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An exploration of the relationships among religious orientation, object relations, and positive adjustment

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AN EXPLORATION OF THE RELATIONSHIPS AMONG RELIGIOUS ORIENTATION,
OBJECT RELATIONS, AND POSITIVE ADJUSTMENT

by

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ABSTRACT

Many studies have found positive relationships between religion and mental health. This study explored the relationships between Religious Orientations, Positive Adjustment, and Object Relations. Intrinsics live by their religion, whereas Extrinsics use their religion for other ends (Allport & Ross, 1967), and Questers explore religion (Batson & Schoenrade, 1991a, 1991b). Positive Adjustment, a latent variable, consisted of Life Satisfaction (Pavot & Diener, 1993), Hope (Snyder, Harris, et al., 1991), Optimism (Scheier, Carver, & Bridges, 1994), and Flow (Csikszentmihalyi, 1975b, 1982). Object Relations refers to an individual's interpersonal dynamics and attachment style (Rizzuto, 1979; Winnicott, 1971) and were posited to play a moderating and/or mediating role in the relationships between Religious Orientation and Positive Adjustment. Scales measuring each of these variables and some additional questions to explore the nature of Religious Orientations were compiled into a questionnaire and given to 197 students and 80 members of the larger community, including both Christians and Jews.

Three hypotheses were tested. Hypothesis 1 indicated that Religious Orientations, Object Relations, and Positive Adjustment would be significantly interrelated. This hypothesis was supported for many of the specific relationships posited. Further analyses showed other relationships, including group-specific effects for Christians and Jews. The second hypothesis indicated that Object Relations would serve as a moderating role in the relationship between Religious Orientation and Positive Adjustment, whereas the third indicated that Object Relations would mediate the relationships between Religious Orientation and Positive Adjustment. These hypotheses were not supported, largely due to a

lack of relationships between Religious Orientations and Object Relations or Positive Adjustment, thereby eliminating the possibility of a model inclusive of the three variables.

Overall, this study failed to find support for moderation or mediation models between Religious Orientation, Object Relations, and Positive Adjustment. Partial support was found for a link between Object Relations and Positive Adjustment, but few significant relationships were found between Religious Orientations and any other variables. The findings suggest that measures used to assess Religious Orientation deserve further analysis and theoretical conceptualization, in part to better understand how Religious Orientation might affect other psychological traits or experiences.

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Introduction

For much of psychology's history, religion was ignored. When it was considered, it was usually in the context of mental illness or as an indication of human weakness and immaturity. For example, early psychological pioneers, such as Freud (1927/1961), described religion as an immature way of dealing with the difficult events inherent in human experience, as a method of protecting the ego, and as a way of keeping primal needs and drives in check (Forsyth, 2003). Today, however, positive psychology looks for ways to support human adjustments and strengths (see Linley & Joseph, 2004; Peterson & Seligman, 2004; Snyder & Lopez, 2002), and religion is being reevaluated in a more balanced light. Psychodynamic approaches, inspired by analytic and Freudian theory, also are beginning to examine the positive contributions of religion. For example, using object-relations theory (that is, a theory about the relationship between people where each person is represented as an object), religion can be understood as a way for an individual to enact certain dynamic patterns by having religious figures serve in the role of substitute parental figures (e.g., Hall, Brokaw, Edwards, & Pike, 1998; P. C. Hill & Hall, 2002; Kirkpatrick & Shaver, 1990; Schlauch, 1999).

This dissertation explores how religious orientation is related to positive adjustment, specifically life satisfaction, hope, optimism, and positive consciousness experiences (e.g., flow). Religious orientation refers to the way we orient to our religious beliefs and how these beliefs are applied. The religious orientations (and scales used) are those defined by Allport and Ross (1967) and Batson and Ventis (1982; Batson & Schoenrade, 1991a, 1991b). Allport and Ross described two types of religious orientation: intrinsic and extrinsic. Intrinsic religiosity involves seeing religion as an end and shaping one's life around religious beliefs.

Extrinsic religiosity involves trying to gain external rewards, such as social status, from religious participation. The third type of religious orientation, quest, was described by Batson and Ventis and involves seeking religious meaning, as opposed to accepting traditional religious doctrines or dogma.

In the review of the literature, religion will be explored more broadly than simply orientation in order to develop a context for the theorized connection between religious orientation and positive adjustment. Further, the dissertation will explore how object relations are related to positive adjustment. Object relations refer to the way our early experiences shape our interpersonal styles and lead to patterns of interaction, such as reenacting parental dynamics in later life situations. Finally, the three variables—religious orientation, positive adjustment, and object relations—will be explored through regression and path analyses, to determine whether object relations affect the relationship between religious orientation and positive psychological variables.

The Relationship Between Religion and Mental Health

Negative views not supported. Freud indicated that religion was a means of escaping reality and defending the ego through projection and repression (Forsyth, 2003; Freud, 1927/1961). In essence, God becomes a father figure who protects and guides, through both love and wrath, controlling the instinctual drives that would otherwise threaten civilization's existence. Without social control and morality, Freud believed that humans would follow their primal libidinous drives. For Freud, who lived in the Victorian era, escaping religion's grasp was the goal. Religion was not a means to combat distress and emotional disorder. Further, Freud argued that religion served a secondary function, as a form of "universal obsessional neurosis" that embodied the internalized guilt of individuals toward their own

immoral drives (e.g., Oedipal desires for the mother, sexual obsessions, violent thoughts). The obsession is purified by the compulsive act of religious practice and belief (Forsyth, 2003). Freud was not alone in his negative view of religion. Another vocal antagonist of religion was Albert Ellis (1992), who argued that religion is "emotionally harmful," when it is a "pietistic, rigid, dogmatic belief in and reliance upon some kind of supernatural divine, or 'higher' power" (p. 428).

Most studies of religion and mental health or pathology have failed to find detrimental effects linked to religious beliefs or practices. Indeed, George, D. B. Larson, Koenig, and McCullough (2000) reported that "beyond case-reports and samples of fewer than 10 people, [they had] found no evidence that religion can harm health in *representative samples of community residents* or in *systematically sampled clinical populations* [italics in original]" (p. 110). However, the picture is not clear-cut; George et al. also note that there likely is some evidence that religious involvement is linked to harmful or negative health impacts. Even individuals generally supportive of the link between religion and mental health are often unsure of the relationship. For example, Bergin (1983, 1991) reviewed the literature on the subject and found that there existed no generalized correlation between adjustment and an individual's religious participation. Specifically, he collected data from 14 studies and 20 individual data sets that examined "better mental health" (1991, p. 399) and religiosity, calculating correlations for each data set. He found a correlation of .09 between the two variables, although he did not explicitly state how these constructs were defined in the studies that he analyzed.

Problems of definition. One of the most difficult aspects of interpreting the existing literature on the relationships between religion and positive adjustment are the diversity of

definitions, terms, and instruments used to assess these constructs. Batson, Schoenrade, and

Ventis (1993) explicated seven different forms of "mental health," including appropriate

social behavior, freedom from worry and guilt, personal competence and control, self-

acceptance or self-actualization, personality unification and organization, open-mindedness

and flexibility, and absence of mental illness. Other researchers have used states of

consciousness to describe positive adjustment. Through detailed interviews with several large

groups of individuals, Csikszentmihalyi (1975b) developed a theory that described the "flow"

experience. This state, he reported, occurs when people are completely engrossed in an

engaging activity that matches their levels of skills with a commensurate level of difficulty. It

is analogous to what athletes describe as "being in the zone." Csikszentmihalyi (2000) detailed

the chief characteristics as:

> (a) a clear sense of what has to be done moment by moment; (b) immediate feedback
>
> as to how well one is doing; (c) an intense concentration of attention; (d) a balance
>
> between opportunities for action (challenges) and capacity to act (skills); (e)
>
> exclusion of irrelevant content from consciousness; (f) a sense of control over the
>
> activity; (g) a distortion of sense of time—usually hours pass by in minutes; and (h) a
>
> feeling that the activity is intrinsically rewarding, or worth doing for its own sake. (p.
>
> 381)

Clearly, these criteria or descriptors are defined broadly enough to allow for many different

flow experiences. This is demonstrated in Csikszentmihalyi's (1975b) original study, in

which he reported similar flow events in a diverse population ranging from artists to

climbers, and athletes to chess players. Similarly, Positive Adjustment has been defined very

differently and measured with very different questionnaires. It has been defined and

measured using questionnaires on subjective well-being (Diener, 2000), meaning in life (Steger & Frazier, in press; Steger, Frazier, Oishi, & Kaler, in press), and cheerfulness (Ruch, Kohler, & van Thriel, 1996). As Batson, Schoenrade, and Ventis (1993) noted, the breadth of variables used as indices of mental health makes global conclusions about the relationship between religion and positive adjustment tenuous at best.

Batson, Schoenrade, and Ventis (1993) also noted that religion is a difficult concept to operationalize; religion could mean "(1) having versus not having religious affiliation, (2) frequency of attendance at religious services, (3) amount of reported interest in religion, (4) strength of religious attitudes, (5) strength of religious values, and (6) strength of orthodox religious beliefs" (p. 239). When Batson, Schoenrade, and Ventis performed a meta-analysis on 115 findings on mental health and religion, they found an overall weak but negative relationship between religion and adjustment. However, they explained that this finding was due to the profusion of concepts already noted: religion was negatively related to personal competence and control, self-acceptance or self-actualization, and open-mindedness and flexibility, while it was positively related to appropriate social behavior and the absence of mental illness. Hackney and Sanders (2003) reported similar results from their meta-analysis of 35 studies on religion and mental health, which included a final data set of 264 correlations. They reported that only studies defining religiosity as institutional religion, ideology, or personal devotion were included; definitions such as "spirituality, mysticism, religious coping, religious attribution, God-mediated locus of control, moral reasoning, and transcendent experiences, although related constructs" (p. 46) were not included in analyses. Mental health was defined as "mental health variables," including low psychological distress, high life satisfaction, and high self-actualization. Measures of clinical pathology or related

constructs, such as "coping, attribution, or physical robustness," (p. 46) were not included. Hackney and Sanders reported that there existed only a small, non-significant relationship between religiosity and mental health, likely due to the confusion of concepts and definitions used in measuring the respective constructs.

The importance of orientation. Batson, Schoenrade, and Ventis (1993) argued that immediately dismissing religion as a negative factor in mental health might be a premature conclusion. They noted that Allport (1950) believed religion could be beneficial for psychological well-being, especially when fully internalized, as seen in intrinsic religiosity. This conceptualization led Allport and Ross (1967) to develop the Religious Orientation Scale, which delineated religion along two orthogonal dimensions: intrinsic and extrinsic religious orientation. The essential distinction between the two orientations lies in the way individuals approach religion and in what light they view their religiosity. The extrinsic, or means, orientation describes a pattern of religious involvement marked by an individual's interest in gaining something from religious participation. Religion thus becomes a tool for the achievement of goals, such as engaging in a social contact or the improvement of one's financial situation. For example, a highly extrinsically religious individual might attend church and sit prominently in the front pew solely for purposes of political, social, or financial gain.

The intrinsic religious orientation consists of seeing religion as an end in and of itself. Individuals who score high on this religious orientation tend to shape their life around their religiosity. These individuals are comfortable with their beliefs and are not motivated to bend their religion to fit or justify their actions; instead, they model their daily behaviors on religious doctrines and teachings. For example, a highly intrinsically religious individual

would practice their religion personally, both in private meditations and in group-based religious services. They would not be concerned with the tangible rewards or benefits of their faith, beyond the personal satisfaction and peace of mind that comes from such practices. In a colloquial sense, extrinsics tend to view God (or their higher spiritual power) as being on their side, whereas intrinsics are more apt to see themselves as being on God's (or their higher spiritual power's) side; "the extrinsically motivated individual *uses* his religion, [and] the intrinsically motivated *lives* his" (Allport & Ross, 1967, p. 434).

Initially, Allport believed that the two orientations were the ends of a single continuum, but analysis by Feagin (1964) showed that the two were nearly unrelated factors. This discovery led to the creation of several different scales of the two orientations. The most frequently used scale has been the Allport and Ross (1967) Religious Orientation Scale, which measures both the extrinsic and intrinsic religious orientations. Allport and Ross (1967) note that some individuals tend to be aberrant in their scores: they either score high on both scales or low on both scales. The common terms for such individuals are the *indiscriminately proreligious* and the *indiscriminately antireligious*, respectively.

A third type of religious orientation was described more recently by Batson and Ventis (1982) and Batson and Schoenrade (1991a): the quest orientation. Batson and Ventis (1982) explained the orientation as

> an approach that involves honestly facing existential questions in all their complexity, while resisting clear-cut, pat answers. An individual who approaches religion in this way recognizes that he or she does not know, and probably never will know, the final truth about such matters. But still the questions are deemed important, and however tentative and subject to changes, answers are sought. There may not be a clear belief

in a transcendent reality, but there is a transcendent, religious dimension to the
individual's life. We shall call this open-ended, questioning orientation *religion as a quest*. (p. 149)

In essence, the individual who is motivated by a quest for religious meaning tends not to accept dogmatic beliefs or values. Instead, it is possible that this individual is motivated by the act of questioning itself, finding that religion is not necessarily about an end but that the means of believing provide some purpose in oneself.

In order to measure this new religious orientation, Batson and Ventis (1982) developed a six-item scale that looks at what they originally termed *interactional* religiosity. However, the shorter and perhaps more descriptive term *quest* replaced this in later research. In order to address reliability concerns, Batson and Schoenrade (1991b) developed a longer and more reliable 12-item instrument that contained three subscales measuring "readiness to face existential questions," "religious doubt," and "openness to change" (p. 436). Support for this three-factor view of the quest orientation also was reported by McHoskey et al. (1999), who found that quest tended to be positively related to relativism and negatively related to nihilism. McHoskey et al. noted that these findings are generally consistent with the Batson and Ventis (1982) view of quest given that relativism—and quest—are active approaches to existential concerns, whereas nihilism is a passive approach to the same phenomenon. However, recent research has found that a clear understanding of what actually constitutes quest is lacking (S. R. Brown, 2006; J. R. Parker, personal communication, January 2006). Both S. R. Brown and Parker found that quest orientation was positively related to extrinsic religiosity, which suggests that such individuals are both questioning religion and seeking some tangible reward from their religious beliefs and practices.

Batson and Ventis (1982) were careful to note that their three-dimensional view of religious orientation is not restricted to typologies or discrete distinctions. Instead, their measures and their conceptualization look at how each individual rates on each factor. They noted that hypothetical distinctions could not be made between quest people and intrinsic people per se. Individuals are best represented by their profiles on all of the religious orientations. In this context, the researchers noted that the quest orientation is likely to be related to cognitive complexity and flexibility when dealing with issues such as existential crises. Conversely, they argued that the intrinsic orientation is related more to cognitive rigidity and dogmatic belief given the definition of this dimension as a confirmed and comfortable belief in a specific religious perspective.

The theoretical conceptualizations of the three religious orientations (intrinsic, extrinsic, and quest) are still being debated. As noted above, it was originally thought that intrinsic and extrinsic would serve as ends on a bipolar continuum. However, this was not borne out by the data. Instead, it appears that people can be either intrinsic, extrinsic, or a combination of both (indiscriminately proreligious) or neither (indiscriminately antireligious; Allport & Ross, 1967; Batson, Schoenrade, & Ventis, 1993; Burris, 1994). While the view of orientations as orthogonally related has predominated, some researchers have questioned this interpretation. Burris (1994) has examined the three orientations and determined that they, in fact, may be inversely and curvilinearly related. Specifically, Burris found that intrinsic and extrinsic were curvilinearly related, with mid-level religiousness serving to elicit the strongest relationships between the two orientations. This may explain, according to Burris, the tendency for highly religious samples to exhibit strong negative relationships between extrinsic and intrinsic orientation. Burris also found a curvilinear relationship between quest

and intrinsic, which is congruent with previous findings that highly religious individuals do not possess levels of doubt or quest in their religious experiences. However, Burris also found a relatively strong linear relationship between extrinsic and quest, which is somewhat surprising. S. R. Brown (2006) and Parker (2004) also found an unpredicted positive correlation between quest and extrinsic, suggesting that this relationship in particular requires further examination.

Utilizing the religious orientations coined by Allport and Ross and the quest orientation, developed by Batson and Ventis (1982; see also Batson and Ventis, 1991a, 199b), Batson, Schoenrade, and Ventis (1993) tallied 197 findings from researchers in this area relating the previously described dimensions of "mental health" to religious orientation. They found that extrinsic orientation was generally related negatively to positive adjustment, intrinsic tended to relate positively, and quest was mixed. Therefore, their conclusion was that religion could be related to positive adjustment, especially when religion was measured as an orientation to faith. Ryan, Rigby, and King (1993), Bergin (1991), and Batson, Schoenrade, and Ventis (1993) also suggested that the relationship between religion and adjustment must be examined through the lens of religious orientation, instead of simple religiosity. Batson, Schoenrade, and Ventis (1993) noted that a determination of which orientation promotes better psychological adjustment is a matter of the aspect considered: intrinsic is linked to freedom from guilt and worry, while quest is linked to open-mindedness and flexibility. Interestingly, they also found that these relationships were dependent on other factors. For instance, religious involvement was linked more strongly to freedom from guilt and worry when individuals were either young or old, not middle-aged. In addition, members of religious leadership, including clergy, tended to be more worried than non-clergy.

Therefore, the relationship between religious orientation and positive adjustment may be especially salient for individuals who are not clergy and who exist at the extremes of the age scale.

These findings for religious orientation are mirrored in other studies (e.g., Baker & Gorsuch, 1982, Bergin, Masters, & Richards, 1987; Hettler & Cohen, 1998; Laurencelle, Abell, & Schwartz, 2002; Richards 1991, 1994; Salsman & Carlson, 2005). All of these studies found results congruent with the review performed by Batson, Schoenrade, and Ventis (1993): the intrinsic orientation was associated with lower trait anxiety (Baker & Gorsuch, 1982), decreased paranoid ideation and hostility (Salsman & Carlson, 2005), and greater self-control (Bergin, Masters, & Richards, 1987), while the extrinsic orientation was generally linked to pathology and distress, including higher trait anxiety (Baker & Gorsuch, 1982) and lower scores on self-control and personality functioning (Bergin, Masters, & Richards, 1987).

However, when considering individuals high on several orientation scales, the results are more complex. Burris (1994) found that individuals high on all three orientations (intrinsic, extrinsic, and quest) were highest on *introjective depression*, meaning that the individual negatively evaluates the self and is overly self-critical (Reis & Grenyer, 2002). Individuals high on the intrinsic scale alone scored relatively low on measures of depression. Burris noted that this finding may "challenge current understanding of the relation of [extrinsic] and [quest] to mental health, as it suggests that [extrinsic] and [quest] are associated with increased maladjustment primarily when accompanied by a profession of devout commitment (intrinsic)" (p. 254). The differences in religious orientations and the individual characteristics of the orientations might be explicated on through research on other

concepts, such as object relations theory. These studies also might help illuminate the mechanisms of religious orientation in affecting positive adjustment, through models such as mediation.

Empirical Findings

  Positive effects. In order to develop a theory about the relationships between religious orientation and positive adjustment, past empirical research in the area is very relevant. In general, the findings across both individual studies and reviews, including meta-analyses, indicate a positive relationship between religion and positive adjustment (Bergin, 1983; Gartner, D.B. Larson, & Allen, 1991; D.B. Larson, Sherrill, Lyons, Craigie, Thielman, Greenwold, et al., 1992; Levin & Chatters, 1998). For instance, Koenig (2001) reviewed the past century's research on religion and various forms of psychological adjustment. His search was extensive and included referencing both computer databases and paper texts. Koenig, McCullough, and Larson (2001) ultimately examined 630 reports and found broad-based support for the link between religion and psychological adjustment. Specifically, Koenig (2001) reported that religious beliefs and practices were related to "greater life satisfaction, happiness, positive affect, [and] morale," (p. 99) as well as hope, optimism, purpose in life, and lower levels of both depression and anxiety. Overall, he also said that positive findings significantly outweighed neutral or negative findings. Nearly 80% of studies that examined the relationship between religious beliefs and practices and "life satisfaction, happiness, positive affect, morale, and other indicators of well-being" (p. 99) reported significant positive correlations for the variables of interest.

  Miller and Kelley (2005) remarked that positive findings are linked not just to the absence of disorders, but to other factors, such as those explicated by Batson, Schoenrade,

and Ventis (2003), including variables such as happiness, subjective well-being, optimism, and life satisfaction (e.g., Argyle & P. C. Hills, 2000; Ellison, 1991; Fredrickson, 2002; Myers & Diener, 1995; Sethi & Seligman, 1993). These variables are derived from the field of positive psychology (Seligman & Csikszentmihalyi, 2000), which is an orientation not just aiming to deal with problems but to determine "what actions lead to well being, to positive individuals, and to thriving communities … [and] what kind of families result in children who flourish, what work settings support the greatest satisfaction among workers, what policies result in the strongest civic engagement, and how our lives can be most worth living" (p. 5). By examining positive variables, Seligman and Csikszentmihalyi argue that positive psychology attempts in a scientific manner to describe human achievement and strength, ultimately leading to means of improving well-being and positive adjustment:

> Whatever the personal origins of our conviction that the time has arrived for a positive psychology, our message is to remind our field that psychology is not just the study of pathology, weakness, and damage; it is also the study of strength and virtue. Treatment is not just fixing what is broken; it is nurturing what is best. Psychology is not just a branch of medicine concerned with illness or health; it is much larger. It is about work, education, insight, love, growth, and play. And in this quest for what is best, positive psychology does not rely on wishful thinking, faith, self-deception, fads, or hand-waving; it tries to adapt what is best in the scientific method to the unique problems that human behavior presents to those who wish to understand it in all its complexity. (p. 7)

Therefore, exploring the connections between religious orientations and positive psychological variables is important for both research and clinical purposes. Further, by

attempting to explicate the impact of relationships with people as we were growing up (i.e., object relations) on the relationship between religious orientation and positive psychological variables, methods of improving overall psychological well-being can hopefully be developed.

In general, research suggests that religion is positively related to positive adjustment, although few studies have specifically examined the association of these variables with measures of religious orientation. In a sample of 217 students, Salsman, Brown, Brechting, and Carlson (2005) found that optimism, measured using the Life Orientation Test-Revised (Scheier, Carver, & Bridges, 1994), and social support, measured using the Duke-UNC Functional Social Support Questionnaire (Broadhead, Gehlbach, DeGruy, & Kaplan, 1988), appeared to mediate the relationship between intrinsic religiosity and life satisfaction. Specifically, Salsman et al. found that "optimism fully mediated the relationship between intrinsic religiousness and psychological distress and partially mediated the relationship between intrinsic religiousness and satisfaction with life and between prayer fulfillment and satisfaction with life" (p. 526). They also reported that extrinsic religiousness was not linked to life satisfaction. Sethi and Seligman (1993) similarly reported a link between religion and optimism, finding that fundamentalists, which they sampled from orthodox populations including Orthodox Jews, Muslims, and Calvinists, were significantly more optimistic than religious individuals who were liberal, who were sampled from Reformed Jewish and Unitarian populations. This may be explained, they noted, by the increased hope associated with literal belief in a religious tradition. Indeed, Batson, Schoenrade, and Ventis (1993) found that the intrinsic orientation usually is not related to religious doubting (as seen in quest religious orientation), but rather to orthodoxy and fundamentalism. Hackney and

Sanders (2003) found similar results, noting that individuals who internalize their faith ("true believers") demonstrate greater positive psychological health.

There exists little research exploring the relationship between positive consciousness experiences, such as flow (see Csikszentmihalyi, 1975a, 1975b; Csikszentmihalyi & Csikszentmihalyi, 1988) and religiousness (e.g., Dillon & Tait, 2000). S. R. Brown (2006) examined religious orientation and flow and found that extrinsic orientation was negatively related to the intensity of flow experiences. Further, consistent with the definition of extrinsic religious orientation, S. R. Brown found that highly extrinsic individuals were more likely to experience flow in public religious practices, rather than individual activities, such as meditation or private prayer. These findings seem congruent with previously mentioned research that suggested that extrinsic religiosity might be detrimental to psychological adjustment (Batson, Schoenrade, & Ventis, 1993).

Mixed results. The findings for the relationship between religion and positive adjustment are consistently mixed, as noted by Batson, Schoenrade, and Ventis (1993). For instance, Fundamentalists may demonstrate increased optimism and well-being, but they also are more prejudiced toward outsiders (Pargament, 2002; Shahabi, Powell, Musick, Pargament, Thoresen, Williams, et al., 2002). Bergin (1983) performed a meta-analysis covering the previous 30 years of research on religion and mental health or positive adjustment. Initially he found a positive relationship between adjustment and religion in 47 percent of the studies. However, when using only statistically significant results, that number dropped to 17 percent. Most findings in the meta-analysis were not significant in either a positive or negative direction. Hackney and Sanders (2003) also conducted a meta-analysis of previous research on religion and mental health, finding that there was only a suggestion

of a possible positive relationship between mental health and religiosity ($r = 0.10$). This relationship, they concluded, was largely dependent on the definition of each variable (see Batson, Schoenrade, & Ventis, 2003). Hackney and Sanders found that internalized and identified religious beliefs were more strongly associated with benefits to psychological adjustment, than was institutional participation or simple religious practices; in essence, "true believers" received more benefit from religion than those who are just passively participating in religion:

> It may be necessary to be a "true believer," accepting and internalizing the worldview as one's own, for the worldview's capacity to generate meaning and worth to function. In other words, the "shared cultural worldview" may need to be internally, even privately, "shared" by the adherent to be existentially relevant. This would fit the demonstrated pattern within the data, with measures of personal devotion producing the strongest correlations with positive psychological functioning. (p. 51)

It also is possible that the relationship between religion and positive adjustment might not be linear in nature, with several studies suggesting that the relationship, in fact, is curvilinear (Ross, 1990; Shaver, Lenauer, & Sadd, 1980). In essence, these studies have found that individuals falling at both extremes of the religious spectrum (i.e., the steadfastly irreligious and the strongly proreligious) tend to be more positively adjusted, while individuals possessing only moderate levels of religiosity demonstrate poorer psychological adjustment. Masters and Bergin (1992) argued that these findings suggest that the level of religiousness or belief is less important than the individual's level of certainty in that belief system.

Possible Mechanisms

Levin and Chatters (1998) contend that the next step in exploring the relationship between religion and positive adjustment is determining the mechanisms behind the positive effects. One possible mechanism is *social cohesiveness*, which is related to the social supports offered by religion. The social supports available in a religious community lead to improved coping and stress management (Idler, 1987; George et al., 2000; Koenig, 2001). In addition to social cohesiveness, Idler also argues that individuals might be able to explain difficult events or traumas through a religious framework, thereby minimizing the negative effects. This is remarkably similar to the theories contained in both classical and modern psychoanalytic approaches, in that the individual utilizes a shared defensive mechanism (religion) to combat threats to the ego using a variety of basic defenses, such as repression, by subsuming libidinous impulses to appease a higher power, and rationalization, which allows individuals to explain difficult events or trauma as part of "God's plan." Idler also suggests that religious behaviors or schemata, such as religiously-based optimism, might assist an individual in coping with anxiety or mental distress. Moreover, Idler (1987) and George et al. (2000) contend that health-related behaviors, such as abstaining from drinking or smoking, which some religions may dictate, might lead to better physical and mental health. Schaefer and Gorsuch (1991) suggest that religious problem-solving, as a form of religiously-based coping, could mediate the relationship between positive adjustment and religion. Pargament et al. (1998, p. 2) suggest that "religious coping (like religion more generally) is … designed to assist people in the search for a variety of significant ends in stressful times: a sense of meaning and purpose, emotional comfort, personal control, intimacy with others, physical health, or spirituality." Therefore, it is logical that this form of

problem solving would relate to positive adjustment and possibly mediate relationships between religion, as a higher order construct, and positive psychological variables. Research by Schaefer and Gorsuch supports this idea, showing that religious problem-solving was responsible for a unique portion of the variance between religious beliefs and level of anxiety.

Several researchers have explored the link between religiosity and attachment styles. Rowatt and Kirkpatrick (2002) found that attachment style was significantly associated with affect presentation and personality traits. Individuals who were anxiously attached to God tended to be neurotic and display increased levels of negative affect, while avoidant attachment was inversely linked to agreeableness. It may be that these traits predispose an individual to certain adjustment styles, as well as religious orientations. Further, the combination of attachment style, affect presentation, and personality traits may be indicative of deeper-seated object relations internalized through early interactions, thereby influencing future religious experiences and psychological adjustment. This theory is supported by P. C. Hill and Hood (1999a), who noted that within object relations theory, "affect, religion, and the unconscious are all integrated within one theoretical system" and that object relations theory "is among the most thoroughly developed to study religious experience" (p. 1032).

Object relations theory. Object relations refers to the relationship between people, where each person is represented as an "object." Object relations theory (Black, 1993; Heimbrock, 1991; P. C. Hill & Hall, 2002; Rizzuto, 1979; Winnicott, 1971) is one of several dynamically derived theories that have challenged the Freudian view of religion as regressive and pathological (Forsyth, 2003; Heimbrock, 1991). The theory suggests that individuals develop internal *objects*, which are abstract representations of individuals and experiences

that serve to guide future interactions in similar circumstances. These "objects may be either external (real people) or elaborations of internal mental representations of people, real or fictional. One's internal representation of the self is causally determined at least in part by these introjective processes" (Buelow, McClain, & McIntosh, 1996, p. 606). For instance, an individual whose mother was extremely cold might learn that one must relate in a detached manner to people perceived as caregivers and authority figures.

From a strictly psychoanalytic sense, object relations develop from the first encounters with the caregiver, who is traditionally seen as the mother. The first encounters with the frustration of libidinous impulses (e.g., feeding) involve mediating a crude relationship with the mother, who fulfills or further frustrates the impulses, which are referred to collectively as the id. The part of the personality referred to as the ego develops as a means of negotiating this outside world and mediating id impulses. As a result, individuals develop within the ego-part of the personality a set of object relations or representations that they use in future relationships to negotiate their needs and desires within the context of the cultural values and goals for self (collectively referred to as the super-ego) if these have been learned and internalized. In discussing the traditional analytic view of object relations theory, Fairbairn (1952) noted:

> Freud spoke, of course, of libidinal aims and defined these aims in terms of erotogenic zones—as oral aims, anal aims and so on. What he so described, however, are not really aims, but modes of dealing with objects; and the zones in question should be properly regarded, not as the dictators of aims, but as the servants of aims—bodily organs which serve as channels whereby personal aims may be achieved. The real libidinal aim is the establishment of satisfactory relationships with

objects; and it is, accordingly, the object that constitutes the true libidinal goal. (p.

138)

In essence, object relations, while developing from the psychosexual stages and organs,

extend beyond these developmental stages to include the development of meaningful

relationships and connections with objects, of which pieces—such as the breast, anus, or

penis—represent only part of the greater whole. So, to connect with mother requires further

interaction beyond feeding and basic need gratification. Fairbairn calls these impulses to

extend past simple pleasure seeking *object seeking*. Kernberg (1976) commented that the *self*,

as an object in its own right, develops along with the object-representations of external

objects, "derived from the integration of multiple object-images into more comprehensive

representations of others" (p. 57). The means of interacting with the outside world depends

on developing a set of object relations that allow for such contact, including feelings of

security, attachment, social competence, and belonging. Accordingly, measures of object

relations utilize subscales that assess these different aspects of object relations (e.g., Bell's

Object-Relations Inventory – BORI and Bell's Object Relations and Reality Testing

Inventory – BORRTI; Bell, 1995, 2003; Bell, Billington, & Becker, 1986; see Appendix I).

Winnicott (1971, p. 2) noted that there exists "an intermediate area of *experiencing*, to

which inner reality and external life both contribute"; the confluence of these areas is

populated by transitional objects, which allow for the internal subjective experience and

external reality to interact. These transitional objects help the individual combat anxiety and

depression; as Winnicott explained, "There may emerge some thing or some phenomenon …

that becomes vitally important to the infant for use … [as] a defence against anxiety,

especially anxiety of the depressive type" (p. 4). For object relations theorists, and Winnicott

in particular, religion becomes a type of transitional object (see Shafranske, 1992), mediating the inner experiences with the external reality and bridging individual objectivity and subjectivity (Forsyth, 2003). The concept of the God image is an important concept that illustrates this bridge between religion and object relations. Rizzuto (1979) and Shafranske (1992) argued that God is not simply a father figure, as Freud (1927/1961) contended, but that God is created as an amalgam of different relational experiences, including parents. Indeed, researchers have determined that the mother's role can be the most important in determining an individual's conceptualization or image of God (Hertel & Donahue, 1995).

Carr (2000) elaborated by arguing that a child uses many transitional objects, such as a blanket, an invisible friend, or God. However, the conceptualization of God-object is not discarded as the individual matures. Therefore, the conceptualization of God-object and religion become means of motivation and guidance, especially in relating to external reality and experiences. In essence, religion is something like a security blanket or the parent we do not have in real life that helps us to cope. In addition, it can be an adaptive tool that matures over time, instead of pathological, as suggested by Freud. Given these theories, it follows that an individual's early experiences and resulting pattern of object relations would not just influence the approach to people and God, but indeed their style of religious belief and practices—in other words, their religious orientation.

While it remains an uninvestigated area, it is theoretically logical that religious orientation would, at least in part, stem from the development of object relations. Individuals who develop a clear sense of self, an appropriate and secure relation with the parent(s), and who can mediate the outside world with certainty about their *self* and their own beliefs sound much like the traditional definition of intrinsically religious individuals. If they approach

religion in a similar manner, especially if they ascribe to beliefs similar to their parents',

which is quite possible given mature or secure object relations, we could expect them to

orient to religion in a self-motivated, secure manner. Individuals who are preoccupied with

sensation seeking or need gratification, perhaps due to continual frustration of the id (the

impulses) during development or due to lack of parental attention, may develop extrinsic

motivations aimed at pleasing the *self* through libidinal desires. As the superego (the

conscience and the conceptualizations of an ideal self) develops, these desires may become

subsumed into socially acceptable forms, such as obtaining attention, social status, money,

and power. Individuals who orient to religion in such a manner are defined as extrinsically

religious. Finally, individuals who developed in confusing situations where needs were both

satisfied and frustrated continually, and where boundaries were indistinct between *self* and

object, may continually search for means of navigating this outside world, possessing a set of

generally weak object relations. Individuals who approach religion in this manner would be

quest-oriented.

There exists empirical evidence that object relations, religion, and adjustment are

interrelated. Hall and Brokaw (1995) reported that in a sample of 20 evangelical Christians,

spiritual maturity, which was measured as spiritual well-being, worship and commitment,

involvement in organized religion, and religious fellowship, was positively related to the

level of object relations development. Further exploration by Hall, Brokaw, Edwards, and

Pike (1998) provided concurrent evidence for Hall and Brokaw's initial findings. In a sample

of 26 "spiritual direction training program [participants], 39 undergraduate psychology

students, and 11 outpatient clients" (p. 305), they found that 19 out of 20 correlations

between spiritual maturity, which was measured using the Spiritual Assessment Inventory

(Hall & Edwards, 1996), and object relations development, which was measured using the BORI (Bell, Billington, & Becker, 1986), indeed showed that those who were more spiritually mature had better developed object relations. These findings are congruent with Rizzuto's (1979) contention that God images form early in development, largely as a result of mother-child relations, and that they continue to develop throughout the lifespan, according to the changes inherent in an individual's object relations over time. Pollner (1989) analyzed the 1984 General Social Survey and reported that symbolic relations with the divine, measured through questions about relationships with God, along with descriptions of the participants' perceived images of God, are linked to measures of psychological well-being, including global happiness, life satisfaction, and life excitement. Relationship with the divine was a better predictor for these variables than race, sex, income, age, marital status, or church attendance, which Pollner noted have been associated with well-being. Individuals with lower levels of education gained more, in terms of psychological well-being, from interacting with God than did more educated individuals. Whether this generalizes to other religions or religions which do not have a personal, anthropomorphized divine is unclear.

Huprich and Greenberg (2003) noted that the major purpose of object relations assessment and research has been to provide clinical information, such as diagnostic and prognostic data, but that there exist other potential uses. Given the trend of object relations development to be negatively related to level of psychopathology and disorder, Huprich and Greenberg made a compelling argument that relationships and representations, along with early developmental experiences, play an important role in mental health. The temporal relationship between religious development and object relations development suggests that object relations measures might link not just to pathology, but also with religion, perhaps

serving to mediate or moderate the religion/adjustment relationship. Mediation refers to a variable affecting the presence of a significant relationship between two other variables. For example, household income and physical health might be related, but when taking into account level of healthcare access, regardless of income level, the relationship between income and health may disappear, because a third variable (i.e., access to healthcare) is actually responsible for the connection. Moderation refers to a variable altering the size of a relationship between two variables. For example, income and health might be related and by adding a third variable, such as average age of the household, the relationship between income and health might increase or decrease accordingly.

For this dissertation, it is argued that if an individual is raised in a supportive, nurturing, and religious environment, object relations should be well-developed, likely affecting an individual's religious orientation and their level of positive adjustment.

Conclusions

It may be that object relations (the characteristic patterns of relational interaction with other people) are associated with religious orientation (intrinsic, extrinsic, and quest), and they may moderate (alter the size or significance of a relationship) or mediate (affect the presence of a significant relationship) relationships between religious orientation and positive adjustment. For example, when viewed from a dynamic perspective, positive mental health benefits are generally related to spiritual maturity and well-developed object relations, including images of God (Carr, 2000; Rizzuto, 1979). Less theoretically-based studies have generally found positive relationships between religion and mental health, although it should be noted that the strength and presence of such relationships is largely dependent on the definitions and measures used to assess religion and health (Batson, Schoenrade, & Ventis,

1993). This study seeks to explore the relationships between these three variables (Religious Orientation, Positive Adjustment, and Object Relations) and to perform extended statistical analyses, including regression modeling and structural equation modeling (SEM), to determine the nature and presence of such relationships.

Operational definitions. Due to the difficulties in determining relationships between religiosity and adjustment when differing definitions are utilized, these concepts will be strictly operationalized for this study. Religion will be measured using the Religious Orientations of Extrinsic, Intrinsic, and Quest. These orientations will be considered by themselves and not in combination. Even so, this form of religious measurement is relatively broad in scope and allows for a more nuanced view of religiosity than simple assessment of religious participation or practices. In essence, the orientations describe how a person approaches religious or existential issues and what importance these issues are given in the individual's life. Positive Adjustment will be defined as a group of positive psychological variables, including Life Satisfaction, Optimism, Hope, and positive consciousness experiences, such as Flow. Each of these is measured by a single questionnaire. Object Relations will be measured as a construct consisting of four specific subscales, as defined by Bell, Billington, and Becker (1986) for Bell's Object Relations Inventory: Alienation, Insecure Attachment, Egocentricity, and Social Incompetence.

Hypotheses. Given that both Object Relations and Religious Orientation are related to parental relationships and early experiences, and that Religious Orientation, especially an Intrinsic Religious Orientation, tends to be associated with Positive Adjustment, it was reasonable to hypothesize that the three variables would relate to each other. Well-developed Object Relations are related to Positive Adjustment (Carr, 2000; Rizzuto, 1979) and an

individual's Religious Orientation reflects how an individual approaches religion, including their view of, and their relationship with, the Divine.

Three hypotheses were proposed. First, Religious Orientation, Object Relations, and Positive Adjustment would be significantly interrelated, with the size and direction of these relationships differing by the individual variables being examined. These relationships were examined in an exploratory manner, given the lack of sufficient previous research to conclusively state directional, specific hypotheses for each variable. However, some key relationships were hypothesized *a priori*:

- Intrinsic Religious Orientation would be positively related to Life Satisfaction, Hope, and Optimism.

- Intrinsic Religious Orientation would be negatively related to Alienation, Insecure Attachment, Egocentricity, and Social Incompetence (Object Relations subscales).

- Extrinsic Religious Orientation would be positively related to Quest orientation.

- Extrinsic Religious Orientation would be positively related to Insecure Attachment and Egocentricity (Object Relations subscales).

Second, it was hypothesized that Object Relations would serve a moderating role in the relationship between Religious Orientation and Positive Adjustment. Again, the specific size and direction of moderation would vary according to the variables being examined. There is not enough research in this area to formulate more specific hypotheses. However, as an example of the logic behind such analyses, it was posited that Intrinsic Orientation would be positively related to Life Satisfaction and that well-developed Object Relations, such as secure attachment, would increase the size of this relationship, while Insecure Attachment

would decrease the size of the correlation. Hypothesized relationships for moderation are shown in the mediation model presented below (Figure 1).

Finally, the third hypothesis addressed the meditation model of Religious Orientation and Positive Adjustment relationships. It was hypothesized that Object Relations would affect the presence of significant relationships between Religious Orientation and Positive Adjustment in a mediation model, which were analyzed using structural equation modeling (SEM; see Weston & Gore, 2006). In essence, it was hypothesized that the relationships between Religious Orientation and Positive Adjustment variables would be significant without Object Relations present, but would lose significance or decrease in magnitude when Object Relations were taken into account (see *Figure 1*).
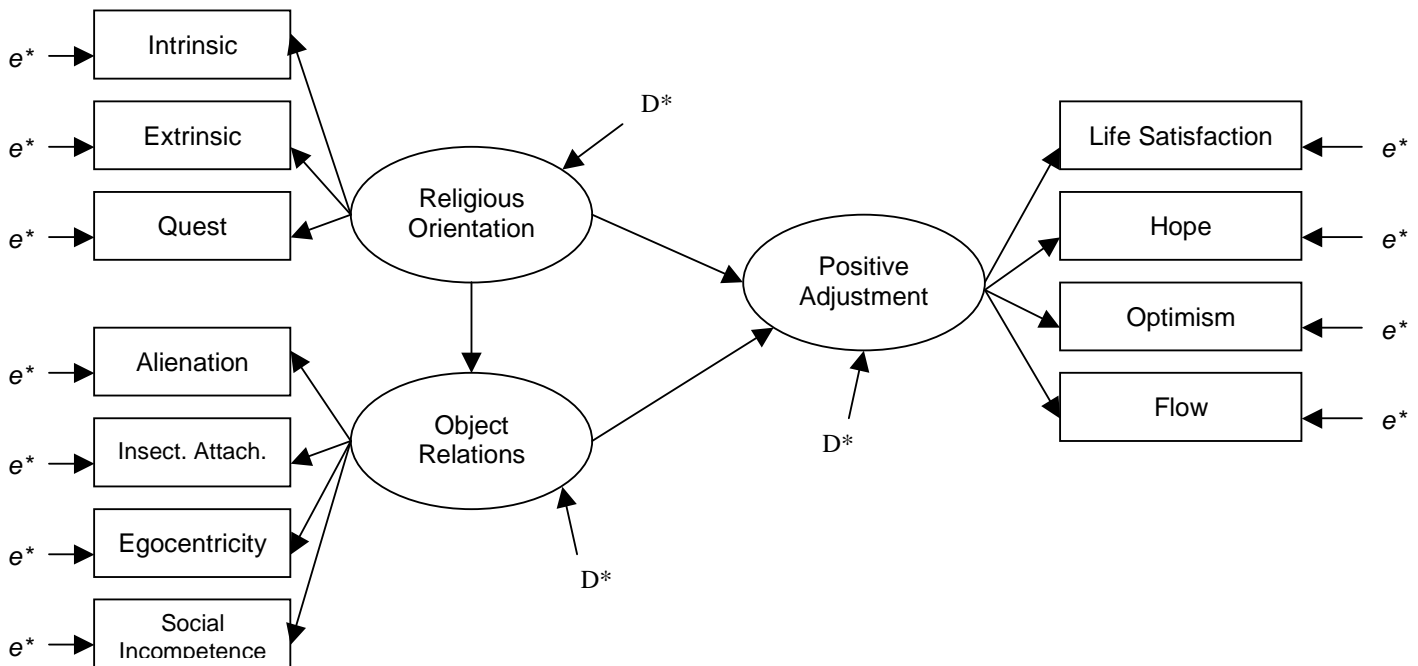
Figure 1. Proposed SEM Mediation Model among the latent constructs Religious Orientation, Object Relations, and Positive Adjustment.

NOTE: Asterisks represent parameters to be estimated. In addition, all relationships between latent and measured variables must be estimated.

Baron and Kenny (1986, p. 1176) note that "a variable functions as a mediator when it meets the following conditions: (a) variations in levels of the independent variable significantly account for variations in the presumed mediator, (b) variations in the mediator significantly account for variations in the dependent variable, and (c) when [the above relationships] are controlled, a previously significant relation between the independent and dependent variables is no longer significant." The change in significance and magnitude serves as an indication of the mediating effect of the mediator.

Method

Participants

To achieve diverse representation, undergraduate and graduate students were recruited from a Midwestern university ($n = 197$), and non-student members of religious and spiritual groups (including Jewish and Christian individuals) were recruited from the surrounding geographic region ($n = 80$). Individuals were fully informed of their rights through a standard informed consent form (see Appendix J), and students received extra credit for their participation if their instructor was willing to grant it. The mean age of all participants ($N = 281$[1]) was 30.11, with a SD of 13.86. Other demographic statistics are shown in Table 1.

The representativeness of the sample was assessed by comparing the current study data with demographics from both the university population (Eastern Michigan University; EMU, June 2007) and the general population of the United States (United States Census Bureau, n.d.; Davis & Smith, 2006). These values are represented in Table 2. In general, the sample was relatively representative of the broader populations, especially the university sample. This is logical, given the high percentage of students who participated in the study. The most significant ethnic variations found were between the current study and the broader general population (United States), wherein Hispanics and Asians were more highly represented in the general population (14.8% and 4.6%, respectively).

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[1] This includes individuals ($n = 4$) who did not indicate whether or not they were currently a student.

Table 1.
Participant Demographics

	Number Reporting	%
Sex		
Female	167	59.4%
Male	109	38.8%
Marital Status		
Single – Never Married	159	56.6%
Single – Divorced or Separated	20	7.1%
Single – Widowed	9	3.2%
Living w/Significant Other – Unmarried Heterosexual	23	8.2%
Living w/Significant Other – Unmarried Lesbian or Gay	2	.7%
Married or Remarried	67	23.8%
Work Status		
Retired	44	15.7%
Unemployed	85	30.2%
Employed – Part Time	68	24.2%
Employed – Full Time	81	28.8%
Education Status		
Not a Student	80	28.5%
Student – Part Time	12	4.3%
Student – Full Time	185	65.8%
Economic Status – During Childhood		
"We had barely enough to get by."	24	8.5%
"We had enough, but no more."	87	31%
"We definitely had enough of everything."	85	30.2%
"We had plenty of extras, but no luxuries."	57	20.3%
"We had a lot of luxuries."	27	9.6%
Economic Status – Currently		
"We have barely enough to get by."	30	10.7%
"We have enough, but no more."	81	28.8%
"We definitely have enough of everything."	95	33.8%
"We have plenty of extras, but no luxuries."	47	16.7%
"We have a lot of luxuries."	23	8.2%
Race and Ethnicity		
African American	40	14.2%
Asian American[a]	4	1.4%
Caucasian or European American	202	71.9%
Hispanic American	3	1.1%
Middle-Eastern American	14	5%
Native American	1	.4%
Religious Affiliation		
Catholic	49	17.4%
Episcopalian	1	.4%
Protestant	13	4.6%
Lutheran/Methodist/Presbyterian	22	7.8%
Evangelical/Church of Christ/Baptist	36	12.8%
Non-denominational Christian[b]	42	14.9%
Jewish	26	9.3%
Islamic	8	2.8%
Pagan/Wiccan	8	2.8%
Eastern Religions[c]	2	.7%
Agnostic	8	2.8%
Atheistic	8	2.8%
No religious affiliation *or* "None"	9	3.2%
Other[d]	15	5.3%

[a] includes Indian and Pacific Island regions
[b] includes individuals who indicated Christian, without any descriptive affiliation
[c] Buddhism, Taoism, and Hinduism
[d] includes individuals who reported "spirituality" or "spiritual," as well as religions that merge religious concepts (e.g**.,** Association of Unity Churches International**)**

Table 2.

Comparison Between Demographics in Current Study Sample, University Population, and General Population (United States of America)

	% in Study Sample	% in University Population[b]	% in General Population (USA)[c]
Sex			
Female	59.4%	59% (UG[d]); 65% (G[d])	50.7%
Male	38.8%	41% (UG); 35% (G)	49.3%
Education Status			
Not a Student	28.5%	---	---
Student – Part Time	4.3%	31%	---
Student – Full Time	65.8%	69%	---
Race and Ethnicity			
African American	14.2%	16%	12.8%
Asian American[a]	1.4%	2.5%	4.6%
Caucasian or European American	71.9%	68%	66.4%
Hispanic American	1.1%	2%	14.8%
Middle-Eastern American	5%	---	---
Native American	.4%	1%	1%
Religious Affiliation[e]			
Catholic	19.8%	19.9%	24.8%
Protestant	45.2%	51.1%	51.9%
Jewish	10.5%	1%	1.7%
None	10.1%	20.9%	16.5%
Other	13.8%	7%	5.0%

[a] includes Indian and Pacific Island regions
[b] gender and race statistics from Eastern Michigan University (EMU) Fast Facts, June 2007 (EMU, June 2007); religion statistics from Cooperative Institutional Research Program (CIRP) Institutional Summary Report (CIRP, 2006)
[c] gender and race statistics from United States Census Bureau (n.d.), 2006 American Community Survey; religion statistics from General Social Survey, 2006 (Davis & Smith, 2006)
[d] UG = undergraduate students; G = graduate students
[e] religious affiliations as listed by the, 2006 (Davis & Smith, 2006). Religious grouping from current study and from CIRP (2006) were condensed to conform to the General Social Survey groupings.

Measures

Variables were measured using questionnaires. Each variable, including Object Relations, Religious Orientation, and Positive Adjustment, was measured by at least one instrument. Other instruments or items are detailed below, including specific rationale for their inclusion.

Measures of Religiosity

Religious Orientation. The Allport and Ross (1967) Religious Orientation Scale was used to measure Intrinsic and Extrinsic Religious Orientation (see Appendix A). This scale is

perhaps the most widely used instrument of general religious attitudes and orientation. The Religious Orientation Scale consists of 20 items divided into two subscales: Intrinsic and Extrinsic. The Intrinsic scale has nine items, while the Extrinsic has eleven. Questions are answered using a Likert-type scale; that is, the reactions are indicated as Strongly Agree, Agree, Uncertain, Disagree, or Strongly Disagree. Overall, the Religious Orientation Scale has demonstrated good psychometric properties, with high internal consistency for both subscales (P. C. Hill & Hood, 1999b). P. C. Hill and Hood (1999b) noted that the Intrinsic subscale has been found to be more internally consistent than the modest internal consistency of the Extrinsic subscale, with $\alpha \geq .80$ and $\alpha \geq .70$, respectively. Further, each scale has been found to be valid, although, as with reliability, the Intrinsic scale tends to perform more strongly, given the "relatively high internal consistency and breadth of item content" (p. 148).

Batson and Schoenrade (1991a, 1991b) developed the Quest Scale (see Appendix B) to measure a form of religion they felt was not represented by the Religious Orientation Scale. Specifically the Quest Orientation taps into religious searching and doubt. This scale will be used to measure the Quest Religious Orientation. The 12-item scale utilizes a 5-point Likert scale (Strongly Agree, Agree, Uncertain, Disagree, or Strongly Disagree) and contains three subscales measuring "readiness to face existential questions without reducing their complexity," "self-criticism and perception of religious doubt as positive," and "openness to change" (p. 436). Reliability as measured by internal consistency is good, with a reported alpha coefficient of .78. Batson and Schoenrade also found that the construct validity of the Quest Orientation was supported through negative correlations between the Quest score and measures of orthodoxy and religious rigidity.

Positive Adjustment

Life Satisfaction. The Satisfaction With Life Scale (Pavot & Diener, 1993; see Appendix C) was used to assess Life Satisfaction. The scale is five items long and was assessed using a seven-point Likert-type scale ranging from Strongly Disagree to Strongly Agree. The scale designers reported that the scale is both internally reliable and temporally stable (α = .87 and 2-month test-retest correlation of .82). Further, cross-validation with peer reports, a memory measure, and clinical ratings suggest that the scale is valid in measuring life satisfaction. Pavot, Diener, Colvin, and Sandvik (1991) reported that Life Satisfaction appears to be a global and stable condition, not a transient or fleeting assessment of current functioning.

Optimism. Optimism was measured using the Life Orientation Test-Revised (Scheier, Carver, & Bridges, 1994; see Appendix D). The instrument is 10 items long with four "filler" items. All items are completed using a 5-point Likert-type scale ranging from "Strongly Disagree" to "Strongly Agree." To safeguard against response bias, items are stated so that individuals indicate agreement on some items and disagreement on others. After reversing the relevant items, the answers are summed to produce an overall measure of generalized Optimism. Carver and Scheier (2003) reported good internal consistency with alphas ranging from the .70s to the .80s. Further, they noted good reliability over time.

Hope. The Adult Dispositional Hope Scale (Snyder, Harris, et al., 1991; see Appendix E) was used to assess hope as a trait. The scale is 12 items long, with four "filler" items. Subscales for the instrument include pathways which assesses people's "perce[ptions] that they can produce routes to desired goals" (Lopez, Snyder, & Pedrotti, 2003, p. 94), and agency, which measures individuals' level of "requisite motivation to use those routes" (p.

94). These two, four-item subscales are combined to form the overall Hope Scale score. The instrument uses either a four- or eight-point response scale. The scale has good internal consistency, with α ranging from .74 to .84 (Lopez, Snyder, & Pedrotti, 2003) and good test-rest values of .80 or higher, even when time periods between measures exceeded 10 weeks (Snyder, Harris, et al., 1991). Concurrent validity is high, as demonstrated by correlation with similar measures, including the Life Orientation Test (Scheier & Carver, 1985).

Flow experiences. The connection between Religious Orientation and positive consciousness states is relatively unexamined. However, measures do exist that would prove useful in researching this area, including the Flow Questionnaire (Csikszentmihalyi, 1975b, 1982; see also Han, 1988). The Flow Questionnaire is a set of three quotations that describe the chief characteristics of Flow. Participants are asked to indicate whether they have ever experienced a similar phenomenon (see Appendix H). There also exists a supplemental set of twelve questions that allows for quantification of the intensity of Flow experiences (see Fave & Massimini, 1988; see Appendix F). There is little empirical evidence of the reliability or validity of these instruments, although other studies have used them and results suggest an adequate level of construct and content validity (e.g., S. R. Brown, 2006; Fave & Massimini, 1988).

Object Relations

One of the most used Object Relations scales is Bell's Object-Relations and Reality Testing Inventory (BORRTI; Bell, 1995, 2003; Bell, Billington, & Becker, 1986; due to copyright it cannot be reproduced anywhere – see Appendix G). The BORRTI is a 45-item self-report inventory that uses true-false responses to assess four subscales: Alienation, Insecure Attachment, Egocentricity, and Social Incompetence. Items were designed from

clinical interviews that used recommended procedures for clinically assessing Object

Relations developed by Bellack, Hurvich, and Gediman (1973).

Alienation assesses distrust in intimate relationships and difficulty within such

relationships (Bell, Billington, & Becker, 1986). A sample item from the Alienation subscale

is "It is hard for me to get close to anyone." The Insecure Attachment scale measures how

comfortable and secure a person feels within relationships. Bell (1991) and Hall, Brokaw,

Edwards, and Pike (1998) suggested that individuals high on this scale are "sensitive to

rejection and are easily hurt by others" (Hall et al., p. 306). A sample item is "I feel I have to

please everyone or else they may reject me." Egocentricity measures the extent to which

individuals view other people as objects to be used for personal gain and the extent to which

people are suspicious of others' motivation (Bell, Billington, & Becker, 1986). A sample

Egocentricity item is "Manipulating others is the best way to get what I want." Social

Incompetence measures "shyness, nervousness, and uncertainty in interactions with members

of the opposite sex" (Bell, Billington, & Becker, 1986; Hall et al., 1998, p. 306). A sample

item is "I often feel nervous when I am around members of the opposite sex." Huprich and

Greenberg (2003) concluded that the Bell's Object-Relations Inventory—the instrument from

which the newer BORRTI was developed—had acceptable reliability and validity. Bell

(2003) reported alpha levels of .78 to .90 and the split-half and test-retest reliability

demonstrated the instrument's high level of consistency and reliability. Bell (2003) also

reported predictive validity with measures of spiritual belief (see Hall et al., 1998).

Other Items

Supplemental religious items. Some religious items were included in order to assess

specific domains not addressed in measures of spiritual maturity or religious orientation and

to allow for comparison across religious groups or denominations (see Appendix H). In addition, several items were included that allow for exploration of whether an individual approaches new experiences openly, or whether an individual is guarded or extrinsically motivated to participate. These items are exploratory in nature and allow for basic analyses with other scales in the study.

Results[2]

Exploratory Factor Analysis of Measures

Measures were examined using exploratory factor analysis (EFA) to determine whether the individual items grouped together to form the posited manifest and latent constructs. Both Religious Orientation and Positive Adjustment variables were examined using item-level EFA to explore their factor structure; Object Relations was not explored in this manner due to restrictions in accessing item-level data (scores were calculated using carbon-copy forms and individual items were not available in SPSS for analysis), as well as the True/False item structure. The BORRTI has been highly researched and validated (Bell, 1995, 2003; Bell, Billington, & Becker, 1986; Huprich & Greenberg, 2003), suggesting it is a valid indicator in the current study.

EFA using maximum likelihood analysis with Oblimin rotation was used for all variables. All items, minus filler questions, were entered into each analysis. Items that were worded in the negative were reversed before extraction. Determination of optimal number of factors was made by examining eigenvalues (eigenvalues > 1.00) and the resulting scree plot.

Coughlin and Knight (2007) suggest using .40 as a criterion for adequate factor loading, but they also note that values approaching .30 are important to consider when fully evaluating factor structures. Similarly, T. A. Brown (2006) notes that in applied research, factor loadings "greater than or equal to .30 to .40 are often interpreted as *salient*" (italics in original, p. 30). While values .40 or greater are preferred, values near .30 suggest that the variable loads to a small but significant amount on the factor—a loading near this level suggests that the higher-order factor explains approximately 10% of the variable's variance

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[2] SPSS 15.0.1.1 (2007) was used for all data analyses, except for SEM, which was conducted using AMOS 7.0.0 (2006).

(.30 x .30 = .09)—and that modification may be made in the future to increase this factor loading value. Therefore, a cutoff of values approximating .30 was used for all exploratory factor analysis procedures in this study.

Religious Orientation measures. Several factors were indicated using the eigenvalue criteria. Analysis of the scree plot suggested a clear breakpoint at four factors. The four-factor model was rotated obliquely. This model was not a clean representation of the Religious Orientations that meaningfully reduced the data; it contained numerous cross-loadings (13 > .30, 2 > .40), especially for the Extrinsic and Quest Orientation items. Therefore, a three-factor model was rotated to determine if the traditional groupings were applicable and a better factor solution; the three-factor model is in Appendix K. This model is notably cleaner, with much less cross-loading (2 > .30, 0 > .40). However, one Extrinsic and three Quest items loaded primarily on the Intrinsic factor. Overall, these factor models suggest some confusion about the exact factor structures of these variables and the need for further study. However, for the purposes of this study, the cleaner, three-factor model will be utilized.

Positive Adjustment measures. Numerous factors were suggested using the eigenvalue criteria; however, the scree plot suggested a natural breakpoint at five factors. The five-factor model was rotated using Oblimin procedures, allowing the factors to correlate, due to previously reported inter-scale correlations and the similarity of the constructs being assessed. The resulting factor structure model is depicted in Appendix L.

The five-factor model fit the data well, with only 11 cross loadings greater than .30 and only 1 cross loading greater than .40. However, even these cross-loadings are suggestive of a model that could be statistically "cleaner." The five factors represented the original

scales and generally fell in line with the original structure of the individual measures (i.e.,

Optimism, Hope, and Life Satisfaction), except for the Flow Scale. One item from the

Optimism Scale ("I'm always optimistic about my future") loaded primarily on the Hope

Factor, although it also loaded at a .30 level on the Optimism factor. This is consistent with

the theoretical bases for the two scales and the face validity of the item. The Flow Scale

broke into two distinct factors. The first Flow factor indicated Barriers to Flow Experiences.

It contained all items that, as presented on the questionnaire in reversed format, represented

barriers to Flow Experiences, such as anxiety and boredom. Internal consistency for this

factor was .77. The second factor was Quality of Flow Experiences. This factor contained all

items that describe how intensely a person experiences Flow. Cronbach's alpha for this factor

was .80. The five-factor structure suggests that these standardized scales generally represent

the higher-order factors. Given that the division of Flow into two factors is not relevant to the

current study, this division is not included in the analyses.

Object Relations and Positive Adjustment latent constructs. EFA was used to

validate the higher-order factors used in subsequent SEM testing. Religious Orientation

variables did not correlate strongly in initial analysis (see Hypothesis 1, below), suggesting

that attempting to group these onto a higher-order factor would be inappropriate. Therefore,

all remaining measures from the Positive Adjustment and Object Relation scales were

entered into a maximum likelihood factor analysis to determine the initial grouping for

subsequent rotation.

Determination of the optimal number of factors was made by examining the

eigenvalues for values greater than one and through visual analysis of the scree plot to

determine the best breakpoint for factor rotation. The eigenvalue analysis produced two

factors. The scree plot placed the breakpoint directly at 2, supporting the two-factor solution. In this solution, variables from the object relations scale fell on Factor 1, while Positive Adjustment variables were grouped on Factor 2.

An oblimin rotation factor analysis was performed to refine the two-factor model, while allowing for factor correlation, given that the groups of items in the non-rotated model were previously found to correlate significantly. The structure matrix for the rotated model, including individual loading for each measure, is illustrated in Table 3. The first factor, Object Relations, accounted for 40.60% of the variance, while the second factor, Positive Adjustment, accounted for 8.00% of the variance; together these factors account for nearly half (48.60%) of the total variance. No variables cross-loaded on more than one factor. Flow loaded less strongly (.28) than the other variables, but it came close to the cutoff value of .30, suggesting it does group to a relatively significant extent on the Positive Adjustment construct. Overall, the factors correlated negatively ($r = -.64$). This is congruent with the individual correlations reported previously that suggest that as Object Relations become poorer, Positive Adjustment decreases.

Table 3.

Factor Loadings for Object Relations and Positive Adjustment Variables

Measurement Scale	Factors	
	Object Relations	Positive Adjustment
Alienation (BORRTI Subscale)	**.95**	-.56
Insecure Attachment (BORRTI Subscale)	**.77**	-.55
Egocentricity (BORRTI Subscale)	**.74**	-.53
Social Incompetence (BORRTI Subscale)	**.71**	-.44
Life Orientation Test (Optimism)	-.53	**.76**
Satisfaction With Life Scale	-.48	**.65**
Adult Dispositional Hope Scale	-.27	**.49**
Flow Scale	-.19	**.28**

These findings provide support for two higher-order factors reflecting grouping of like measures: Object Relations and Positive Adjustment. The fact that there was insufficient interscale correlation to support factor analysis of a possible Religious Orientation higher-order factor suggests that these variables should be looked at as individual constructs in further analyses, including the proposed SEM model in Hypothesis 3.

Measurement Reliabilities

The internal consistency, Cronbach's alpha, was calculated for each scale, with filler items removed. All but one measure received either "good" ($\alpha \geq .80$) or "acceptable" ($\alpha \geq .70$) designations, as defined by George and Mallery (2003). The exception was an α of .62 for Positive Adjustment. This reflects the internal consistency for the standardized Positive Adjustment variables, given the different measurement indices used for each variable. Actual α coefficients, as well as descriptive statistics for all measures, are reported in Table 4.

It should be noted that the lower reliability, which approaches the "acceptable" range, for Positive Adjustment is not unexpected given the theoretical basis of the construct. Positive Adjustment was posited to reflect an overall sense of well-being and positive psychological experiences. The variables may be measuring different experiences that do not correlate highly with each other. However, the results of the factor analysis for Hypothesis 1 confirm that these variables indeed do group together, reflect a unifying construct, and can be summed meaningfully when using standardized variables. Further, the low number of items decreases the reliability of the statistic.

Table 4.

Internal Consistency Reliabilities and Descriptive Statistics for Questionnaire Measures

Variable	# of items	*M*	*SD*	Range Low	Range High	Cronbach's α
Religious Orientation						
Intrinsic	9	28.95	8.57	9.00	45.00	.89
Extrinsic	11	29.42	6.77	11.00	46.00	.74
Quest	12	35.27	6.69	18.00	58.00	.73
Object Relations[a, b]	4	197.67	30.00	149.00	297.00	.87
Alienation	22	50.70	9.30	37.00	81.00	---
Insecure Attachment	16	48.73	9.43	31.00	74.00	---
Egocentricity	12	49.60	8.53	40.00	77.00	---
Social Incompetence	6	48.65	7.90	41.00	71.00	---
Positive Adjustment[a]	4	111.12	27.95	32.00	173.00	.62
Optimism	6	35.19	5.50	15.00	48.00	.76
Life Satisfaction	5	22.74	6.54	5.00	35.00	.87
Hope	8	25.40	3.54	9.00	36.00	.82
Flow	12	28.83	20.89	0.00	60.00	.80

[a] These statistics represent values calculated using the sums of the scales that comprised these higher-order variables. The sum of Positive Adjustment variables was calculated using standardized values.

[b] Cronbach's alpha reliability not reported due to True/False structure of the items and the complex scoring algorithms used to determine the final subscale scores.

Group Differences

Group differences were calculated to ensure that subsequent analyses would be controlled for any large underlying inter-group variations. Given the smaller subsamples, especially for different religious affiliations, the cut-off for determining practical, versus statistical, significance was set as a Cohen's *d* of .80, which reflect a "large" effect size (Cohen, 1992). Groups explored for significant differences were those that were large enough. These were gender, student/non-student identification, current employment status, and religious affiliation. For gender and student/non-student identification, independent-

sample *t*-tests were conducted on all Religious Orientation, Object Relations, and Positive

Adjustment variables. No significant gender differences were found, while significant

differences were found when students and non-students were compared (see Table 5).

Table 5.

Group-based Differences Between Student and Non-Student Participants

	Students		Non-Students					
	(n = 197)		(n = 80)					
Variable	*M*	*SD*	*M*	*SD*	*t*-score	*df*	Sig.	*d*
Religious Orientation								
Intrinsic	28.12	8.56	30.55	8.34	2.13	271	.03	.29
Quest	34.71	6.59	36.80	6.88	2.35	273	.02	.31
Positive Adjustment								
Optimism	34.74	5.24	36.22	6.04	2.02	272	.05	.26
Life Satisfaction	22.19	6.36	23.94	6.86	2.03	275	.04	.26
Object Relations								
Alienation	51.77	9.35	48.46	8.89	-2.70	269	.007	.36
Insecure Attachment	49.89	9.33	46.10	9.36	-3.05	269	.003	.41
Egocentricity	51.04	8.69	46.31	7.21	-4.29	269	< .001	.59

There were four employment statuses. These were Unemployed, Part-time Employee,

Full-time Employee, and Retired. A one-way ANOVA on the dependent variables revealed

only one significant difference, and this was on the Egocentricity scale of the BORRTI, (F

(3, 268) = 3.64, p < .05). LSD post-hoc analysis showed that Unemployed individuals (n =

81; M = 51.65, SD = 9.28) were more egocentric than Full-time employees (n = 80; M =

47.30, SD = 8.06). Cohen's d was .50 for this difference.

Of the 15 coding variables for religious affiliation, only five possessed large enough

sample sizes (n > 20) to produce meaningful data for examining intergroup differences.

These groups were Catholic (n = 49), Lutheran/Methodist/Presbyterian (n = 22),

Evangelical/Church of Christ/Baptist (n = 36), Non-denominational Christian (n = 42), and

Jews ($n = 26$). One-way analyses were done on all Religious Orientation, Object Relations, and Positive Adjustment variables. Significant differences were found for two variables: Intrinsic Religious Orientation (F [4, 169] = 2.74, $p < .05$) and Quest Religious Orientation (F [4, 169] = 2.78, $p < .05$). Results of LSD post-hoc analyses for statistically significant differences are shown in Table 6.

Table 6.

Group-based Differences Between Religious Affiliations

Variable	Religious Affiliation	M	SD	compared with	Religious Affiliation	M	SD	d
Intrinsic	Catholic	28.49	5.69		Evangelical[a]	32.29	7.24	.58
	Catholic	28.49	5.69		Non-denom. Christian	32.43	6.90	.62
Quest	Evangelical[a]	34.22	6.07		Jewish	38.35	6.30	.67
	Non-denom. Christian	33.49	6.03		Jewish	38.35	6.30	.79

[a] includes Evangelical/Church of Christ/Baptist

Overall, these findings suggest that some significant differences do exist based on demographic group membership. However, none of the effect sizes for these differences indicated a "large" effect (Cohen's $d = .80$). The largest effect sizes were found for differences between Christian and Jewish participants. Therefore, separate exploratory correlational and SEM analyses will be conducted for Christian participants. All other effect sizes were in the "small" to "medium" range (Cohen, 1992); no further statistical control will be included in further analyses.

Hypothesis 1

Bivariate correlations were calculated for all Religious Orientations, Object Relations, and Positive Adjustment variables; see Table 7. The first hypothesis, that Religious Orientation, Object Relations, and Positive Adjustment would be significantly

interrelated, was supported for some of the interrelationships. These relationships, including results of the *a priori* predictions made in Hypothesis 1, are reported below and grouped by the variables examined.

Religious Orientation. As hypothesized, the Extrinsic Religious Orientation was positively related to Quest Orientation (r [273] = .16, $p < .01$), such that individuals who agreed with Extrinsic Orientation items also agreed with some Quest Orientation items. In addition, the correlation between Intrinsic and Extrinsic Orientation was significant and negative (r [275] = -.14, $p < .05$), such that individuals who endorsed Intrinsic items were less likely to endorse some Extrinsic items. Overall, Religious Orientation variables were relatively unrelated, as indicated by both the lack of significant inter-correlations and the very small magnitude of relationships that were present.

Object Relations. There was a high degree of relationship among the Object Relations subscales, supporting the overall cohesiveness of the instrument (BORRTI). All correlations between these scales were significant and ranged from .43 to .72.

Positive Adjustment. The Positive Adjustment variables were highly interrelated, as indicated by the number and size of correlations between these variables. This suggests that the latent variable (Positive Adjustment) is a theoretically consistent grouping for these manifest measures. The only non-significant relationship was between Life Satisfaction and Flow.

Religious Orientation and Object Relations. The prediction that Intrinsic Religious Orientation would be negatively related to Alienation, Insecure Attachment, Egocentricity, and Social Incompetence was not supported for any of the variables; there were no significant correlations. As hypothesized, Extrinsic Religious Orientation was positively

related to Egocentricity (r (273) = .14, $p < .05$). Not specifically predicted but consistent with this, Extrinsic Orientation was positively related to Alienation (r (273) = .16, $p < .01$). The hypothesized relationship that Extrinsically religious individuals would be more insecure in their attachment style was not found using the Insecure Attachment subscale of the BORRTI for the whole sample, but it was found for religions emphasizing beliefs rather than behaviors (see below). Quest was unrelated to any Object Relations subscales.

Table 7.

Correlations Between Religious Orientation, Positive Adjustment, and Object Relations Variables

	Rel. Orient.		Object Relations				Positive Adjustment			
Variable	2	3	4	5	6	7	8	9	10	11
Religious Orientation										
1. Intrinsic	-.14*	.07	-.02	-.07	.01	.01	.20**	.05	.04	.09
2. Extrinsic	--	.16**	.16**	.10	.14*	.10	-.08	-.04	.04	-.07
3. Quest		--	-.01	-.01	-.02	.06	-.02	-.01	.07	.14*
Object Relations										
4. Alienation			--	.72**	.71**	.70**	-.47**	-.44**	-.25**	-.12**
5. Insecure Attachment				--	.63**	.61**	-.47**	-.41**	-.18**	-.13*
6. Egocentricity					--	.43**	-.43**	-.39**	-.17**	-.17**
7. Social Incompetence						--	-.37**	.31**	-.26**	-.07
Positive Adjustment										
8. Optimism							--	.49**	.35**	.21**
9. Life Satisfaction								--	.35**	.12
10. Hope									--	.22**
11. Flow										--

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

Religious Orientation and Positive Adjustment. The *a priori* prediction that Intrinsic Religious Orientation would be positively related to Life Satisfaction, Hope, and Optimism was only supported for Optimism (r (271) = .20, $p < .01$). No relationships were found between Extrinsic Orientation and Positive Adjustment. No specific hypotheses were posited

for the Quest Orientation; however, it was found that Quest Orientation was significantly related to one Positive Adjustment variable, which was Flow (r [277] = .14, $p < .05$).

Object Relations and Positive Adjustment. The Positive Adjustment and Object Relations variables were highly interrelated. In fact, all of these relationships were significant, except for the correlation between Flow and Social Incompetence, and they indicated that as participants' Object Relations became more maladaptive, levels of Positive Adjustment also were likely to decrease.

Separate Christian and Jewish Analyses. Based upon previous classifications, religious commitment has been analyzed into five facets (Glock & Stark, 1965; Stark & Bainbridge, 1985). These are religious beliefs, religious practices, religious experiences, knowledge about the origins of the beliefs and practices of the religion, and the degree of influence of the religion in the daily life of the participants. Religions differ in the degree to which specific facets are emphasized, and individuals when compared to others in the same religion may show more relative emphasis on specific facets. The Religious Orientation scales were developed with Christians' belief orientation in mind, and, therefore, their applicability to behavior-emphasizing religions, such as Judaism and Islam, was unclear. The correlations are shown in Table 8 for the sample with the Jews and Muslims removed and for the Jews separately. A few differences were noted in the resulting correlations.

For Christians, the relationship between Intrinsic and Extrinsic Religious Orientations increased in magnitude (r [160] = -.36, $p < .01$), as did the relationship between Extrinsic and Quest Orientation (r [160] = .26, $p < .01$). The second notable change was the relationship between Extrinsic Orientation and Insecure Attachment, which achieved significance (r [158] = .20, $p < .05$). This suggests support for the posited relationship between Extrinsic

Table 8.

Correlations Between Religious Orientations, Positive Adjustment, and Object Relations Variables for Christian and Jewish Participants

	Rel. Orient.		Object Relations				Positive Adjustment			
Variable	2	3	4	5	6	7	8	9	10	11
Christian Participants (*N* = 163)										
Religious Orientation										
1. Intrinsic	-.36**	-.05	-.03	-.07	-.05	-.03	.37**	.11	.14	.19*
2. Extrinsic	--	.26**	.18*	.20*	.19*	.14	-.14	-.06	.06	-.08
3. Quest		--	.08	.09	.11	.12	-.07	-.08	.02	.06
Object Relations										
4. Alienation			--	.76**	.72**	.68**	-.42**	-.40**	-,14	-.20*
5. Insecure Attachment				--	.68**	.61**	-.44**	-.42**	-.16*	-.15
6. Egocentricity					--	.40**	-.39**	-.28**	-.08	-.17*
7. Social Incompetence						--	-.36**	-.27**	-.22**	-.06
Positive Adjustment										
8. Optimism							--	.47**	.36**	.20*
9. Life Satisfaction								--	.22**	.04
10. Hope									--	.17*
11. Flow										--
Jewish Participants (*N* = 26)										
Religious Orientation										
1. Intrinsic	.07	.03	.30	.37	.35	.18	-.14	-.02	.11	.17
2. Extrinsic	--	-.07	.07	-.16	-.07	-.12	-.05	-.13	-.19	.01
3. Quest		--	-.24	-.17	-.09	-.11	.35	.33	.39	.26
Object Relations										
4. Alienation			--	.74**	.67**	.79**	-.63**	-.68**	-.64**	-.43*
5. Insecure Attachment				--	.67**	.75**	-.44*	-.56**	-.40	-.38
6. Egocentricity					--	.51**	-.59**	-.45*	-.38	-.34
7. Social Incompetence						--	-.58**	-.50**	-.49*	-.32
Positive Adjustment										
8. Optimism							--	.75**	.57**	.54**
9. Life Satisfaction								--	.62**	.54**
10. Hope									--	.52**
11. Flow										--

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

Orientation and Insecure Attachment, but only when the sample mainly consists of Christian participants.

When examining correlations among all key variables for Jewish participants, there were several findings. First, all relationships among Religious Orientations and between Religious Orientations and other variables disappeared, losing statistical significance. Second, relationships among the Positive Adjustment variables increased notably in their magnitude; these correlations are seen in Table 7. Some changes also are seen in magnitude and significance of relationships between Positive Adjustment and Object Relations variables (see Table 7). Separate correlational analyses were not conducted for Islamic participants because the sample was too small ($n = 8$).

Hypothesis 2

The second hypothesis indicated that Object Relations would serve a moderating role in the relationship between Religious Orientation and Positive Adjustment. This hypothesis assumed that Religious Orientation was positively related to Positive Adjustment and that including Object Relations in this model would either decrease or increase the size or significance of that relationship. Moderation does not imply a causal relationship between the variables, but instead describes a third variable influencing the relationship between an independent and dependent measure (Frazier, Tix, & Barron, 2004).

To explore whether moderation exists, multiple regression was used (Frazier, Tix, & Barron, 2004), entering each independent variable (Religious Orientation and Object Relations), as well as the interaction between these variables (Religious Orientation x Object Relations), into a regression equation using Positive Adjustment as the dependent variable. Both Object Relations and Positive Adjustment were calculated by summing the lower-order

variables within each construct—a process supported by the previously reported exploratory factor analysis; Positive Adjustment was first standardized into *z*-scores in order to control for differing indices used to measure each manifest variable. Three separate regressions were calculated, since the Religious Orientation variables were shown in prior analyses to be independent variables not suited to grouping into a single factor. The results of the regression did not support the hypothesis that Object Relations would moderate the relationship between Religious Orientations and Positive Adjustment, since none of the interaction effects were significant (see Appendix M for regression results). Therefore, the inclusion of Object Relations does not appear to significantly affect the relationships between Religious Orientation and Positive Adjustment.

Some significant main effects were found. Object Relations was a significant predictor of poorer Positive Adjustment, $\beta = -.73$, $p < .01$, when controlling for the effects of Extrinsic Orientation (Equation #2, Appendix M). In Equation #3, Quest Orientation was a significant predictor of Positive Adjustment, $\beta = .72$, $p < .05$, when the effects of Object Relations were held constant.

Hypothesis 3

The third hypothesis focused on the mediation model utilizing the three latent variables: Religious Orientation, Object Relations, and Positive Adjustment. It was specifically hypothesized that Object Relations would affect the presence of significant relationships between Religious Orientation and Positive Adjustment in a mediation model. This model was analyzed using AMOS (2006) to explore a structural equation model (SEM; see Weston & Gore, 2006), which is illustrated in the Introduction to this dissertation.

The original model, wherein all three religious orientations were posited to be represented by a latent variable labeled "Religious Orientation" was found to be flawed during initial analysis, given that preliminary correlational analysis found little significant correlation among these variables (and such relationships were very small, even when significant), suggesting that these variables are relatively independent and not suited to summary in a single larger-order latent variable. Therefore, prior to running the original SEM model in AMOS, the latent variable "Religious Orientation" was removed, with each Religious Orientation manifest variable being used independently. This model is presented below with standardized coefficients labeled for each variable and relationship present within the model (see Figure 2). Residual errors for each variable were estimated by the statistical package.

Overall, this model proved a poor fit for the data, $\chi^2 = 91.55$, $df = 40$, $p < .001$. However, while the model proved not to be ideal, the relations between the latent and manifest variables were illustrated by regression statistics produced during analysis; see Table 9. These values further illustrate the generally strong relationships between Object Relations and Positive Adjustment. Further, it is clear that Religious Orientations are relatively unrelated to the other latent variables, with the exception of Extrinsic Orientation and Object Relations, $\beta = .17$, $SE = .08$, $p < .05$, and Intrinsic Orientation and Positive Adjustment, $\beta = .19$, $SE = .03$, $p < .01$. These regression statistics suggest that there is a weak and directional relationship between Extrinsic Orientation and Object Relations, with poorer Object Relations resulting from increased Extrinsic Orientation, as well as a weak and directional relationship between Intrinsic Orientation and Positive Adjustment, with increased Intrinsic Orientation leading to more Positive Adjustment.

Figure 2. Structural Model of the Relationships Among Religious Orientations, Object Relations, and Positive Adjustment

Due to missing values within the dataset, further refinement of the model via modification of indices was not possible. Exploratory analysis of other models was undertaken by allowing variables and residuals to co-vary. However, none of these exploratory models resulted in a nonsignificant Chi-square value, suggesting that the general theoretical model containing these three groups of variables is not sufficient to accurately predict the dependent variable.

Further, even if a suitable model was found, it is considered questionable practice to refine a model solely based on intra-dataset factors, due to the possibility of unaccounted for, within-group sampling error (Kline, 1998). Specifically, utilizing a specific dataset to refine

the model is questionable, since such methods may make use of sample-specific errors or

deviations, and thus the refinement would require checking with a different sample.

Table 9.

Regression Statistics for the Proposed Model for Religious Orientations, Object Relations, and Positive Adjustment

Dependent Variable	Predictor	β	SE	Critical Ratio[a]	*P*-value
Object Relations	Extrinsic	.17	.08	2.75	.01
Object Relations	Intrinsic	.01	.06	.11	.92
Object Relations	Quest	-.04	.08	-.67	.50
Positive Adjustment	Object Relations	-.70	.04	-8.37	< .001
Positive Adjustment	Intrinsic	.19	.03	3.21	.00
Positive Adjustment	Extrinsic	.07	.04	1.20	.23
Positive Adjustment	Quest	-.02	.04	-.36	.72
Alienation	Object Relations	.93[b]	---	---	---
Insecure Attachment	Object Relations	.80	.05	17.03	< .001
Egocentricity	Object Relations	.75	.05	15.36	< .001
Social Incompetence	Object Relations	.73	.05	14.61	< .001
Life Satisfaction	Positive Adjustment	.65[b]	---	---	---
Hope	Positive Adjustment	.46	.06	6.25	< .001
Flow	Positive Adjustment	.25	.31	3.58	< .001
Optimism	Positive Adjustment	.78	.11	8.78	< .001

[a] Critical Ratio values are calculated using unstandardized regression weights.

[b] These values were 1.00 before standardization.

The hypothesis that Object Relations would mediate the relationship between

Religious Orientation and Positive Adjustment was not supported, due to the fact that the

model lacked a strong, significant relationship between the proposed independent variable

(Religious Orientation) and the dependent variable (Positive Adjustment). The only positive

relationship between these variables was for Intrinsic Religious Orientation, β = .19, *SE* = .03, *p* < .01, suggesting that individuals with a more Intrinsic Religious Orientation were more likely to experience positive psychological adjustment. This relationship was not mediated by Object Relations, as individual tests of the model with and without the proposed mediating variable (Object Relations) did not result in statistically significant changes in the reported relationship. Thus, the hypothesis was not supported, since mediation suggests that there is a direct causal relationship between the tested variables (Baron & Kenny, 1986); specifically, Variable A (Religious Orientation) is posited to be directly related to Variable B (Object Relations), which in turn is posited to cause Variable C (Positive Adjustment).

While a significant effect was found between Object Relations and Positive Adjustment, β = -.70, *SE* = .04, *p* < .001, suggesting that poor Object Relations has a direct negative effect on Positive Adjustment, it is clear that the proposed theoretical model does not fit the sample data, as Religious Orientations remain unrelated to most Object Relations and Positive Adjustment variables, both in the SEM model and resulting regression estimates and in the bivariate correlations reported for Hypothesis 1.

Christian subsample. Given the differences seen in initial analyses of group differences between Christian subgroups and Jewish participants, and differences in correlational analyses, a secondary SEM analyzed Christian participants (SEMs for other groups were not calculated due to small sample sizes); see Figure 3.

The model proved a poor fit for the data, χ^2 = 89.81, *df* = 40, *p* < .001. Regression statistics are presented in Table 10. Extrinsic Orientation and Object Relations remained linked, as seen in the broader sample, β = .22, *SE* = .11, *p* < .001, as did Intrinsic Orientation

and Positive Adjustment, β = .42, *SE* = .05, *p* < .01. A significant effect was found between

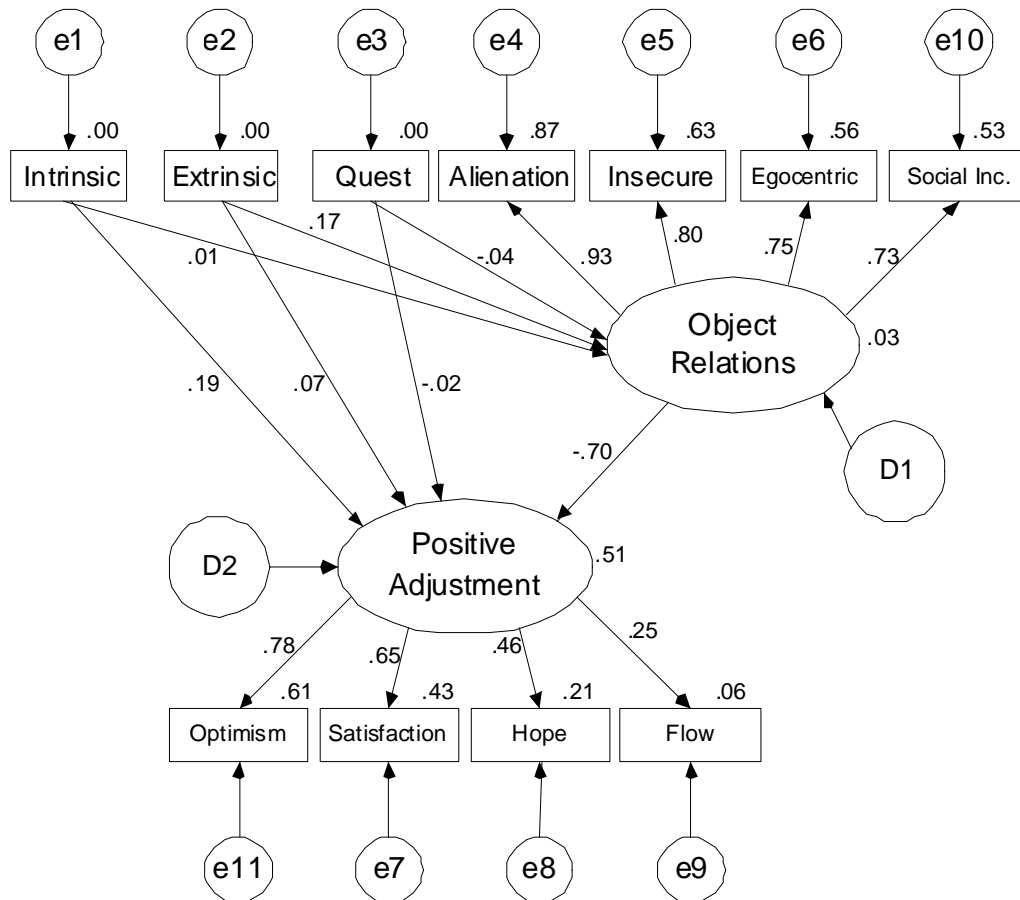Object Relations and Positive Adjustment, β = -.63, *SE* = .05, *p* < .001.
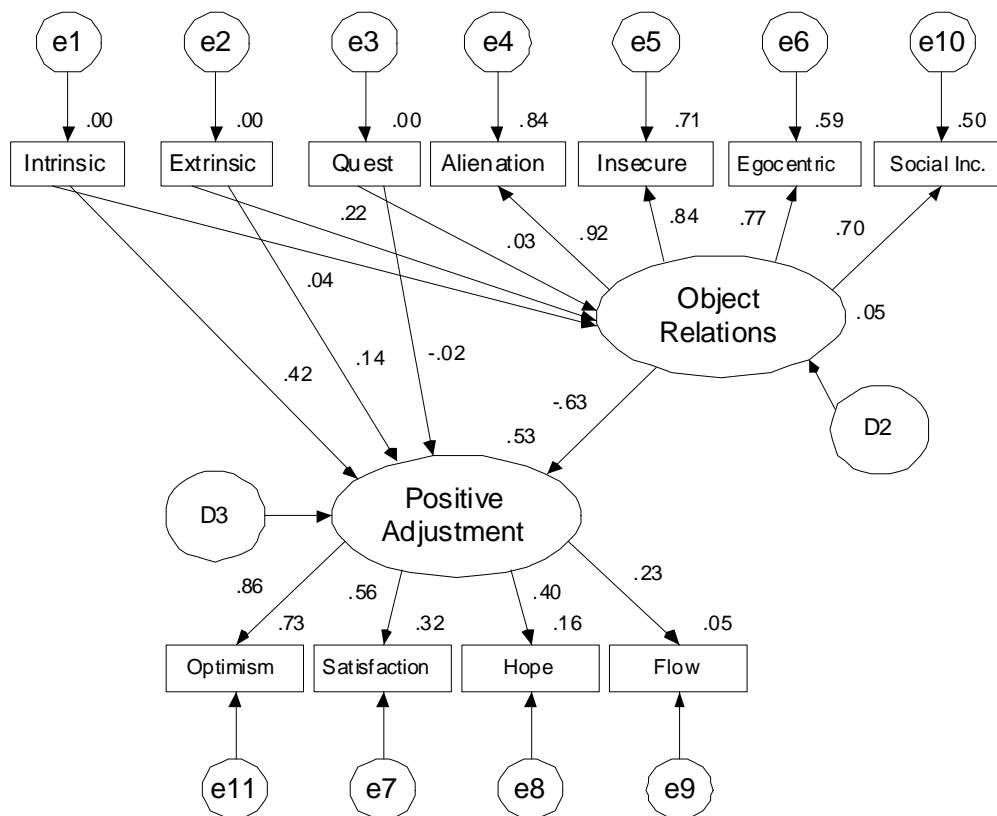
Figure 3. Structural Model of the Relationships Among Religious Orientations, Object Relations, and Positive Adjustment for Christians

Table 10.

Regression Statistics for the Proposed Model for Religious Orientations, Object Relations, and Positive Adjustment for Christians

Dependent Variable	Predictor	β	SE	Critical Ratio[a]	*P*-value
Object Relations	Extrinsic	.22	.11	2.71	.007
Object Relations	Intrinsic	.04	.10	.48	.63
Object Relations	Quest	.03	.12	.35	.78
Positive Adjustment	Object Relations	-.63	.05	-5.35	< .001
Positive Adjustment	Intrinsic	.42	.05	4.62	< .001
Positive Adjustment	Extrinsic	.14	.04	1.89	.06
Positive Adjustment	Quest	-.02	.04	-.34	.73
Alienation	Object Relations	.92[b]	---	---	---
Insecure Attachment	Object Relations	.84	.07	14.34	< .001
Egocentricity	Object Relations	.77	.06	12.25	< .001
Social Incompetence	Object Relations	.71	.06	10.62	< .001
Life Satisfaction	Positive Adjustment	.56[b]	---	---	---
Hope	Positive Adjustment	.40	.09	4.17	< .001
Flow	Positive Adjustment	.23	.51	2.58	.01
Optimism	Positive Adjustment	.86	.23	6.12	< .001

[a] Critical Ratio values are calculated using unstandardized regression weights.

[b] These values were 1.00 before standardization.

Discussion

Hypothesis 1

Hypothesis 1, that Religious Orientation, Object Relations, and Positive Adjustment would be significantly interrelated, was partially supported. Several *a priori* predictions were made and these received limited support.

Religious Orientation

In general, there was a lack of significant relationships among the Religious Orientation variables, and the correlations that were present were small. The only significant relationships were a negative correlation between Intrinsic and Extrinsic Orientation, and, as stated in an *a priori* prediction, a positive relationship between Extrinsic and Quest Orientation. These relationships increased in size when the sample consisted mainly of Christian participants, without Jews or Muslims. This is consistent with the development of the measures for use with Christians. Christianity is a belief-oriented religion, whereas Judaism and Islam put more emphasis on behaviors. The size of the correlation between Extrinsic and Quest is congruent with previous theory and research references (S. R. Brown, 2006; Parker, 2006) and suggests that these orientations share certain attitudes or beliefs. This finding lends import to the need for a more detailed analysis of Religious Orientations.

Positive Adjustment

Positive Adjustment variables were significantly interrelated. This provides support that the latent variable, Positive Adjustment, is a theoretically consistent grouping for the manifest variables studied, namely Life Satisfaction, Optimism, Hope, and Flow. While the Positive Adjustment construct was valuable in this study, future research in positive psychology should explore whether such a group is an adequate conglomeration of positive

psychological traits. Although possibly lengthy and difficult to produce, a broad-based instrument for measuring overall Positive Adjustment, marked by a diverse grouping of positive psychological traits or subscales, would be a valuable addition to the field and encourage new research into correlates, predictors, and models of positive psychological development and experiences. Specially, extended factor analyses of positive psychological measures, such as the manifest variables in this study, might help elucidate how best to combine such factors into a higher-order variable or an instrument that assesses global positive psychological functioning.

Object Relations

The Object Relations subscales were highly interrelated, supporting the overall cohesiveness of the BORRTI and the theoretical foundations of the measure. The measure is a strong universal measure of deficits in mature Object Relations, marked by declines in social interaction, lack of secure attachment to others, and overly egocentric attitudes.

Religious Orientation and Object Relations

Intrinsic Orientation and Object Relations. Intrinsic Religious Orientation was predicted to be negatively related to Alienation, Insecure Attachment, Egocentricity, and Social Incompetence. None of these correlations were found. No previous research had explored the relationships between Religious Orientations and Object Relations. The lack of any relationship between Intrinsic Orientation and Object Relations suggests that approaching religion from an Intrinsic standpoint does not relate to or predict any of these specific means of interacting with others. For example, Intrinsically-Oriented people by definition are oriented toward the religious beliefs and a relationship with the Divine. As a

result they are not necessarily more or less likely to be securely attached to others, display

social competence, remain socially engaged, or be less egocentric.

Extrinsic Orientation and Object Relations. The prediction that Extrinsic Religious

Orientation would be positively related to Egocentricity was supported. Although it was not

predicted prior to analysis, it also was found that Extrinsic Orientation was positively related

to Alienation, which is consistent with the positive relationship between Extrinsic Orientation

and Egocentricity. Allport and Ross (1967) described the Extrinsic Orientation as an

approach to religion marked by an individual's interest in gaining something from religious

participation. Baker and Gorsuch (1982) found that the Extrinsic Orientation was linked to

pathology and distress, including higher trait anxiety, while Bergin, Masters, and Richards

(1987) found that the Extrinsic Orientation was associated with decreased self-control and

impaired personality functioning. Further, Batson, Schoenrade, and Ventis (1993) reported

increased levels of individual prejudice for more Extrinsically-oriented individuals. The

present study's findings are congruent with these previous reports and suggest that those who

score higher on Extrinsic Orientation are more likely to possess more immature levels of

Object Relations, including impaired ability to relate to others (Alienation) and inflated self-

concept (Egocentricity). These relationships are consistent with the tendency of Extrinsics to

"use" their social sphere for personal gain. These traits and poor relational maturity suggest

the possibility for serious interpersonal deficits. Indeed, Egocentricity and Alienation are key

components of psychopathological disorders, such as narcissism; further, these Object

Relations traits have been linked in empirical research to psychopathy and the abuse of

methadone (Huprich & Greenberg, 2003; Rutherford, Alterman, Cacciola, McKay, & Cook,

1996).

The final *a priori* prediction that Extrinsically-religious individuals would be more insecure in their attachment style (i.e., higher scores on Insecure Attachment) was not supported. Although Extrinsic Orientation was associated with more alienated demeanor and egocentric views of self, it did not appear to have a negative impact on one's ability to develop appropriate attachments with others. While initially this may seem incongruent, since Alienation and Egocentricity are related to Insecure Attachment, this finding is theoretically consistent with the definition of Extrinsic religiosity. It is an approach to religion that involves a high reliance on social engagement and extrinsic rewards. Engaging in such a religious orientation would be much more difficult if the person showed Insecure Attachments to others. Further, religious groups that permit conversions accept almost all comers, including those who are not very socially skilled, and the subsequent social interactions may be very helpful for the newcomer, including for social networking. The finding that Extrinsic are higher on alienation and Egocentricity but not higher on Insecure Attachment is new to the literature and allows for better understanding of the Extrinsic Orientation. However, further analyses with subsamples (see *Separate Christian and Jewish Analyses*, below) demonstrated that Extrinsic Orientation was linked, for specific groups such as Christians, to more problems with secure attachments. Therefore, there is clear need for further study of the social behaviors associated with Extrinsic Religious Orientation.

The lack of relationships between Religious Orientation and Object Relations. The lack of significant relationships between Religious Orientation and Object Relations suggests that people's approach to religion is not necessarily related to early developmental experiences or interpersonal dynamics as these are posited by psychodynamic theorists (e.g., Hertel & Donahue, 1995; Freud, 1927/1961; Rizzuto, 1979; Shafranske, 1992; Winnicott,

1971). The absence of such relationships also challenges the contention that Object Relations

Theory is particularly well-suited to explore religion (P. C. Hill & Hood, 1999a). The

absence of a clear relationship between these two constructs may reflect that almost everyone

in the U.S. is religious, the majority of people belong to a religious organization, and that

many religions have an inclusive nature, wherein nearly anyone is welcome to participate and

benefit from religious practice, regardless of upbringing or the presence of interpersonal

maturity. Therefore, a religious group may include people with both mature and immature

Object Relations. In this study, Religious Orientation and Object Relations were relatively

independent, and Object Relations served as a more reliable indictor of overall psychological

well-being and adjustment. As a result, this bolsters the importance of familial dynamics in

predicting future psychological adjustment.

Religious Orientation and Positive Adjustment

Intrinsic Orientation and Positive Adjustment. The prediction that Intrinsic Religious

Orientation would be positively related to Positive Adjustment variables was only supported

for Optimism. This partially supports the theoretical model of Intrinsic Orientation developed

by Allport and Ross (1967). As noted in the introduction, Intrinsic individuals hold their

religious beliefs to be central in their lives, so that their religion represents an end and not a

means to other goals. Batson and Ventis (1982) argued that Intrinsic Orientation was marked

by dogmatic beliefs in a religious system. Given a strong belief that a Higher Power helps

them and has a "plan" for them and for the world, high scorers on Intrinsic Orientation

appear to be able to maintain an optimistic worldview.

In the current study, Intrinsic Orientation was not related with Hope, which usually is

strongly correlated with Optimism (Scheier & Carver, 1985), or Life Satisfaction, which

would seem to stem from other positive psychological attributes, such as Optimism. Such findings suggest that Intrinsic Orientation is linked to Optimism in another manner, perhaps through specific religious beliefs themselves. The fact that Hope and Life Satisfaction were not significantly related to Intrinsic Orientation suggests that such individuals might be able to have a positive view of their lives and the world around them (i.e., Optimism), but that such positivity does not necessarily equate with a hopeful view for the future or with overall feelings of being satisfied with their lives. This interpretation is supported by the nature of the Hope and Life Satisfaction items; these items are worded such that an individual thinks of real, physical problems or situations, which often involve self-directed problem solving, instead of reliance on a Higher Power (e.g., "I can think of many ways to get out of a jam"; "I can think of many ways to get the things in life that are most important to me"; "So far I have gotten the important things I want in my life"), instead of assessing how hopeful a person is about the afterlife or about their religious well-being. Items on the Optimism scale seem to possess a more abstract form of hope, which could include belief in the afterlife or trust in a Higher Power (e.g., "In uncertain times, I usually expect the best"; "Overall, I expect more good than bad things to happen to me"). Intrinsic individuals may focus on the afterlife, reliance on a Higher Power, and "being saved," as opposed to focusing on their Hope for the material world or on their own Life Satisfaction, both of which may be significantly diminished given the difficult world situation at present, including the declining economy and the fact that the nation is at war. Therefore, it is clear that incorporating a person's actual religious beliefs and practices, along with Religious Orientation, is key to fully understanding a person's religiosity.

Quest Orientation and Flow. While no specific predictions were made for interrelationships with Quest Orientation, apart from its positive relationship with Extrinsic Orientation, it was found that Quest Orientation was significantly related to Flow. S. R. Brown (2006) predicted this finding, but did not find support for it within his data sample. This finding is consistent with the theoretical foundations of both Quest Orientation, which is linked to cognitive complexity, openness to experiences, and flexibility when dealing with distress or crises (Batson & Ventis, 1982), and Flow, which is by definition an experience that requires inquisitiveness and complete openness to the task as hand (Csikszentmihalyi, 1975b, 2000). The relationship between Quest and Flow was significant, albeit small. Further, the significant relationship was not found when examining only Christian or Jewish participants, but it was significant when participants from both religions were included. Perhaps only a minority of participants in either religion experience both Quest and Flow, so that it requires a large sample to find the relationship. This would be the case if the relationship exists in a subgroup of those who engage in meditative prayer or meditation. If so, it may be that the relationship is more frequent in the committed religious (e.g., nuns, monks) in Christianity, minority religious populations, such as those who practice Eastern religions (e.g., Buddhism or Hinduism), those who identify as "spiritual," focus on New Age-type belief systems, or are atheists and agnostics. Again, the relationship may be small enough that finding it requires a larger sample size. Given the small number of each of the relevant belief systems within this study's sample, determinations about how Quest and Flow are related was not feasible. However, this is a valuable finding that suggests that further research should explore how approaches to religion—and Quest Orientation, specifically—

affect positive experiences, such as Flow. By determining under what conditions Flow can be most frequently and powerfully experienced, people's lives could be substantially improved.

The lack of relationships between Religious Orientation and Positive Adjustment. The results discussed provide extremely limited support for the belief that Religious Orientation leads to improved psychological health (e.g., Baker & Gorsuch, 1982; Bergin, 1983, 1991; Bergin, Masters, & Richards, 1987; Hettler & Cohen, 1998; Laurencelle, Abell, & Schwartz, 2002; Richards, 1991, 1994; Salsman & Carlson, 2005), since relationships between Religious Orientation and Positive Psychology variables were minimal at best. Overall, how people orient to or approach their spirituality does not seem to affect how hopeful or optimistic they are about life, how satisfied they are with life, or even the presence or strength of actively positive consciousness experiences, such as Flow; however, those with an Intrinsic Orientation did seem to be more Optimistic, and, for Christians and Jews, high scorers on Quest Orientation tended to be more likely to experience Flow.

Religious Orientation might protect against negative psychological experiences instead of increased positive health. Many past studies examining religion and psychological health have focused on decreased maladjustment, such as lower trait anxiety (Baker & Gorsuch, 1982) and decreased paranoid ideation (Salsman & Carlson, 2005). It may be that religiousness, including Religious Orientation, provides a protective mechanism against certain forms of mental distress (e.g., trait anxiety or paranoid ideation), but that such beliefs or attitudes toward religion and spirituality are not necessarily associated with improved mental health or more positive psychological attitudes.

Positive Adjustment and Object Relations

The Positive Adjustment and Object Relations variables were highly interrelated; all of the relationships between the subscale measures for these constructs were significant (except for the correlation between Flow and Social Incompetence) and in the negative direction. This suggests that as one's Object Relations become more maladaptive, levels of Positive Adjustment also are likely to decrease. This finding supports Huprich and Greenberg's (2003) assertion that Object Relations play an important role in mental health. They noted that immature or underdeveloped Object Relations have been found to be associated with psychopathology and mental problems. The finding that Positive Adjustment is negatively related to poor Object Relations suggests that these traits also are related to the level of a person's positive experiences and attitudes. Further research should explore how early developmental traits and dynamics, such as Object Relations, impact other positive psychological experiences and attitudes, including those used in this study (Life Satisfaction, Optimism, Hope, and Flow), as well as others, such as resilience.

Separate Christian and Jewish Analyses

The original design of the Religious Orientation Scale (Allport & Ross, 1967) was developed for a belief-based system, namely Christianity. Judaism and Islam are more behaviorally-based, such that one's faith revolves around specific practices and tenets, instead of a belief system. To understand more fully the effects of Judaism and Islam, several analyses were conducted. First, Jewish and Islamic participants were removed from the sample, and the correlations were recalculated. This resulted in a slight increase in the correlations between Intrinsic and Extrinsic Religious Orientations and between Extrinsic and Quest Orientations. Future studies should explore the questions in the scales further,

including study of changes in religious beliefs and practices in reaction to changes in the culture.

Another finding was the positive relationship between Extrinsic Orientation and Insecure Attachment. This relationship was part of the *a priori* predictions. It was not found when examining the complete study sample; however, Extrinsic Orientation was indeed linked to Insecure Attachment to others in a sample mainly consisting of Christians. This finding, in concert with the relationships between Extrinsic Orientation and both Alienation and Egocentricity, provides strong impetus for future research into the negative relationships between Extrinsic Orientation and interpersonal relationships, including attachment.

A separate correlational analysis was done for only Jewish participants. Perhaps most interesting was the complete loss of significance for any relationships among Religious Orientation variables or between Religious Orientation and Positive Adjustment or Object Relations. This suggests that the belief-based questionnaire developed by Allport and Ross (1967), as well as the Quest Scale by Batson and Schoenrade (1991a, 1991b), may be ill-suited for Jewish samples. As noted previously, this may stem in part from differences in the way different faiths are practiced; that is, Jewish people are more likely to stress the behavioral tenets of their religious group, whereas Christians emphasize their belief system. It should be noted that the Jews sampled in this study were from a Reformed synagogue, and, therefore, consisted on average of more liberal participants than Jews in Conservative or Orthodox groups. In addition, on the day of data collection, the congregation provided the opportunity to members to engage in community service, and the participants answered the questionnaire as a community service. Consequently, the particular sample was highly self-selected.

Within the Jewish sample, interrelationships amongst the Positive Adjustment variables increased notably in their magnitude. This suggests that when Jewish participants experienced one area of increased adjustment among the ones measured, they were more likely to experience increases in other areas measured. Likewise, relationships between Positive Adjustment and Object Relations variables increased in size and significance. These changes generally indicated that Jews in this sample were more likely to experience a direct relationship between the degree of Positive Adjustment and the degree of mature, well-developed Object Relations.

This finding may reflect the strong role of family in Jewish life and the importance of these relationships in affecting levels of Positive Adjustment. This role may be especially powerful given the history of Jewish oppression, which has led to strong familial relationships in order to protect members at all costs, regardless of whether the relationships are positive or negative. Therefore, these relationships may define how the individual family members can interact "safely" with individuals outside the community.

Hypothesis 2

The second hypothesis, that Object Relations would serve a moderating role in the relationship between Religious Orientation and Positive Adjustment, was not supported. Exploration of moderating effects through regression analysis found that the relationships between Religious Orientation and Positive Adjustment variables were not affected significantly by Object Relations.

A likely reason for the absence of any significant moderation is the lack of strong, significant relationships between the Religious Orientation, Object Relations, and Positive Adjustment variables. While moderation does not imply a causal connection between

variables, as is seen in mediation analyses, it does assume significant relationships among the variables being explored. The absence of such relationships, mostly between Religious Orientation and the other variables, likely contributed to the lack of support for a moderation model. As previously noted, only two relationships between the proposed independent and dependent variables (Religious Orientation and Positive Adjustment, respectively) were significant: those between Intrinsic Orientation and Optimism and between Quest Orientation and Flow. It is notable, however, that these effects appear to be due to factors other than one's level of mature Object Relations, since the proposed moderator (Object Relations) was found not to affect the relationships between Religious Orientation and Positive Adjustment significantly.

Two main effects were found. First, Object Relations was a significant predictor of poorer Positive Adjustment, when controlling for the effects of Extrinsic Orientation. Second, when the effects of Object Relations were being held constant, Quest Orientation was a significant predictor of Positive Adjustment. The first finding was consistent with the general correlations seen between Object Relations and Positive Adjustment, suggesting that mature Object Relations were associated with increased levels of psychological well-being. The second finding was more spurious, especially since no correlations were seen between Quest Orientation and Positive Adjustment. The predictive relationship would suggest that Quest Orientation is linked to improved psychological health; however, the lack of further support for this finding suggests a strong need for replication of this result and further research into this relationship.

Hypothesis 3

Hypothesis 3 stated that Object Relations would affect the presence of significant relationships between Religious Orientation and Positive Adjustment in a mediation model (see Figure 1). The model was revised prior to analysis, since Religious Orientation was not found to form a single latent variable. The resulting modified model (Figure 2) did not fit the data adequately. Therefore, Hypothesis 3 was not supported.

The model's largest flaw appears to be the inclusion of Religious Orientations, since these variables are generally unrelated to variables in either of the other constructs (Object Relations or Positive Adjustment). The only significant positive relationship between Religious Orientation and Positive Adjustment was for Intrinsic Orientation. Tests of this relationship with and without the proposed mediating variable (Object Relations) did not change the significance or size of the relationship, suggesting that this association between Intrinsic Orientation and Positive Adjustment was not mediated by Object Relations.

The general lack of significant relationships among the three proposed latent variables suggests immediately that the model is a poor fit to the data (Baron & Kenny, 1986). Specifically, Baron and Kenny note that the first step in exploring a mediation model is demonstrating a relationship between the proposed initial variable and the dependent or outcome variable. Modification of structural equation models to improve fit is possible, using modification indices within AMOS or by allowing variables to covary (by either removing manifest variable residual error values or by drawing bi-directional relationships between latent variables). However, these modifications should only be undertaken if consistent with theory, and caution must be exercised, since modifying a model to fit a specific set of sample data reduces external validity and generalizability of the model (Kline, 1998). In the data of

this dissertation study, missing values within the dataset prevented AMOS from attempting to modify the model via modification indices. Further, while no theoretically consistent model could be developed, especially given the lack of significant interrelationships among the variables before model fitting, exploratory analysis of other models was undertaken by allowing variables and residuals to co-vary. None of these exploratory models resulted in a well-fitting model. In this case, it appears better to reject the current model as descriptive of the relationship between the three latent variables.

A significant effect was found between Object Relations and Positive Adjustment, suggesting that poor Object Relations had a direct negative effect on Positive Adjustment. The presence of a directional effect from Object Relations on Positive Adjustment is an important finding, indicating that how a person develops psychically and emotionally, and his or her interpersonal dynamics, plays an important role in determining one's level of Positive Adjustment. Further research into these relationships, including more refined predictive models of such effects, is needed.

Overall, it is clear that the theoretical mediation model (Figures 1 and 2) did not fit the sample data, as Religious Orientations remained unrelated to most Object Relations and Positive Adjustment variables, both in the structural model and resulting regression estimates and in the bivariate correlations reported for Hypothesis 1. While Object Relations and Positive Adjustment were strongly related, the inclusion of Religious Orientation did not fit with the data from this study's sample. Exploration of Religious Orientation correlates should be conducted prior to future attempts to fit a model describing the interaction between Religious Orientation, Object Relations, and Positive Adjustment.

Christian Subsample SEM

The separate SEM for Christians did not show marked improvement in model fit, suggesting that religious affiliation alone did not account for the lack of relationships between the three constructs examined. Regression results were similar for Christians and the broader sample: Extrinsic Orientation and Object Relations were positively related, suggesting that Extrinsic Religious Orientation predicts some level of immature Object Relations. Intrinsic Religious Orientation predicted Positive Adjustment, as seen in the larger sample, suggesting that Intrinsic Orientation does indeed relate to broader psychological health. No findings relate to Christian-specific effects that were not seen in the sample including all religious affiliations. Therefore, while the correlational analyses in Hypothesis 1 suggested some differences between religious groups, especially between Christians and Jews, the SEM model for Christians provides evidence that the lack of significant support for the posited model was not solely linked to the religious affiliation of the sample participants.

Limitations to the Study

While sample size was adequate for the analyses conducted, it would be valuable to assess these hypotheses across a diverse group of sample subjects and populations. Some diversity was ensured for this study by sampling non-student and religious groups, but the numbers of participants from the community in these samples were notably fewer than those of the student groups, largely due to issues of participant accessibility and the likelihood of people returning the questionnaire. Sampling of students generally took place during classes, allowing ample time and motivation for completion, while non-student sampling was conducted by individually requesting participation from adults in the community (through social networking with friends and family or by soliciting participation at local venues, such

as a nearby Jewish temple) or by on-campus sampling of non-student staff. For instance, office support staff in departments across campus individually were asked to fill out questionnaires and return them in addressed campus mail envelopes to the primary researcher. There were 281 useable questionnaires, and 29 were incomplete, while 10 were completely blank. It was not clear what the characteristics of non-responders were. Learning more about non-responders is important in order to determine what effects this has on study outcomes. Future research exploring relationships between similar constructs to those used in the study should ensure broad-based sampling of diverse groups. As religion-specific results were found, it would be beneficial to engage in research that specifically takes account of different religions.

Several limitations surround the measures used to assess Religious Orientations. Given that the original Allport and Ross (1967) Religious Orientation Scale was developed for Christians and used in that context throughout most of its history, the validity and reliability of the measure for non-Christian samples needs to be studied. This study demonstrated that, when examining Jewish participants, the relationships among Religious Orientations disappeared. These facts suggest that the Religious Orientation Scale would benefit from testing on diverse religious populations, with the aim of developing norms for different affiliations or faiths and documenting the validity and reliability of such measures. In this study, the Jews were also a self-selected, highly liberal group of participants (Reform Judaism) and, therefore, not representative of Judaism as a whole. Careful sampling of diverse faiths, both within and between different religions, is vital for future research.

In addition to testing of diverse populations to ensure validity of the measures for these groups, the Religious Orientation instruments could benefit from further general study

and re-conceptualization. For instance, the internal consistency of the Extrinsic Scale (Allport & Ross, 1967) is consistently lower (P. C. Hill & Hood, 1999b) than that of the Intrinsic Scale, despite the fact that it is two items longer. Further, findings of relationships among scales, such as the relationship between Extrinsic and Quest Orientation (S. R. Brown, 2006; J. R. Parker, personal communication, January 2006), suggest the need for further understanding of how these orientations are related and what they are measuring in today's religious environment. It would be valuable to explore alternative means of assessing religious constructs, instead of reliance on self-reports, such as behavioral observation or projective measures. Each strategy has its own limitations, and these need to be considered carefully.

A possible limitation of the Positive Adjustment instruments used, in general, is their brevity. While this is advantageous for ease of data gathering, it can lead participants not to endorse certain traits or experiences that would be detected by further exploration or questioning. Further, the possibility of longer, more global measures of Positive Adjustment should be examined in future research.

Conclusions

The Question of Religious Orientation

While the results of this study support the presence of relationships between Object Relations and Positive Adjustment, there was relatively little support for any relationships between Religious Orientations and either the Object Relations or Positive Adjustment variables studied in this dissertation. Further, this study also demonstrated that it is important to consider religion as a complex, multi-faceted construct. For instance, clear differences were seen in interrelationships among variables in diverse religious samples, such as for

Christian and Jewish participants. Understanding religion in a multi-modal context—through the lenses of belief, practice, affiliation, and orientation—is vital to fully conceptualizing an individual's religious identity and the consequences thereof. As noted above, further exploration of the Religious Orientation measures, including factor and cluster analyses, may help elucidate the assessment of religiosity.

Theoretical modifications may be required, pending further research. For instance, it is possible that the orientations actually reflect underlying interpersonal traits or dispositions, such as sociability (Extrinsic Orientation), wherein individuals desiring social relationships may endorse moderate levels of Extrinsic Orientation. In addition, curvilinear relationships between the Religious Orientations, as well as with other variables, such as Positive Adjustment, should be explored. It may be that linear modeling is not well suited to religious behaviors, beliefs, or orientation.

Finally, other means of assessing religiosity and Religious Orientation should be explored, including behavioral assessment or observation, as opposed to solely relying on participant self-report. The desire to present as spiritual or religious may negatively impact the validity of self-report assessment of religiosity, thereby limiting the validity of predictions made regarding correlates or outcomes of religious involvement. By utilizing either third-party observation, neutral recording of behaviors, or multiple assessments (such as using a PDA or daily log) to minimize error, the overall quality of the data may be improved.

General Conclusion

Overall, this study failed to provide support for a mediation or moderation model between Religious Orientation, Object Relations, and Positive Adjustment. While there were

minor relationships between Religious Orientation and the other latent variables, these relationships did not provide the basis for a well-fitting model of either moderation or mediation effects. Object Relations and Positive Adjustment were both cohesive latent constructs that successfully described their underlying manifest subscales. Object Relations and Positive Adjustment were strongly related, suggesting that individuals' intra- and interpersonal dynamics influence their experience of positive psychological attitudes and experiences. Further, preliminary support was found for relationships between Intrinsic Orientation and Positive Adjustment (specifically, Optimism) and Quest Orientation and Flow—a relationship that had been previously posited by S. R. Brown (2006) but unsupported in that research. These relationships should be explored further. In addition, there were clear relationships found between Object Relations and Positive Adjustment, lending credence to the theory that early developmental experiences and interpersonal dynamics directly affect positive psychological attributes and experiences; however, which aspects of Positive Adjustment and which aspects of Object Relations are most related to Religious Orientations in different religious groups and subgroups awaits further study.

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APPENDICIES

Appendix A
Allport and Ross Religious Orientation Scale
Please indicate the extent to which you agree or disagree with each item below by using the following rating scale:

A	B	C	D	E
Strongly Disagree	Disagree	Uncertain/ Neutral	Agree	Strongly Agree

Extrinsic Orientation Subscale*:
1. Although I believe in my religion, I feel there are many more important things in my life.
2. It doesn't matter so much what I believe so long as I lead a moral life.
3. The primary purpose of prayer is to gain relief and protection.
4. Places of worship are most important as a place to formulate good social relationships.
5. What religion offers me most is comfort when sorrows and misfortune strike.
6. I pray chiefly because I have been taught to pray.
7. Although I am a religious person I refuse to let religious considerations influence my everyday affairs.
8. A primary reason for my interest in religion is that my place of worship is a congenial social environment.
9. Occasionally I find it necessary to compromise my religious beliefs in order to protect my social and economic well-being.
10. One reason for my being a member of a religion is that such membership helps to establish a person in the community.
11. The purpose of prayer is to secure a happy and peaceful life.

Intrinsic Orientation Subscale*:
12. It is important for me to spend periods of time in private religious thought and meditation.
13. If not prevented by unavoidable circumstances, I attend religious services.
14. I try hard to carry my religion over into all my other dealings in life.
15. The prayers I say when I am alone carry as much meaning and personal emotion as those said by me during services.
16. Quite often I have been keenly aware of the presence of God or a higher power.
17. I read literature about my faith.
18. If I were to join a religious group I would prefer to join a religious study group rather than a social fellowship.
19. My religious beliefs are really what lie behind my whole approach to life.
20. Religion is especially important because it answers many questions about the meaning of life.

*The ordering of all 20 items should be scrambled.

Appendix B
12-Item Quest Scale
(Items arranged by subscale)

All items will be administered with a 5-point Likert scale:

A	B	C	D	E
Strongly Disagree	Disagree	Uncertain/ Neutral	Agree	Strongly Agree

Readiness to face existential questions without reducing their complexity
1. I was not very interested in religion until I began to ask questions about the meaning and purpose of my life.
2. I have been driven to ask religious questions out of a growing awareness of the tensions in my world and in my relation to my world.
3. My life experiences have led me to rethink my religious convictions.
4. God wasn't very important for me until I began to ask questions about the meaning of my own life.

Self-criticism and perception of religious doubt as positive
5. It might be said that I value my religious doubts and uncertainties.
6. For me, doubting is an important part of what it means to be religious.
7. (-) I find religious doubts upsetting.
8. Questions are far more central to my religious experience than are answers.

Openness to change
9. As I grow and change, I expect my religion also to grow and change.
10. I am constantly questioning my religious beliefs.
11. (-) I do not expect my religious convictions to change in the next few years.
12. There are many religious issues on which my views are still changing.

Note: A minus sign indicates that the item is reverse-scored.

Appendix C
The Satisfaction with Life Scale

Instructions: Please use the following scale to indicate how much you agree or disagree with the following statements.

A	B	C	D	E	F	G
Strongly Disagree	Disagree	Slightly Disagree	Uncertain/ Neutral	Slightly Agree	Agree	Strongly Agree

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in my life.
5. If I could live my life over, I would change almost nothing.

Appendix D
Life Orientation Test – Revised (Generalized Optimism)
Directions: Answers items on a 5-point Likert-type scale ranging from Strongly Disagree to Strongly Agree.

A	B	C	D	E
Strongly Disagree	Disagree	Uncertain/ Neutral	Agree	Strongly Agree

1. In uncertain times, I usually expect the best.
2. It's easy for me to relax. (Filler)
3. If something can go wrong for me, it will.*
4. I'm always optimistic about my future.
5. I enjoy my friends a lot. (Filler)
6. It's important for me to keep busy. (Filler)
7. I hardly ever expect things to go my way.*
8. I don't get upset too easily. (Filler)
9. I rarely count on good things happening to me.*
10. Overall, I expect more good than bad things to happen to me.

*These items are reversed before scoring. When all items are reversed and filler items removed, sum the scores to calculate the overall Generalized Optimism score.

Appendix E
Adult Dispositional Hope Scale

Directions: Read each item carefully. Using the scale shown below, please select the number that best describes YOU and put that number in the blank provided.

A	B	C	D
Definitely False	Mostly False	Mostly True	Definitely True

1. I can think of many ways to get out of a jam.
2. I energetically pursue my goals.
3. I feel tired most of the time.
4. There are lots of ways around my problem.
5. I am easily downed in an argument.
6. I can think of many ways to get the things in life that are most important to me.
7. I worry about my health.
8. Even when others get discouraged, I know I can find a way to solve the problem.
9. My past experiences have prepared me well for my future.
10. I've been pretty successful in my life.
11. I usually find myself worrying about something.
12. I meet the goals that I set for myself.

Notes: Items 3, 5, 7, and 11 are distracters and are not used for scoring. The pathways subscale score is the sum of items 1, 4, 6, and 8; the agency subscale consists of items 2, 9, 10, and 12. Hope is the sum of the pathways and agency subscales.

Appendix F

Flow Questionnaire
The following three quotations are presented to participants. After they have read them, they are asked to indicate if they have ever had a similar experience to any or all of the quotations.

1. My mind isn't wandering. I am not thinking of something else. I am totally involved in what I am doing. My body feels good. I don't seem to hear anything. The world seems to be cut off from me. I am less aware of myself and my problems.
2. My concentration is like breathing. I never think of it. I am really quite oblivious to my surroundings after I really get going. I think that the phone could ring, and the doorbell could ring, or the house burn down or something like that. When I start, I really do shut out the whole world. Once I stop, I can let it back in again.
3. I am so involved in what I am doing. I don't see myself as separate from what I am doing.

Supplemental Flow Experience Clarification Questions
After reading and responding to the Flow Questionnaire, participants are asked to read the following statements and to rate their agreement with each, thinking specifically of the experience or event described in response to the flow quotations. The statements will be rated on a 5-point Likert-type scale.

A	B	C	D	E
Strongly Disagree	Disagree	Uncertain/ Neutral	Agree	Strongly Agree

1. I get involved.
2. (-) I get anxious.
3. I clearly know what I am supposed to do.
4. I get direct clues as to how well I am doing.
5. I feel I can handle the demands of the situation.
6. (-) I feel self-conscious.
7. (-) I get bored.
8. (-) I have to make an effort to keep my mind on what is happening.
9. I would do it even if I didn't have to.
10. (-) I get distracted.
11. Time passes (slowly – fast, on the semantic differential scale).
12. I enjoy the experience, and/or the use of my skills.

Note: A minus sign indicates that the score on the semantic differential scale should be reversed before summing the supplemental questions to produce a rating of the flow experience.

Appendix G
Bell's Object Relations Inventory

Due to copyright restrictions, this inventory cannot be replicated here. For further information about the inventory, please contact either Scott Brown or Dr. S. Huprich of the Psychology Department.

Appendix H
Additional Items

The following items are not from any standardized scale. They will be assessed using the following 5-point Likert-type scale:

A	B	C	D	E
Strongly Disagree	Disagree	Uncertain/ Neutral	Agree	Strongly Agree

I'm a very religious, spiritual person.
I believe there is a God or Higher Power.
I'm unsure whether God or a Higher Power exists.
I am a "born-again" Christian.
As I was growing up, my parents were very religious.
If at all possible I go to religious services at least once a week.

I am open to new experiences in my daily life.
I am usually the first person to try new things.
I am reluctant to try new things.
Before trying something new, I usually consider what's in it for me.

When growing up, I believed in the religious ideas my parents believed in.
Currently, I believe in the religious ideas my parents believe in.
My religious attitudes and beliefs have changed significantly since I was younger.
I am actively searching for religious beliefs that fit with my identity.
I honestly believe that I will never find religious beliefs that really fit with my identity.
I have religious beliefs, but I don't question them much.

Appendix I
Demographic Information

Finally, we'd like you to indicate some general information about yourself. None of this information can be used to specifically identify you and your anonymity is protected.

Sex: A. Male B. Female

My marital status is:

A   Single – *Never Married*

B   Single – *Divorced or separated*

C   Single – *Widowed*

D   Living with a significant other – *Unmarried, Heterosexual Relationship*

E   Living with a significant other – *Unmarried, Homosexual Relationship*

F   Married or remarried

With respect to work, I am:

A   Retired

B   Unemployed

C   Employed – *Part-time*

D   Employed – *Full-time*

With respect to school or education, I am:

A   Not a student

B   Student – *Part-time*

C   Student – *Full-time*

How would you describe the economic situation of your family as you were growing up?

A   We had barely enough to get by

B   We had enough, but no more

C   We definitely had enough of everything

D   We had plenty of extras, but no luxuries

E   We had a lot of luxuries

How would you describe your current economic situation?

      A   I have barely enough to get by

      B   I have enough, but no more

      C   I definitely have enough of everything

      D   I have plenty of extras, but no luxuries

      E   I have a lot of luxuries

Your racial/ethnic group membership is:

      A   African American

      B   Asian American (including Indian and Pacific Island regions)

      C   Caucasian or European American

      D   Hispanic American

      E   Native American

      F   Middle-Eastern American

      F   Other: *Please indicate here:* _____

Religious affiliation: _____
Please be as specific as possible

Age: _____ years

Appendix J

**"An Exploration of the Relationships Between Religious Orientation,
Positive Psychological Variables, and Object Relations"**
Informed Consent to Participate in Research
Department of Psychology
Eastern Michigan University

1. **Purpose of the Study**:
   The purpose is to examine the relationship between people's orientation to religion, to daily life, and to other people.

2. **Anonymity**:
   Please do not put your name anywhere, so that your answers cannot be traced to you and you can be completely honest.

3. **Description of Procedures**:
   You will fill out a questionnaire anonymously. The questionnaire should take about 30-45 minutes to complete. The questions ask you about your orientation to religion, to daily life, and to other people.

4. **Right to Withdraw or Refuse to Participate**:
   Taking part in this study is voluntary. You may refuse to participate or withdrawal from the research at any time without penalty of any kind.

5. **Use of the Research Results**:
   The results are anonymous. The results of this study will be published in a psychological journal and presented at conferences. Any presentation of the study results will be presented only for the group of people who participated. Individual results are not available. If you would like a copy of the results, please let the researcher, Scott R. Brown, know. You can reach him at *sbrown26@emich.edu*.

6. **Expected Risks of the Study**:
   There are no known risks. Some questions, such as those about your attitude toward religion or personal relationships, may make you emotional, but not more so than normal discussion of these issues. If you would like to talk about any uncomfortable emotional reactions you have, please let the primary research, Scott Brown, know and/or contact Counseling Services at Snow Health Center (487-1118) or the EMU Psychology Clinic (487-4987).

7. **Expected Benefits of the Study**:
   If we are able to identify key aspects of how people normally come to experience positive and enjoyable psychological states, it becomes possible to help other people experience them and achieve greater. Your participation also will allow you to be an active contributor to scientific research. If you are participating as part of a college class, you may be able to receive extra-credit for your involvement. Whether there is extra-credit and the amount of extra credit are up to your professor. You will receive a receipt for participation that you will need to complete and turn in to your instructor for extra-credit.

8. **If You Have Questions or Comments**:
   For questions about the research, please contact the researcher, Scott R. Brown, at sbrown26@emich.edu, or the dissertation committee chair, Dr. Alida S. Westman, at alida.westman@emich.edu. This research protocol has been reviewed and approved by the Eastern Michigan University Human Subjects Review Committee. If you have questions about the approval process, please contact Dr. Deb de Laski-Smith (734.487.0042, Interim Dean of the Graduate School and Administrative Co-chair of UHSCR, human.subjects@emich.edu)."

By completing the packet of questionnaires, you are implying agreement to participate in the study as detailed above, in this informed consent agreement. We are not requesting your signature, so that your responses can be kept anonymous.

Appendix K

Appendix K.
Factor Loadings for Religious Orientation Variables

Items	Extrinsic	Factors Intrinsic	Quest
Extrinsic Orientation Scale			
Although I believe in my religion, I feel there are many more important things in my life.	**.35**	-.33	
It doesn't matter so much what I believe so long as I lead a moral life.		**-.48**	.37
The primary purpose of prayer is to gain relief and protection.	**.56**		
Places of worship are most important as a place to formulate good social relationships.	**.48**		
What religion offers me most is comfort when sorrows and misfortune strike.	**.53**	.32	
I pray chiefly because I have been taught to pray.	**.59**		
Although I am a religious person I refuse to let religious considerations influence my everyday affairs.	**.42**		
A primary reason for my interest in religion is that my place of worship is a congenial social environment.	**.49**		
Occasionally I find it necessary to compromise my religious beliefs in order to protect my social and economic well-being.	**.46**		
One reason for my being a member of a religion is that such membership helps to establish a person in the community.	**.51**		
The purpose of prayer is to secure a happy and peaceful life.	**.44**	.31	
Intrinsic Orientation Scale			
It is important for me to spend periods of time in private religious thought and meditation.		**.71**	
If not prevented by unavoidable circumstances, I attend religious services.		**.72**	
I try hard to carry my religion over into all my other dealings in life.		**.85**	
The prayers I say when I am alone carry as much meaning and personal emotion as those said by me during services.		**.68**	
Quite often I have been keenly aware of the presence of God or a higher power.		**.69**	
I read literature about my faith.		**.63**	
If I were to join a religious group I would prefer to join a religious study group rather than a social fellowship.		**.33**	
My religious beliefs are really what lie behind my whole approach to life.		**.83**	
Religion is especially important because it answers many questions about the meaning of life.		**.79**	
Quest Orientation Scale			
I was not very interested in religion until I began to ask questions about the meaning and purpose of my life.		**.33**	
I have been driven to ask religious questions out of a growing awareness of the tensions in my world and in my relation to my world.		**.45**	
My life experiences have led me to rethink my religious convictions.			**.53**
God wasn't very important for me until I began to ask questions about the meaning of my own life.			**.24**
It might be said that I value my religious doubts and uncertainties.			**.59**
For me, doubting is an important part of what it means to be religious.			**.64**
I find religious doubts upsetting.*		**-.32**	
Questions are far more central to my religious experience than are answers.			**.47**

As I grow and change, I expect my religion also to grow and change.	**.48**
I am constantly questioning my religious beliefs.	**.63**
I do not expect my religious convictions to change in the next few years.*	**.39**
There are many religious issues on which my views are still changing.	**.42**

Note: Values less than .30 have not been listed, given the cut-off for the study (factor loadings must approximate .30), except for Quest Item #4, which had a maximum loading on any scale of .24. Bolded items indicate the factor where the item primarily loaded.
*These items are reversed before scoring

Appendix L

Appendix L.
Factor Loadings for Positive Adjustment Variables

Items	Optimism[a]	Life Satisfaction	Hope	Barriers to Flow (Flow)	Quality of Flow (Flow)[b]
Life Orientation Test – Revised					
In uncertain times, I usually expect the best.	**-.43**	.35	.30		-.27
If something can go wrong for me, it will.*	**-.62**	.26		.45	
I'm always optimistic about my future.	-.30	.28	**.46**		-.31
I hardly ever expect things to go my way.*	**-.80**				
I rarely count on good things happening to me.*	**-.80**				
Overall, I expect more good than bad things to happen to me.	**-.47**	.32			-.30
The Satisfaction with Life Scale					
In most ways, my life is close to my ideal.	-.39	**.79**	.27		
The conditions of my life are excellent.	-.39	**.82**			
I am satisfied with my life.	-.38	**.88**	.29		
So far I have gotten the important things I want in my life.	-.28	**.78**	.26		
If I could live my life over, I would change almost nothing.		**.62**			-.27
Adult Dispositional Hope Scale					
I can think of many ways to get out of a jam.			**.62**		
I energetically pursue my goals.			**.60**		
There are lots of ways around my problem.			**.59**		-.28
I can think of many ways to get the things in life that are most important to me.			**.60**		
Even when others get discouraged, I know I can find a way to solve the problem.			**.75**		-.27
My past experiences have prepared me well for my future.			**.67**		
I've been pretty successful in my life.		.47	**.66**		
I meet the goals that I set for myself.		.28	**.59**		
Flow Scale					
I get involved.					**-.57**
I get anxious.*				**.48**	
I clearly know what I am supposed to do.		.26			**-.69**
I get direct clues as to how well I am doing.					**-.59**

I feel I can handle the demands of the situation.		.37	**-.76**
I feel self-conscious.*	.27	**.58**	
I get bored.*		**.76**	-.35
I have to make an effort to keep my mind on what is happening.*		**.74**	-.25
I would do it even if I didn't have to.			**-.45**
I get distracted.*		**.77**	-.29
I enjoy the experience, and/or the use of my skills.			**-.80**
Time passes (slowly – fast, on the semantic differential scale).		**.25**	

Note: Values less than .30 have not been listed, given the cut-off for the study (factor loadings must approximate .30) except for the final Flow Scale item, that had a maximum loading of .25. Bolded items indicate the factor where the item primarily loaded.

[a] The factor loadings are negative, suggesting that the oblique rotation actually created a factor for Pessimism; however, reversing the sign on the loadings would result in the factor Optimism.

b The factor loadings are negative, suggesting that the oblique rotation actually created a factor describing poorer quality Flow Experiences; however, reversing the sign on the loadings would result in the factor describing increasingly powerful Flow Experiences.

*These items are reversed before scoring

Appendix M

Appendix M.

Results of Multiple Regression of Religious Orientations and the Proposed Moderator Object Relations on Positive Adjustment

	b	β
Equation 1		
Intrinsic	.16 (.11)	.52
Object Relations	-.03 (.02)	-.30
Intrinsic x Object Relations	-.001 (.001)	-.44
Constant	4.19 (3.31)	---
$R^2 = .27$		
Equation 2		
Extrinsic	-.13 (.14)	-.33
Object Relations	-.07**(.02)	-.73**
Extrinsic x Object Relations	.001 (.001)	.45
Constant	12.93** (4.21)	---
$R^2 = .26$		
Equation 3		
Quest	.30* (.15)	.72*
Object Relations	.003 (.03)	.04
Quest x Object Relations	-.001 (.001)	-.87
Constant	-1.32 (5.24)	---
$R^2 = .27$		

Note: b = unstandardized regression coefficient, with standard error in parentheses; β = standardized regression coefficient

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