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Domain Specific Identity Commitment And Alcohol Use And Problems

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DOMAIN SPECIFIC IDENTITY COMMITMENT
AND ALCOHOL USE AND PROBLEMS

A Dissertation

Presented to

The School of Graduate Studies

Department of Arts and Sciences

Indiana State University

Terre Haute, Indiana

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Psychology

by

Alison Glanville

August 2007

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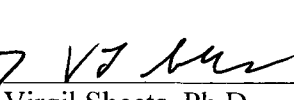
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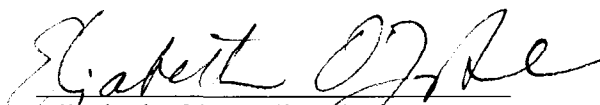
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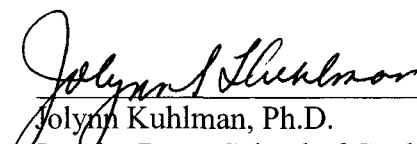
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ABSTRACT

Identity formation is an important developmental task of the college years. Previous research has demonstrated that identity commitment, as defined by James Marcia, is related to decreased substance use and problems. That is, individuals who are identity achieved or foreclosed use substances less frequently and experience fewer substance-related problems than do individuals who are classified in the statuses of identity diffused or moratorium. However, Marcia discussed identity as developing in two domains, the occupational and the ideological (religious beliefs and political ideology). To date, no studies have examined in which domain commitment is associated with a decrease in substance use and problems. Using a sample of 283 college students, the present study sought to examine the relationship between identity development in these domains and alcohol use and problems. It was hypothesized that identity commitment in the ideological domain, rather than the occupational domain, would account for the relationship between overall identity commitment and substance use and problems and that this relationship would be mediated by anxiety. Overall, the hypotheses were not supported by the data. Identity commitment was not a significant predictor of alcohol use and problems and identity crisis was a better predictor than commitment. Religious identity appeared to be the best predictor of alcohol use and problems of the three identity domains. Of the separate identity statuses, identity

achievement had the highest predictive value for alcohol use. Finally, there was no evidence in the data to support the hypothesis that any relationships between identity and alcohol variables were mediated by anxiety. Limitations of the current study include differences in sample and measures as compared to other studies, as well as a number of variables that were not measured here. Implications and applications for working with adolescents and for substance abuse treatment are discussed along with recommendations for future studies.

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Chapter 1

INTRODUCTION

The concept of identity can be traced back as far as the philosophical dispute between Leibnitz and Hume regarding the nature of the soul in which Leibnitz believed that no soul could affect another and Hume concluded that humans have shared conscious knowledge (Bourne, 1978a). Freud later used the term identity to describe an individual's link with unique values based on a unique history. More recently, using Freud's work as a springboard, Erikson (1956) developed the concept of ego identity. Erikson used the term ego identity to denote gains occurring at the end of adolescence that are derived from pre-adult experiences and that prepare the individual for the tasks of adulthood.

The college years are generally viewed as a time of major psychosocial growth and as a time when identity will be established in the occupational and ideological (both religious and political) domains (Erikson, 1956; Waterman, Geary, & Waterman, 1974). According to Marcia's (1966) theory, individuals in late adolescence may or may not experience an identity crisis and/or commitment. Based on the experience of a crisis and/or commitment, or lack thereof, individuals may be classified as having an identity

status belonging to one of four categories (diffusion, moratorium, foreclosure, or achievement).

Interestingly, the college years also mark dramatic increases in alcohol consumption and this appears to relate to identity (Dacey & Travers, 2004). In their study of the relationship between identity and illegal drug use, Welton and Hauser (1997) found that identity status in college students appears to relate to drug use and problems, such that drug abstainers obtain higher scores on identity commitment than do drug experimenters, regardless of the experience of an identity crisis. However, to date, no study has examined which domain, occupational or ideological, accounts for the influence of identity commitment on drug or alcohol use and problems. Nor has any study yet investigated whether anxiety mediates the relationship between identity commitment and alcohol use and problems. This is interesting given that increased anxiety is associated with both a lack of identity commitment (Bourne, 1978a; Bourne, 1978b; Marcia, 1966; Watson, Morris, & Hood, 1992) and with alcohol use (Clark & Sayette, 1993).

The present study will attempt to clarify the relationship between identity commitment and alcohol use and problems and to examine anxiety as the possible mechanism through which this relationship exists.

Identity Theory

According to Erikson (1956), adolescence is the final stage of childhood in which the primary task is the formation of identity. Upon the successful resolution of this stage, a young adult will have an assured sense of self and will have internalized the values and beliefs that provide the foundation for his or her worldview. Erikson posed that this

successful resolution is unlikely if an individual has not adequately progressed through early psychosocial crises by developing a sense of trust, autonomy, initiative, and industry. An unsuccessful resolution of adolescence is marked by what Erikson termed identity diffusion.

Identity Status

James Marcia (1966) expanded on Erikson's (1956) theory by establishing two criteria by which to determine overall ego identity, crisis and commitment. For Marcia, crisis refers to a period of engagement in which an adolescent chooses among meaningful alternatives, rather than to a negative, chaotic or uncontrollable situation, as the term is frequently used. Therefore, crisis involves actively thinking about and considering options. Commitment refers to the degree of personal investment the individual exhibits in his or her choice. This investment and choice is exhibited through the adoption of a set of values, beliefs, and behaviors. Marcia described two areas in which crises and commitment may occur. The first is occupation and the second is ideology, which is comprised of religious and political ideology. From these two variables, crisis and commitment, Marcia established four identity statuses in the domains of occupation and ideology.

First, in identity diffusion an individual has not experienced a crisis period nor has he or she made a commitment. Individuals in the identity diffusion status are undecided on an occupation and are not concerned with resolving this issue. These individuals also tend to be uninterested in ideological matters and/or do not prefer a particular standpoint. The diffusion status has been further divided by Dellas and Jernigan (1981). In the process of measure development, Dellas and Jernigan separated the diffusion status into

diffused-diffused and diffused-luck. Consistent with Marcia's conceptualization of diffusion, diffused-diffused reflects a lack of commitment; however it deviates from Marcia's diffusion status in that it connotes a superficial search for identity. Diffused-luck differs from diffusion-diffusion in that it reflects a dependence on luck or fate in determining identity. These statuses, diffused-diffused and diffused-luck, will generally be referred to as diffusion from this point. It should be noted that others (Goosen, 2001) have successfully combined these two statuses into a broader diffusion status.

Second, identity moratorium characterizes the experience of an existing crisis and lack of commitments. That is, identity moratorium differs from identity diffusion in that moratorium individuals are actively attempting to make a commitment. Third, identity foreclosure refers to individuals who have not experienced a crisis but have nonetheless committed to an identity. For individuals in this identity status it is difficult to determine where their parents' goals end and where personal goals begin. College experiences tend to serve as a confirmation of childhood beliefs in the foreclosure status. Finally, identity achievement occurs when an individual has experienced a crisis and is committed to an identity. Therefore, achieved individuals in both the occupational and ideological domains have considered several occupational choices and come to a decision on their own terms. They also have reevaluated past beliefs resulting in an achieved resolution as to the ideology to which they wish to commit. Table 1 depicts each status in terms of the experience of crisis and commitment.

Research on Identity Status Development

Identity research over the past 30 years supports the contention of Erikson (1956) and Marcia (1966) that identity develops throughout adolescence and young adulthood

Table 1

Marcia's Identity Statuses

	No Crisis	Crisis
No Commitment	Diffusion	Moratorium
Commitment	Foreclosure	Achievement

and that the college years appear to be a time of significant identity development. In a longitudinal study of college students, Waterman, Geary, & Waterman (1974) found a net increase in the number of individuals categorized as identity achieved from freshman to senior year. In the occupational domain there was also a net decrease in the number of students characterized as being in a moratorium status. Additionally, in the ideological domain there was a net decrease in the number of students characterized as foreclosed. In this study, the identity achieved status was significantly more stable than was moratorium status for occupation and ideology. Identity achievement was also more stable than the foreclosure status for ideology only. Waterman et al. (1974) concluded from these findings that once the matter of occupation is settled, there will be an increase in emphasis on resolving ideological issues.

In a later review of the literature examining identity development from adolescence to adulthood, Waterman (1982) concluded that identity development reflects movement from the diffusion status to foreclosure or moratorium and then from one of these two statuses to achievement and that the moratorium status is the least stable of the four. He also concluded that there appears to be little interest in identity related questions prior to high school and that the greatest gains in identity formation occur during the college years. He found that college seniors have a stronger sense of personal identity

than do college freshman and that identity commitments held by seniors are more likely arrived at through the successful resolution of an identity crisis. Waterman also noted that two longitudinal studies by Marcia (1976) and Whitbourne and Waterman (1979) tracing identity development from the college years to adulthood found that identity statuses tend to be fairly stable throughout adulthood. This was further supported by Baxter-Magdola (2000) who found that subjects' self-definitions in college appeared to be grounded in external others but that just after college a shift occurs in which an internal self-definition takes over. This is consistent with the notion of a crisis during the college years that facilitates the observed shift that closely follows graduation. Additionally, Kroger and Green (1996) demonstrated that leaving home for college is responsible for the examining or reexamining of identity defining decisions. In summary, Waterman (1982) and others (Baxter-Magdola, 2000; Kroger & Green, 1996) have reported that the nature of college experiences facilitate identity development in the areas of occupation, religion, and politics and that the identity formed by adulthood appears stable.

Erikson's (1956) theory implies that regardless of educational status, the psychosocial crisis of adolescence is identity formation. However, because a significant portion of psychological research is conducted with college undergraduates, it is difficult to determine from the existing literature whether or not the same identity trends are seen in older adolescents and young adults who do and do not attend college. The present study will focus only on those adolescents who attend college.

Domains of Identity

As mentioned above, identity formation consists of two different domains, the ideological and the occupational, which tend to differ in stability during college. The ideological domain comprises both religious and political ideology, which appear to be separate entities that do not necessarily develop simultaneously. In fact, De Haan and Schulenberg (1997) concluded that there is little evidence for a relationship between religious and political identity development and that these two specific domains should be measured separately. Therefore, in addition to the theories regarding overall identity achievement, it is important to examine the theories regarding the development of identity in these specific domains.

Occupational Identity Development

To date, few theories exist regarding the development and importance of occupational identity, and even fewer approach occupational identity in terms of the identity statuses defined by crisis and commitment. John Holland discussed occupational identity but did not define it in terms of Marcia's (1966) categories. In his research on "vocational personality" types, Holland (1985) concluded that individuals with a clear sense of identity have a stable picture of the goals, interests, and skills that provide information about a suitable occupation. Individuals who have this clear sense of identity are more likely to select work that is congruent with their personal characteristics. In contrast, individuals with a less stable sense of identity are more likely to have a work history of job choices incompatible with their personality and frequent job changes (Holland, 1996).

Charles Christiansen (1999) conceptualized identity as being shaped by what we do and how we do it and, therefore, viewed occupation as an exemplification of one's identity. He stated that people shape their identities through their daily occupations and proposed that any threat to an individual's ability to engage in occupations and to present him- or herself as competent is a threat to that individual's identity. Christiansen concluded that a sense of coherence and commitment in one's occupational identity is critical for mental health, adaptive adjustment, and overall well-being.

A few studies have explicitly examined the development of Marcia's occupational identity status. Waterman (1982) concluded that the diffusion status was more stable for the ideological domain than for the occupational domain, and he, therefore, concluded that because crisis and commitment had not occurred in the ideological domain but had in the occupational domain, the college experience particularly facilitates identity development in the occupational rather than the ideological domain. Rogow et al. (1983) found that occupational identity status had the lowest overall correspondence to overall identity status. However, occupational status was most frequently ranked by diffusion subjects as highest in importance. This further demonstrates the progression from examining occupational issues to examining ideological issues as one develops from a diffused to achieved status. If an individual is generally only achieved in the ideological domain after being achieved in the occupational domain, then it follows that the occupational domain would have the lowest overall correspondence with overall identity. Finally, Philipchak & Sift (1995) found higher occupational identity achievement in seniors than in freshman, again providing evidence of the identity development, specifically occupational identity development, that occurs during college. The above

evidence supports the notion that college facilitates development in the occupational identity domain and that development in this domain appears to be followed by development in the ideological domain.

Religious Identity Development

Sharon Daloz Parks (2000) proposed a theory of faith development specific to young adulthood and the college years. She claimed that during the years of young adulthood, individuals build their own systems of faith and life meaning. These young men and women move from having a faith based on the views of their community to having a faith based on inner experience to which they commit themselves. Essentially, she argued that college aged individuals progress from an ideologically diffused or foreclosed status, based on community views, to an achieved status, based on their own questioning and experience.

James Fowler (1991, 1993) proposed a theory of faith development involving a greater portion of the lifespan than does Parks' (2000) theory. Fowler defines faith as a generic feature of human life that provides the foundation for social relations, personal identity, and the making of personal and cultural meanings. This faith is a way of finding coherence in and giving meaning to the many forces that comprise human life. He stated that faith is the way in which individuals see themselves in relation to others against a background of shared meaning. Thus, faith, as defined by Fowler, is not necessarily religious or reducible to belief. The development of faith, according to Fowler, occurs through a process of construal and commitment in which the individual establishes trust and loyalty to values and images.

Fowler proposed six stages through which this faith develops. Each stage represents a new level of commitment to one's sense of self. A "pre-stage" of primal faith exists during infancy and characterizes innate spiritual capacities and basic trust that precedes the six stages. The first stage of faith development is intuitive-projective faith of early childhood, which consists of fantasy and imitation of adults. The second stage, mythic-literal faith of middle childhood, is typified by a logical construction of the beliefs and stories associated with one's faith. Fowler's third stage, the synthetic-conventional faith stage of adolescence, focuses on the development of self-identity and the formation of a personal ideology. This corresponds to Erikson's (1956) and Marcia's (1966) conceptions of identity development as the task associated with adolescence. The fourth stage, individuative-reflective faith of young adulthood, refers to the emergence of the ability to assess critically the firmly held beliefs established during the previous stage, which results in the explicit choice of and commitment to an ideology, vocation, and lifestyle. This stage of Fowler's faith development exemplifies the crisis and commitment necessary for identity achievement as defined by Marcia. Fowler's final two stages occur during mid-life. The fifth stage, conjunctive faith, involves a reincorporation of the ideals one has inherited from his or her culture and environment. Finally, Fowler's sixth stage is universalizing faith and is characterized by a strong sense of community and a desire to transform those who oppose their ideology. Fowler's stages of faith development parallel the previously discussed theories of overall identity development at the stages of synthetic-conventional, individuative-reflective, and conjunctive faith in which there is a movement (synthetic-conventional) from a diffused or foreclosed status to moratorium (individuative-reflective stage) and then on to faith or

ideological identity achievement (conjunctive faith) in adolescence and young adulthood, or specifically the college years.

Traditionally, it was thought that during college levels of religion and spirituality declined (Feldman, 1969). However, Spilka, Hood, Hunsberger, and Gorsuch (2003) claimed that the current research indicates a more complex conceptualization of religious development during college such that church attendance does typically decrease at this time, but other aspects of religiosity, such as religious commitment, may not. In fact, identity research, and specifically religious identity research, not only supports the notion that identity in the religious domain is important to college students but also supports the idea that religious identity develops in college students from freshman to senior year.

In their study of 80 college males, examining the relative contribution of identity domains to overall identity status, Rogow, Marcia, & Slogoski (1983) found that identity status in the area of religion had the highest correspondence to overall identity status and that religion was most frequently ranked as the domain highest in importance among college students in the moratorium status. This appears to be consistent with the idea that occupational identity development precedes ideological identity development as it would be expected that it is the domain of identity in which a commitment had not been made that would be particularly salient. Providing additional evidence for the importance of ideological concerns during the college years, Kroger and Green (1996) conducted a study of 100 adults, ages 40-63 years, in which participants reported retrospectively on issues related to identity development in each of the three identity domains. These participants were categorized according to Marcia's (1966) theory for each year from age 15 to the present. Kroger and Green demonstrated that the majority of events associated

with an identity status change in the religious domain occur between the ages of 15 and 24. These findings imply that identity crises experienced in college concern the ideological domain.

In addition to the perceived importance of religious issues to college students, research also demonstrates a change in religious identity during college. Waterman (1982) found that college experiences appear to undermine traditional religious beliefs, and although it does not appear to help with determining alternative beliefs, it does facilitate a crisis and, thus, identity development. Furthermore, in a study of 20 undergraduate women, Philipchak and Sift (1995) discovered higher religious identity achievement scores in college seniors and a “childlike faith” in college freshman. The identity crisis observed in these subjects appeared to focus on issues of religion and lasted up to two years.

More recently, the Higher Education Research Institute (2005) conducted a survey of 112,000 college students from 236 colleges and universities. They found that college students report a high degree of spiritual interests and involvement. They also found that 75% of college students report “searching for meaning/purpose in life” and that similar numbers expect that college will help them develop spiritually.

Political Identity Development

Currently there are no theories regarding the development of a political ideology and few of the studies on identity examine political identity as a separate component of ideological identity. Rogow et al. (1983) found that politics was most frequently ranked as least important to college students regarding their identity development; however Waterman (1982) observed a development toward a clear commitment to a political

ideology during the college years. Additionally, Kroger and Green (1996) demonstrated that the majority of events that facilitate change in the political domain occur between the ages of 15 and 24. Therefore, it appears that although political issues may not be as salient in the minds of college students as compared to religious and occupational issues, there is important development occurring in the political domain at this time.

Identity Development and Psychological Functioning

In his review of over 50 studies assessing the relationship between identity status, as categorized by Marcia's (1966) taxonomy, and psychological functioning in primarily college undergraduates, Waterman (1992) concluded that a clear sense of identity, that is identity achievement, is associated with a sense of personal well-being in the form of self-esteem and self-acceptance. He also found that a clear sense of identity is associated with the relative absence of negative emotional states such as anxiety and depression. Specifically, he found that those who had committed to an identity, those categorized as identity achieved and identity foreclosed, scored higher on measures of self-esteem and lower on measures related to negative emotional states than did those who had not committed to an identity. Additionally, Waterman concluded from this large body of research that a clear sense of identity relates to goal-directed activity, attitudes of tolerance and social acceptance, cooperation, helping, and with the seeking of intimate relationships.

Identity Development and Substance Use and Problems

Alcohol use in the college population is an important social and psychological issue. College presidents continually rank alcohol abuse as the number one problem on campus (Dacey & Travers, 2004). Additionally, Dacey and Travers (2004) note that

binge drinking is found most commonly among college students than in any other age group and alcohol use appears to be a significant factor in sexual assaults on college campuses. A small body of research demonstrates a link between overall identity status and substance use and abuse.

Jones and Hartmann (1988) cross-sectionally examined the relationship between overall identity status and substance use in almost 7,000 seventh to twelfth graders. They found that in each grade identity diffused individuals reported a greater frequency of substance-use experiences when compared to their own cohorts classified as achieved, moratorium, and foreclosed. Additionally, individuals classified as foreclosed reported the least substance use in each grade while those in the moratorium and achievement category fell between the diffused and foreclosed statuses. Interestingly, Jones and Hartmann found that in the ninth grade, generally a time of transition to a new school and of exposure to new people, moratorium and diffused respondents reported frequencies of substance use, including alcohol, that were almost twice that of the foreclosed group and that significantly exceeded the achieved group. This suggests that during periods of transition, lack of identity commitment, regardless of crisis, may be associated with increased substance use.

Jones, Hartmann, Grochowski, and Gilder (1989) examined the relationship between identity status and substance use among 54 adolescents enrolled either in school or in a residential drug treatment center. They found that diffused respondents reported more substance use than the achieved, moratorium, and foreclosed groups, a finding that was supported by Chritopherson, Jones, and Sales (1988). Jones et al. also found that the adolescents in residential treatment were significantly less mature in identity

development than were those adolescents enrolled in school. This implies that those with more severe substance use problems score lower on measures of identity achievement than do their non-substance using cohorts.

Welton and Hauser (1997) also demonstrated a relationship between identity status and substance use, but did so in a college student population. They found that drug abstainers obtained higher scores on identity commitment than drug experimenters without a corresponding decrease in scores on crisis. In other words, simple-effects tests showed that drug abstainers did not differ from drug experimenters in the extent to which they had experienced a crisis, however, they did differ in the extent to which they had made a commitment, such that drug abstainers were more committed to an identity than drug experimenters. This indicated that the foreclosed and achieved groups, who differ only in the extent to which they experienced an identity crisis, were similar regarding drug abstention. They also failed to find any significant difference between the diffusion and moratorium groups. Each of these studies suggests that commitment to an overall identity, regardless of crisis, serves as a protective factor against alcohol use and problems.

Domain Specific Identity and Substance Use and Problems

Research has examined the relationship between the domains of identity development (i.e. religion, political ideology, and occupation) and substance abuse. However, this research tends to examine these subcomponents in a general sense rather than in terms of an identity status in each of these separate areas.

Occupational Identity and Alcohol Use and Problems

The research on occupation and alcohol use tends not to examine occupational identity, but rather focuses on the occupation itself and its relationship to substance use. This body of research shows that alcohol use and dependence are more prevalent in blue-collar occupations and in restaurant industry jobs (Parker & Harford, 1992; Stinson & DeBakey, 1992). The quality and organization of the work setting also appear to significantly relate to alcohol use, such that individuals working in dangerous and hazardous conditions tend to experience higher levels of alcohol use than those who work in safer conditions (MacDonald, Wells, & Wild, 1999). Finally, career status and job security seem to have a profound effect on alcohol use. Individuals with higher status and greater perceived job security demonstrate lower levels of alcohol use (Zhang & Snizek, 2003). As mentioned above, the research in this area does not examine occupational identity, and therefore, does not include commitment to an occupational identity as a variable. No specific hypotheses will be made regarding occupational identity content as it is not possible to do meaningful comparisons in this population based on the available literature.

Religious Identity and Alcohol Use and Problems

Generally, the research demonstrates that religiosity has an inverse, linear relationship with drug and alcohol use and abuse, such that as religiosity increases, alcohol and drug use and problems decrease. Studies consistently show that religiosity has a positive relationship with infrequency of substance use (Willis, Yaeger, & Sandy, 2003), negative attitudes toward substance abuse (Francis, 1997; Patock-Peckham, Hutchinson, Cheong, & Nagoshi, 1998), length of abstinence, and Alcoholics

Anonymous involvement (Connors, Tonigan, & Miller, 1996; Horstmann & Tonigan, 2000). However, each of these studies either failed to include non-religious individuals in their sample, failed to discriminate between finer gradations of religiosity (i.e. atheist, agnostic, unsure, spiritual, religious), or failed to report how many subjects were categorized in these finer gradations when they were included. This renders it impossible to determine the influence of religious commitment, as these consistently neglected gradations of religiosity provide information about commitment to a particular religious ideology.

Studies that do examine religious commitment tend to find that those with stronger religious commitments report less use of drugs and alcohol. Gorsuch (1995) discussed the impact of religious commitment on substance abuse through his review of the relevant literature. He concluded that substance use norms relate to an individual's religious commitment and that religion tends to decrease substance use through social control, punishment, peer groups, socialization processes, and its ability to serve as an alternative method to meet one's basic needs.

In his study of over 1,500 undergraduates, Perkins (1985) examined the relationship between religious commitment and alcohol use. He asked students to rate their strength of commitment to their religious faiths from "not at all important" or "no religious faith" to faith being the "most important part of life." Perkins also inquired about participant affiliation with a particular denomination. Students who rated themselves in the extreme faith categories showed the fewest negative consequences related to alcohol use, while students with modest commitments indicated slightly higher destructive effects than the category of least faith, although these differences do not

necessarily reflect differences in amount or frequency of alcohol use. This implies that those with strong commitments to a religious or non-religious ideology demonstrate fewer alcohol related problems than those who have a minimal or intermediate level of commitment. Additionally, he found that Catholic students exhibited the greatest consumption of alcohol followed by Protestants, students with no religious background, and then Jewish students. These findings are not consistent with the well-established linear relationship between religiosity and alcohol use. In fact, the students with no religious background consumed less alcohol than both Catholic and Protestant students. Additionally, Kendler, Gardner, and Prescott (1997) found in their study of monozygotic and dizygotic same-sex adult twin pairs that twins tend to be similar regarding religiosity and alcohol use and that those lacking a strong religious commitment were more at risk for alcohol abuse. These studies provide evidence for a relationship between identity commitment and alcohol use.

Tonigan, Miller, and Schermer (2002) stated that “a serious flaw in nearly all measures of religiosity or spirituality used in alcohol research is the presupposition that the construct of interest (i.e. religiosity) exists in all persons to some degree” (p. 534). It seems quite plausible that one individual could be equally strong in their commitment to not having a religious orientation as another individual is in their commitment to religion. Tonigan et al. (2002), therefore, include “religious” categories that encompass different degrees of faith uncertainty and nonbelief used by previous researchers (Conors et al, 1996). These categories include atheist (“I do not believe in God”), agnostic (“I believe we can’t really know about God”), unsure (“I don’t know what to believe about God”), spiritual (“I believe in God, but I’m not religious”), and religious (“I believe in God and

practice religion”). Tonigan et al. conducted their study with 1,697 participants recruited from aftercare and outpatient alcohol dependence treatment samples. Similar to the findings of Perkins (1985), they found that clients who reported that they were unsure about God drank significantly more drinks per drinking day relative to agnostic clients and that the unsure group appeared to be the most severe in their alcohol use relative to the four other groups. They also demonstrated that stability of God belief was highest at the scale anchors where 73% of atheists and 76% of religious clients reported the same orientation at both intake times, and only 55% of agnostics and 44% of unsures did so. Furthermore, they demonstrated that higher frequency of Alcoholics Anonymous attendance was significantly associated with increased abstinence regardless of God belief and that atheists and agnostics combined did not differ significantly from spiritual or religious clients in terms of proportion of abstinent days. The unsure group had significantly fewer abstinent days in this study than did spiritual or religious clients and they demonstrated the highest rates of drinking consequences, the greatest dependence severity at intake, the least improvement during and after treatment, the highest levels of sociopathy, and the fewest feelings of purpose in life relative to all other groups. Finally, the researchers concluded that “it seems that a clear identity regarding God belief (including atheism or agnosticism) is correlated with variables prognostic of positive outcome” (p. 540). These results clearly suggest that religious commitment, whether theistic or atheistic, serves as a protective factor against alcohol abuse. In terms of Marcia’s (1966) categories, this suggests that those who are either foreclosed or achieved in their religious identity, as in those who have made a commitment to a faith or to not

having a faith, have fewer alcohol related problems than do those who are categorized as being in a diffused or moratorium status in the domain of religion.

Although these studies provide information about religious commitment and substance use, they do not measure religious commitment in terms of Marcia's (1966) notions of commitment to a religious identity. Thus, the degree to which these findings would be replicated using Marcia's (1966) theory of identity is unclear.

Political Identity and Alcohol Use and Problems

There exists far less research examining the relationship between political identity and substance use. In addition, no studies to date examine the association between crisis and commitment in the domains of political ideology and occupation and substance use. However, one researcher has examined the relationship between general political ideology and alcohol and drug use. Mehrabian (1996) conducted four studies relating a conservatism scale to a number of dimensions including religiousness, anxiety, depression, panic, somatization, and alcohol and drug use. He found that age and income positively relate to Libertarianism and Conservatism scales, with older and wealthier individuals endorsing conservative views. He also found in one study that religiousness was not a significant positive correlate of the conservatism scale, although this finding contrasted with the other three studies he conducted. In two of his studies, Mehrabian found that political ideology (i.e. conservatism and liberalism) was not significantly associated with anxiety, depression, panic disorder, somatization, alcohol, or drug use. Therefore, religiousness was not associated with political ideology and neither of these was associated with increased drug or alcohol use. Although Mehrabian had mixed

findings, some of these findings are consistent with the notion that commitment to an ideology, rather than the ideology itself, is what exerts an influence on substance use.

Differentiation of Domains

The important phase of identity development, that is late adolescence, and even more specifically the college years, is associated with dramatic increases in alcohol consumption. In fact, college aged students demonstrate higher rates of alcohol use than any other age cohort (Dacey & Travers, 2004). The research clearly demonstrates that the presence of a clear sense of identity positively relates to psychological functioning (Waterman, 1992) and to decreased alcohol use and abuse (Jones, 1992; Jones & Hartmann, 1988; Welton & Houser, 1997). However, as mentioned above, very few studies have examined which specific aspects of identity achievement account for the positive relationship between identity achievement and psychological functioning and for the inverse relationship between identity development and alcohol use and abuse. If one is to examine which domain of identity formation (i.e. occupation, religion, or politics) influences the negative relationship between identity development and alcohol use, then it is important to understand the extent to which these domains are related. Specifically, it is necessary to determine to what degree religion and politics relate, as they comprise the same component, the ideological component.

Occupation

To date, few studies examine the relationship between occupation and religion and between occupation and political views. Based on the establishment of Erikson's (1956) and Marcia's (1966) theories spanning over 40 years of research, it can be assumed for the purposes of this study that occupation is a separate identity component

and that any relationship that exists between occupation and the ideology domains will not influence the extent to which a crisis or commitment has occurred in these domains.

Ideology

Of more concern is the relationship between the religious and political components as these comprise the same domain. Evidence actually suggests that these components are essentially unrelated and that they are separate entities and researchers should consider them as such. De Haan and Schulenberg (1997) found no significant relationship between the processes of religious and political identity development. Neither religious and political diffusion nor religious and political achievement were significantly correlated, yet they are combined together into the ideology domain. De Haan and Schulenberg found in a college sample that there was a progression from interest and investment in religious issues to political issues, such that governmental interest was higher for those with high overall identity achievement scores than for those with lower scores. This suggests that these domains are distinct and that their effects are capable of differentiation. This was further supported by Goosens (2001) who concluded that adolescent identity should not be considered a unitary construct and that the use of domain-specific identity status (i.e. a status assigned to occupation, religious beliefs, and political ideology) is preferable.

Influences on the Relationship between Identity and Alcohol Use

Commitment

It appears that identity development progresses from crisis and commitment in the occupational domain to the ideological domain and within the ideological domain from religious to political ideology (De Haan & Schulenberg, 1997; Waterman, Geary, &

Waterman, 1974). Therefore, if identity commitment is the essential aspect influencing decreased alcohol use then it follows that commitment in the realm of ideology rather than occupation, is the source of the influence on decreased alcohol use and problems because the resolution of crisis and commitment in this domain results in overall identity achievement. Additionally, prior research demonstrated that commitment is the necessary component of identity development for the reduction in the presence of alcohol use and problems (Gorsuch, 1995; Jones & Hartmann, 1988; Kendler et al; 1997; Perkins, 1985; Waterman, 1992; Welton & Hauser, 1997).

Anxiety

It is important to consider through what mechanism(s) ideological commitment exerts its influence on alcohol use. Some emotional and behavioral factors differentiate between the identity statuses while others do not. For example, there are mixed results regarding self-esteem, with some studies showing that those categorized as foreclosed are higher in self-esteem than the other identity statuses while others show no relationship between self-esteem and identity status (Bourne, 1978a; Marcia, 1966; Marcia, 1967). On the other hand, impulse expression does relate to identity development. Individuals scoring lower on an identity achievement scale exhibit less control over impulses (Dellas & Jernigan, 1990). Although impulsivity relates to identity development, it appears that anxiety best differentiates among the identity status categories. In terms of overall identity formation, individuals in the diffusion and moratorium status experience significantly more anxiety than do individuals in the foreclosure and achievement statuses (Bourne, 1978a; Bourne, 1978b; Marcia, 1966; Watson, Morris, & Hood, 1992). Dellas & Jernigan (1990) examined religious identity specifically and found that

moratorium subjects in religious identity scored significantly higher on a measure of anxiety than the other statuses while those in the foreclosure status in religious identity had the lowest anxiety scores.

Strikingly, the behavioral and affective factors related to lack of identity commitment also relate to increased alcohol use. Hussong and Chassin (1994) demonstrated that impulsive adolescents drink more heavily than do depressed, non-impulsive adolescents and non-depressed adolescents. Additionally, as mentioned above, anxiety appears to differentiate among identity statuses. Anxiety also reliably identifies those at risk for frequent alcohol use and alcohol problems. Research demonstrates a positive correlation between anxiety and stress, which can lead to increased alcohol use, and between anxiety and alcohol problems (Clark & Sayette, 1993; Hussong & Chassin, 1994; Lewis & O'Neil, 2000; Oliver, Reed, & Smith, 1998). For example, high levels of anxiety sensitivity are found among those diagnosed as alcohol abusers or alcohol dependent and are also seen among college students who drink excessively (Conrod, Stewart, & Pihl, 1997; McNally, 1994). Specifically, anxiety relates particularly to the negatively reinforcing effects of alcohol. Lawyer, Karg, Murphy, and McGlynn (2002) demonstrated that anxiety sensitivity relates strongly to engagement in excessive drinking for tension reduction purposes. The source of this anxiety remains unknown. One possible source is lack of identity commitment. The anxiety and tension created by an identity crisis or by a lack of commitment may relate to an increase in alcohol use intended to reduce this negative affect. Interestingly, the dual diagnosis of anxiety disorders and substance abuse frequently emerges in adolescence. This is the time in which identity becomes an important issue to be resolved and in which there is a lack of

identity commitment. In fact, of cases in which an anxiety disorder was present before a substance use disorder, 75% of people reported an onset age before 20 years (Clark & Sayette, 1993).

Hypotheses

The existing body of research regarding identity status and alcohol use generally fails to examine which aspect of identity development; occupational, religious, or political; influences the relationship between these variables or to account for the apparent development of identity from the occupational to the ideological domain. The research to date has also failed to determine whether the specific nature or content of identity commitment impacts this relationship. The present study seeks to determine which aspect of identity formation accounts for the negative relationship between identity commitment and alcohol use and problems. The study will also attempt to determine how this aspect of identity development is accounting for this relationship, specifically whether anxiety is involved. It is hypothesized that:

1. Identity commitment will be negatively related to alcohol use and problems (i.e. there will be a main effect for identity commitment on alcohol use and problems).
2. Ideological identity commitment will account for more of the variance in alcohol use and problems than will occupational commitment.
3. Commitment to a political ideology will account for more of the variance in alcohol use and problems than will religious belief commitment
4. The negative relationship between ideological identity commitment and alcohol use and problems will hold regardless of the content or direction of the

commitment (i.e. there will be no difference between theistically and atheistically religiously committed individuals nor will there be a difference between conservatively and liberally politically committed individuals in alcohol use).

5. Anxiety will mediate the relationship between identity commitment and alcohol use and problems.

Chapter 2

METHODS

Participants

Two hundred and eighty three participants, 109 men, 173 women, and one participant with missing data for sex, were sampled. According to Cohen, (1992) two-hundred participants are sufficient for detecting a medium effect size in a four groups ANOVA. A medium effect size was hypothesized as past research demonstrated a large to medium effect between religious commitment and alcohol use and problems (Tonigan, Miller, & Schermer, 2002) and a medium effect for the relationship between identity commitment and alcohol use and problems (Welton & Hauser, 1997).

The mean age for men was 21.49 (SD=5.10), while the mean age for women was 20.77 (SD=3.5) and the age range for the overall sample was 18 to 55. The sample consisted of 237 (83.7%) White participants, 29 (10.2%) Black or African American participants, 7 (2.5%) Asian participants, 6 (1.8%) participants who reported more than one race, 2 (.7%) Native Hawaiian or Other Pacific Islander participants, and 1 (.4%) American Indian or Alaskan Native participant. Two participants (.7%) did not provide data for race. One hundred and eighty participants (63.6%) reported that they were not Hispanic or Latino, 10 (3.5%) participants reported that they are Hispanic or Latino, and

93 (32.9%) did not provide data for ethnicity. Because identity status appears to develop throughout college (Waterman, 1982), participants were sampled from the freshman, sophomore, junior, and senior classes. The final sample had 97 (34.3%) freshmen, 50 (17.7%) sophomores, 66 (23.3%) juniors, and 68 (24%) seniors. Two (.7%) participants did not provide data for year in school. With regard to marital status, 249 (88%) participants reported that they are Single/Never married, 14 (4.9%) married, 7 (2.5%) divorced, 7 (2.5%) living as married, and 6 (2.1%) provided no data. No participants reported being widowed. Two hundred and fifty six (90.5%) participants reported not being a parent and 20 (7.1%) reported that they are a parent. Seven (2.6%) participants did not provide data. For employment status, 117 (41.5%) participants reported that they were not currently employed, while 64 (22.7%) participants reported that they worked more than 20 hours per week. All other participants reported working between 1 and 20 hours per week. The majority of the sample was enrolled in the college of Arts and Sciences (N = 169, 61.1%). Thirty six participants (13.1%) were enrolled in the College of Nursing, 22 (8.0%) in the college of Education, 19 (6.9%) in the college of Business, and 11 (4.0%) in the college of Technology. Nineteen students (6.9%) reported being undecided. The sample represented 50 different majors at the University. The most frequent major was Psychology with 50 (17.7%) participants reporting that they are Psychology majors. The next most frequent major was Criminology with 30 (10.6%) participants reporting this major, which was followed by Nursing with 28 (9.9%) participants. No other major represented more than 5% of the sample. One hundred and fifty three (54.1%) participants reported that they would like to pursue a career in the social services. No other vocational area represented more than 10% of the sample.

With regard to religious denomination, the sample was 26.1% (N = 74) Christian Non-Denominational, 17.7% (N = 50) Catholic, 15.5% (N = 44) Baptist, 7.8% (N = 22) Methodist, 7.4% (N = 21) Agnostic, 5.3% (N = 15), Atheist, 3.9% (N = 11) Other Protestant, 3.5% (N = 10) Lutheran, and 3.5% (N = 10) Christian- Other Denomination. No other religious denomination represented more than 1% of the sample.

Measures

Identity Commitment

Two measures of identity commitment were employed in the current study. The Deltas Identity Status Inventory-Occupation, -Religious Beliefs, and -Political Ideology (DISI-ORP, Deltas & Jernigan, 1981; 1987) provides separate identity status classifications for each of three identity domains. The Objective Measure of Ego-Identity Status (OM-EIS, Adams, Shea, & Fitch, 1979) provides a single overall classification of identity status.

The Deltas Identity Status Inventory-Occupation, -Religious Beliefs, and -Political Ideology (DISI-ORP, Deltas & Jernigan, 1981; 1987) was used to establish participants' level of identity commitment in the occupational and ideological domains (see Appendix A). This instrument was developed as objective scales capable of determining an individual's identity status according to Marcia's (1966) crisis and commitment criteria. Five statuses are represented on each scale; achieved, moratorium, foreclosed, diffused-diffused, and diffused-luck. The scale consists of 105 statements, in three sets of 35 statements (one set for each of the three domains, occupation, religious beliefs, and political ideology) that are arranged in seven sets of five statements. Each statement reflects the presence or absence of crisis and commitment and each five-

statement set contains one statement representing each of the statuses noted above. These statements are “forced choice” such that the participant must select the one statement that is “most like me” for each of the 21 sets of five statements.

To conduct categorical analyses, groups were created representing achieved, moratorium, foreclosed, diffused, and unclassified participants. Following the procedure used by Dellas and Jernigan, a participant was classified as exhibiting a particular identity status if he or she endorsed four or more statements indicative of that status. A participant who did not endorse four or more statements indicative of the same identity status was considered unclassified. Data of participants categorized as unclassified was included and used as a comparison group. When continuous variables were necessary for analyses, continuous scores were created by counting the number of responses provided in a given domain that were indicative of a particular status. For example, if an individual on the DISI-O endorsed 3 statements indicative of diffusion, 1 statement indicative of moratorium, and 3 statements indicative of foreclosure, his or her diffusion score would equal 3, moratorium = 1, foreclosure = 3, and achievement = 0 for the occupational domain. It should be noted that the directions for the DISI-R were changed, such that participants were asked to consider atheism and agnosticism to be a set of religious beliefs. This was done so that such individuals could appropriately respond to the items on this measure. Additionally, as was done by Goosens (2001), the data of individuals classified as diffused-diffused and diffused-luck on the DISI-ORP (Dellas & Jernigan, 1981; 1987) for a given identity domain were combined to form a broader diffused group.

Alpha coefficients for each measure, the occupational (DISI-O), religious (DISI-R), and political (DISI-P) demonstrate reasonable internal consistency for the measurement of each of the five identity statuses; foreclosure (.92, .93, .90), achievement (.91, .93, .91), moratorium, (.84, .90, .89), diffused-diffused (.91, .91, .94), and diffused luck (.79, .89, .82). The development of the DISI-O demonstrated 90% agreement with the statuses identified by Marcia's semi-structured interview. Discriminant analyses, as conducted by Dellas and Jernigan, also demonstrated that each measure correctly classified over 90% of a research sample, demonstrating its predictive power. No such discriminant analyses were conducted for the Religious Beliefs nor Political Ideology measures. Finally, item and factor analyses demonstrated the construct validity of each measure (Dellas & Jernigan, 1981; 1987).

The Objective Measure of Ego-Identity Status (OM-EIS, Adams, Shea, & Fitch, 1979) was used in order to cross-validate the DISI-ORP and provide an additional measure of identity status and commitment (see Appendix B). The OM-EIS is a self-report instrument also developed to determine identity status according to Marcia's (1966) theory. It is a 24-item measure that uses a six-point likert scale, ranging from strongly agree to strongly disagree, measuring overall crisis and commitment. While individual items may refer to the occupational, religious, and political domains, separate scores cannot be computed by domain. An individual may be assigned to an overall identity category or may be assigned scores in each of the four statuses allowing use of each status as a separate continuous variable. In order to assign participants to identity categories, Adams, et al (1979) calculated means, standard deviations, and cutoff scores for each of four identity categories, with each scale having a possible range of 6 to 36.

Participants with scores falling one standard deviation above the mean on a given scale are categorized as being in that identity status if all remaining scores fall below that cutoff. As was done by Adams, et al participants whose scores fall less than 1 standard deviation above the mean were categorized as moratorium, as this is assumed to reflect a unique form of crisis. Participants' mean response on the 4 subscales of diffusion, moratorium, foreclosure, and achievement were used as continuous variables..

Adams, et al (1979) reported that the internal consistency for each of the diffusion, foreclosure, moratorium, and achievement scales were adequate. The alpha coefficients in the Adams, et al study were .68, .76, .67, and .67, respectively. In this study the alpha coefficients were .65, .56, .70, and .52, respectively. This marks a drop in alpha value of .20 for foreclosure and .15 for achievement. Using Marcia's interview and the Marcia Ego-Identity Incomplete Sentence Blank (1966, ISB), Adams, et al also demonstrated the acceptable concurrent and predictive validity of the measure.

Occupational Identity Content

Participants were provided with a list of the colleges offered at Indiana State University. Additionally, participants were asked to write in which major they are enrolled or to indicate that they are undecided (see Appendix C). Participants were also provided with a list of 10 broad vocational areas from the Kuder Occupational Interest Survey profile (Diamond & Zytowski, 2000). They were asked to indicate in which vocational area they would like to pursue a career (see Appendix C). See Appendix D for a table displaying the frequencies and percentages of each vocational area in the sample in. These lists were included to determine the nature of participants' occupational identity and although no hypotheses are posed specifically relating to occupational

content, these lists were included in for methodological consistency (i.e., additional information was collected about identity content for the other two domains) and to provide a more detailed description of the sample.

Religious Identity Content

In order to assess the nature of participants' religious identity, participants were provided with a list of 17 denominations and an "other" category and were asked to indicate which denomination best described their current religious identification (see Appendix E). Participants were also asked to indicate to what extent they consider themselves spiritual and to what extent they consider themselves religious. Additionally, participants were asked to indicate the nature and strength of their belief in God. Finally, participants were also asked how often they attend religious services and how often they engage in private prayer or meditation (see Appendix F). These items have been adapted from the Brief Multidimensional Measure of Religiousness/Spirituality (Fetzer Institute, 1999). The items have been modified to include seven response options, rather than four, in order to increase variability in response. With the exception of the question regarding religious denomination, higher scores on these questions are associated with higher levels of religiousness and/or spirituality.

Because the student population at Indiana State University is predominantly Christian, Kaldestad's Liberal Beliefs Scale (Kaldestad & Stifoss-Hanssen, 1993; see Appendix G) was used in attempt to detect some variation with regard to religious beliefs. The Liberal Belief's Scale is an eight item measure that examines the extent to which a participant's religious beliefs are liberal versus fundamentalist. Participants were asked to indicate their level of agreement on a 5 point scale from 1=strongly disagree to

5=strongly agree. Higher scores on this measure are associated with higher levels of religious liberalism, while lower scores are associated with religious conservatism or fundamentalism. The Cronbach's alpha value for this measure was .55. Although it was hypothesized that content of religious commitment, specifically belief in God, would not be related to alcohol use and problems, the literature does not discuss religious liberalism/fundamentalism and alcohol use, therefore, no specific hypotheses are made regarding the relationship of religious liberalism and alcohol use and problems. Analyses of this measure are exploratory in nature and are intended to simply provide additional information about the sample and its pattern of alcohol use.

Three items from the Intrinsic/Extrinsic Measurement (Gorsuch & McPherson, 1989; see Appendix H) were also included. These three items were intended to examine the extent to which participants perceive religion as a source of comfort, a source of social contact, and the extent to which it affects one's life. Higher scores on these questions reflected a greater association with religion as a source of comfort, as a source of social contact, and as more greatly affecting one's life. No analyses including these items were relevant and therefore will not be reported.

Political Identity Content

In order to assess the nature of participants' political identity, participants completed the Conservatism-Liberalism Scale (Mehrabian, 1996; see Appendix I). This is a seven item scale scored from 1 to 9, in this study, with 1 indicating "very strong disagreement" and 9 indicating "very strong agreement." Scores can, therefore, range from 7 to 63, with higher scores indicating higher levels of conservatism and lower scores indicating higher levels of liberalism. All items in this scale had satisfactory item-

total scale correlations and the alpha coefficient for this scale was .76, indicating sufficient internal consistency. Using Crowne and Marlowe's (1960) Social Desirability Scale, Mehrabian also concluded that this scale is free of social desirability bias. No further reliability or validity information was provided.

Negative Affect

The State-Trait Anxiety Questionnaire was used to assess the anxiety level of participants (Spielberger, 1983; see Appendix J). This measure has been used extensively in research and clinical practice. It includes two self-report scales, one measuring state anxiety (S-Anxiety) and one measuring trait anxiety (T-Anxiety). The S-Anxiety scale consists of 20 statements that evaluate how an individual feels "right now, at this moment." The T-Anxiety scale also consists of 20 statements but evaluates how people "generally feel." Both scales are on a four point likert scale, with almost never and almost always at the endpoints with lower scores reflecting lower levels of anxiety. Participants were assigned separate scores for state and trait anxiety. These scores were the participants' mean score for the separate measures. These measures demonstrated high internal consistency for the S- and T-Anxiety scales with alpha coefficients of 0.94 and 0.93, respectively. Spielberger also reported a number of studies that demonstrate the construct, concurrent, convergent, and divergent validity of the measures.

Seven Questions from the General Social Survey addressing anxiety and depression will also be used to assess negative affect (Davis, 1978; see Appendix K). Participants were asked how often they experience various negative states on a five point likert scale ranging from "none of the time" to "all of the time." Higher scores on this scale are indicative of higher levels of negative affect. Participants were assigned a mean

score for these seven items. The internal consistency for these items was adequate with an alpha coefficient of .83.

Two composite scores for negative affect were created, the anxiety composite and the negative affect composite. The anxiety composite was created by calculating the mean of the z scores for state and trait anxiety. The negative affect composite was created by calculating the mean of the anxiety composite and the z score for psychological distress as measured by the General Social Survey.

Alcohol Use

Participants were asked to estimate the frequency and quantity of alcohol consumption as well as the frequency of heavy drinking and peak quantity consumed on one drinking occasion (see Appendix L). Each measure (quantity, frequency, and heavy and peak drinking) was determined for both the current school year and for the past month in order to balance a potentially representative measure, past year, with a measure that is likely to be more accurately recalled, past month. Frequency of alcohol consumption was assessed by participants indicating how many days per week or per month they have had at least one alcoholic beverage. Participants responded on an 11 point scale with options ranging from never to six or seven days per week. Quantity of alcohol consumption was assessed by providing participants with the definition of a standard drink and asking them to estimate the number of drinks they typically consume on a drinking occasion. Participants responded on an 11 point scale with options ranging from zero to 13 or more drinks. In order to determine frequency of heavy drinking, participants were asked to indicate how many times they drank five or more drinks (four for women) on a single drinking occasion. Participants responded on an 11 point scale

with options ranging from never to six or seven days per week. Finally, peak drinking was determined by an item used by Dimeff, Baer, Kivlahan, and Marlatt (1999) indicating the amount of alcohol consumed during “the occasion you drank the most.” Participants responded on an 11 point scale, with options ranging from 0 to 19 or more drinks (or whatever it was). For data analyses, a single alcohol use composite was created as the mean of the standardized scores for both past year and past month drinks per week, frequency of heavy drinking, and peak drinking. As expected, the overall mean was 0 and the standard deviation approached one for this composite.

Alcohol Problems

Alcohol problems were assessed using the Young Adult Alcohol Problems Screening Test (YAAPST; Hurlbut & Sher, 1992; see Appendix M). The YAAPST is a 27-item self-report measure that asks participants to indicate the frequency of alcohol related problems in the past year. Higher scores on this measure are associated with greater frequency of problems associated with alcohol use. A problems score was created by computing a participant’s mean response to this questionnaire. As reported by Hurlbut and Sher, the YAAPST has acceptable internal consistency for the measurement of lifetime and past year problems with alpha levels of 0.87 and 0.83, respectively. Additionally, they found test-retest correlations for lifetime and past year problems to be .85 and .73, respectively. Concurrent, criterion, and construct validity have also all been deemed acceptable by Hurlbut and Sher (1992).

Procedure

Participants were recruited from undergraduate psychology, philosophy, and aviation courses. The investigator spoke to these classes, with the permission of the

professor or instructor, and provided information regarding the nature of the study, risks, benefits, voluntariness, and incentives. Participants within the psychology department who were interested in participating were provided with an envelope that included, two informed consent forms (see Appendix N), one to be signed and returned and one to be kept, the questionnaire, and instructions to the participants regarding responding to the questionnaire (see Appendix O). The participants returned questionnaires, sealed in the envelope, to their instructors and/or professors, who returned the envelopes to the principal investigator. Participants taking courses outside of the psychology department were provided slightly different informed consent forms (See Appendix P), a different set of instructions (see Appendix Q), and were provided an address form (see Appendix R) to be completed and returned to the investigator so that the incentive could be mailed to them. The packets received by participants outside of the psychology department were addressed to the psychology department so that upon completion they could be placed in the mail in order to be returned to the investigator. Debriefing information was provided on the informed consent form. Incentives for participants taking psychology courses was extra credit, of which the amount was determined by the instructor. Incentives for participants taking courses outside of the psychology department was a raffle ticket for the chance to win one \$100 or one of five \$20 gift certificates to an electronics store. The participants winning the raffle received their prizes in the mail following the completion of data collection.

Ethical Considerations

Anonymity

Responses to questionnaires remained anonymous. Questionnaires, not participants, were assigned an identification number, therefore, responses were not connected to participants in any way. Additionally, participants were asked to sit one desk away from one another when possible in the in-class situations. Participants responding outside-of-class were encouraged to fill out the questionnaire in private. Additionally, return address forms were immediately separated from completed questionnaires for participants mailing back questionnaires. Informed consent materials and data were kept in a locked file cabinet in a locked office.

Induced Distress

Because the present study inquired about alcohol use and because many of the participants are under the legal drinking age, participants were reminded that their responses would not be connected to them in any way. However, it is possible, although unlikely, that admitting to illegal behavior may have created anxiety or distress in some participants. Additionally, answering questions regarding identity and anxiety may have induced distress. Therefore, participants were provided with the telephone number to the Indiana State University Counseling Center, the Crisis Telephone Hotline number, and the contact information of the investigator should such distress arise and require attention.

Chapter 3

RESULTS

Analysis Plan

Since gender has been found to be related to both identity status (Goosens, 2001) and alcohol use (Klein, 1994), most analyses will include gender as a covariate. The section of descriptive statistics begins by presenting the total N and the percentage of the total sample for categorical variables.

Table 2 provides the N and within sex percentages for overall identity status as measured by the Objective Measure of Ego Identity Status (OMEIS). That is, it demonstrates how many males and females were categorized as diffusion, moratorium,

Table 2

Totals and Within Sex Percentages for Overall Identity Status^a

Identity Status	<u>Males</u>		<u>Females</u>		<u>Total</u>	
	N	%	N	%	N	%
Diffusion	57	(53.3)	70	(40.7)	127	(45.5)
Moratorium	41	(38.3)	83	(48.3)	124	(44.4)
Foreclosure	6	(5.6)	14	(8.1)	20	(7.2)
Achievement	3	(2.8)	5	(2.9)	8	(2.9)

Note. Total N for males = 107, Total N for female s= 172, Total combined N = 279

^aOverall identity status was determined by the Objective Measure of Ego Identity Status (OMEIS).

Table 3

Totals and Within Sex Percentages for Identity Status by Identity Domain^a

	<u>Males</u>		<u>Females</u>		<u>Total</u>	
	N	%	N	%	N	%
Occupational Identity						
Diffusion	16	14.7	12	6.9	27	9.6
Moratorium	9	8.3	45	26.0	54	19.3
Foreclosure	24	22.0	30	17.3	54	19.3
Achievement	24	22.0	56	32.4	80	28.6
Unclassified	36	33.0	30	17.3	65	23.2
Religious Identity						
Diffusion	24	22.0	30	17.3	54	19.3
Moratorium	8	7.3	12	6.9	20	7.1
Foreclosure	46	42.2	96	55.5	142	50.7
Achievement	18	16.5	21	12.1	39	13.9
Unclassified	13	11.9	14	8.1	25	8.9
Political Identity						
Diffusion	38	34.9	71	41.0	109	38.9
Moratorium	14	12.8	37	21.4	51	18.2
Foreclosure	16	14.7	28	16.2	44	15.7
Achievement	27	24.8	29	16.8	56	20.0
Unclassified	24	12.8	8	4.6	20	7.1

Note. Total N for males = 109. Total N for females = 173. Overall combined N = 280 for all domains.

^aDomain specific identity categories were determined by the Dallas Identity Status Inventory- Occupation, Religion, Politics (DISI-ORP).

foreclosure, or achievement and what percentage of males or females this total represented.

Table 3 presents the total and within sex percentages for identity status in the three identity domains, as measured by the Dallas Identity Status Inventory- Occupation,

Religion, Politics (DISI-ORP). Therefore, it presents the totals of males and females who were categorized as diffusion, moratorium, foreclosure, or achievement and what percentage of males and females this represented for the occupational, religious, and political domains.

Table 4

Comparison of Means and Standard Deviations for Alcohol Related Variables

Variable	<u>Males</u>		<u>Females</u>		t	df	<u>Full Sample</u>	
	Mean	SD	Mean	SD			Mean	SD
Typical frequency in past Year (drinking occasions per week)	1.27	1.34	.71	.94	3.85***	172.62	.93	1.14
Typical frequency in past month (drinking occasions per week)	1.15	1.26	.60	.92	3.92***	177.57	.81	1.09
Typical amount consumed in past year (per drinking occasion)	4.61	3.79	3.05	2.51	3.79***	166.07	3.68	3.18
Typical amount consumed in past month (per drinking occasion)	4.01	3.75	2.43	2.40	3.90***	162.38	3.05	3.09
Typical number of drinks per week in past year	8.98	11.94	3.50	6.13	4.42***	142.94	5.67	9.25
Typical number of drinks per week in past month	7.86	10.86	2.87	6.00	4.37***	148.55	4.82	8.55
Peak quantity consumed in past year (in standard drinks)	8.68	7.02	5.55	5.16	3.40***	178.95	6.79	6.13
Peak quantity consumed in past month (in standard drinks)	6.69	6.58	3.62	4.43	4.24***	163.90	4.82	5.56
Frequency of binge drinking in past year (occasions per week)	.86	1.13	.42	.76	3.52**	166.91	.59	.94
Frequency of binge drinking in past month (occasions per week)	.81	1.10	.37	.78	3.60***	169.81	.54	.94
Problems	.43	.73	.28	.64	1.91†	278.00	.35	.68
Alcohol Composite ^a	.31	1.07	-.20	.70	4.34***	164.24	0.0	.90

Note. †p<.10; **p<.01; ***p<.0001; N = 278.

^aAlcohol composite is mean of the standardized scores for past year and past month drinks per week, frequency of heavy drinking, and peak drinking.

Table 4 presents the means and standard deviations for alcohol variables. Across all alcohol measures, men reported significantly more alcohol use and problems than women.

Table 5 shows means and standard deviations for men and women and the full sample on other continuous variables included in the study. See Appendix S for a correlation tables including these variables and the alcohol use and problems variables. Women were significantly higher than men on belief in God and religious foreclosure and marginally higher on trait anxiety, negative affect, and political moratorium. Men reported higher levels of overall diffusion, occupational diffusion, and religious liberalism than did women.

Table 5

Means and Standard Deviations by Gender for Religious and Political Content Variables, Anxiety Variables, and Continuous Identity Variables

Variable	<u>Males</u>		<u>Females</u>		t	df	<u>Full Sample</u>	
	Mean	SD	Mean	SD			Mean	SD
Religious Liberalism	3.19	.70	3.04	.68	1.74†	276.00	3.10	.69
Belief in God	5.64	1.91	6.26	1.40	-2.90**	177.55	6.01	1.66
Political Conservatism	5.14	1.34	5.07	1.22	.45	276.00	1.43	1.26
State Anxiety	1.76	.63	1.81	.55	-.84	277.00	3.20	.58
Trait Anxiety	1.99	.59	2.12	.55	-1.79†	276.00	2.93	.57
Anxiety Composite ^a	-.08	1.01	.06	.84	-1.29	277.00	.01	.91
Negative Affect ^b	1.70	.54	1.82	.56	-1.81†	277.00	1.77	.55
Affect Composite	-.11	.92	.07	.81	-1.69†	277.00	0.00	.85
Overall Diffusion (OMEIS)	18.70	5.50	17.29	4.92	2.08*	278.00	17.89	5.17
Overall Foreclosure (OMEIS)	17.29	5.11	16.67	5.00	.99	278.00	16.91	5.03
Overall Moratorium (OMEIS)	16.62	5.30	16.03	5.34	.90	278.00	16.25	5.31

Overall Achievement (OMEIS)	22.33	4.10	22.40	4.70	-.13	277.00	22.37	4.44
Occupational Diffusion (DISI)	.97	1.09	.70	.91	2.16*	199.81	.80	.99
Occupational Moratorium (DISI)	1.46	1.58	1.91	2.06	-2.09	269.37	1.75	1.91
Occupational Foreclosure (DISI)	1.66	2.39	1.49	2.27	.60	280.00	1.55	2.31
Occupational Achievement (DISI)	1.93	2.14	2.20	2.47	-.97	253.05	2.09	2.34
Religious Diffusion (DISI)	.95	1.33	.75	1.28	1.30	280.00	.85	1.30
Religious Moratorium (DISI)	.63	1.45	.64	1.72	-.04	280.00	.64	1.62
Religious Foreclosure (DISI)	3.00	3.17	3.77	3.17	-2.00*	280.00	3.48	2.21
Religious Achievement (DISI)	1.33	2.36	1.03	2.12	1.09	280.00	1.15	2.21
Political Diffusion (DISI)	1.45	1.55	1.52	1.59	-.33	280.00	1.49	1.57
Political Moratorium (DISI)	1.08	1.98	1.55	2.50	-1.74†	265.79	1.36	2.32
Political Foreclosure (DISI)	1.13	2.25	1.12	2.27	.03	280.00	1.14	2.28
Political Achievement (DISI)	1.72	2.52	1.23	2.35	1.64	280.00	1.41	2.42

Note. †p<.10; *p<.05; **p<.01; N = 278

^aAnxiety Composite is the mean of the z scores for State and Trait anxiety (as measured by the STAI)

^bAffect Composite is the mean of the Anxiety Composite and z scores on psychological distress (as measured by the General Social Survey)

Hypothesis One

Hypothesis 1 was that identity commitment would be negatively related to alcohol use and problems. That is, there will be no difference between the achieved and foreclosed group on alcohol use and problems nor will there be a difference between moratorium and diffused in individuals. Additionally, achieved and foreclosed participants will demonstrate less alcohol use and fewer problems than moratorium and diffused participants. Therefore, it assumes that there will be a significant main effect for commitment on alcohol use and problems. Because gender differences exist in each of the constructs being examined, gender was treated as a covariate.

Analyses with the OMEIS

MANOVAs & ANOVAs. A 2 (gender) x 4 (identity status as measure by the OMEIS) MANOVA was conducted with alcohol use and problems as the dependent variables. No significant main effect was found for identity status ($F(6,540) = .37$, N.S.) or gender ($F(2,270) = 1.32$, N.S.) on alcohol use or problems, nor was there a significant interaction effect ($F(6,540) = 1.03$, N.S.). Similarly, examination of univariate ANOVAs revealed no main effects or interactions, nor were there any differences by identity status on post-hoc tests. Table 6 displays the means and standard deviations for alcohol use and problems by overall identity status.

Table 6

Means and Standard Errors for Alcohol Use and Problems by Overall Identity Status

	Diffusion	Moratorium	Foreclosure	Achievement	Non-Commit	Commit
	Mean (SE)	Mean (SE)	Mean (SE)	Mean (SE)	Mean (SD)	Mean (SD)
Alcohol Use	.06 (.08)	.08 (.08)	-.06 (.21)	-.18 (.03)	-.00 (.88)	-.11(0.87)
Alcohol Problems	.40 (.06)	.37 (.07)	.21 (.17)	.19 (.25)	.36 (.71)	.23 (.34)

N = 280

Although the findings were not significant, the means demonstrate the hypothesized trend that the moratorium and diffusion groups would demonstrate higher scores on alcohol use and problems than would the foreclosure and achievement groups. Additionally, when the diffused and moratorium groups were combined to form a non-committed group and the foreclosure and achievement groups were combined to form a committed group, the means demonstrated that the committed group consumed less alcohol and experienced fewer alcohol problems. Because hypothesis 1 was not supported using the above tests, additional tests were conducted to determine what

variables are predictive of alcohol use and problems so that later hypotheses could be tested.

Correlation & regression. Correlations and regressions were conducted using the four scales of the OMEIS (the diffusion, foreclosure, moratorium, and achievement scales) as predictors of alcohol use and alcohol problems. Table 7 shows the correlations.

Table 7

Correlations of Overall Identity Subscales with Alcohol Use and Problems

	Use	Problems
Diffusion	.03	.05
Moratorium	.03	.17**
Foreclosure	-.02	-.02
Achievement	-.05	-.04

Note. ** $p < .01$; $N = 280$.

The only significant correlation was between moratorium and alcohol problems. In other words, those who were high on a scale that indicates having experienced a crisis, but not having made a commitment, reported more alcohol problems than those lower on that scale. The regression predicting alcohol use from the four OMEIS subscales was not significant ($F(4,275) = .34$, N.S.). However, the overall regression predicting problems was significant ($F(4,275) = 2.81$, $p < .05$). The moratorium scale was significantly predictive of alcohol problems with higher moratorium scores being predictive of more alcohol problems ($\beta = .23$, $p < .01$). These regressions were also run separately by gender. As above, the regressions predicting alcohol use from the four OMEIS identity status subscales were not significant for men ($F(4,102) = .92$, N.S.) or women ($F(4, 167) = .72$,

N.S.). The results predicting alcohol problems were not significant for men ($F(4,102) = .55$, N.S.) but were for women ($F(4,167) = 3.36$, $p < .01$, β for moratorium = .29, $p < .0001$). These findings are somewhat consistent with hypothesis one in that moratorium reflects a lack of identity commitment and was associated with greater alcohol problems. However, by hypothesis one, diffusion should also have been positively related to alcohol use.

MANOVA & ANOVA with the DISI-ORP

Tests were conducted to determine if the four identity statuses, as measured by the DISI-ORP, are predictive of alcohol use or problems. Therefore, identity statuses were tested separately for the occupational, religious, and political domains.

Occupational identity. A 2 (gender) x 5 (identity status, including the non-categorized group) MANOVA for occupational identity demonstrated no significant main effect for occupational identity status on alcohol use or problems ($F(8,538) = 1.58$, N.S.). However, there was a main effect for gender ($F(2,269) = 10.85$, $p < .0001$). There was no significant interaction effect ($F(8,538) = 1.32$, N.S.). Additionally, univariate ANOVAs for use and problems also failed to demonstrate a main effect for occupational identity on alcohol use or problems. There was a significant univariate main effect for gender on alcohol use ($F(1,270) = 19.60$, $p < .0001$). There were no significant interactions for the univariate ANOVAs. Given that there were specific predictions about identity status, the means were examined to determine if the pattern of the means obtained was consistent with hypothesis one. Table 8 displays the means and standard errors for alcohol use and problems by occupational identity status.

For occupational identity status, the pattern of means was not in the hypothesized direction (i.e. achieved and foreclosed demonstrating lower scores on use and problems

Table 8

*Means and Standard Errors for Alcohol Use and Problems by Occupational Identity**Status*

	Diffusion		Moratorium		Foreclosure		Achievement		Non-Categorized	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Alcohol Use	-.04	.17	.19	.16	.21	.12	-.04	.11	.05	.11
Alcohol Problems	.64	.13	.42	.12	.40	.09	.29	.08	.31	.09

Note: N = 280

than diffused and moratorium) for alcohol use but was for alcohol problems. Individual pairwise comparisons did demonstrate some differences between occupational identity statuses. With regard to alcohol use, the occupationally achieved and foreclosed groups differed significantly on alcohol use ($p < .06$) which is contrary to the hypothesis that these two groups would not differ on alcohol use or problems. The relationship was such that the foreclosed group demonstrated significantly more use than the achieved group. With regard to alcohol problems, the occupationally achieved group differed significantly from the diffused group on alcohol problems ($p < .01$) such that the diffused group demonstrated significantly more alcohol problems than did the achieved group, which is consistent with hypothesis 1. Finally, the occupationally non-categorized group and the diffusion group also differed significantly on alcohol problems ($p < .05$) such that the diffusion group reported significantly more alcohol problems than the non-categorized group. Overall, the findings were not strongly supportive of hypothesis one. The findings suggest that the occupationally achieved status was associated with less alcohol consumption than the foreclosed group and fewer alcohol problems than the diffused group.

Religious identity. The same tests (i.e. a 2x5 MANOVA predicting alcohol use and problems) were conducted for the religious domain as described above for the occupational domain. The MANOVA demonstrated a significant main effect for religious identity ($F(8,538) = 2.19, p < .05$) as well as for gender ($F(2,269) = 5.94, p < .01$). There was no significant interaction effect for the MANOVA ($F(8,538) = 1.53, N.S.$). The univariate ANOVA for alcohol use demonstrated a significant main effect for religious identity on alcohol use ($F(4,270) = 3.45, p < .01$) and a marginally significant main effect for religious identity on alcohol problems ($F(4,270) = 1.99, p < .10$). There was also a significant univariate effect for gender on alcohol use ($F(1,270) = 10.13, p < .01$) but not on alcohol problems. The univariate ANOVA revealed a marginally significant gender by religious identity interaction effect for alcohol problems ($F(4,270) = 1.99, p < .10$). Generally, means for alcohol problems were higher for men than for women. However, the means for alcohol problems in the moratorium group were significantly higher in women ($M = .54$) than in men ($M = .10, p < .01$). The mean for women was also higher among participants in the diffused group (.37 versus .26), but this difference was not statistically significant. Table 9 displays the means and standard errors for alcohol use and problems by religious identity status.

Table 9

Means and Standard Errors for Alcohol Use and Problems by Religious Identity Status

	Diffusion		Moratorium		Foreclosure		Achievement		Non-Categorized	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Alcohol Use	.04	.12	-.17	.19	.19	.08	-.31	.14	.30	.17
Alcohol Problems	.31	.09	.32	.15	.40	.06	.21	.11	.67	.13

Notes: N = 280

Individual pairwise comparisons for alcohol use revealed that, consistent with hypothesis one, the religiously achieved group demonstrated significantly less use than the diffused group ($p < .05$). However; contrary to hypothesis one, the religiously achieved group also demonstrated significantly less use than the foreclosed group ($p < .05$). Post-hoc tests also revealed that the non-categorized group drank more than the achieved group ($p < .01$) and slightly more than the moratorium group ($p < .10$) and that the religiously achieved group did not differ from the moratorium group.

Post-hoc tests for problems demonstrated that for religious identity, the non-categorized group reported significantly more alcohol problems than did the religiously achieved group ($p < .01$), foreclosed group ($p < .05$), and the diffused group ($p < .05$). The religiously non-categorized group and the moratorium group did not differ significantly for alcohol problems. Given the marginally significant gender x religious identity interaction, the means for men and women were also examined separately. In women, the achieved group demonstrated significantly fewer alcohol problems than the non-categorized group ($p < .05$) and than the moratorium group ($p < .05$). Additionally, the foreclosed group demonstrated fewer alcohol problems than the non-categorized group ($p < .10$). No significant differences by identity status were found for the men. Therefore, the trend for women is more similar to the hypothesized relationship than for men. Overall, these analyses were not strongly supportive of hypothesis one, although the pattern of results for women was more similar to the hypothesized relationship than the pattern observed in the men. As with the analyses for occupational identity, analyses for religious identity found that achievement was most predictive of use.

Political identity. The same tests were also conducted for the political domain.

The MANOVA failed to demonstrate a main effect for political identity ($F(8,538) = .79$, N.S.) but did reveal a significant main effect for gender ($F(2,269) = 13.03$, $p < .0001$).

The MANOVA failed to demonstrate a significant interaction effect ($F(8,538) = 1.27$, N.S.). The univariate ANOVAs did not demonstrate a significant main effect for political identity status but, as in previous analyses, there was a significant main effect for gender on both alcohol use ($F(1,269) = 26.12$, $p < .0001$) and alcohol problems ($F(1,269) = 6.685$, $p < .05$). There were no significant gender by political identity status interaction effects in the univariate ANOVAs. Additionally, post-hoc tests did not demonstrate any significant differences between any of the political identity statuses for either alcohol use or problems. Table 10 displays the means for alcohol use and alcohol problems by political identity status. Again, the means are not in the hypothesized direction for alcohol use but are for alcohol problems (e.g. the achievement and foreclosure groups have the lowest means while the diffusion and moratorium groups have higher means for alcohol problems).

Table 10

Means and Standard Errors for Alcohol Use and Problems by Political Identity Status

	Diffusion		Moratorium		Foreclosure		Achievement		Non-Categorized	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE	Mean	SE
Alcohol Use	.10	.09	.09	.13	.18	.13	-.09	.12	-.03	.20
Alcohol Problems	.37	.07	.47	.12	.30	.11	.27	.09	.42	.16

N = 281

Correlation & Regression with the DISI-ORP

In order to further explore hypothesis 1, continuous variables for identity status by domain were created as described above (see Methods section). This allowed for the use of correlation and regression to examine these four subscales as predictors of alcohol use and problems separately for each of the three domains. The regression statistics showed that multicollinearity between the four subscales was high enough that the regressions could not be considered reliable (e.g. tolerance values close to zero). Therefore, only the correlations between the subscales and alcohol use and problems will be reported. Table 11 displays the correlations of each identity status by domain with alcohol use and alcohol problems.

Table 11

Correlations of Identity Statuses by Domain with Alcohol Use and Alcohol Problems

	<u>Occupation</u>		<u>Religion</u>		<u>Politics</u>	
	Use	Problems	Use	Problems	Use	Problems
Diffusion	.01	.07	.08	.03	.04	.02
Moratorium	-.01	.05	-.07	.03	-.06	.06
Foreclosure	.05	-.01	.04	.01	.08	.01
Achievement	-.06	-.09	-.12*	-.07	-.10	-.10

Note. * $p < .05$. $N = 281$

Overall, the achievement subscale in each domain showed the strongest relationship with alcohol use and problems. In fact, in the religious domain the achievement scale demonstrated a significant inverse relationship with use and in the political domain demonstrated a marginally significant inverse relationship with both use and problems. Again, this is only marginally consistent with hypothesis 1. As in several previous analyses, identity achievement was an important predictor.

Crisis and Commitment

Three important issues have presented themselves thus far in the analyses. First, hypothesis one was that there would be a main effect for commitment, no main effect for crisis, and no crisis X commitment interaction. However, results to this point have not been consistent with this hypothesis. Second, in several analyses, achievement (high crisis and high commitment) was inversely related to alcohol use or problems. Finally, it is impossible to know how to interpret significant findings involving those individuals that were not classified on the DISI-ORP. The manner in which the DISI-ORP items are constructed and scored makes it difficult to separate crisis and commitment and therefore determine whether commitment or crisis or both are the key factors in predicting use and problems. Participants must select one of 5 statements as best describing them. Each statement contains both information about whether or not they have experienced a crisis (e.g. have they thought about this issue or not) and whether or not they have committed to an identity.

Separating crisis & commitment in the DISI-ORP. In order to be able to compare the relative predictive power of both crisis and commitment using the DISI-ORP, continuous crisis and commitment variables were created. For crisis, this was done by assigning a score of 1 to a participant for every time they endorsed a statement indicative of identity crisis (e.g. “I’m presently investigating several vocations so I’ll be happy in the career I finally select;” “After carefully analyzing different religious ideas, I have adopted those that I believe are right for me.”). The total crisis score was the mean across the 21 items. For commitment, this was done by assigning a score of 1 to a participant for every time they endorsed a statement indicative of identity commitment

(e.g. “I was raised in the political beliefs I now hold and I firmly believe in these conservative/liberal ideas;” “I’ve explored different kinds of work, have selected my career, and I am happy with my choice.”) and computing the mean across items. This was done for each of the three identity domains measured by the DISI-ORP; occupation, religion, and politics. Therefore, for each participant scores were created for occupational crisis, occupational commitment, religious crisis, religious commitment, political crisis, and political commitment. Table 12 displays the means and standard deviations for these crisis and commitment variables by gender.

Table 12

Comparison of Means and Standard Deviations by Gender for Identity Crisis and Commitment Variables

	Males		Females		t	df
	Mean	SD	Mean	SD		
Occupational Crisis	.48	.33	.59	.33	-2.57*	280
Occupational Commitment	.51	.40	.53	.41	-.28	280
Religious Crisis	.28	.38	.24	.37	.94	280
Religious Commitment	.63	.43	.69	.42	-1.19	280
Political Crisis	.41	.44	.40	.44	.18	277
Political Commitment	.43	.43	.34	.43	1.62	280

Note. * $p < .05$; N = 278

Computing these scores allowed for the testing of crisis and commitment as predictors of alcohol use and problems as well as testing for interactions between crisis and commitment. To test for a main effect and interaction effect of crisis and commitment, hierarchical regressions were used as specified by Baron and Kenney

(1986). The first step enters the main effects of the predictor variables, while the second step adds an interaction term to determine if additional variance is explained. A significant interaction term would indicate the presence of a moderating or interaction effect. Six separate sets of regressions were performed (i.e. each of the three identity domains predicting both alcohol and problems). When testing the interactions, the crisis variable was treated as a potential moderator of the effect of identity commitment on alcohol use and problems. In the first analyses, gender, occupational crisis, and occupational commitment were regressed onto alcohol use and alcohol problems. There were no significant main effects for occupational crisis or commitment on alcohol use. However, there was a marginally significant interaction effect. A probe of the interaction using simple slopes analyses revealed that higher levels of identity crisis were associated with lower levels of alcohol use among individuals who also scored high on commitment. In contrast, for individuals low on crisis, commitment was slightly positively related to alcohol use. This is consistent with findings above suggesting that the combination of crisis and commitment may be more important than commitment alone. There were no significant main effects for occupational crisis or commitment or crisis x commitment interaction effects on alcohol problems (see Table 13).

In the second analyses, gender, religious crisis, and religious commitment were regressed onto alcohol use and alcohol problems (see Table 14). There was a significant main effect for identity crisis on use such that individuals scoring higher on crisis demonstrated less use. There was not a significant main effect for religious commitment nor was there a significant crisis x commitment interaction for use (see Table 14). There

were no significant main effects for religious crisis or commitment on alcohol problems nor was there a significant crisis x commitment interaction for problems.

Table 13

Main Effects and Interaction of Occupational Crisis and Occupational Commitment on Alcohol Use

	R ²	R ² Δ	b	SE	β
Step 1 Main Effects	.08***				
Gender			-.50	.11	-.27***
Occupational Crisis			-.08	.16	-.03
Occupational Commitment			.01	.13	.00
Step 2 Interaction	.09***	.01†			
Crisis x Commitment			.71	.38	0.11†
			b for	SE for	β for
			commitment	commitment	commitment
Low on Crisis			.21	.17	.10
Mean on Crisis			-.03	.13	-.01
High on Crisis			-.27	.19	-.12

Note. †p<.10; ***p<.0001; N = 280

Table 14

Main Effects and Interaction of Religious Crisis and Religious Commitment on Alcohol Use

	R ²	R ² Δ	b	SE	β
Step 1 Main Effects	.10***				
Gender			-.52	.11	-.28***
Religious Crisis			-.40	.14	-.17**
Religious Commitment			-.07	.12	-.03
Step 2 Interaction	.10***	0.00			
Crisis x Commitment			-.06	.32	-.01

Note. **p<.01; ***p<.0001; N = 280

In the third analyses, gender, political crisis, and political commitment were regressed onto alcohol use and alcohol problems (see Table 15). There was a marginally significant main effect for political crisis on alcohol use, such that as political crisis increases, alcohol use goes down. However, there were no significant main effects for political commitment nor was there a significant crisis x commitment interaction for alcohol use (see Table 15). There were no significant main effects or interactions for alcohol problems in the political domain.

Table 15

Main Effects and Interaction of Political Crisis and Political Commitment on Alcohol Use

	R ²	R ² Δ	b	SE	β
Step 1 Main Effects	.084***				
Gender			-.48	.11	-.27***
Political Crisis			-.23	.12	-.12†
Political Commitment			-.01	.13	0.00
Step 2 Interaction	.087***	.003			
Crisis x Commitment			-.24	.27	-.05

Note. †p<.10; ***p<.0001; N = 280

In the political and religious domains, crisis, but not commitment, predicted alcohol use, with greater crisis predicting lower use. In the occupational domain, crisis was inversely related to use only among individuals were high on commitment. Occupational identity crisis is significantly correlated with age ($r = .14$, $p < .05$) in this sample. However, age is unrelated to alcohol use ($r = -.003$, N.S.) or alcohol problems ($r = .002$, N.S.) in the current sample. Year in school is related to religious crisis ($r = .25$, $p < .001$) and to alcohol use ($r = -.15$, $p < .05$) and problems ($r = .12$, $p < .05$). However,

when year in school was added to step one of the regression, the effect for crisis was still significant. This suggests that the effect of crisis is not mediated by year in school.

Hypothesis 1 was that identity commitment would be inversely related to alcohol use and problems. Overall, hypothesis one was not supported. Two types of findings were obtained in the analyses described above. In several analyses, higher levels of crisis were associated with lower levels of use (e.g., findings involving achievement, moratorium, and crisis variables). In several analyses, the combination of crisis and commitment was predictive (i.e., analyses finding an effect for achievement and the significant crisis X commitment interaction). Specifically, individuals high in both crisis and commitment drank less or had fewer problems than those in other groups.

Hypotheses Two and Three

Hypothesis two was that ideological commitment (i.e. religious and political commitment) would account for more of the variance in alcohol use and problems than would occupational commitment. Hypothesis three was that political commitment would account for more of the variance in alcohol use and problems than would religious commitment. Because commitment was not found to be predictive of alcohol use and problems in tests of hypothesis one, it was no longer useful to test hypotheses two and three. Therefore, new hypotheses were created, based on the analyses of hypothesis one, in order to compare the three different domains and to determine which domains account for more variance in alcohol use and problems.

As described above, regressions using the identity status subscales for the three identity domains (religious, political, occupational) demonstrated that identity achievement for all three domains appeared to be the best predictor of alcohol use and

problems, particularly problems. As a result, the new hypotheses state that ideological achievement will be a better predictor of alcohol use and problems than occupational achievement (similar to hypothesis 2 that ideological *commitment* would account for more of the variance) and that political achievement will be a better predictor of alcohol use and problems than will religious achievement (similar to hypothesis 3 that political *commitment* would account for more of the variance). Bivariate correlations between both religious achievement and political achievement and alcohol problems were significant (see Table 19). This finding is consistent with the revised hypothesis two, that ideological (religious and political) achievement would be a better predictor of alcohol problems.

To further examine the revised hypotheses, a series of simultaneous regressions predicting alcohol use and problems were conducted. Gender and continuous scores for each domain from the DISI-ORP were entered. Separate regressions were conducted for identity diffusion, moratorium, foreclosure, and achievement. Thus, in the first regression, gender and continuous scores for occupational identity diffusion, religious identity diffusion, and political identity diffusion were entered as predictors of alcohol use. All of the regressions predicting alcohol use were significant (see Table 16) and gender was a significant predictor in each case. However, the only regression where any of the DISI-ORP scales was a significant predictor was the regression using occupational, religious, and political identity achievement as predictors (see Table 16). Both religious and political identity achievement were better predictors than occupational achievement, but only the β for religious achievement was marginally significant.

Table 16

Identity Domains and Statuses Predicting Alcohol Use

predictor	Adj. R ²	F (4,275)	β gender	β occupation	β religion	β politics
Diffusion	.07	6.16****	-.28****	-.04	.06	.04
Moratorium	.07	6.15****	-.27****	.03	-.07	-.03
Foreclosure	.07	6.36****	-.28****	.03	.06	.06
Achievement	.09	7.91****	-.29****	-.02	-.12†	-.09

Note. †p<.06; ****p<.0001; N = 280; DV in each regression is alcohol use. Separate regressions were conducted for each identity status.

Similar regressions were conducted for alcohol problems. In these regressions, none of the DISI-ORP scales significantly predicted problems.

As can be seen, the only regression where any of the DISI-ORP scales was a significant predictor was in the regression testing achievement in each of the three domains as a predictor of alcohol use. It should be noted that multicollinearity was not a problem in conducting this regression. The finding shown in Table 16 is inconsistent with the new hypothesis (i.e., that political achievement would be a better predictor of alcohol use and problems than would religious achievement).

Findings from hypothesis one also revealed that religious crisis was significantly related to alcohol use. Therefore, new hypotheses state that ideological crisis will be a better predictor of alcohol use and problems than occupational crisis (similar to hypothesis 2 that ideological *commitment* would be a better predictor) and political crisis will be a better predictor of alcohol use and problems than religious crisis (similar to hypothesis 3 that political *commitment* would be a better predictor).

In hypothesis one crisis and commitment were tested separately by domain. In order to test hypotheses two and three, two hierarchical regressions, one for use and one for problems were conducted. In each regression, the predictors at step one were gender, crisis scores, and commitment scores for each of the three domains. Step two of the regression entered the interaction of crisis by commitment in each domain. Table 17 displays the findings from the regression for alcohol use.

The regression for alcohol use revealed that religious crisis was a significant predictor of alcohol use. No other crisis or commitment variables predicted use. For Table 17

Main Effects and Interaction of Identity Crisis and Identity Commitment by Domain on Alcohol Use

	R ²	Overall F	df	R ² Δ	F Δ	b	SE	β
					(3,268)			
Step 1 Main Effects	.10	4.44****	7,271.00					
Gender						-.50	.11	-.28***
Occupational Crisis						.07	.16	.03
Occupational Commitment						-.02	.13	-.01
Religious Crisis						-.34	.14	-.14*
Religious Commitment						-.04	.12	-.02
Political Crisis						-.16	.13	-.08
Political Commitment						-0.00	.12	-0.00
Step 2 Interaction	.11	3.42***	10,268	.01	1.03			
Occupational Crisis x Commit.						-.60	.38	-.22
Religious Crisis x Commit.						.02	.32	.01
Political Crisis x Commit						-.22	.28	-.09

Note. *p<.05; ***p<.0001; N = 279

alcohol problems, the overall F value of the regression was not significant at either step one ($F(7,271) = 1.07$, N.S.) or step two ($F(10,268) = 1.02$, N.S.). These findings are inconsistent with hypotheses two and three revised. Overall, the analyses have demonstrated that religious identity is the most consistent predictor of alcohol use and problems among the identity domains; achievement is the most consistent predictor of alcohol use and problems among the identity statuses; and identity crisis is a better predictor of alcohol use and problems than is identity commitment (although crisis was only a significant predictor for the religious domain). In general, hypotheses two and three were not supported by the analyses, as ideological commitment did not account for the most variance in use and problems and political commitment did not account for a greater amount of variance in use and problems than commitment in the other domains.

Hypothesis Four

Hypothesis four was that there would be a relationship between ideological commitment and alcohol use and problems regardless of the content of the commitment or belief. In other words, it should not matter whether one is committed to liberal or conservative religious or political views or to theistic or atheistic religious views. As long as one is committed to some view, one should drink less. However, because ideological commitment and alcohol use and problems did not have the relationship expected, it was no longer logical to test this hypothesis as stated. Alternatively, identity variables that did demonstrate a relationship with alcohol use or problems were tested with regard to whether or not the actual content of the belief had an impact on the relationship. Because previous tests indicated that there is a relationship between religious identity achievement and alcohol use and/or problems and political identity

achievement and alcohol use and/or problems, these variables were examined to determine if the actual content of religious or political belief would have an impact on the relationship with alcohol use and problems. The revised hypothesis was that the content of participants' beliefs would not affect the relationships. Because the interest here is in the identity achieved participants, the first set of analyses will examine only those participants who were achieved in a given domain. However, identity achievement can also be treated as a continuous variable and this will be done in the second set of analyses.

Analyses with Identity Achievement treated as a Categorical Variable

The scores on the Kaldestad's Liberal Beliefs Scale and the responses to the belief in God item were used as indicators of religious belief. The scores on the Conservatism-Liberalism Scale were used as indicators of political belief.

Belief in God. First, participants who had been categorized as being religiously achieved were divided into three groups in regard to belief in God: 1) atheist; 2) unsure; and 3) believer. Those who endorsed "I know that God does not exist" and "I am pretty sure that God does not exist," and "I think that God probably does not exist" comprised the atheist group (N=7). Those endorsing "I am not sure what to think about the existence of God," "I think there probably is a God," and "I am pretty confident that God exists" comprised the unsure group (N=7). Those endorsing "I know that God exists" comprised the believer group (N=24).

A oneway ANOVA was conducted in this religiously achieved sample. These tests resulted in a marginally significant effect for God belief on alcohol use for those

who are religiously achieved ($F(2,35) = 3.06, p < .06$). Table 18 displays the means and standard deviations for alcohol use and problems by belief in god group.

Table 18

Means and Standard Errors for Alcohol Use and Problems by Belief in God Group

	Atheist (N = 7)		Unsure (N = 7)		Believers (N = 24)	
	Mean	SE	Mean	SE	Mean	SE
Alcohol Use	-.11 _{ab}	.53	.08 _a	.93	-.51 _b	.51
Alcohol Problems	.18 _a	.18	.34 _a	.51	.15 _a	.43

Note. Means with different subscripts differ significantly at $p < .05$ by the Fisher Least Significant Difference Test

The general pattern was that the unsure group reported greater alcohol and problems than the atheist or believer groups, but only a few of those differences were statistically significant. Both the atheist and believer groups had alcohol use means below the full sample mean. Individual pairwise comparisons revealed that those who were unsure about their belief in God reported significantly more alcohol use than the believer group ($p < .05$). There were no significant differences on alcohol use between the atheist and believer groups, although the difference between these two groups did approach significance ($p < .15$). There were no significant differences for alcohol problems. However, t-tests using just the two extreme groups on the belief in God variable demonstrated a marginally significant difference between atheists and believers ($t = 1.77, p < .10$) in which the atheists reported more alcohol use than did the believers. Again, there were no significant effects for problems.

Liberal versus conservative religious beliefs. The scores on the Kaldestad's Liberal Beliefs Scale were divided into quartiles in order to create categories with

participants scoring in the lower quartiles endorsing beliefs indicative of religious fundamentalism, and those in upper quartiles endorsing more liberal religious beliefs.

A one-way ANOVA conducted with only those who were categorized as achieved in the religious domain revealed a significant effect for religious liberalism on alcohol use ($F(3,33) = 3.53, p < .05$). Table 19 displays the means and standard deviations for alcohol use and problems by quartile.

An examination of the means reveals that those scoring in the upper two quartiles of the measure (indicating religious liberalism) reported significantly more alcohol use than those in the lower quartile ($p = .01$) and the second quartile ($p < .02$), both of which indicate higher levels of religious fundamentalism. Additionally, it demonstrates that those in the two upper quartiles did not differ significantly from each other, nor did those

Table 19

Means and Standard Deviations for Alcohol Use and Problems by Religious Liberalism Quartiles

	Lower Quartile		2 nd Quartile		3 rd Quartile		Upper Quartile	
	N = 12		N = 9		N = 3		N = 13	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Alcohol Use	-.60 _a	.47	-.60 _a	.31	-.01 _b	.92	.52 _b	.74
Alcohol Problems	.01 _a	.21	.10 _a	.24	.68 _b	1.18	.25 _a	.42

Note. Means with different subscripts differ significantly at $p < .05$ by the Fisher Least Significant Difference Test

in the lower two quartiles. In other words, this test indicated that certain religious beliefs do have an effect on alcohol use for religiously identity achieved individuals, such that those who report more religious fundamentalism also report lower levels of drinking than the most religiously liberal groups. The ANOVA for alcohol problems was not

significant ($F(3,33) = 1.98$, N.S). However, in planned comparisons, the third quartile was significantly different from the other three quartiles. Because the third quartile group only comprised three individuals, this group was examined for outliers. Two of the participants in this group had problem scores of zero while the third had a problem score of 2.04, the highest score among the religiously achieved participants. The differences between groups were re-tested using a median split. This did not result in a significant difference between the two groups. The lower and upper quartiles were also compared and there was no significant difference between them for alcohol problems.

In order to test this hypothesis further, correlations between religious liberalism and alcohol use and problems and correlations between belief in God and alcohol use and problems were examined in the 38 religiously achieved participants. There was a significant correlation between religious liberalism and alcohol use ($r = .49$, $p < .01$) and a marginally significant correlation between belief in God and alcohol use ($r = -.28$, $p < .10$). There was also a marginally significant correlation between belief in God squared and alcohol use ($r = -.303$, $p < .10$), suggesting the presence of a quadratic effect (e.g., those scoring low and high on belief in God drinking less than those scoring in the middle). This is consistent with the findings above from the ANOVA comparing atheist, unsure, and believer groups.

Political liberalism versus conservatism. A one-way ANOVA including only those participants who were categorized as politically achieved was conducted. This ANOVA examined the effect of political liberalism on alcohol use and problems. Participants were divided into quartiles based on their scores on the Conservatism-

Liberalism Scale. Table 20 displays the means and standard deviations for each quartile on alcohol use and problems.

Table 20

Means and Standard Deviations for Alcohol Use and Problems by Political Liberalism Quartiles

	Lower Quartile (N = 29)		Second Quartile (N = 4)		Third Quartile (N = 6)		Upper Quartile (N = 17)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Alcohol Use	-.12	.76	-.40	.46	.23	1.17	-.10	.78
Alcohol Problems	.13	.26	.07	.09	.48	1.02	.44	.81

This ANOVA did not yield any significant results for use ($F(3,52) = .53$, N.S.) or problems ($F(3,53) = 1.43$, N.S.). However, given that political conservatism was related to both gender and alcohol problems, an additional 2×2 ANOVA was conducted with gender and liberalism (conservative and liberal groups formed on the basis of a median split on the Liberalism Scale) predicting alcohol problems. There was a marginally significant main effect for gender ($F(1,42) = 2.86$, $p < .10$) and a marginally significant main effect for political liberalism ($F(1,42) = 3.36$, $p < .07$). The conservative group ($N = 23$) had a higher mean alcohol problems score ($M = .37$, $SD = .73$) than the liberal group ($M = .12$, $SD = .21$). There was no significant gender by political liberalism effect for alcohol problems ($F(1,32) = .53$, N.S.).

Overall, hypothesis four, that content of identity commitment will not relate to alcohol use and problems, was not strongly supported by these analyses. Religiously achieved individuals who are unsure about their belief in God tend to demonstrated greater alcohol use and problems, while religiously achieved and religiously fundamental

Hierarchical regressions were used to explore any possible main effects for identity achievement, content of belief, and any interactions between achievement and content of belief. These were done for both religious and political achievement and for both alcohol use and alcohol problems.

Religious identity. For religious identity, gender, religious achievement, religious liberalism, and belief in god were entered at the first step. The second step included the interaction of religious achievement by religious liberalism and the interaction of religious achievement by belief in god. Table 21 displays the results of this regression.

Main Effects and Interaction of Religious Achievement, Religious Liberalism, and Belief in God on Alcohol Use

	R ²	Overall F	df	R ² Δ	F Δ	b	SE	β
					(2,271)			
Step 1 Main Effects	.10	7.45****	(4,273)					
Gender						-.49	.11	-.27***
Religious Achievement						-.06	.02	-.14*
Religious Liberalism						-.06	.08	.10
Belief in God						.01	.03	.01
Step 2 Interaction	.11	5.51	(6,271)	.01	1.56			
Rel. Achievement x Belief in God						-.00	.02	.00
Rel. Ach. x Rel. Liberalism						.06	.04	.12

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There was a significant main effect for both gender and religious achievement as predictors of alcohol use, but no significant interaction effects. There were no significant main effects (Step 1, $R^2 = .02$, $F(4,273) = 1.65$, N.S.) or interactions (Step 2, $R^2 = .03$, $F(6,271) = 1.20$, N.S.) predicting alcohol problems..

Political identity. For political identity, gender, political achievement, and political liberalism were entered at the first step. The second step included the political achievement by political liberalism interaction. Table 22 displays the results of this regression. There were significant main effects for gender and for political achievement as predictors of alcohol use. There was no significant main effect for political liberalism, nor was there a significant interaction between political achievement and political

Table 22

Main Effects and Interaction of Political Achievement, Political Liberalism on Alcohol Use

	R^2	Overall F	df	$R^2\Delta$	F Δ	b	SE	β
					(1,273)			
Step 1 Main Effects	.08	8.43****	(3,274)					
Gender						-.50	.11	-.28***
Political Achievement						-.04	.02	-.12*
Political Liberalism						.01	.04	.01
Step 2 Interaction	.08	6.59		(4,273)	0.0	1.07		
Pol. Achievement x Pol. Liberalism						-.01	.01	-.07

Note. * $p < .10$; *** $p < .0001$; $N = 278$

liberalism. There was only a marginally significant effect for alcohol problems (Step 1, $R^2 = .03$, $F(3,274) = 2.39$, $p < .07$); Step 2, $R^2 = .03$, $F(1,273) = 1.82$, N.S.) Gender was the only variable with a significant regression coefficient ($\beta = -0.12$, $p < .05$).

Religious Crisis and Religious Content. Because religious crisis was a predictor of alcohol use, the interactions between religious crisis and religious content (i.e. religious liberalism and belief in god) were tested using a hierarchical regression. Gender, religious crisis, religious liberalism, and belief in God were entered at step one and the interaction of religious crisis by religious liberalism and the interaction of religious crisis by belief in god were entered at step two. Table 23 displays the results for this regression.

These tests resulted in main effects for gender, religious crisis, and religious liberalism as predictors of alcohol use. There were no significant interaction effects. In analyses predicting alcohol problems, there was no significant main effects (Step 1, $R^2 =$ Table 23

Main Effects and Interaction of Religious Crisis, Religious Liberalism, and Belief in God on Alcohol Use

	R^2	Overall F	df	$R^2\Delta$	F Δ	b	SE	β
					(2,271)			
Step 1 Main Effects	.11	8.22****	(4,273)					
Gender						-.49	.11	-.27****
Religious Crisis						-.41	.14	-.17*
Religious Liberalism						.14	.11	.11*
Belief in God						.01	.03	.02
Step 2 Interaction	.12	5.88	(6,271)	.01	1.18			
Rel. Crisis x Rel Liberalism						.32	.22	.10
Rel. Crisis x Belief in God						.09	.09	.06

Note. * $p < .10$; **** $p < .0001$; N = 278

.02, $F(4,273) = 1.41$, N.S) or interactions (Step 2, $R^2 = .03$, $F(6,271) = 1.18$, N.S.).

Gender was the only variable with even a marginally significant regression coefficient ($\beta = -0.12$, $p < .10$).

Hypothesis four stated that ideological identity commitment would account for the negative relationship between ideological identity commitment and alcohol use and problems regardless of the content of the belief. Overall, the analyses did not strongly support this hypothesis, as religious fundamentalism and belief in God was significantly associated with lower alcohol use. However, some support was shown for the hypothesis. Specifically, the findings for political liberalism were somewhat consistent with hypothesis four, as political liberalism was not shown to be significantly related to alcohol use or problems.

Hypothesis Five

Hypothesis 5 was that anxiety would mediate the relationship between identity commitment and alcohol use and problems. However, because identity commitment and alcohol use and problems were not significantly related as hypothesized, a new hypothesis was created to state that anxiety will mediate the relationship between those variables that were predictive of alcohol use and problems. That is, anxiety will mediate the relationship between identity moratorium and alcohol use and problems, religious crisis and alcohol use and problems, and between occupational, religious, and political achievement and alcohol use and problems. Three measures of negative affect were used for these analyses: state anxiety, trait anxiety (both measured by the State-Trait Anxiety Questionnaire), and psychological distress (measured by questions from the General Social Survey, see Methods section). Two composites were also created: an anxiety

composite (mean of z scores for state and trait anxiety) and a negative affect composite (mean of anxiety composite and z scores on psychological distress). As can be seen from Table 24, while there were several significant correlations between identity variables and affect variables, the affect variables were largely unrelated to alcohol use and problems.

Examination of these correlations revealed that the conditions for mediation (i.e. there is a significant correlation between each of the three variables) were met only for the relationship between moratorium and alcohol problems being potentially mediated by state anxiety as well as the relationship between occupational achievement and alcohol problems potentially being mediated by state anxiety. The bivariate correlation between moratorium and alcohol problems was $r = .17$ ($p < .01$). Examination of the partial correlations revealed that there was still a significant relationship between

Table 24

Correlations of Moratorium, Religious Crisis, Identity Achievement, Affect Variables, and Alcohol Variables

	Moratorium	Rel. Crisis	Occ. Ach	Rel. Ach	Pol. Ach	Use	Problems
State Anxiety	.24***	-.07	-.10	-.12*	-.07	.01	.16**
Trait Anxiety	.16**	-.01	-.06	.02	-.05	.03	-.14*
Anxiety Comp.	.22***	-.05	-.10	-.06	-.07	-.05	.11
Negative Affect	.19**	-.06	-.08	-.08	-.02	-.05	.04
Affect Comp.	.23***	-.05	-.10	-.07	-.06	-.06	.09
Alcohol Use	.30	-.15*	-.06	-.12*	-.10	1.00	.54***
Alcohol Problem	.17**	-.04	-.09	-.07	-.10	.54***	1.00

Note. * $p < .05$; ** $p < .01$; *** $p < .001$; $N = 281$

moratorium and alcohol problems when controlling for state anxiety ($r = .14, p < .05$).

Additionally, in a hierarchical regression, entering moratorium at the first step and state anxiety at the second step, the Beta value at step one was .17 ($p < .01$) while the beta value at step two was .14 ($p < .05$). Similarly, for occupational achievement and alcohol problems (for which the correlation was only marginally significant), a hierarchical regression in which occupational achievement was entered at the first step and state anxiety was entered at the second step, the Beta value at step one was -.09 ($p < .13$) while the Beta at step two only goes down to .08 ($p < .20$). A new hypothesis was created so that the mediation between significantly predictive variables and alcohol use and problems could be examined. The analyses did not support that anxiety and/or negative affect mediate the relationship between identity variables and alcohol use and problems.

Chapter 4

DISCUSSION

Summary of Findings

Overall, the current study failed to replicate the findings of previous studies and did not support the hypotheses made based on the existing literature.

Hypothesis One

Hypothesis one, that identity commitment would be negatively related to alcohol use and problems, was not supported. In fact, results indicated that of the two identity dimensions, crisis appeared to be a better predictor of alcohol use and problems than did identity commitment. This was demonstrated by the main effect for religious crisis on alcohol use, the marginally significant main effect for political crisis on alcohol use, and the significant occupational crisis by occupational commitment interaction effect.

Hypothesis one, indicated that identity achievement and foreclosure groups should not differ with regard to alcohol use and problems and that these two groups should differ from the identity diffusion and moratorium groups, the two of which should also not differ. This also was not supported by the data. For overall identity status, moratorium appeared to be the only significant predictor and this was for alcohol problems only.

Additionally, when the identity domains were examined separately, identity achievement

appeared to be the best predictor of alcohol use. This finding is consistent with the significant crisis by commitment interaction noted above as individuals who are identity achieved have experienced both a crisis and a commitment. It should be noted that for each of the three identity domains, the means for alcohol problems are in the hypothesized direction. That is, the foreclosure and achievement groups demonstrate lower means than do the diffusion and moratorium groups. Further examination indicated that the trend tends to be more similar to the hypothesized trend for women than it does for men.

Hypotheses Two and Three

Hypotheses two, that ideological identity would be a better predictor of alcohol use and problems than would occupational identity and that within the ideological domain, political identity would be a better predictor than would religious identity, was also not supported. In fact, religious identity appeared to be the best predictor of alcohol use and problems of the three domains. More specifically, religious crisis appeared to be a better predictor than any of the other crisis or commitment variables.

Hypothesis Four

Hypothesis four, that content of belief would not have an impact on the relationship between identity and alcohol use and problems, was not supported by the data. Specifically, it was found that those who are religiously achieved and are unsure about their belief in God demonstrate higher alcohol use. Additionally, individuals who are religiously achieved and report higher levels of religious liberalism also demonstrate higher levels of alcohol use.

Hypothesis Five

Hypothesis five, that anxiety would mediate the relationship between identity and alcohol use and problems, was also not supported. In the current sample, the anxiety and affect variables were largely unrelated to alcohol use and problems. For the variables for which the conditions were met for mediation (i.e. state anxiety mediating the relationship between overall moratorium and problems; state anxiety mediating the relationship between occupational achievement and problems) there was no evidence that anxiety was a significant mediator of the relationship.

Limitations of the Current Study

Sample

One explanation for the lack of replication of previous results is differences in the sample used. Although many of the previous studies' samples were comprised of college undergraduates (De Haan & Schulenberg, 1997; Waterman, 1992; Waterman, Geary, & Waterman, 1974; Welton & Houser, 1997), others were not. A number of studies examined the relationship between identity and alcohol use in a younger adolescent population, generally seventh to twelfth graders (Christopherson, Jones, & Sales, 1988; Hussong & Chassin, 1994; Jones & Hartmann, 1988; Jones, Hartmann, Grochowski, & Gilder, 1989; Wills, Yaeger, & Sandy, 2003). Distributions regarding identity status in studies with younger adolescents differed from the current study. One study demonstrated a generally even distribution across status (Christopherson, Jones, & Sales, 1988) and another found high percentages of "unclassified" individuals in this population. The current study, however, classified most participants as diffused and moratorium, with regard to overall identity status, and had relatively few foreclosed and

achieved participants. One explanation as to why studies using younger participants yield different results is it could be that identity and identity commitment is a better predictor of alcohol use and problems in a younger adolescent population. In these younger adolescents, identity commitment may have more of a protective role than identity crisis, as psychosocially they are not prepared to take on the challenges of experiencing identity crises. Therefore, perhaps at a premature age, identity crisis becomes an anxiety inducing event associated with alcohol use, while it does not when engaged in at a psychosocially appropriate time. This is consistent with the findings of the current study that identity crisis was, at times, associated with less alcohol use and anxiety did not mediate the relationship between identity variables and alcohol use variables in an older adolescent population. Another explanation may be the individual and environmental differences between younger adolescents and college students who drink. Because alcohol use is less normative in high school than it is in college, it may be that only certain niche social groups use alcohol and identity status may act as more of a determinant of social group in this younger population. However, in a college population, it may be that alcohol use is so normative that the effect of identity is eliminated.

Measurement Differences

Measurement differences may also be a source of the failure to replicate previous findings here. Many of the previous studies (Christopherson, Jones, & Sales, 1988; Jones & Hartmann, 1988; Jones, Hartmann, Grochowski, & Gilder, 1989) have used the Extended Version of the Objective Measure of Ego Identity Status (EOM-EIS), a 64-item measure, rather than the 36-item OMEIS used here. The extended version may yield

more reliable identity status categorizations and therefore may be more likely to demonstrate a relationship between alcohol use and problems and identity if such a relationship exists. Other measures of identity status have also been used in the literature including the California Adult Q-Sort (CAQ) and Marcia's Identity Status Interview. Again, these measures may yield more reliable results or they may be less reliable measures and may render the studies based on them misleading.

Differences in the measurement of substance use may also have affected the results here. The majority of the studies examining identity and substance use, measured illicit substance use alone or alcohol and illicit substance use together. Specifically, one study asked a sample of college students about only illegal drug use (Welton & Houser, 1997) while others used the Young People's Survey to ask about both alcohol and drug use (Christopherson, Jones, & Sales, 1988; Hussong & Chassin, 1994; Jones & Hartmann, 1988; Jones, Hartmann, Grochowski, & Gilder, 1989) or used other questions about quantity and frequency of alcohol and drug use (Will, Yaeger, & Sandy, 2003). It should be noted that the studies that asked about alcohol and drug use were conducted with younger adolescent populations (grades seven to twelve). Therefore, these studies were consistently inquiring about illegal substance use. The current study inquired about alcohol use only, which for part of the sample is an illegal activity and for part of the sample is not. It is possible that identity commitment is a better predictor of illegal substance use than legal substance use, although given the current state of the research it is unclear as to why that might be. Additionally, the study conducted by Welton and Houser (1997) which largely provided the basis for the hypotheses of the current study, measured drug use categorically, making a determination between drug abstainers and

drug non-abstainers. This study measured alcohol use continuously. This difference in measurement may also relate to lack of replication in the findings.

Other studies have also used other measures of anxiety and negative affect than the State-Trait Anxiety Inventory (STAI) and the General Social Survey. Lewis and O'Neil (2000) used the Social Avoidance and Distress Scale, the Fear of Negative Evaluation Scale, the Shyness Scale, and the Sociability Scale. These measures of anxiety may be better related to identity variables and alcohol use and problems. In fact, research indicates that shyness is positively related to identity diffusion and is negatively associated with identity achievement (Harmer & Bruch, 1994). However, the researcher linking shyness with substance use has yielded mixed results. Fothergill and Ensminger (2006) found that shyness was associated with a reduced risk for substance use, while Santesso, Schmidt, and Fox (2004) found that a combination of shyness and sociability predicted increased substance use in a U.S. college sample.

Unmeasured Variables

Anxiety did not mediate any of the relationships between identity variables and alcohol use variables in the present study. It may be that some other unmeasured variable mediates or moderates the relationship between identity and alcohol use and problems. This study examined the role of negative affect. However it could be that the presence or absence of positive affect mediates the relationship between identity and alcohol use. Clark and Watson (1991) proposed a tripartite model of anxiety and depression. They claim that there are three factors related to anxiety and depression. The first is a Nonspecific Factor which includes general distress associated with negative affect (e.g. insomnia, poor concentration). The second factor is referred to as Specific

Factor 1 which includes the absence of positive affect (e.g. loss of interest, anhedonia). The third factor, Specific Factor 2, includes somatic tension and hyperarousal (i.e. shortness of breath, dizziness). The current study primarily examined the Nonspecific Factor and Specific Factor 2, with only a few items addressing Specific Factor 1. It may be that the lack of a strong sense of identity leads to a lack of positive affect rather than the presence of negative affect and that positive affect mediates the relationship between identity and alcohol use. It may also be that lack of positive affect moderates the relationship between identity and alcohol use. That is, a lack of a strong sense of identity may be related to higher alcohol use only in those with an absence of positive affect. Although, it should be noted that the relationship between positive affect and alcohol use and problems has not been as stable as the relationship for negative affect (Cooper, Frone, Russell, & Mudar, 1995).

Another possible moderator of the relationship between identity and alcohol use is negative beliefs about alcohol. Johnson, Sheets, and Kristeller (2007) found that negative beliefs about alcohol mediates the relationship between religious and spiritual involvement and alcohol use. Additionally, Francis (1997) found a relationship between personality variables and negative attitudes toward substance use. He found higher levels of psychoticism, extraversion, neuroticism, and social non-conformity are associated with more positive and tolerant beliefs about substance use. Personality variables were not measured here. In fact, social conformity may be related to the finding that women were more likely to exhibit the hypothesized relationship between identity and alcohol use. It may be that alcohol use in women is more guided by internal factors, such as identity, while alcohol use in men is more guided by external factors, such as social factors and

social conformity (Bosari & Carey, 2006). Although it is thought that identity status changes throughout development, it may be that individuals of certain personality types remain in certain statuses longer or do not ever progress toward identity achievement.

Motives and expectancies may also moderate the relationship between identity and alcohol use and problems. Kushner, Sher, Wood, and Wood (1994) found that tension reduction expectancies moderate the relationship between negative affect and alcohol use and problems. Additionally, Christopherson, Jones, and Sales (1988) found in a study of younger adolescents that motivations for substance use differed across overall identity statuses. They found that achieved and moratorium participants cited curiosity and recreational motives for substance use and lack of interest or health concerns as motives for not using substances. Diffusion participants cited peer pressure and boredom as reasons for using and parents finding out and fear of arrest as reasons for not using substances. Foreclosed participants also cited peer pressure and boredom as reasons for using; however, they were the most likely of any group to cite religion as a motive for not using. Therefore, it may be that the relationship between identity and alcohol use and problems is moderated by alcohol expectancies and motives for use, and that these motives may differ by identity status.

Discussion of Significant Findings

Crisis by Commitment Interaction

The current study did not replicate the findings that identity commitment is significantly related to alcohol use and problems. However, the results did indicate that the interaction between identity crisis and identity commitment predicts alcohol use, particularly for occupational identity. As stated, this relationship was such that

participants who endorsed higher levels of crisis who also indicated higher levels of commitment used less alcohol. In other words, higher levels of crisis predicts less use if there is a high level of identity commitment. Because identity achievement is the only status that requires high levels of identity crisis and commitment, this finding suggests that identity achievement is the aspect of identity that is related to less alcohol use, a finding which was also partially supported in this data. Additionally, crisis itself was found to be related to use in the religious and political domains, such that those who indicated higher levels of crisis reported lower levels of use. Initially, one might assume that identity achievement's and crisis' relationship with alcohol use is a function of age. However, identity crisis had a significant effect on alcohol use when age was controlled for in the current study. Perhaps, maturity, a construct that was not measured here, rather than age is related to identity development and alcohol use. Maturity has been found to be associated with identity development. Helbing (1984) found that participants who were vocationally immature did not have a strong sense of identity or had problems with their personal identity. Additionally, Adalbjarnardottir (2002) found that psychosocially mature adolescents were less likely to engage in heavy drinking. Also, identity crisis indicates a certain level of questioning. It could be that those individuals who have questioned their identity and given some thought as to what they believe have concluded that heavy alcohol use would either hinder their process of questioning or would interfere with their development into the person they want to be. It could also be that these individuals are more serious students, particularly those who have explored different occupations and committed to one, and view alcohol use as something that would hinder their progress as students.

Significance of the Religious Domain

The importance and relevance of an identity domain to the individual may also be important in predicting alcohol use and problems. Rogow, Marcia, and Slugoski (1983) found in a sample of college students that occupation was most frequently ranked as being highest in importance. This may explain why the interaction between crisis and commitment was important in the occupational domain. Occupation is what is important in the minds of many college students, after all one of the main goals of a college or university is to prepare the individual for their chosen occupation, and therefore their identity development in this domain will be related to well-being and alcohol use as a correlate of that. However, the present study found that identity crisis was a better predictor of alcohol use than commitment and that religious identity was a better predictor of alcohol use than any of the other identity domains. Interestingly, Rogow, et al. (1983) found that religion was most frequently ranked as being highest in importance to participants who were classified as being in the moratorium status. The moratorium status is characterized as period of crisis without commitment. Rogow, et al's study indicates that when crisis is present alone, religion is what is salient in the minds of college students. This may help to explain why it was crisis and religion and that stood out as predictors of alcohol use. Additionally, Rogow, et al found that politics was listed most frequently as being least important. The present study found that political identity was consistently the worst predictor of alcohol use and problems of the three domains. The study by Rogow et al suggests that this may be because the issues of politics and political identity development are not important or relevant to college aged students.

Effect of Religious Content

The current study found that individuals who identify themselves as religiously liberal engage in more alcohol use than those who identify as religiously fundamental or conservative. This finding is consistent with the explicit prohibition of alcohol use in many religiously fundamental and conservative groups, such as the Baptist, Mormon, and some Pentecostal churches.

Implications and Applications

Overall, the data indicate that individuals who are undergoing or who have undergone a crisis demonstrate less alcohol use and problems. That is, individuals who question their career and beliefs report less alcohol use. This is important information for the parents of and professionals working with adolescents. In this study, the modal status in the religious domain was foreclosure, indicating that most individuals had committed to a set of religious beliefs without ever examining others or questioning their own beliefs. This is particularly interesting given that religious crisis was the best predictor of alcohol use than any of the other domains' crisis or commitment variables. This indicates that alcohol use prevention may benefit from including a self-discovery component. Participants in prevention programs should be encouraged to question and examine the type of career they want and their religious and political beliefs, or lack thereof. College appears to be an ideal place for this type of questioning, as individuals are generally exposed to new people and new ideas during college. However, at least in the religious domain, it appears that college students are not being encouraged to examine their own beliefs. A number of individuals and organizations could be involved in fostering this

type of questioning as a means of alcohol use prevention including residential advisors on college campuses, career centers, teachers and professors, and religious institutions.

The findings here may also have implications for substance abuse treatment. Often in addictions treatment, therapists encourage clients to embrace their identity as “an addict”. However, it may be that helping the client figure out who they are, outside of being “an addict,” and assisting them in that questioning process may be protective from future alcohol use.

Future Studies

The present study has a number of implications for future studies. First, future studies should consider using other measures than were used in this study. Specifically, consideration should be given to using the Extended Version of the Objective Measure of Ego Identity Status as previous studies have found significant results using this measure. Additionally, future studies may want to measure illicit drug use in a college population rather than alcohol use. As previously noted, it appears that significant results are more likely when measuring illegal substance use, rather than legal use. Future studies may also want to use other measures of anxiety, such as measures of social anxiety.

Future studies should also include additional measures. A measure of psychosocial maturity may provide important information in that maturity, rather than age, may be related to both identity development and alcohol use. Future studies should also ask participants about Grade Point Average (GPA). This measure would help in determining if college students who have questioned their identity and/or committed to an identity are more serious students and therefore engage in less alcohol use. Additional research could also include measures of social influence, such as questions regarding

passive social influence for drinking (Read, Wood, Maddock, & Palfai, 2003), as a moderator of the relationship between identity and alcohol use and problems. Future studies may also consider the use of a measure of positive affect. The present study only measured negative affect but it may be that the absence of positive affect is related to alcohol use and identity development. Previous studies have also indicated that personality variables are related to identity development, specifically psychoticism, extraversion/introversion, and social non-conformity. Future studies should examine these variables as possible mediators or moderators of the relationship between identity and alcohol use. Finally, future studies should examine cognitive variables as mediators or moderators of the relationship between identity and alcohol use. That is, they should examine the role of negative beliefs about alcohol and/or illicit drugs, alcohol and/or illicit drug expectancies, and motives for use.

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APPENDIXES

APPENDIX A

Dellas Identity Status Inventory- Occupation, Religion, Politics (DISI-ORP)

The statements on the following pages pertain to attitudes and perceptions about vocations, and religious and political ideas generally. They do not pertain to any specific occupation or religion or political group. You are asked to select those statements that apply to you. There are no “right” responses, only responses that are accurate about yourself.

The statements are arranged in sets with five statements in each set.

From each set, select the ONE statement that is MOST LIKE YOU.

DISI-O

Set 1 Select ONE statement MOST LIKE YOU

- a. I’m presently investigating several vocations so I’ll be happy in the career I finally select.
- b. I’ve explored different kinds of work, have selected my career, and am happy with my choice.
- c. I’m keeping my options open regarding a vocation because I think it’s too early for me to make a choice.
- d. I’ve long known what my career will be, so I haven’t had to spend time checking occupations to match up with them.
- e. I’m just waiting to see what comes along because I’m still pretty much undecided what work I want to get into.

Set 2 Select ONE statement MOST LIKE YOU

- a. I'm hanging loose on a career choice because I don't want to make a hasty decision before things are right.
- b. I think things will probably fall into place, because it's a little hard to get it all together to decide on a vocation.
- c. Getting it all together wasn't ever one of my problems, I'm going to do what I planned on doing since I was a kid.
- d. I'm now carefully studying a few channels and career areas to help me focus on the vocation I want to follow.
- e. There were several vocations I was exploring, but now I know what I'm going to do.

Set 3 Select ONE statement MOST LIKE YOU

- a. They say school changes your ideas about the job you want to do, but that didn't happen to me. I'm still going into the work I wanted to do when I was a child.
- b. Careers tend to work themselves out, so I can't get myself too worried about a vocation.
- c. My school experiences have helped me examine some things but I'm testing one or two others before definitely deciding on a career.
- d. Right now I'm open-minded on vocational choice because I don't want to get locked in and miss any opportunity.
- e. I've given a lot of thought to my vocation, and have even considered the ideas of others, and now I definitely have selected my career.

Set 4 Select ONE statement MOST LIKE YOU

- a. I've questioned the suitability of several vocations for me, but I've resolved these questions and now I'm certain of my vocational goal.
- b. Several vocations complement my talents, so right now I'm exploring which one is most meaningful for me.
- c. I'm hanging loose with respect to a career choice because there are different things around and deciding too soon is something I want to keep away from.
- d. Things will probably work out a certain way no matter how much thinking I do about different occupations.
- e. There was never any doubt in my mind about the vocation I would follow and I've pursued this vocational goal steadily.

Set 5 Select ONE statement MOST LIKE YOU

- a. I can't picture myself in any job right now, but I guess things will work themselves out for me.
- b. I've always wanted to be a teacher or lawyer, etc., and never had to give a thought to other vocations.
- c. I've checked into different careers, and now I clearly picture myself in the career I've selected.
- d. I'm getting close to choosing a career, even though sometimes I think I should do one thing I'm good at, and then other times I think I should do something else to use other talents.
- e. I've some vague ideas about a career choice, but I'm leaving my options open for now.

Set 6 Select ONE statement MOST LIKE YOU

- a. No need investigating jobs, I've known what work I've wanted to do since I was a kid.
- b. I'm staying flexible and open regarding a career because I want to be able to change easily for all possibilities that come up, but I'll probably start deciding soon.
- c. I'm waiting to see what happens because luck has a lot to do with the kind of job you get into.
- d. After exploring different kinds of jobs, I now know definitely what my career will be.
- e. I've narrowed the field on my career choice, but I'm still scrutinizing a few others to be sure I pick one that suits me.

Set 7 Select ONE statement MOST LIKE YOU

- a. I'm just taking courses because the way I see it who I know will probably play a big part in determining my career.
- b. School influenced my ideas as to the vocation I was going into and now I know what I'm going to do.
- c. School helped me recognize what I'm good at, but now I'm analyzing careers to decide in which vocation I should use these abilities.
- d. I'm bouncing different vocations about in my mind while in school because I don't want to get into something before I know what I'm into.
- e. My school experiences have just confirmed the vocational goal I've had since childhood.

DISI-R

*For the purposes of this section, please consider atheism a form of religious belief.

Set 8 Select ONE statement MOST LIKE YOU

- a. My ideas about religion are indefinite, but someday when I have time I'm going to look into this area.
- b. The religion I was raised with is fulfilling for me and I see no reason to deviate from it.
- c. After having examined a number of religious beliefs and ideas, I now know what's best for me and I have adopted definite religious views.
- d. I am now looking closely and seriously at different religious beliefs and ideas so that I can decide where I stand.
- e. I haven't resolved anything about religions, but what will happen will happen.

Set 9 Select ONE statement MOST LIKE YOU

- a. My religious beliefs are those I grew up with and I find they satisfy my needs.
- b. After carefully analyzing different religious ideas, I have adopted those that I believe are right for me.
- c. I haven't made any decisions regarding religious beliefs, but someday I plan to look at what's around on this subject.
- d. So far as religion goes, I can't take it or leave it, because whatever will be will be.
- e. Right now, I'm closely examining different religious ideas so that I can decide which ones are appropriate for me.

Set 10 Select ONE statement MOST LIKE YOU

- a. The religion I was raised in provides a good basis for me, and a sense of roots, and I find it very satisfying.
- b. I have explored various religious ideas, have made choices, and I'm happy with the ones I've chosen.
- c. I can't see getting involved in religion because I think religion tends to take its own direction.
- d. My religious beliefs are rather indefinite, but someday I'll firm them up.
- e. I am now seriously evaluating religious ideas to determine their meaning for me because I think some resolution is important to my life.

Set 11 Select ONE statement MOST LIKE YOU

- a. I'm giving serious thought to forming my religious beliefs and I'm digging in trying to get answers to questions that keep coming up in my mind.
- b. I haven't had a chance to really think about religious beliefs, but someday I'll probably get into this subject.
- c. Religion is something that tends to come to you, so I don't think about it.
- d. The religion I grew up with meets my needs and I see no reason to question it.
- e. I've thoroughly examined different religious beliefs, I know what is right for me, and I have definitely selected these beliefs.

Set 12 Select ONE statement MOST LIKE YOU

- a. I haven't got any particular religious position as yet because I haven't given much thought to this subject, but I'm going to.

- b. Right now, I'm carefully examining several religious issues and ideas before deciding on the beliefs I will hold.
- c. I'm comfortable with the religious views I was raised with, and feel I didn't have to explore others.
- d. I thoroughly explored various religious views and ideas before adopting the religious beliefs I now hold.
- e. I think religious beliefs eventually fall into place, so I don't pay any attention to these things.

Set 13 Select ONE statement MOST LIKE YOU

- a. After checking into various religious beliefs, I now have a clear picture of what is right for me and I've adopted these views.
- b. Someday I want to look into different religious ideas that are around, because nothing's firm in my mind yet.
- c. I'm working on developing my religious beliefs, and I'm giving serious thought to a number of ideas before I make any decisions.
- d. I haven't deviated from the religious beliefs I was raised with because they give me moral support.
- e. I don't have any definite religious beliefs, but I don't really think it makes much difference what one believes.

Set 14 Select ONE statement MOST LIKE YOU

- a. I'm seriously investigating several religious ideas and orientations so that I can clarify my thoughts and make up my own mind on the subject.
- b. After examining different religious ideas, I have selected those views that I agree with.

- c. Religious beliefs aren't something I've paid much attention to because I think religion simply happens, or it doesn't matter.
- d. I agree with the religious beliefs I was raised with, and they provide a sense of security to my life.
- e. I haven't decided on any particular religious beliefs as yet, and I've hardly looked around at what's available on the subject, but I plan to sometime.

DISI-P

Set 15 Select ONE statement MOST LIKE YOU

- a. There's not much you can do about politics, so I don't think about these things and I don't concern myself with them.
- b. I was raised in the political beliefs I now hold and I firmly believe in these conservative/liberal ideas.
- c. Right now, I'm closely examining different political issues so I can decide on which ones I will adopt.
- d. I don't have any particular views on politics, and I don't really want to get involved in political activities or ideas right now.
- e. I've spent a lot of time examining political questions and now I know what's best for me and I have definite political views.

Set 16 Select ONE statement MOST LIKE YOU

- a. I've always agreed with the conservative/liberal beliefs I grew up with because these ideas suit me and I'm comfortable with them.
- b. I don't know much about different politics because I haven't had time to get into this, but I probably will when I get time.

- c. After a great deal of thought and observation, I have formed the political beliefs I now hold.
- d. I'm studying the different political ideas I hear and read about because I'm trying to firm up my ideas and thoughts on politics.
- e. I don't pay any attention to what I hear about politics because I think these things are out of my control anyway.

Set 17 Select ONE statement MOST LIKE ME

- a. I don't have any kind of political views right now because I've hardly looked into this area, but probably someday I will.
- b. I have investigated different political ideas, and I have made my selections so now I have a definite political viewpoint.
- c. I think political views tend to take their own direction, so I say why take time thinking about them.
- d. Several political views seem to me to have some merit, so now I'm analyzing them and trying to decide which ones I agree with.
- e. The conservative/liberal orientation I grew up with suits me and I am satisfied with it.

Set 18 Select ONE statement MOST LIKE ME

- a. My conservative/liberal political ideas have the same focus as those I was raised with, so I've had no need to change them.
- b. I'm pretty much undecided about my political beliefs, because I haven't focused my attention on this subject, but I will.
- c. I'm looking closely at different political ideas and have eliminated some, so that I can more easily focus on making the right choice for myself.

- d. After examining what was involved in various political views, I have focused on the political beliefs I'm in agreement with.
- e. What ever is going to happen will happen, so why spend a lot of time focusing on political beliefs.

Set 19 Select ONE statement MOST LIKE YOU

- a. I've done some reading in the political literature—newspapers, books, etc. —and examining the thoughts presented helped me form the views I now have.
- b. I'm too much involved in other things to have any definite political ideas, but someday I'll look into this.
- c. I guess my liberal/conservative political ideas stem from my home and family and I find I'm comfortable with these beliefs and they suit me.
- d. I think deciding on political ideas by flipping a coin is as good as anything else because politics are like a weathervane —they go the way the wind blows.
- e. I'm seriously trying to develop my own views regarding political questions rather than just reacting against others, so I'm scrutinizing various political issues now.

Set 20 Select ONE statement MOST LIKE YOU

- a. I haven't formulated any political ideas, but one of these days I'll probably look into this.
- b. Before adopting the political views I now hold, I've spent a lot of time investigating different political issues and ideas.
- c. In my life, politics are neither here nor there because it doesn't make much difference what you think, so it's not worth the effort.

- d. I've narrowed the field on my political choice, but I'm still exploring a few ideas before I decide which ones I'll adopt.
- e. Getting my political views together hasn't been a problem for me since they are the conservative/liberal political beliefs I was raised with.

Set 21 Select ONE statement MOST LIKE YOU

- a. I'm getting close to developing a political philosophy, but there are a few more ideas I'm still weighing before I make an adoption.
- b. I can't see giving much thought to political beliefs because politics are like a game of chance which doesn't seem worth the effort.
- c. I have checked into different political ideas and beliefs, and now I have a clear picture of my political orientation.
- d. My conservative/liberal political orientation is the one I was raised with, so I haven't had to spend time exploring this area.
- e. Politics are a complicated area, my knowledge of the subject is limited, so I don't want to make any decisions about political views right now.

APPENDIX B

Objective Measure of Ego-Identity Scale

Directions for Participants:

This questionnaire is designed to measure how you see yourself. It is not a test, so there are no right or wrong answers. Please interpret the label “parent(s)” as your adoptive parents. Please answer each item as carefully and as accurately as you can by placing a number beside each one as follows:

1= Strongly Agree

2= Moderately Agree

3= Agree

4= Disagree

5= Moderately Disagree

6= Strongly Disagree

Questions That Load on Identity Diffused.

1. I haven't really considered politics. It just really doesn't excite me much.
3. When it comes to religion I just haven't found any that I'm really into myself.
6. I don't give religion much thought and it doesn't bother me one way or the other.
8. I haven't chosen the occupation I really want to get into, but I'm working toward becoming a _____ until something better comes along.
11. I really never was involved in politics enough to have to make a firm stand one way or the other.

16. I'm sure it will be pretty easy for me to change my occupational goals when something better comes along.

Questions That Load on Identity Foreclosed.

2. I might have thought about a lot of different things but there has never really been a decision since my parents said what they wanted.
4. My parents had it decided a long time ago what I should go into and I'm following their parents.
7. I guess I'm pretty much like my folks when it comes to politics. I follow what they do in terms of voting and such.
17. My folks have always had their own political and moral beliefs about issues like abortion and mercy killing and I've always gone along accepting what they have.
21. I attend the same place of worship as my family has always attended. I've never really questioned why.
23. I've never really questioned my religion. If it's right for my parents it must be right for me.

Questions That Load on Identity Moratorium.

5. There are so many different political parties and ideals. I can't decide which to follow until I figure it all out.
12. I'm not so sure what my religion means to me. I'd like to make up my mind but I'm not done looking yet.
18. Religion is confusing to me right now. I keep changing my views on what is right and wrong to me.

- 19. I'm not sure about my political beliefs, but I'm trying to figure out what I can truly believe in.
- 20. I just can't decide how capable I am as a person and what jobs I'll be right for.
- 22. I just can't decide what to do for an occupation. There are so many possibilities.

Questions That Load on Identity Achieved.

- 9. A person's faith is unique to each individual. I've considered and reconsidered it myself and know what I can believe.
- 10. It took me a long time to decide but now I know for sure what direction to move in for a career.
- 13. I've thought my political beliefs through and realize I may or may not agree with many of my parent's beliefs.
- 14. It took me a while to figure it out, but now I really know what I want for a career.
- 18. I've gone through a period of serious questioning about faith and can now say I understand what I believe in as an individual.
- 24. Politics are something that I can never be too sure about because things change so fast. But I do think it's important to know what I believe in.

APPENDIX C

Occupational Content

Please indicate into which category your major falls:

College of Arts and Sciences

- ☐ African and African American Studies
- ☐ Anthropology
- ☐ Art
- ☐ Chemistry
- ☐ Communication
- ☐ Criminology
- ☐ Economics
- ☐ English
- ☐ Family and Consumer Sciences
- ☐ Geography
- ☐ Geology
- ☐ History
- ☐ Information Technology
- ☐ Languages, Literatures, and Linguistics
- ☐ Liberal Studies
- ☐ Life Sciences
- ☐ Mathematics and Computer Science
- ☐ Music

_____ Philosophy

_____ Physics

_____ Political Science

_____ Pre-professional Programs (e.g. pre –engineering, -law, -dentistry, -medicine,
etc.)

_____ Psychology

_____ Science Education

_____ Social Studies Education

_____ Social Work

_____ Sociology

_____ Theater

College of Business

_____ Accounting

_____ Business Administration

_____ Business Education

_____ Business Non-designated

_____ Finance

_____ Information Design and End-User Communication

_____ Insurance and Risk Management

_____ Management

_____ Management Information Systems

_____ Marketing

_____ Operations Management and Analysis

College of Education

_____ Early Childhood Education

_____ Education Non-designated

_____ Elementary Education

_____ Library Media Services

_____ Special Education

_____ Speech-Language Pathology

College of Health & Human Performance

_____ Athletic Training

_____ Community Health Promotion

_____ Environmental Health Sciences

_____ Physical Education- All Grade Education

_____ Recreation and Sport Management

_____ Safety Management

_____ School Health

_____ Sports Studies

College of Nursing

_____ Nursing

College of Technology

_____ Aerospace Administration

_____ Automotive Technology

_____ Career and Technical Education

_____ Computer Hardware Technology

_____ Computer Integrated Manufacturing Technology

_____ Construction Management

_____ Construction Technology

_____ Electronics and Computer Technology

_____ Electronics Technology

_____ General Aviation Flight Technology

_____ Human Resource Development

_____ Industrial Supervision

_____ Industrial Technology

_____ Manufacturing Technology

_____ Mechanical Design Technology

_____ Packaging Technology

_____ Printing Management

_____ Professional Aviation Flight Technology

_____ Technology Education

_____ Technology Non-designated

Undecided

Please indicate in which of the following vocational areas you would like to pursue a career:

- _____ Artistic (involving visually creative work with design, color, form, and materials)
- _____ Clerical (working with precision and accuracy)
- _____ Computational (working with numbers)
- _____ Literary (reading and writing)
- _____ Mechanical (using machines and tools)
- _____ Musical (making or listening to music)
- _____ Outdoor (being outside, working with plants or animals)
- _____ Persuasive (meeting and dealing with people, promoting projects, selling things and ideas)
- _____ Scientific (solving problems and discovering facts)
- _____ Social Services (helping people)
- _____ Other (please specify)

APPENDIX D

Totals and Percentages for Vocational Interest Area

Totals and Percentages for Vocational Interest Area

	N	Percentage of Total
Sample		
Artistic	18	6.4
Clerical	2	.7
Computational	11	3.9
Literary	10	3.5
Mechanical	7	2.5
Musical	10	3.5
Social Services	153	54.1
Outdoor	7	2.5
Persuasive	24	8.5
Scientific	21	7.4
Other	13	4.6

Note. Total N = 276

APPENDIX E

Religious Denomination

Religious Denomination- Select the one item that best describes your current religious identification:

- _____ 1) Buddhist
- _____ 2) Christian- Catholic
- _____ 3) Christian- Lutheran
- _____ 4) Christian- Methodist
- _____ 5) Christian- Baptist
- _____ 6) Christian- Other Protestant
- _____ 7) Christian- LDS (Mormon)
- _____ 8) Christian- Other Denomination
- _____ 9) Hindu
- _____ 10) Muslim/Islam
- _____ 11) Jewish
- _____ 12) Atheist
- _____ 13) Agnostic
- _____ 14) Taoist
- _____ 15) Pagan/Wiccan
- _____ 16) Unitarian-Universalist
- _____ 17) Other (please describe) _____

APPENDIX F

Religious Content

To what extent do you consider yourself a spiritual person?

- _____ Not spiritual at all
- _____ Slightly spiritual
- _____ Somewhat spiritual
- _____ Moderately spiritual
- _____ Very spiritual

To what extent do you consider yourself a religious person?

- _____ Not religious at all
- _____ Slightly religious
- _____ Somewhat religious
- _____ Moderately religious
- _____ Very religious

Which of the following best describes your current belief in God?

- _____ I know that God does not exist
- _____ I am pretty sure that God does not exist
- _____ I think that God probably does not exist
- _____ I am not sure what to think about the existence of God
- _____ I think there is probably a God
- _____ I am pretty confident that God exists

_____ I know that God exists

How often do you attend religious services?

_____ never

_____ less than once a year

_____ about once or twice a year

_____ several times a year

_____ about once a month

_____ 2-3 times a month

_____ nearly every week

_____ every week

_____ several times a week

How often do you pray or meditate privately in places other than at church
or your place of worship?

_____ never

_____ less than once a month

_____ once a month

_____ a few times a month

_____ once a week

_____ a few times a week

_____ once a day

_____ several times a day

APPENDIX G

Kaldestad's Liberal Beliefs Scale

Please use the following scale to indicate your level of agreement with each of the following statements.

1 = strong disagree

4 = partly agree

2 = partly disagree

5 = strongly agree

3 = neutral

1. The Bible cannot be understood literally, and it can be interpreted in different ways
2. The Bible contains both true and some historically incorrect information.
3. There is a lot of evil in the world, but I doubt whether the devil exists or not.
4. On the basis of the Bible we cannot prophesy the future history of the world.
5. We human beings know little or nothing about the end of the world.
6. People's life on earth is just as important as a possible life after death.
7. God at last will reconcile to Himself even those people who stand up against Him.
8. I believe that all human beings are good, if they do their best and are sincere.

APPENDIX H

Intrinsic/Extrinsic Religiousness

Please use the following scale to indicate your level of agreement with each statement.

1 = strongly disagree 5 = agree somewhat

2 = disagree 6 = agree

3 = disagree somewhat 7 = strongly agree

4 = not sure

1. I go to church mainly because I enjoy seeing people I know there
2. What religion offers me most is comfort in times of trouble and sorrow
3. My whole approach to life is based on my religion.

APPENDIX I

Conservatism-Liberalism Scale

Please use the following scale to indicate the degree of your agreement or disagreement with each of the statements below. Record your numerical answer to each statement in the space provided preceding the statement. Try to describe your attitudes accurately and generally.

1 = very strong agreement

2 = strong agreement

3 = moderate agreement

4 = slight agreement

5 = neither agreement nor disagreement

6 = slight disagreement

7 = moderate disagreement

8 = strong disagreement

9 = very strong disagreement

(-)_____ 1. I am politically more liberal than conservative

(+)_____ 2. In any election, given a choice between a Republican and a Democratic candidate, I will select to the Republican over the Democrat.

(+)_____ 3. Communism has been proven to be a failed political ideology.

(-)_____ 4. I cannot see myself ever voting to elect conservative candidates.

(+)_____ 5. The major national media are too left-wing for my taste.

(-)_____ 6. Socialism has many advantages to capitalism.

(-)_____ 7. On balance, I lean politically more to the left than to the right.

* () indicate how items will be scored and did not appear on actual questionnaire

APPENDIX J

State-Trait Anxiety Inventory
SELF-EVALUATION QUESTIONNAIRE

STAI Form Y-1

Please provide the following information:

Name _____ Date _____

Age _____ Gender (Circle) M F

Directions:

A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you feel *right* now, that is, at *this moment*. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	NOT AT ALL	SOMEWHAT	MODERATELY SO	VERY MUCH SO
1. I feel calm	1	2	3	4
2. I feel secure	1	2	3	4
3. I am tense	1	2	3	4
4. I feel strained	1	2	3	4
5. I feel at ease	1	2	3	4
6. I feel upset	1	2	3	4

7. I am presently worrying over possible misfortunes	1	2	3	4
8. I feel satisfied	1	2	3	4
9. I feel frightened	1	2	3	4
10. I feel comfortable	1	2	3	4
11. I feel self-confident	1	2	3	4
12. I feel nervous	1	2	3	4
13. I am jittery	1	2	3	4
14. I feel indecisive	1	2	3	4
15. I am relaxed	1	2	3	4
16. I feel content	1	2	3	4
17. I am worried	1	2	3	4
18. I feel confused	1	2	3	4
19. I feel steady	1	2	3	4
20. I feel pleasant	1	2	3	4

SELF-EVALUATION QUESTIONNAIRE

STAI Form Y-2

Name _____ Date _____

DIRECTIONS:

A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you *generally* feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
21. I feel pleasant	1	2	3	4
22. I feel nervous and restless	1	2	3	4
23. I feel satisfied with myself	1	2	3	4
24. I wish I could be as happy as others seem to be	1	2	3	4
25. I feel like failure	1	2	3	4
26. I feel rested	1	2	3	4
27. I am "calm, cool, and collected"	1	2	3	4
28. I feel that difficulties are piling up so that I cannot overcome them	1	2	3	4
29. I worry too much over something that really doesn't matter	1	2	3	4
30. I am happy	1	2	3	4
31. I have disturbing thoughts	1	2	3	4
32. I lack self-confidence	1	2	3	4
33. I feel secure	1	2	3	4
34. I make decisions easily	1	2	3	4
35. I feel inadequate	1	2	3	4
36. I am content	1	2	3	4
37. Some unimportant thought runs through my mind and bothers me	1	2	3	4
38. I take disappointments so keenly that I can't put them out of my mind	1	2	3	4
39. I am a steady person	1	2	3	4
40. I get in a state of tension or turmoil over my recent concerns and interests	1	2	3	4

APPENDIX K

General Social Survey Questions

Please use the following rating scale to answer the questions below

- a) None of the time
- b) Some of the time
- c) About half of the time
- d) Most of the time
- e) All of the time

In the past 30 days, how often did you feel*

- 1. So sad nothing could cheer you up
- 2. Nervous
- 3. Restless or fidgety
- 4. Hopeless
- 5. That everything was an effort
- 6. Worthless
- 7. That nothing was any fun

APPENDIX L

Alcohol Consumption- Frequency, Quantity, Heavy and Peak Use

For the next four questions please choose the answer that comes closest to describing your drinking during the current school year- that is, since classes started in August.

1. In this questionnaire, one “drink” is equal to 1 beer or wine cooler (12 ounces), 1 glass of wine (4 ounces), or 1 shot of liquor (1 ¼ ounces).

How often did you consume alcoholic beverages during the current school year?

- ☐ Never
- ☐ Less than once month
- ☐ About once a month
- ☐ Two times a month
- ☐ Three times a month
- ☐ About once a week
- ☐ Two days per week
- ☐ Three days per week
- ☐ Four days per week
- ☐ Five days per week
- ☐ Six or seven days per week

2. What is your usual quantity of alcoholic beverages consumed at any one drinking occasion during the current school year?

- ☐ I did not drink at all during this school year

_____ 1 bottle (or can) or beer, 1 wine cooler, 1 glass of wine, or 1 mixed drink

_____ 2 bottles, wine coolers, wine glasses, mixed drinks

_____ 3 bottles, wine coolers, wine glasses, mixed drinks

_____ 4 bottles, wine coolers, wine glasses, mixed drinks

_____ 5 bottles, wine coolers, wine glasses, mixed drinks

_____ 6 bottles, wine coolers, wine glasses, mixed drinks

_____ 7 or 8 bottles, wine coolers, etc.

_____ 9 or 10 bottles, wine coolers, etc.

_____ 11 or 12 bottles, wine coolers, etc.

_____ 13 or more bottles, wine coolers, etc.

3. Think of the occasion you drank the most during this school year. How much did you drink?

_____ I did not drink at all during this school year.

_____ 1-2 drinks

_____ 3-4 drinks

_____ 5-6 drinks

_____ 7-8 drinks

_____ 9-10 drinks

_____ 11-12 drinks

_____ 13-14 drinks

_____ 15-16 drinks

_____ 17-18 drinks

_____ 19 or more drinks

4. How often did you consume five or more drinks on a single drinking occasion during the current school year?

- ☐ Never
- ☐ Less than once a month
- ☐ About once a month
- ☐ Two times a month
- ☐ Three times a month
- ☐ About once a week
- ☐ Two days per week
- ☐ Three days per week
- ☐ Four days per week
- ☐ Five days per week
- ☐ Six or seven days per week

5. How often did you consume alcoholic beverages during the past month.

- ☐ Never
- ☐ Less than once a month
- ☐ About once a month
- ☐ Two times a month
- ☐ Three times a month
- ☐ About once per week during the past month
- ☐ Two days per week during the past month
- ☐ Three days per week during the past month
- ☐ Four days per week during the past month

_____ Five days per week during the past month

_____ Six or seven days per week during past month

6. What is (or was) your usual quantity of alcoholic beverages consumed at any one drinking occasion during the past month?

_____ I did not drink at all during the past month

_____ 1 bottle (or can) of beer, 1 wine cooler, 1 glass of wine, or 1 mixed drink

_____ 2 bottles, wine coolers, wine glasses, mixed drinks

_____ 3 bottles, wine coolers, wine glasses, mixed drinks

_____ 4 bottles, wine coolers, wine glasses, mixed drinks

_____ 5 bottles, wine coolers, wine glasses, mixed drinks

_____ 6 bottles, wine coolers, wine glasses, mixed drinks

_____ 7 or 8 bottles, wine coolers, etc.

_____ 9 or 10 bottles, wine coolers, etc.

_____ 11 or 12 bottles, wine coolers, etc.

_____ 13 or more bottles, wine coolers, etc.

7. Think of the occasion you drank the most during the past month. How much did you drink?

_____ I did not drink at all during the past month

_____ 1-2 drinks

_____ 3-4 drinks

_____ 5-6 drinks

_____ 7-8 drinks

_____ 9-10 drinks

_____ 11-12 drinks

_____ 13-14 drinks

_____ 15-16 drinks

_____ 17-18 drinks

_____ 19 drinks

8. How often did you drink 5 or more drinks during the past month?

_____ Never

_____ Less than once a month

_____ About once a month

_____ Two times a month

_____ Three times a month

_____ About once a week

_____ Two days per week

_____ Three days per week

_____ Four days per week

_____ Five days per week

_____ Six or seven days per week

APPENDIX M

Young Adult Alcohol Problems Screening Test

Please provide the answer the best describes your experiences.

- A. No, Never
- B. Yes, but not in the past year
- C. Yes, 1 time in the past year
- D. Yes, 2 times in the past year
- E. Yes, 3 times in the past year
- F. Yes, 4-6 times in the past year
- G. Yes, 7-11 times in the past year
- H. Yes, 12-20 times in the past year
- I. Yes, 21-39 times in the past year
- J. Yes, 40 or more times in the past year

Please use the above responses for the following questions

1. Have you driven a car when you knew you had too much to drink to drive safely?
2. Have you had a headache (hangover) the morning after you had been drinking?
3. Have you felt very sick to your stomach or thrown up after drinking?
4. Have you showed up late for work or school because of drinking, a hangover, or an illness caused by drinking?
5. Have you not gone to work or missed classes at school because of drinking, a hangover, or an illness caused by drinking?

6. Have you gotten into physical fights when drinking?
7. Have you ever gotten into trouble at work or school because of drinking?
8. Have you ever been fired from a job or suspended or expelled from school because of your drinking?

- A. No, never.
- B. Yes, but not in the past year.
- C. Yes, 1 time in the past year.
- D. Yes, 2 times in the past year.
- E. Yes, 3 or more times in the past year.

Please use the above responses for the following questions.

9. Have you damaged property, set off a false alarm, or other things like that after you had been drinking?
10. Has your boyfriend/girlfriend (or spouse), parent(s), or other near relative complained to you about your drinking?
11. Has your drinking ever created problems between you and your boyfriend/girlfriend (or spouse) or other near relative.
12. Have you ever lost friends (including boyfriends or girlfriends) because of your drinking?
13. Have you ever neglected you obligations, your family, your work, or school for two or more days in a row because of your drinking?
14. Has drinking ever gotten you into sexual situations which you later regretted.
15. Have you ever received a lower grade on an exam or paper than you should have because of your drinkning?

16. Have you ever been arrested for drunken driving, driving while intoxicated, or driving under the influence of alcohol?
17. Have you ever been arrested, even for a few hours, because of other drunken behaviors?
18. Have you awakened the morning after a good bit of drinking and found you could not remember a part of the evening before?
19. Have you ever had “the shakes” after stopping or cutting down on drinking (for example, your hands shake so that your coffee cup rattles in the saucer or you have trouble lighting a cigarette)?
20. Have you ever felt like you needed a drink just after you’d gotten up (that is, before breakfast)?

A. No, never.

B. Yes, but not in the past year.

C. Yes, 1 or more times in the past year.

Please use the above responses to answer the following questions.

21. Have you ever found you need larger amounts of alcohol to feel any effect, or that you could no longer get high or drunk on the amount that used to get you high or drunk?
22. Have you ever felt that you needed alcohol or were dependent on alcohol?
23. Have you ever felt guilty about your drinking?
24. Has your doctor ever told you that your drinking was harming your health?
25. Have you ever gone to anyone for help to control your drinking?

26. Have you ever attended a meeting of Alcoholics Anonymous because of concern about your drinking?
27. Have you ever sought professional help for your drinking (for example, spoken to a physician, psychologist, psychiatrist, alcoholism counselor, clergyman about your drinking)?

APPENDIX N

Informed Consent- Within the Psychology Department

CONSENT TO PARTICIPATE IN RESEARCH

Identity and Alcohol Use Study

You are asked to participate in a research study conducted by Alison Glanville, who is a doctoral student from the Psychology Department at Indiana State University. Ms. Glanville is conducting this study for her doctoral dissertation. Dr. Thomas Johnson is her faculty sponsor for this project.

This study is for individuals 18 years old or older. Your participation in this study is entirely voluntary. You should read the information below and ask questions about anything you do not understand, before deciding whether or not to participate. You have been asked to participate in this study because you are a college student.

PURPOSE OF THE STUDY

The purpose of this study is to examine how identity development influences alcohol use and problems in college students. We hope that this information will increase our understanding of alcohol use in college and that it will lead to improvements in alcohol prevention and treatment programs.

PROCEDURES

If you volunteer to participate in this study, we will ask you to complete several questionnaires regarding the following:

1. the development of your identity
2. your religious beliefs

3. your political beliefs

4. alcohol use and problems resulting from alcohol use

POTENTIAL RISKS AND DISCOMFORTS

We expect that any risks, discomforts, or inconveniences will be minor and we believe that they are not likely to happen. Discomforts may include stress and anxiety in regard to answering questions about your beliefs and alcohol use (which for individuals under 21 years of age is an illegal activity). If discomforts become a problem, you may discontinue your participation without penalty. If discomfort continues following the discontinuation or completion of the study, we suggest contacting the Indiana State University Counseling Center. (567 North 5th Street, Terre Haute, IN 47809, 812-237-3939). You may also contact the Crisis Telephone Hotline at 812-235-8333 (open 24 hours per day, 365 days per year).

POTENTIAL BENEFITS TO SUBJECTS AND/OR SOCIETY

It is not likely that you will benefit directly from participation in this study, but the research should help us learn what factors contribute to alcohol use and problems in college students. This study should also help us improve alcohol prevention and treatment programs.

PAYMENT FOR PARTICIPATION

You will receive extra credit in your psychology class for your participation in this study the amount of which will be determined by your teacher or professor. There is no cost to you for participation

CONFIDENTIALITY

Any information that is obtained in connection with this study will not be connected to you in any way. If you choose to participate in this study, your signed consent form will not be connected to your responses. We will not use your name in any of the information we get in this study or in any of the research reports.

All signed informed consent forms and complete questionnaires will be stored separately in a file cabinet in a locked office.

PARTICIPATION AND WITHDRAWAL

You can choose whether or not to be in this study. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you do not want to answer. There is no penalty if you withdraw from the study and you will not lose any benefits to you.

IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact

Ms. Alison Glanville

Dr. Thomas Johnson

Principal Investigator

Associate Professor

Psychology Department

Psychology Department

211 Root Hall

B-206 Root Hall

Indiana State University

Indiana State University

812-237-2446

812-237-2449

aglanville80@hotmail.com

pytjohn@isugw.indstate.edu

RIGHTS OF RESEARCH SUBJECTS

If you have any questions about your rights as a research subject, you may contact the Indiana State University Institutional Review Board (IRB) by mail at 114 Erickson Hall, Terre Haute, IN 47809, by phone at 812-237-8217, or email the IRB at irb@indstate.edu. You will be given the opportunity to discuss any questions about your rights as a research participant with a member of the IRB. The IRB is an independent committee composed of members of the University community, as well as lay members of the community not connected with ISU. The IRB has reviewed and approved this study.

I understand the procedures described above. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

Printed Name of Participant

Signature of Participant

Date

**Indiana State University
Institutional Review Board
APPROVED**

IRB Number: _____

Approval: _____

Expiration Date: _____

APPENDIX O

Instructions to Within the Psychology Department Participants

Thank you for your willingness to participate in this study examining the relationship between identity and alcohol use and problems. This study is for individuals 18 years old or older. Please remember that your participation in this study is completely voluntary and that you may withdraw from the study at any time. It is possible, although unlikely, that you will find answering questions about identity, emotions, and alcohol use distressing. Please refer to your copy of the informed consent for sources to help you handle this distress. The following questionnaires should take approximately 50 minutes to complete. Please answer these questions as honestly as you can, remembering that your responses are completely anonymous and will not be associated with your name in any way. When you are finished, please place your signed informed consent form and the questionnaire in the envelope, seal the envelope, and return the envelope to your teacher/professor. Thank you again for your participation.

APPENDIX P

Informed Consent- Outside the Psychology Department

CONSENT TO PARTICIPATE IN RESEARCH

Identity and Alcohol Use Study

You are asked to participate in a research study conducted by Alison Glanville, who is a doctoral student from the Psychology Department at Indiana State University. Ms. Glanville is conducting this study for her doctoral dissertation. Dr. Thomas Johnson is her faculty sponsor for this project.

This study is for individuals 18 years old or older. Your participation in this study is entirely voluntary. You should read the information below and ask questions about anything you do not understand, before deciding whether or not to participate. You have been asked to participate in this study because you are a college student.

PURPOSE OF THE STUDY

The purpose of this study is to examine how identity development influence alcohol use and problems in college students. We hope that this information will increase our understanding of alcohol use in college and that it will lead to improvements in alcohol prevention and treatment programs.

PROCEDURES

If you volunteer to participate in this study, we will ask you to complete several questionnaires regarding the following:

1. the development of your identity
2. your religious beliefs

3. your political beliefs

4. alcohol use and problems resulting from alcohol use

POTENTIAL RISKS AND DISCOMFORTS

We expect that any risks, discomforts, or inconveniences will be minor and we believe that they are not likely to happen. Discomforts may include stress and anxiety in regard to answering questions about your beliefs and alcohol use (which for individuals under 21 years of age is an illegal activity). If discomforts become a problem, you may discontinue your participation without penalty. If discomfort continues following the discontinuation or completion of the study, we suggest contacting the Indiana State University Counseling Center (567 North 5th Street, Terre Haute, IN 47809, 812-237-3939). You may also contact the Crisis Telephone Line at 812-235-8333 (open 24 hours per day, 365 days per year).

POTENTIAL BENEFITS TO SUBJECTS AND/OR SOCIETY

It is not likely that you will benefit directly from participation in this study, but the research should help us learn what factors contribute to alcohol use and problems in college students. This study should also help us improve alcohol prevention and treatment programs.

PAYMENT FOR PARTICIPATION

You will be entered into a raffle for your participation in this study. The raffle will be held upon the completion of data collection and the six winners will receive a gift certificate to Circuit City. One winner will win a \$100 gift certificate and 5 people will win a \$20 gift certificate. There is no cost to you for participation.

CONFIDENTIALITY

Any information that is obtained in connection with this study will not be connected to you in any way. If you choose to participate in this study, your signed consent form will not be connected to your responses. We will not use your name in any of the information we get in this study or in any of the research reports.

All signed informed consent forms and complete questionnaires will be stored separately in a file cabinet in a locked office.

PARTICIPATION AND WITHDRAWAL

You can choose whether or not to be in this study. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you do not want to answer. There is no penalty if you withdraw from the study and you will not lose any benefits to you.

IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact

Ms. Alison Glanville

Dr. Thomas Johnson

Principal Investigator

Associate Professor

Psychology Department

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812-237-2446

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aglanville80@hotmail.com

RIGHTS OF RESEARCH SUBJECTS

If you have any questions about your rights as a research subject, you may contact the Indiana State University Institutional Review Board (IRB) by mail at 114 Erickson Hall, Terre Haute, IN 47809, by phone at 812-237-8217, or email the IRB at irb@indstate.edu. You will be given the opportunity to discuss any questions about your rights as a research participant with a member of the IRB. The IRB is an independent committee composed of members of the University community, as well as lay members of the community not connected with ISU. The IRB has reviewed and approved this study.

I understand the procedures described above. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

Printed Name of Participant

Signature of Participant

Date

**Indiana State University
Institutional Review Board
APPROVED**

IRB Number: _____

Approval: _____

Expiration Date: _____

APPENDIX Q

Instructions to Outside the Psychology Department

Thank you for your willingness to participate in this study examining the relationship between identity and alcohol use and problems. This study is for individuals 18 years old or older. Please remember that your participation in this study is completely voluntary and that you may withdraw from the study at any time. It is possible, although unlikely, that you will find answering questions about identity, emotions, and alcohol use distressing. Please refer to your extra copy of the informed consent for sources to help you handle this distress. The following questionnaires should take approximately 50 minutes to complete. Please answer these questions as honestly as you can. Your responses will be separated from your signed informed consent form when we receive your completed questionnaire. Your responses will then be anonymous and not associated with your name in any way.

Please complete the included address form so that we can mail you your prize should you be the winner.

When you are finished, PLEASE PLACE YOUR SIGNED INFORMED CONSENT FORM, COMPLETED QUESTIONNAIRE, AND COMPLETED ADDRESS FORM into the envelope provided. Please place this envelope into Campus or U.S. Mail. Upon receiving your questionnaire we will mail you a \$100 gift certificate OR one of five \$20 gift certificates to Circuit City if you are selected as one of the raffle winners.

Thank you again for your participation.

APPENDIX R

Address Form for Outside of Psychology Department Participants

Please complete the following information so that we can mail you your raffle ticket and inform you if you have won a prize (one \$100 gift certificate to Circuit City OR one of five \$20 gift certificates to Circuit City)!

NAME: _____

ADDRESS: _____

PHONE NUMBER: () _____

EMAIL: _____

APPENDIX S

Correlation Tables for Religious and Political Content, Anxiety,
Identity, and Alcohol Variables

*Correlations of Religious and Political Content Variables, Anxiety Variables, Continuous Identity Variables, and
Alcohol Variables*

Variable	Religious Lib.	Belief in God	Political Cons.	State Anxiety
Religious Liberalism	1.00	-.35***	-.26***	.00
Belief in God	-.35***	1.00	.21***	.03
Political Conservatism	-.26***	.22***	1.00	.06
State Anxiety	.00	.03	.06	1.00
Trait Anxiety	-.06	.03	-.00	.60***
Anxiety Composite ^a	.01	-.03	-.03	-.90***
Negative Affect ^b	-.01	-.02	-.03	-.61***
Affect Composite	.01	-.03	-.04	-.86***
Overall Diffusion (OMEIS)	.04	-.16**	.06	.17**
Overall Foreclosure (OMEIS)	-.07	.14*	.18**	-.07
Overall Moratorium (OMEIS)	.16**	-.08	-.01	-.24***
Overall Achievement (OMEIS)	.06	.11	-.10†	.11†
Occupational Diffusion (DISI)	-.03	-.01	-.01	-.17**
Occupational Moratorium (DISI)	.07	-.06	-.05	-.06
Occupational Foreclosure (DISI)	-.03	-.05	.10†	.10
Occupational Achievement (DISI)	-.01	.11†	-.05	.10†
Religious Diffusion (DISI)	.27***	-.48***	-.09	-.07
Religious Moratorium (DISI)	.11†	-.01	-.05	-.06
Religious Foreclosure (DISI)	-.32***	.44***	0.22***	.02
Religious Achievement (DISI)	.05	-.06	-.17**	.12*
Political Diffusion (DISI)	-.10†	-.05	.02	-.05

Political Moratorium (DISI)	-.01	.06	-.05	-.30
Political Foreclosure (DISI)	-.06	.13*	.24***	.07
Political Achievement (DISI)	.19***	-.12	-.20***	.07
Alcohol Use	.11	-.08	.03	-.01
Alcohol Problems	.04	.03	.07	-.16**

Note. †p<.10; *p<.05; **p<.01; ***p<.001; N = 280

^aAnxiety Composite is the mean of the z scores for State and Trait anxiety (as measured by the STAI)

^bAffect Composite is the mean of the Anxiety Composite and z scores on psychological distress (as measured by the General Social Survey)

Correlations of Religious and Political Content Variables, Anxiety Variables, Continuous Identity Variables, and Alcohol Variables, (continued)

Variable	Trait Anxiety	Anxiety Comp.	Neg. Affect	Affect Comp.
Religious Liberalism	-.03	.01	-.01	.01
Belief in God	.03	-.03	-.02	-.03
Political Conservatism	-.00	-.03	-.03	-.04
State Anxiety	.60***	-.90***	-.61***	-.86***
Trait Anxiety	1.00	-.90***	-.57***	-.85***
Anxiety Composite ^a	-.90***	1.00	.64***	.95***
Negative Affect ^b	-.57***	.64***	1.00	.85***
Affect Composite	-.85***	.95***	.85***	1.00
Overall Diffusion (OMEIS)	-.14*	.18**	.16**	.19**
Overall Foreclosure (OMEIS)	-.10†	.10	.11	.11
Overall Moratorium (OMEIS)	-.16**	.22***	.19***	.23***
Overall Achievement (OMEIS)	.02	-.07	-.02	-.06
Occupational Diffusion (DISI)	-.13*	.16**	.19**	.19**
Occupational Moratorium (DISI)	.01	.02	-.01	.01
Occupational Foreclosure (DISI)	.04	-.06	-.06	-.07
Occupational Achievement (DISI)	.06	-.10	-.08	-.10
Religious Diffusion (DISI)	-.06	.08	.08	.09
Religious Moratorium (DISI)	.04	.01	.01	.01
Religious Foreclosure (DISI)	.05	-.05	-.02	-.04

Religious Achievement (DISI)	-.02	-.06	-.08	-.07
Political Diffusion (DISI)	-.10	.08	.08	.04
Political Moratorium (DISI)	.06	-.02	0.00	-.01
Political Foreclosure (DISI)	.03	-.06	-.09	-.08
Political Achievement (DISI)	.05	-.07	-.02	-.06
Alcohol Use	.14*	-.05	-.06	-.06
Alcohol Problems	-.03	.11†	.04	.10

Note. †p<.10; *p<.05; **p<.01; ***p<.001; N = 280

^aAnxiety Composite is the mean of the z scores for State and Trait anxiety (as measured by the STAI)

^bAffect Composite is the mean of the Anxiety Composite and z scores on psychological distress (as measured by the General Social Survey)

Correlations of Religious and Political Content Variables, Anxiety Variables, Continuous Identity Variables, and Alcohol Variables, (continued)

Variable	Overall Diff.	Overall Fore.	Overall Mor.	Overall Ach.
Religious Liberalism	.04	-.07	.16**	.06
Belief in God	-.16**	.14*	-.08	.11
Political Conservatism	.06	.18**	-.01	-.10
State Anxiety	-.17**	-.06	-.24***	.11
Trait Anxiety	-.14*	-.10	-.16**	.02
Anxiety Composite ^a	.18**	.10	.22***	-.07
Negative Affect ^b	.16**	.11	.19***	-.02
Affect Composite	.19**	.11†	.23***	-.06
Overall Diffusion (OMEIS)	1.00	.39***	.58***	.00
Overall Foreclosure (OMEIS)	.39***	1.00	.36***	-.11†
Overall Moratorium (OMEIS)	.58***	.36***	1.00	-.05
Overall Achievement (OMEIS)	0.00	-.11†	-.05	1.00
Occupational Diffusion (DISI)	.33***	.16**	.47***	-.16**
Occupational Moratorium (DISI)	.09	-.10†	.19***	.05
Occupational Foreclosure (DISI)	-.12*	.04	-.24***	-.16**
Occupational Achievement (DISI)	-.23***	-.09	-.31***	.24***

Religious Diffusion (DISI)	.35***	-.05	-.35***	-.14*
Religious Moratorium (DISI)	-.04	.02	.26***	.04
Religious Foreclosure (DISI)	-.15*	.21***	-.26***	-.06
Religious Achievement (DISI)	-.18**	-.24***	-.22***	.21***
Political Diffusion (DISI)	.55***	.24***	.31***	.03
Political Moratorium (DISI)	-.17**	-.15*	.14*	-.03
Political Foreclosure (DISI)	-.14*	.22***	-.22***	-.15*
Political Achievement (DISI)	-.43***	-.39***	-.34***	.12*
Alcohol Use	.03	-.02	.03	-.05
Alcohol Problems	.05	-.02	.17**	-.04

Note. †p<.10; *p<.05; **p<.01; ***p<.001; N = 280

^aAnxiety Composite is the mean of the z scores for State and Trait anxiety (as measured by the STAI)

^bAffect Composite is the mean of the Anxiety Composite and z scores on psychological distress (as measured by the General Social Survey)

Correlations of Religious and Political Content Variables, Anxiety Variables, Continuous Identity Variables, and Alcohol Variables, (continued)

Variable	Occ. Diff.	Occ. Fore.	Occ. Mor.	Occ.Ach.
Religious Liberalism	-.03	-.03	.07	-.00
Belief in God	-.01	-.05	-.06	.11†
Political Conservatism	-.01	.10	-.05	-.05
State Anxiety	-.71**	.10	-.06	.10
Trait Anxiety	-.13*	.04	.01	.06
Anxiety Composite ^a	.16**	-.06	.02	-.10
Negative Affect ^b	.19**	-.06	-.01	-.08
Affect Composite	.19**	-.07	.01	-.10
Overall Diffusion (OMEIS)	.33***	-.12*	.09	-.23***
Overall Foreclosure (OMEIS)	.16**	.04	-.10†	-.09
Overall Moratorium (OMEIS)	.47***	-.24***	.19***	-.31***
Overall Achievement (OMEIS)	-.16**	-.16**	.05	.24***
Occupational Diffusion (DISI)	1.00	-.42***	.06	-.48***

Occupational Moratorium (DISI)	.06	-.46***	1.00	-.41***
Occupational Foreclosure (DISI)	-.42***	1.00	-.46***	-.26***
Occupational Achievement (DISI)	-.48***	-.26***	-.41***	1.00
Religious Diffusion (DISI)	.14*	-.01	.10†	-.20***
Religious Moratorium (DISI)	.06	-.17**	.08	.05
Religious Foreclosure (DISI)	-.13*	.14*	-.07	.03
Religious Achievement (DISI)	-.05	-.06	-.06	.16**
Political Diffusion (DISI)	.09	.10	-.10	-.08
Political Moratorium (DISI)	-.04	-.12*	.15**	.03
Political Foreclosure (DISI)	-.05	.10	-.12	.04
Political Achievement (DISI)	-.05	-.11†	.11†	.06
Alcohol Use	.01	.05	-.01	-.06
Alcohol Problems	.07	-.01	.05	-.09

Note. †p<.10; *p<.05; **p<.01; ***p<.001; N = 280

^aAnxiety Composite is the mean of the z scores for State and Trait anxiety (as measured by the STAI)

^bAffect Composite is the mean of the Anxiety Composite and z scores on psychological distress (as measured by the General Social Survey)

Correlations of Religious and Political Content Variables, Anxiety Variables, Continuous Identity Variables, and Alcohol Variables, (continued)

Variable	Rel. Diff.	Rel. Fore.	Rel. Mor.	Rel. Ach.
Religious Liberalism	.27***	-.32***	.11	.05
Belief in God	-.48***	.44***	.01	-.06
Political Conservatism	-.09	.22***	-.05	-.17**
State Anxiety	-.07	.02	-.06	.12*
Trait Anxiety	-.06	.05	.04	-.02
Anxiety Composite ^a	.08	-.05	.01	-.06
Negative Affect ^b	.08	-.02	.01	-.08
Affect Composite	.09	-.03	.01	-.07
Overall Diffusion (OMEIS)	.35***	-.15*	-.04	-.18**
Overall Foreclosure (OMEIS)	-.05	.21***	.02	-.24***
Overall Moratorium (OMEIS)	.35***	-.26***	.26***	-.22***

Overall Achievement (OMEIS)	-.14*	-.06	.04	.21***
Occupational Diffusion (DISI)	.14*	-.12*	.06	-.05
Occupational Moratorium (DISI)	.10†	-.07	.08	-.06
Occupational Foreclosure (DISI)	-.01	.14*	-.16**	-.06
Occupational Achievement (DISI)	-.20***	.03	.05	.16**
Religious Diffusion (DISI)	1.00	-.60***	-.90	-.25***
Religious Moratorium (DISI)	-.09	-.36***	1.00	-.10
Religious Foreclosure (DISI)	-.06	1.00	-.36***	-.43***
Religious Achievement (DISI)	-.25***	-.43***	-.10	1.00
Political Diffusion (DISI)	.19***	.01	-.05	-.18**
Political Moratorium (DISI)	-.11†	-.02	.08	.12†
Political Foreclosure (DISI)	-.12	.22***	-.03	-.14*
Political Achievement (DISI)	-.04	-.17**	.03	.28***
Alcohol Use	.08	.04	-.07	-.12*
Alcohol Problems	.03	.01	.03	-.07

Note. †p<.10; *p<.05; **p<.01; ***p<.001; N = 280

^aAnxiety Composite is the mean of the z scores for State and Trait anxiety (as measured by the STAI)

^bAffect Composite is the mean of the Anxiety Composite and z scores on psychological distress (as measured by the General Social Survey)

Correlations of Religious and Political Content Variables, Anxiety Variables, Continuous Identity Variables, and Alcohol Variables, (continued)

Variable	Pol. Diff.	Pol. Fore.	Pol. Mor.	Pol. Ach.
Religious Liberalism	-.10	-.06	-.01	.20***
Belief in God	-.05	.13*	.06	-.12
Political Conservatism	.02	.24***	-.05	-.20***
State Anxiety	-.05	.07	-.03	.07
Trait Anxiety	-.10	.03	.06	.05
Anxiety Composite ^a	.08	-.06	-.02	-.07
Negative Affect ^b	.08	-.09	.00	-.02
Affect Composite	.09	-.08	-.01	-.06
Overall Diffusion (OMEIS)	.55***	-.14*	-.17**	-.43***

Overall Foreclosure (OMEIS)	.24***	.22***	-.15*	-.39***
Overall Moratorium (OMEIS)	.31***	-.22***	.14*	-.34***
Overall Achievement (OMEIS)	.03	-.15*	-.03	.12*
Occupational Diffusion (DISI)	.09	-.05	-.04	-.05
Occupational Moratorium (DISI)	-.10	-.12	.15**	.11†
Occupational Foreclosure (DISI)	.10	.10	-.12*	-.11†
Occupational Achievement (DISI)	-.08	.04	.03	.06
Religious Diffusion (DISI)	.19***	-.12*	-.11†	-.04
Religious Moratorium (DISI)	-.05	-.03	.08	.03
Religious Foreclosure (DISI)	.01	.22***	-.02	-.17**
Religious Achievement (DISI)	-.18**	-.14*	.12†	.28***
Political Diffusion (DISI)	1.00	-.39***	-.42***	-.50***
Political Moratorium (DISI)	-.42***	-.25***	1.00	-.16**
Political Foreclosure (DISI)	-.39***	1.00	-.25***	-.19**
Political Achievement (DISI)	-.50***	-.19***	-.16**	1.00
Alcohol Use	.04	.08	-.06	-.10
Alcohol Problems	.02	.01	.06	-.10

Note. †p<.10; *p<.05; **p<.01; ***p<.001; N = 280

^aAnxiety Composite is the mean of the z scores for State and Trait anxiety (as measured by the STAI)

^bAffect Composite is the mean of the Anxiety Composite and z scores on psychological distress (as measured by the General Social Survey)

Correlations of Religious and Political Content Variables, Anxiety Variables, Continuous Identity Variables, and Alcohol Variables, (continued)

Variable	Alcohol Use	Alcohol Problems
Religious Liberalism	.11	.04
Belief in God	-.08	.03
Political Conservatism	.03	.07
State Anxiety	-.01	-.16***
Trait Anxiety	.14*	-.03
Anxiety Composite ^a	-.05	.11†
Negative Affect ^b	-.06	.04