, not necessarily intellectually, when considering no significant correlation was found between printed media and knowledge on AIDS for this particular sample. Therefore printed media have presented a sympathetic portrait of homosexuality regarding AIDS, in which California students (utilizing printed media as an information source on AIDS) are more inclined to reevaluate their value systems regarding attitudes on homosexuality. It may be that people who obtain their information from media are more likely to be highly educated and more informed.
Gender Differences Among California Respondents

When examining each region by males and females, regional differences became more distinct. For example, AIDS-related information sources have more direct impact on homophobia for California students than Iowa college students. Yet, the usage rate of information sources on AIDS is proportionately the same in each region (although regional preferences for certain information sources do exist). Only two significant effects were consistent when controlling for sex in each region. In general, males were more likely to believe homosexuals are responsible for AIDS and were more homophobic than females. Although few similarities were apparent when examining each region independently, multiple differences were discovered between males and females when examining California and Iowa separately.

Table 10 summarizes gender differences from the California sample. No significant differences were determined between males and females in California regarding the perceived contribution of information sources on AIDS. The only significant differences between males and females in the California sample dealt with homosexuality. Males were more likely to believe homosexuals are responsible for AIDS; and males were also more likely to be homophobic when compared to females.

Though no significant differences were apparent in the usage rate of information sources, the path model isolated several gender differences among the California college students. The only information source that had a significant impact on knowledge about AIDS was discussions with friends. However, this was only true for females. Discussions with friends, in which females obtained their information on AIDS, significantly decreased the accuracy of knowledge on
AIDS. In other words, females who utilize discussions with friends as an AIDS-related information source were more likely to report inaccurate information regarding the transmission of the AIDS virus. Thus, discussions with friends (as an external reinforcement) tends to inadequately define specific outcomes of behaviors linked to the AIDS epidemic for California females.

Though no specific information source on AIDS significantly increased knowledge on AIDS, the more knowledge females in California possessed about AIDS, the less likely they were to believe homosexuals are responsible for AIDS. California females have integrated both informational and motivational components associated with external reinforcements. In general, extensive knowledge on AIDS tends to effect attitudinal formations regarding the association between AIDS and homosexual behaviors. Accurate information on AIDS motivates California females to perceive AIDS as a social phenomenon, not solely a problem linked to homosexual behaviors.

Television programming on AIDS significantly increased the belief homosexuals are responsible for AIDS among California males. As was suggested before under the discussion of regional differences, this pattern appears to be the result of vicarious pairing and reinforcement. California males, who utilize visual media as an information source on AIDS, have mutually paired homosexual behaviors with the AIDS epidemic. However, it should be noted that visual media significantly decreases overall homophobic attitudes among California males, which appears to be a contradiction associated with this particular information source. From a cognitive social learning perspective, this contradiction can be explained by the difference between external and internal reinforcements. It is proposed that visual media, as an information source utilized
by California males, externally and vicariously reinforce the paired association of homosexuality and AIDS; yet, television programming does not reinforce the internal value system of homophobia among California males. In other words, visual media (for California males) affect beliefs on AIDS and homosexual behaviors, but it does not affect internal value systems in the same manner. For example, a male may observe a television program on AIDS. From this program, he may be lead to believe that AIDS is a homosexual disease, because gay men are the largest “at risk” group. But by the same token, the program may also present a very sensitive depiction of gay men suffering from AIDS. This aspect of the television program may decrease the male’s homophobic attitudes. For California males, visual media appear to produce sympathetic or emotional internal reinforcements which decrease overall homophobia; and consequently, visual media also vicariously reinforce the paired association between homosexuality and AIDS. It is impossible to elaborate further on this contradiction, for the measures in this study only examined the amount of perceived contribution from each information source, and not the content of the material presented by the source.

As visual media decreases homophobia among California males, it was concluded that visual media significantly increases homophobia among California females. Recalling that external reinforcements are nothing more than interpretative or symbolic representations of environmental rewards and punishments, it is possible that California males and females are attaching different symbolic meanings to the information obtained from television programming on AIDS. This interpretative difference may be rooted in the difference associated with separate sexual scripts for each gender. In other words,
the same external reinforcement may be interpreted differently by males and females, because of the unique sexual scripts or schemata utilized by each sex. Through the process of interpreting or assigning meaning to visual media as an external reinforcement, the internal or self-reinforcement may vary according to each gender. California females may perceive symbolic presentations on AIDS appearing on visual media as a reinforcer to previous homophobic attitudes. Whereas, California males may symbolically attribute a different meaning to visual programming on AIDS which decreases their homophobic attitudes.

One significant problem in theoretically interpreting the results of this study is the operationalization of the measurements employed in this project. As was cited earlier, the information source on AIDS measure inquired to the amount of contribution each information source made to the respondents' knowledge on AIDS. The measurement did not acknowledge the nature, quality, or type of information solicited from the source. Thus, it is possible that males and females in the California sample may be viewing different television programming on AIDS, which would explain the gender differences associated with visual media and homophobia.

Periodicals and other printed media significantly decreased homophobic attitudes among California females. From a cognitive social learning perspective, printed media supplying information about AIDS tends to instigate self-reinforcement or internal reinforcement among California females. The information on AIDS obtained through this source may resculpture previous attitudes on homosexuality by negatively reinforcing existing homophobic attitudes. Thus printed media (as an AIDS-related information source) decrease homophobia by affecting California females on a motivational level.
Table 10. Summary of Findings for California Path Model

<table>
<thead>
<tr>
<th>Information Sources</th>
<th>California</th>
<th></th>
<th></th>
<th>Iowa</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Knowledge on AIDS</td>
<td>Belief Homosexuals are responsible for AIDS</td>
<td>Homophobia</td>
<td>Knowledge on AIDS</td>
<td>Belief Homosexuals are responsible for AIDS</td>
<td>Homophobia</td>
</tr>
<tr>
<td>Visual Media</td>
<td>0</td>
<td>+</td>
<td>-</td>
<td>0</td>
<td>0</td>
<td>+</td>
</tr>
<tr>
<td>Printed Media</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Discussions with Parents</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Discussions with Friends</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Church</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>0</td>
<td>0</td>
<td>+</td>
</tr>
<tr>
<td>Classes in School</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

It was concluded in this study that classes in school, as an information source on AIDS, significantly increased homophobia among California males. It is believed that classes in school positively reinforce previous homophobic convictions in California males through an internal reinforcement process. Not only did classes in school increase homophobia, but church (as an AIDS-related information source) also significantly increased homophobic attitudes among both California males and females. As with the regional path model, the belief that homosexuals are responsible for AIDS significantly increased homophobia for both California males and females. It seems apparent that certain information sources and beliefs regarding AIDS and homosexuality either encourage or discourage homophobia among the California college students.
Gender Differences Among Iowa Respondents

Iowa males were more likely to rely on visual media than Iowa females; however, Iowa females were more likely to report that the discussions with parents had contributed to their information on AIDS. In general, Iowa females were more knowledgeable on the transmission of the AIDS virus than Iowa males. And Iowa males were more likely to believe homosexuals are responsible for AIDS, and were more homophobic than Iowa females (see Table 11).

Visual media were the only information source on AIDS that impacted the Iowa respondents' knowledge on the transmission of the AIDS virus. Television programming and other visual media significantly increased accuracy of AIDS knowledge for both males and females. From a cognitive social learning perspective, visual media for both Iowa males and females fulfill the information function of an external reinforcement. Television programming, which contributed to the respondents' knowledge on AIDS, sufficiently defined and differentiated certain behaviors linked to the transmission of the AIDS virus. However, it is important to note that knowledge on AIDS did not affect the belief homosexuals are responsible for AIDS among Iowa respondents. In other words, the accuracy and amount of knowledge on AIDS an Iowa respondent possessed was not associated with the belief that homosexuals are responsible for the epidemic.

None of the information sources on AIDS directly impacted the belief homosexuals are responsible for AIDS, or homophobia for Iowa males. Although, church and classes in school did significantly increase homophobic attitudes among Iowa females. It has been postulated that the direct impact an information source has on homophobia is attributed to self-reinforcement or internal
Table 11. Summary of Findings for Iowa Path Model

<table>
<thead>
<tr>
<th>Information Sources</th>
<th>California</th>
<th>Iowa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Knowledge on AIDS</td>
<td>Belief Homosexuals are responsible for AIDS</td>
</tr>
<tr>
<td>Visual Media</td>
<td>+ 0 0 0 +</td>
<td>0 0</td>
</tr>
<tr>
<td>Printed Media</td>
<td>0 0 0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>Discussions with Parents</td>
<td>0 0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>Discussions with Friends</td>
<td>0 0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>Church</td>
<td>0 0 0 0</td>
<td>0 0</td>
</tr>
<tr>
<td>Classes in School</td>
<td>0 0 0 0</td>
<td>0 0</td>
</tr>
</tbody>
</table>

reinforcement. Church and classes in school depict information on AIDS in such a way that increases homophobic attitudes among Iowa females. It is believed that both of these sources reinforce the internal value system by supplying information that positively reinforces previous homophobic attitudes, or inspires homophobia. Once again without examining the type of information being perceived and observed by Iowa females, it is impossible to analyze in what context this internal or self-reinforcement process occurs.

In conclusion, it is evident that certain information sources on AIDS do contribute to homophobia. The type of information source, the extent of impact, and the effects of gender and region were documented in this study. In general, printed media and visual media were more likely to increase knowledge on AIDS, and decrease homophobia. However, television programming had several
contradictory results in this study. In general, church was more likely to decrease knowledge on the transmission of AIDS, and increase homophobia. Discussion with parents on AIDS was fairly ineffectual regarding the path model. Classes in school and discussion with friends impacted on homophobic attitudes for separate segments of the total sample. Accurate knowledge on AIDS decreased the belief homosexuals are responsible for AIDS only for California females. Yet, a definite connection between AIDS and homophobia was present, in considering the significant correlation between the belief homosexuals are responsible for AIDS and overall homophobia.

The use of cognitive social learning theory distinguished between external, internal, and vicarious reinforcement effects among the different information sources and knowledge on AIDS, the belief homosexuals are responsible for AIDS, and homophobia. It is important to note that the contribution of these sources are based on the general perceptions of the students in this sample. Therefore, the results determined in this study, should be examined further in other studies on the subject. The knowledge that certain AIDS-related information sources do contribute to homophobic attitudes should be further analyzed, by examining the content of the information contained in these information sources. It is hoped this study will spark interest in policy intervention programs, community outreach programs, and educational programs to further examine the content of the information being displayed to the public.
Criticisms of the Study

Three major criticisms exist with this study. These concerns are the formation of the path model, the internal validity of the methodology, and the external validity in generalizing the extent of the finding to other populations.

The formation of the path model is problematic. It is acknowledged the timeline utilized in the path model is conditional. The path model assumes certain AIDS-related information sources may cause homophobic attitudes. However, homophobic attitudes may have existed before the contribution of these information sources on AIDS. The impact of these AIDS-related information sources on homophobia is indistinguishable from prior homophobic attitudes. If individuals were homophobic prior to the contribution of certain AIDS-related information sources, these individuals may have perceived the information to suit their homophobic attitudes which would explain the correlations between each information source on AIDS and homophobia. Therefore, causation is a problem with this path model.

The second criticism of this study is the internal validity associated with the methodology employed. Since only college students were surveyed it presents a problem with generalizing the information to other populations. College students as a target sample, are not representative of other populations as a whole. College students are more educated, usually from a higher socioeconomic status, and (in the case of Iowa State University) racially skewed toward Caucasians. From this internal bias in measurement, the results of this thesis cannot be generalized outside college populations.

Another problem associated with the internal validity of this study is
measurement. For example, the knowledge scale employed in the questionnaire did not assess students' knowledge of AIDS outside of certain myths and facts associated with the transmission of the virus. Therefore, the contribution of each information source on AIDS was only tested to how the sources contributed to the knowledge of transmission of the AIDS virus, and it did not test for other facets of the epidemic. The homophobia scale was not a complete measure of homophobic attitudes. The homophobia scale only ascertained situational and definitional aspects of homosexual behavior, and did not assess prior contact with homosexuals.

Conclusion

It was found in this study that certain AIDS-related information sources may contribute to homophobia, through the mediating variables of knowledge on AIDS and the belief homosexuals are responsible for AIDS. Regional and gender differences were established in the path model for the hypothesized relationships. Utilizing a cognitive social learning perspective, the information sources on AIDS either contributed to homophobic attitudes through external reinforcement (modeling) which lead to internal reinforcement (self-reinforcement) or through vicarious reinforcement.

The following represents the overall results of the path models by regional effects, gender effects in the California sample and gender effects in the Iowa sample.
Regional Effects
1. Printed media increased knowledge of AIDS transmission among California respondents.
2. Discussions with friends decreased knowledge of AIDS transmission among California respondents.
3. Visual media increased the belief homosexuals are responsible for AIDS among California respondents.
4. Printed media decreased homophobia among California respondents.
5. Church increased homophobia among California respondents.
6. Visual media increased knowledge of AIDS transmission among Iowa respondents.
7. Church decreased knowledge of AIDS transmission among Iowa respondents.
8. Classes in school increased the belief homosexuals are responsible for AIDS among Iowa respondents.
9. Church increased homophobia among Iowa respondents.

Gender Effects in California Sample
1. Visual media increased the belief homosexuals are responsible for AIDS among California males.
2. Visual media decreased homophobia among California males.
3. Church increased homophobia among California males.
4. Classes in school increased homophobia among California males.
5. Discussions with friends decreased knowledge of AIDS transmission among California males.
6. Visual media increased homophobia among California females.
7. Printed media decreased homophobia among California females.
8. Church increased homophobia among California females.

**Gender Effects in Iowa Sample**

1. Visual media increased knowledge of AIDS transmission among Iowa males.
2. Visual media increased knowledge of AIDS transmission among Iowa females.
3. Church increased homophobia among Iowa females.
4. Classes in school increased homophobia among Iowa females.

The social ramifications of this study are numerous. The findings presented in this thesis are extremely relevant to the implementation of social policies designed to inform the American public on AIDS. This study has questioned the overall effectiveness of certain information sources on AIDS in instilling homophobic attitudes. Not only is it necessary to provide information on the transmission of the AIDS virus, but it is important to present the information in a nonhomophobic manner. Information on AIDS is only effective if the information initiates concern over AIDS as a social phenomenon, not a homosexual disease. Therefore, the impact of AIDS-related information sources on homophobic attitudes bears a direct significance to the formatting of public service announcements, public health service bulletins, pamphlets on AIDS designed for heterosexuals, human sexuality instructors covering the issue of AIDS in their classroom, etc.

More sensitivity and care needs to be given in the presentation of AIDS in order to decrease the homophobic association attached to the disease. Individuals can only develop attitudes on information surrounding AIDS if the information is
vague in its symbolic or interpretative nature. By allowing individuals to attach homophobic symbolism or vicariously pair information on AIDS with homosexual behaviors, society encourages homophobia as a social response to the AIDS epidemic. Individuals need to be informed that AIDS is not exclusive to homosexuals, and avoiding homosexuals or acquiring homophobic attitudes is personally and socially irresponsible.

It is hoped that this study has not only contributed to the implementations of policy and educational programs dealing with AIDS, but has also contributed to our basic knowledge regarding attitudes toward this disease and those who suffer from it. This thesis has examined the impact of certain AIDS-related information sources on homophobia from a cognitive social learning perspective. It is hoped this study has broadened the application of such social psychological theories in explaining attitudes on the AIDS epidemic. This study has acknowledged how certain information sources may contribute to knowledge on AIDS, and how these information sources may also guide attitudes formations dealing with sexuality. The attitudes of students may be directly or indirectly shaped by certain information sources. This knowledge may be applied to such areas of sexuality, such as sexual scripts. For example, the overall contribution of this thesis may provide further examination of how certain information sources related to AIDS may guide the development and continuance of sexual scripts and attitudes associated with those scripts.

With the close of the 1980s, in which Americans have witnessed the spread of an incurable disease, it was hoped homophobia associated with AIDS had come and gone. But this investigation into the impact of AIDS information sources has documented otherwise. Iowa and California college students (and certainly other
regional colleges and university students) have maintained homophobic attitudes associated with the disease. While it is expected hundreds of thousands will continue to die from the epidemic, college students are still casting shadows of guilt and blame on homosexuals for the disease.
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