

R E S E A R C H

I N T H E

RESEARCH IN THE

S O C I A L

SOCIAL SCIENTIFIC

S C I E N T I F I C

STUDY OF RELIGION

S T U D Y O F

R E L I G I O N

VOLUME

R E S E A R C H

18

I N T H E

S O C I A L

2007

S C I E N T I F I C

S T U D Y O F

R E L I G I O N

R E S E A R C H

EDITOR Ralph L. Piedmont  
*Loyola College, Maryland, USA*

S O C I A L

BRILL

Research in the Social Scientific Study  
of Religion

# Research in the Social Scientific Study of Religion

*Series Editor*

RALPH L. PIEDMONT

VOLUME 18

Research in the Social  
Scientific Study of Religion

Volume 18

*Edited by*

Ralph L. Piedmont

Loyola College, Maryland, USA



BRILL

LEIDEN • BOSTON  
2007

Published with kind support of Loyola College, Maryland, USA.

This book is printed on acid-free paper.

**Library of Congress Cataloging-in-Publication data**

LC control number 89650738

ISSN 1046-8064  
ISBN 978 90 04 15851 1

© Copyright 2007 by Koninklijke Brill NV, Leiden, The Netherlands.  
Koninklijke Brill NV incorporates the imprints Brill, Hotei Publishing,  
IDC Publishers, Martinus Nijhoff Publishers and VSP.

All rights reserved. No part of this publication may be reproduced, translated,  
stored in a retrieval system, or transmitted in any form or by any means, electronic,  
mechanical, photocopying, recording or otherwise, without prior written permission  
from the publisher.

RSSR is indexed in Sociological Abstracts, Social Services Abstracts, Religion Index  
Two: Multi-Author Works, Religions and Theology: Religions and Theology, Social  
Sciences: Comprehensive Works

Authorization to photocopy items for internal or personal use is granted by  
Koninklijke Brill NV provided that the appropriate fees are paid directly to  
The Copyright Clearance Center, 222 Rosewood Drive, Suite 910,  
Danvers, MA 01923, USA.  
Fees are subject to change.

PRINTED IN THE NETHERLANDS

## CONTENTS

Preface .....	vii
Acknowledgements .....	xi
Manuscript Invitation .....	xiii

### PART ONE

#### RESEARCH IN THE SOCIAL SCIENTIFIC STUDY OF RELIGION

Openness and Spiritual Development in Adolescents .....	3
BRIEN S. KELLEY, AURELIE M. ATHAN, AND LISA F. MILLER	
Jung: Mentor for Pastoral Counselors .....	35
WILLIAM J. SNECK	
The Relations Among Spirituality and Religiosity and Axis II Functioning in Two College Samples .....	53
RALPH L. PIEDMONT, CATHERINE J. HASSINGER, JANELLE RHORER, MARTIN F. SHERMAN, NANCY C. SHERMAN, AND JOSEPH E. G. WILLIAMS	
Associations Between Humility, Spiritual Transcendence, and Forgiveness .....	75
CHRISTIE POWERS, RUTH K. NAM, WADE C. ROWATT, AND PETER C. HILL	

### PART TWO

#### SPECIAL SECTION ON POSITIVE PSYCHOLOGY

Introduction to Special Section on Positive Psychology .....	97
JOSEPH W. CIARROCCHI AND GINA M. YANNI-BRELSFORD	
The Vocation Identity Questionnaire: Measuring the Sense of Calling .....	99
DIANE E. DREHER, KATHERINE A. HOLLOWAY, AND ERIN SCHOENFELDER	

Spirituality and God-Attachment as Predictors of Subjective Well-Being for Seminarians and Nuns in India .....	121
DUDLEY MENDONCA, K. ELIZABETH OAKES, JOSEPH W. CIARROCCHI, WILLIAM J. SNECK, AND KEVIN GILLESPIE	
Child Abuse, Personality, and Spirituality as Predictors of Happiness in Maltese College Students .....	141
MICHAEL GALEA, JOSEPH W. CIARROCCHI, RALPH L. PIEDMONT, AND ROBERT J. WICKS	
Spiritual Transcendence and Religious Practices in Recovery from Pathological Gambling: Reducing Pain or Enhancing Quality of Life? .....	155
JAMES M. WALSH, JOSEPH W. CIARROCCHI, RALPH L. PIEDMONT, AND DEBORAH HASKINS	
Patience as a Virtue: Religious and Psychological Perspectives .....	177
SARAH A. SCHNITKER AND ROBERT A. EMMONS	
Inward, Outward, Upward Prayers and Personal Character ...	209
KEVIN L. LADD, MELEAH L. LADD, PETER ASHBAUGH, DANIELLE TRNKA, JULIE HARNER, KATE ST. PIERRE, AND TED SWANSON	
Life Satisfaction and Spirituality in Adolescents .....	233
BRIEN S. KELLEY AND LISA MILLER	
The Relationship Between Spirituality, Assessed Through Self-transcendent Goal Strivings, and Positive Psychological Attributes .....	263
GARY K. LEAK, KRISTINA M. DENEVER, AND ADAM J. GRETEMAN	
Authors' Biographies .....	281
Manuscript Reviewers .....	287
Index of Names .....	289
Index of Subjects .....	299

## PREFACE

This volume reflects a change in the publication process for R<sup>SSSR</sup>. Historically, R<sup>SSSR</sup> has been published at the end of the calendar year. In this way, the volume would provide a useful overview of the salient issues and trends noted in the research literature across a number of fields. Over the years, however, R<sup>SSSR</sup> began to search out and publish more cutting edge research. Instead of being simply a review of work, it began to capture more of the latest trends in the field. As such, it seemed awkward to keep the volume emerging in the later half of the year; an earlier publication date appears warranted. As such, the decision was reached to put the series on a new publication schedule. Although this put some necessary stressors on the editorial staff, such as having to get two volumes out almost “back to back”, making this shift certainly will enhance the value of R<sup>SSSR</sup> to its readers. All the technical issues aside, what is interesting to note is the larger amount of research activity that is taking place in the field creates little difficulty in obtaining high quality studies. This volume continues R<sup>SSSR</sup>’s tradition of presenting diverse, integrative research on the cutting edge of the field.

Of particular interest is that this volume contains a special section on “Positive Psychology” and its relationships with religious and spiritual constructs. Drs. Joseph Ciarrocchi and Gina Yanni-Brelsford graciously took the lead on co-ordinating this section. The eight articles they present cover a diverse range of topics, focusing on clergy, adult, and college student samples. Several of the papers examine how positive psychological constructs link both conceptually and empirically to spiritual and religious variables. One interesting study examines how spirituality (measures by the Spiritual Transcendence Scale) made a unique, significant contribution to recovery from pathological gambling. Many of the other papers demonstrate how numinous constructs are closely related to a wide array of positive psychological constructs, such as well-being, benevolence, intimacy, maturity, and personal vitality. Linking positive psychology with the numinous seems a useful point of departure for future research. The two sets of constructs have much in common (e.g., their focus on the optimal levels of human functioning), but research will need to examine their distinctiveness. Important



questions exist, such as “To what extent are these two sets of constructs capturing similar aspects of the individual?” and “To what extent are these constructs reflecting *different* aspects of the person?” Establishing the discriminant validity of spirituality from the positive psychological variables will be an important issue.

This volume also contains four regular articles. These papers also provide a lot of diversity. One interesting paper here considers the utility of Carl Jung’s theory for Pastoral Counselors. This engaging paper outlines 10 particular points that are most germane for counselors interested in integrating psychological and theological dynamics clinically. Another paper examines the relevance of spirituality and religiosity to understanding Axis II dynamics. Little attention is given in the literature on the potential debilitating aspects of the numinous. Not only does this study explicitly link spiritual and religious constructs to measures of characterological impairment, but it also examines the causal relatedness of these two sets of constructs. Do spiritual and religious variables appear to “cause” impairment, or do levels of personality dysfunction provide impediments to healthy spiritual and religious functioning? Examining the causal precedence of spirituality within the larger psychological system is an important direction for research to pursue.

Using a qualitative design, another study examines the role of Openness in the spiritual development of adolescents. These researchers suggest that spirituality is enhanced in environments that are receptive to spiritual topics. Finding opportunities to talk and discuss numinous material seems important to adolescents developing a broad sense of personal spirituality. As the final article in this section shows, spirituality plays a significant, non-mediated role in personal humility and forgiveness. Developing a healthy spirituality creates many psychological resources for an individual; it promotes a sense of self that is durable, mature, and well-balanced emotionally.

It is hoped that this edition of *RSSSR* will continue to stimulate interest and thinking in this area. Although the inclusion of a special section on Positive Psychology provides a very specific conceptual focus, the studies included here continue this series’ tradition in presenting diverse methodological approaches to studying religious issues. It can only be hoped that future research will move towards employing multi-method designs that aim to capture numinous effects at different levels of analysis simultaneously. This would promote the development of more integrated conceptual models that can chart spirituality’s multiple influences on functioning. Aside from the empirical value of these

studies, findings generated here also have important applied implications as well. Clinicians can find in these pages ways to understand how religion and spirituality shape clients' sense of self and social identities. Such knowledge can help therapists empathize and understand their religiously oriented clients. These studies can also be helpful in identifying potentially new ways of intervening with clients. Religious and spiritual dimensions may offer potential therapeutic pathways for facilitating change.



## ACKNOWLEDGEMENTS

The editorial staff and I are grateful for the contributions and cooperation of a large number of people without whom publication of *RSSSR* would not be possible. Most obvious among them are the authors and coauthors of the published articles. A brief biographical sketch of each is provided on pp. 281–286. There were 16 researchers, scholars, and clinicians who have served as anonymous reviewers (see p. 287) of the manuscripts that were received for current publication. They not only have functioned as professional referees evaluating the appropriateness of the respective manuscripts for publication, but they also have given the authors significant suggestions to improve the quality and scope of their future research in this area. Their efforts helped to insure a high quality among those reports that are published.

I would also like to acknowledge the efforts of Drs. Joseph Ciarrocchi and Gina Yanni-Brelsford for their wonderful work in managing the Special Section on Positive Psychology included here. This is a particularly salient topic area in the social sciences and they have obtained a number of highly stimulating and relevant articles in this area.

Catherine Hassinger has once again served as the editorial assistant for this volume. Her experience, talent, and painstaking work contributed immeasurably to the high standards of production. As she now moves into the final phases of her doctoral work, she will be moving out of this position so that she can devote herself more fully to her dissertation work. I wish her well on her future endeavors. Thank You for all your efforts! Mary Beth Nazzaro, another doctoral student, will be taking her place.

My own academic institution has provided many critical necessities for the production of this volume. Loyola College in Maryland, especially its graduate Department of Pastoral Counseling, has provided office space, funds for the editorial assistant, telephone services, computer technology, postage, access to its admirable support infrastructure, and related services. I am very grateful to both the Department's and Graduate Administration's support for this worthy endeavor.

I am grateful, too, to Regine Reincke and the production staff of Brill Academic Press who have efficiently published this attractive and useful volume. Brill's marketing department ([www.brill.nl](http://www.brill.nl) or e-mail

brill@turpin-distribution.com for R.O.W. and cs@brillusa.com for North America) is eager to fill orders for either single volumes or ongoing subscriptions to RSSSR.

Please recommend RSSSR to your professional and academic colleagues. Also support its addition or continuation in your academic, religious, research, and public libraries for its rich contents are relevant to everyone, both lay and professional, who is interested in keeping up with the rapidly expanding frontiers of scientific knowledge about spirituality and religion.

Ralph L. Piedmont, Ph.D., Editor

## MANUSCRIPT INVITATION

For future volumes we welcome the submission of manuscripts that report on research contributing to the behavioral and social science understanding of religion, whether done by members of those disciplines or other professions. RSSSR is an annual interdisciplinary and international volume that publishes original reports of research, theoretical studies, and other innovative social scientific analyses of religion. (However, we do not include studies that are purely historical or theological.) Manuscripts should be original contributions (not reprints) based upon any of the quantitative or qualitative methods of research or the theoretical, conceptual, or meta-analytical analysis of research on religion in general or on any specific world religion. They should not be under consideration for publication by any other journal or publication outlet and should comply with the professional ethical standards of psychology, sociology, and other social science professions.

Manuscripts may be submitted at any time during the year, although those received within the calendar year have the best chance of inclusion in the next volume. Send four copies, double spaced on standard paper to:

Ralph L. Piedmont, Ph.D., Editor  
Research in the Social Scientific Study of Religion  
Department of Pastoral Counseling  
Loyola College in Maryland  
8890 McGaw Road, Suite 380  
Columbia, MD 21045 USA

Manuscripts that are judged by the editor as relevant to the coverage of RSSSR are reviewed anonymously for quality and then either accepted (usually along with constructive suggestions for revision) or rejected. Those accepted for publication must conform to the style guidelines of the *Publication Manual of the American Psychological Association*, *Publication Manual* 5th edition. (Authors of accepted manuscripts who lack access to the *Publication Manual* may contact Dr. Piedmont for sample materials to help in the final preparation of their papers.) Manuscripts relevant to our subject that are not accepted for publication also receive the benefit of critiques and suggestions that can aid their improvement for submission elsewhere.

RSSSR is also interested in developing “special topic sections” for inclusion in future editions. Special topic sections would include a series of papers (5–7) on a specific theme. These sections would be “guest edited” by a single individual who would be responsible for the solicitation of the manuscripts and their review. If you have a suggestion for a special topic section or would be interested in editing such a section, please do not hesitate to contact Dr. Piedmont for details.

PART ONE

RESEARCH IN THE SOCIAL SCIENTIFIC STUDY  
OF RELIGION





## OPENNESS AND SPIRITUAL DEVELOPMENT IN ADOLESCENTS

*Brien S. Kelley, Aurelie M. Athan, and Lisa F. Miller\**

### ABSTRACT

A qualitative study was conducted to explore spiritual development in adolescents, particularly as intertwined with Openness to Experience and social contexts characterized by openness. A religiously and ethnically heterogeneous sample of adolescents (N = 130) completed in-depth, semi-structured interviews, which were analyzed using a Grounded Theory approach. The contribution of openness to spiritual development in adolescents was interpreted at the level of the self, family, and peer group. Implications of the findings are understood against the extant literature on adolescent development.

Religiosity and spirituality (R/S) are increasingly topics of study with adolescent samples for their contribution to well-being (see Levenson, Aldwin, & D'Mello, 2005; Regnerus, Smith, & Fritsch, 2003; Rew & Wong, 2006, for reviews). From both religious and psychological perspectives, positive mental health is considered to extend beyond the absence of psychopathology, suffering, or self-destructive behaviors to include the presence of positive qualities, such as hope/optimism, forgiveness, prosocial values, and life satisfaction (McCullough & Snyder, 2000; Peterson & Seligman, 2004). Despite the growing empirical support for the positive impact of R/S on adaptive functioning and its consideration as a protective factor against negative health outcomes, relatively little is known regarding how its development might be facilitated or thwarted in adolescence (e.g., King & Boyatzis, 2004; Miller & Kelley, 2005; Rew & Wong, 2006; Roehlkapartain, Benson, King, & Wagener, 2006). The field of spiritual development has been challenged to identify the central processes and dimensions of human R/S development through innovative conceptual approaches.

Increasingly, dynamic systems theories with a focus on ecological perspectives are what Lerner (2004) identifies as the “cutting edge” of developmental scholarship (see also Benson, 2004; Boyatzis, Dollahite,

---

\* *Author Note:* Dr. Miller is supported by a W. T. Grant Faculty Scholars Award for “Religion and Resilience in Adolescence” and by NIMH 5K08 MH016749.

& Marks, 2006; Regnerus, Smith, & Smith, 2004). In studying R/S development, this entails the detailed examination of nonreligious and social contexts, and the ways those contexts influence the religious and spiritual lives of youth (Regnerus et al., 2004). As these contexts hold a wide range of beliefs and practices involving many people and interactions, the predominant use of quantitative methods in empirical research may be leaving out information regarding “how adolescents themselves define spiritual and religious terms and how they then relate these concepts to various aspects of their health” (Cotton, Zebracki, Rosenthal, Tsevat, & Drotar, 2006, p. 478). In response to this movement, this study seeks to dovetail with the increasing tendency among developmental psychologists to investigate the contextual influences of adolescence through in-depth qualitative interviewing and analysis (Regnerus et al., 2004; Smith & Denton, 2005). Qualitative studies with adolescent R/S are rare but useful to further unpack the development of R/S and its shaping environmental influences.

Another aim of this study is to connect the growing field of R/S development with other potentially related topics, such as identity development and personality factors (e.g., King, 2003; McCrae, 1999; Piedmont, 2005). We investigated a primary characteristic in the development of R/S identity, “openness,” which may overlap with Openness to Experience (OTE), a related construct in personality research that has been empirically identified as affiliated with religion and spirituality (McCrae, 1999; Piedmont, 2005; Saroglou, 2002). The well-established personality trait of OTE is a dimension of the Five-Factor Model and has been explored by McCrae (1996) as applying to social contexts, a conceptualization upon which this investigation builds. The current study attempts to conceptualize R/S experience and development from a systems perspective by focusing on the ways in which the spiritual life of adolescents might be fostered or derailed by openness within the adolescent, as well as the role of openness in the multiple social contexts in which they live. This approach explores an orientation towards spiritual life that is characterized by inclusiveness, acceptance, curious exploration, and the primacy of experiential learning in both the person and their contexts. As a teenager progresses through adolescence, positive R/S development would be thought to include an interaction between intrapersonal openness, or curiosity and interest, and the interpersonal openness, or the willingness to encourage and engage, of their primary contexts. When well matched, this developmental interaction holds the potential to contribute to prosocial

and healthy adolescent outcomes, as well as confidence and comfort in their religious and spiritual lives.

Because no survey-based personality data was acquired for this study, and the results are based on adolescents' widely varying descriptions and definitions of what constitutes openness, it cannot be assumed that what is being described is OTE *per se*, the dimension of personality. Openness in this study, while resembling descriptions of OTE, includes *both* intra- and interpersonal manifestations. Therefore, to reflect its adaptation to qualitative methods from a dynamic systems perspective, and to distinguish it from the statistically-derived and dispositional factor of OTE, the authors of this study refer to the broader phenomenon simply as openness.

#### ADOLESCENT MIXED-METHODS RESEARCH

In the social science literature, Smith and Denton's (2005) mixed-methods investigation of adolescent R/S remains the only detailed and comprehensive portrait of the R/S beliefs, practices, and attitudes of today's youth in the United States. While sociological in method and scope, several of their findings are important to our study, particularly relating to "spiritual seeking," and the inductive, qualitative themes with which they describe the experience of R/S in adolescence. Quantitatively, Smith and Denton found, in a representative sample of 3,290 American adolescents across U.S. geographical areas and most religious denominations, only a small percentage (8%) of "spiritual, not religious" teens (though 46% reported this being "somewhat true"). Based on this one item and the responses from 267 qualitative interviews, the authors conclude that spiritual seeking is exaggerated and under-represented in the United States, estimating that only 2–3% of American teens are spiritual seekers. However, their criteria excluded those who explored and amended their faith while still endorsing a traditional religious tradition. Overall, 60% of subjects agreed that more than one religion could be true, 51% agreed that it was OK to practice more than one religion, and 46% found it OK to pick and choose beliefs.

From the qualitative interviews, Smith and Denton noted that the adolescents were "incredibly inarticulate" (p. 151), stating that it seemed "our interview was the first time that any adult had ever asked them what they believed and how it mattered in their life" (p. 133). They inductively identified a general ethical and existential orientation

underlying the adolescents' described disengagement from religious or spiritual issues, which they refer to as Moralistic Therapeutic Deism. While still professing their family's denominational identification, they found that religion and spirituality were "not a big deal" (p. 119), "in the background" (p. 129), and in sole service of feeling good about oneself. Combined with an ethical injunction to be a good person, the rest of religion's activities are used therapeutically; indeed, the creator G-d most admit to believing in is only thought to be involved in one's life, or thought of at all, in times of need (Smith & Denton describe this role as "a combination Divine Butler and Cosmic Therapist" (p. 165)).

Though it was not addressed explicitly in the discussion of their research findings, Smith and Denton's conclusions may be confounded by what is most typically associated with the normative tasks of identity and spiritual development in adolescence, namely, an openness to experience and period of exploration, which may often present itself as an unsophisticated or incomplete spirituality while the process is unfolding. From this perspective, the lack of articulation Smith and Denton found in the adolescents may potentially signal the lack of supportive contexts in which to discuss an inchoate spirituality. Based upon developmental theory, the window of adolescence is characterized by a period of ideological exploration and an increase in the importance of wider social contexts, which can at times extend beyond the religious beliefs and values of their parents (Erickson, 1968; Fowler, 1981; King, 2003; King & Boyatzis, 2004; Ozorak, 1989). Specifically, the identity development literature serves as a useful rubric through which to consider the formative nature of adolescent spiritual understanding and commitment.

#### OPENNESS IN SPIRITUAL AND IDENTITY DEVELOPMENT

Research with the naïve supernaturalism of children (Rosengren, Johnson, & Harris, 2000), and the hereditary aspects of religiosity (D'Onofrio, Eaves, Murrelle, Maes, & Spilka, 1999; Kendler, Gardner, & Prescott, 1997) suggest that some aspects of spirituality may be universal human propensities, though most scholars agree that they develop in concert with morality, cognition, identity, and personality (e.g., King & Benson, 2006; Roehlkepartain, Benson, King, & Wagener, 2006). Because of this parallel progression, theories of religious or spiritual development

in significant ways mirror psychological theories of identity development (see Fowler & Dell, 2006; Hill, Pargament, Hood, McCullough, Swyers, Larson et al., 2000; King & Benson, 2006; Templeton & Eccles, 2006, for a discussion). Several identity development theories have been appropriated by researchers of adolescent R/S with the assumption that, like other areas of human development, the resolution of spiritual development occurs when one ideology or set of spiritual worldviews is negotiated and consolidated as definitive or representative of oneself. Within the developmental models of Erikson (1968) and Marcia (1980), the task of identity achievement ideally involves a period of exploration, followed by a commitment to an identity that best aligns personal experience and worldview. For Erikson, that exploration constitutes the primary, normative task of adolescence, and for Marcia, it is represented in the moratorium stage (involving exploration without commitment), and achievement stage (in which options are explored and resolution occurs). In Fowler's (1981) faith development theory, adolescents initially display a Synthetic-Conventional faith: "During this stage youths develop attachments to beliefs, values, and elements of personal style that link them in con-forming (forming with) relations with the most significant others among their peers, family, and other nonfamily adults" (Fowler & Dell, 2006, p. 40).

Adolescents may later move into what he calls the Individuative-Reflective stage, which includes the ability to reflect critically on their previously unquestioned faith: "One must struggle with developing a self-identity and self-worth capable of independent judgment in relation to the individuals, institutions, and worldview that anchored one's sense of being up until that time. Questions representative of this stage include: Who am I when I am not defined primarily as someone's daughter, son, or spouse? ... Who am I beyond my circle of friends or familiar community? ... In the end, the familiar and traditional beliefs and practices may not be rejected or discarded, but if they are retained, they are held with more self-aware clarity and intentional choice" (Fowler, 1981; quoted in Fowler & Dell, 2006, p. 41). Fowler describes this period of exploration as characteristic of adolescence, which likely reflects their growing flexibility and playfulness with the abstractions and individuation typical of post-operational thinking.

Viewed in the context of Fowler's theory, Smith and Denton's research participants may have been exhibiting the questioning of the Individuative-Reflective stage. Closer examination of this process involves consideration of the adolescents' own experiences of openness

and development, as well as the facilitating or inhibiting qualities of the contexts known to be instrumental in the formation of adolescent views and identity (Erikson, 1968; Forthun, Montgomery, & Bell, 2006; King, 2003; King & Benson, 2006; Marcia, 1980; Markstrom, 1999; Regnerus et al., 2004).

#### OPENNESS TO EXPERIENCE

Previous research suggests potential for illuminating adolescent R/S development through findings and constructs established in the field of personality research, specifically the Openness to Experience (OTE) dimension of the Five-Factor Model (FFM) of personality (McCrae, 1999; Piedmont, 2005). OTE has been defined as “a broad and general dimension, seen in vivid fantasy, artistic sensitivity, depth of feeling, behavioral flexibility, intellectual curiosity, and unconventional attitudes” (McCrae, 1996, p. 323). Aside from intrapsychic characteristics, OTE is also theorized to have interpersonal consequences, ranging from expressions within a family dynamic to influences on political opinions and social mores (see McCrae, 1996, for a discussion). Most research with the FFM has been conducted with adults, and longitudinally suggests that personality factors are largely stable throughout the lifespan (e.g., Costa & McCrae, 1994). However, studies have also shown that individual’s self-report and expression of personality is sensitive to context and development, and that change is possible. For example, Piedmont (2001) performed a study in which a group of adult recovering drug addicts were treated with an intensive, 6-week course of psychotherapy, with one explicit goal being to increase the spiritual development of the participants (which researchers considered their intervention on OTE). Though the author notes that “individuals under 30 years of age are likely to exhibit changes in personality” (p. 507), the moderate increases in OTE that were exhibited occurred irrespective of age. While the other personality factors remained elevated on follow-up, OTE and Extraversion had receded somewhat, suggesting that the subjects were responding specifically to qualities of the therapeutic context, and that changes in OTE are both possible and situation related.

Adolescence may be the developmental period of exception to the characterization of personality as stable and set. Research has found that OTE may be flexible in young adults as a consequence of post-operational cognitive complexity, increased individuation and identity-seeking,

and the willingness to avail oneself of experiences beyond the family's influence. McCrae and colleagues (2002), in a 4-year longitudinal study of intellectually gifted adolescents, 12 to 16, report that OTE increases in both sexes during adolescence exceeding one half standard deviation and conclude in conjunction with cross-sectional results, "There appears to be an increased receptiveness toward many aspects of experience during this part of the lifespan" (p. 1460). Robins, Fraley, Roberts and Trzesniewski (2001) found that over the four years of college, OTE significantly increased in students, and similar results were reported in another longitudinal study of personality change during the college years (Gray, Haig, Vaidya, & Watson, 2001; see McCrae et al., 2002).

Personality in adolescence, as situated in a complex matrix of physiological, interpersonal, and educational changes, is linked to the internal and environmental conditions of the individual. Increased OTE can therefore impact the adolescent's thinking, behavior, and interpersonal involvement in a wide variety of ways. McCrae et al. (2002) reflect,

These findings are of particular interest when one recalls that [Openness] is the dimension of personality most closely related to moral reasoning (Lonky, Kaus, & Roodin, 1984), ego development (Einstein & Lanning, 1998; McCrae & Costa, 1980), and identity exploration (Clancy & Dollinger, 1993; Tesch & Cameron, 1987). During the period of adolescence, growth in the cognitive capacity to understand the world is apparently coupled with an increasing interest in many aspects of experience, and the result is greater complexity and differentiation in moral judgment and a better integrated self (p. 1465).

They note that personality traits, specifically OTE, seem to be "relatively fluid from age 12 to 16" (p. 1459), and that "adolescent rebellion and experimentation may be due in part to this heightened awareness of the possibilities in the world" (p. 1460). In the aforementioned series of longitudinal, cross-sectional, and cross-cultural studies, McCrae and colleagues found substantial increases in OTE in adolescence, and propose that within the population, OTE follows a curvilinear pattern, increasing in adolescence and the college years, and then declining slowly by age 30 and beyond (McCrae et al., 2002; cf. Piedmont, 2001). This developmental progression is compatible with identity theories' identification of exploration as normative and characteristic of adolescents' identity tasks (e.g., Clancy & Dollinger, 1993; Luyckx, Goossens, Soenens, Beyers, & Vansteenkiste, 2005), and constitutes a unique window before their heritable personality structure becomes secured in adulthood.



A small but expanding body of research has shown a relationship between personality variables, such as OTE, and spirituality. Piedmont's (2005) review of the FFM and R/S presents a meta-analysis by Saroglou (2002), who found that spirituality scales are more highly correlated with OTE than are measures of religious practice/behavior, which makes conceptual sense if spirituality is viewed as involving "a seeking, curious attitude towards the transcendent" (Piedmont, 2005, p. 262). In a study of adolescents, Duriez and Soenens (2006) investigated the FFM of personality and its relationship to different styles of religious engagement and identity development. They report that for late and middle adolescents, OTE is associated with a more symbolic and flexible style of religious belief, and among late adolescents is related to transcendence, a proxy in their study for religious involvement. As empirical support has been found for an association between OTE and spirituality, and has identified adolescence as OTE's period of greatest malleability, deeper theoretical and descriptive attention is warranted to understand the etiology and contextual influences of spiritual openness in adolescence (Kneezel & Emmons, 2006; Piedmont, 2005).

In light of the intriguing relationship between personality and religiousness/spirituality, some researchers have posited spirituality *as* a personality dimension (Goldberg, 1990; Piedmont, 1999). Piedmont (1999) has proposed a sixth factor to the FFM, Spiritual Transcendence, as nonredundant and orthogonal from the other five factors. This dimension motivates behavior and aspirations in both religious and secular contexts, and includes a sense of connectedness, universality, prayer fulfillment, and nonjudgmentality, among others. The present authors speculate that, rather than being distinct from spirituality, openness may influence the development of a spiritual perspective, and fleshing out this association using adolescents' own words is the goal of this study.

### *Method*

The current study is part of a 6-year, mixed-methods investigation of spirituality, mental health, and well-being in adolescents (Miller, 2006). The primary aims of the current qualitative study were exploratory and descriptive. For these reasons, the sampling technique of "snowballing" was selected based on the premise that the researchers were not interested in finding a representative, replicable sample, but rather a sample of adolescents characterized by: (a) interest and ability to discuss personal spiritual and religious experience; and (b) highly diverse

ethnic, socio-economic and religious backgrounds. Snowballing has been increasingly suggested in the social science literature as offering a practical advantage for identifying difficult-to-reach target populations for qualitative interview research, in this case adolescents who might give evidence of spiritual experiencing (Atkinson & Flint, 2001). Snowballing consists of identifying initial participants, who are then encouraged to provide names of others they think would be interested in being interviewed. Graduate students enrolled in a research practicum were asked to approach teenagers, directly or indirectly known, through their personal networks. Invitations to participate (i.e., letters, on-site visits, and phone calls) were issued through churches, temples, mosques, and associated youth groups, as well as secular locales, such as camps, community events, and personal settings.

#### PARTICIPANTS

In total, the sample consisted of 130 adolescents ranging in age from 12 to 21 years of age (mean age = 16.20). Of the 130 adolescents, 67 were female and 63 were male. Participants included 70 Caucasians, 33 Asian-Americans (24 South Asian/Tibetan, 9 East Asian), 15 African-American adolescents, 7 Latinos, and 3 whose ethnicity was unknown or unreported. The majority of subjects were ascertained through networks of individual relationships or through small groups from personal contacts, places of worship, schools/camps, and social events in the New York City metropolitan/Tri-state area. Among the groups contacted, 13 were ascertained from a Waldorf school in San Francisco, and 16 from a Lutheran summer camp in Illinois. In terms of religious denomination, 37 identified themselves as some variety of Protestant Christian, 27 as Catholic, 15 as Buddhist, 14 as Jewish, 14 as Muslim, 9 as "other" or a combination of faiths, 4 as Hindu, 7 as "spiritual," and 4 reported being atheists or having no religious or spiritual affiliation.

#### PROCEDURE

Participants were informed that they had been selected because they had been identified as adolescents willing to speak about their personal perspectives on spirituality and religion. It was explained to participants that they would be asked to complete a semi-structured interview

containing a number of open-ended questions with “no right or wrong answers.” The stated intention of the study was to “get to know the variety of experiences adolescents from different backgrounds have with spirituality and religion.” In the tradition of Grounded Theory, the research question was purposefully broad so as not to bias the responses of the participants and to allow for the issue of spirituality to emerge inductively if salient (Cresswell, 1997). The semi-structured interviews were conducted by graduate students in clinical psychology, digitally recorded, and fully transcribed. In response to interview questions, subjects were encouraged to disclose anecdotes and any other associations to the questions posed. A maximum of interviewer flexibility was an explicit goal in the data collection process. Interview questions addressed multiple domains of the adolescents’ lives, including parental, peer, and social influences on their spirituality and personal history. In order to include the widest range of potential definitions of spirituality, the researchers were not guided by an a priori operational definition provided by the literature, but rather intended to examine how the participants themselves defined and experienced the phenomenon. Interviews were conducted in homes, places of worship, libraries, community centers, camps, and schools. Once confidentiality was ensured, each participant was given the same semi-structured interview, always with a unique set of follow-up questions and topics based on the individual’s responses. The dialogue generated by these questions lasted on average an hour and a half. Each participant was interviewed once, except for five of the adolescents who were re-interviewed to further explore salient aspects of family or social contexts.

#### DATA ANALYSIS

Data analysis was based on a verbatim transcript of each interview, and at the first level interpreted by the interviewers themselves, who were asked to write a descriptive summary of the interview and a preliminary analysis of themes. The research practicum team met bi-weekly over the course of three years to compare and contrast findings, using both the transcriptions and the written summaries. The original transcriptions were then interpreted independently by the authors using a modified line-by-line analysis based on the Grounded Theory methodology, which resulted in the emergence of four main thematic categories, reflecting

the specific contexts investigated, and one overarching theme. The reduction of the raw information from the interviews into themes was further refined using the constant comparison method as new interviews were conducted, until the authors felt that the themes comprehensively organized the data (Boyatzis, 1998; Cresswell, 1997).

In-depth review of the interview material was conducted weekly for “close contact and familiarity” with the raw data, until a pool of concepts and categories emerged inductively as a result (Boyatzis, 1998). Once categories were identified within a subsample, they were applied to and compared with other subsamples for similarities and differences (Cresswell, 1997). Multiple readers during lab meetings were used to determine the inter-reliability of the evolving codes. Revision of the code’s label was based on whether it met the following criteria: (a) minimized exclusion (its consistent existence across subsamples); (b) maximized differentiation (i.e., subject A displayed it, and subject B did not); (c) facilitated coding (it explained and condensed the data); and (d) reached saturation (additional analysis/uncovering of data did not effect its integrity nor add to its explanatory power) (Boyatzis, 1998; Creswell, 1997). The four themes discussed in this study were chosen as a result of having met the aforementioned criteria and for their parsimony in explaining the data from a contextual perspective (once analysis moved into the phase of theory-driven coding).

### *Results*

The adolescents expressed a desire for an open encounter with spiritual matters, as facilitated through discussion, experience, and acceptance within the main personal and interpersonal contexts of their lives. Overall, openness emerged as facilitative, rather than as a liability to spiritual development in adolescents. Specifically, with respect to each context, openness thematically emerged as follows: (a) the interview process itself was a positive learning experience in which the reciprocal nature of spiritual openness was engendered *in vivo*, and for many, was the first time an adult had shown interest in the individual’s personal spiritual beliefs and concerns; (b) personal time and space are necessary to investigate and internalize spiritual ideas and experiences, and thus develop spiritually; (c) sympathetic and nonjudgmental friends can provide feelings of normality and acceptance around spiritual issues and exploration; and (d) parental openness and willingness to discuss,

along with the flexibility to accommodate family members' changes, are critical for the adolescents' experience of their development as accepted and valued.

#### INTERVIEW PROCESS AS MICROCOSM OF INTERPERSONAL OPENNESS

The first inductive, qualitative theme concerns the *process* of conducting the interview. This context, though not typical, provided experiential evidence for the adolescents' enjoyment of and engagement with spiritual issues when encountered in an interpersonal setting that valued their experience and ideas. It is telling that in an interview dealing with one of the most personal and charged of topics, none of the adolescents discontinued the interview and none complained about the content questioned. Similar to Smith and Denton (2005), we also had the distinct sense that ours was the first in-depth conversation with an interested adult that many of the adolescents had had on *their* beliefs and spiritual development. However, we found them quite lucid and open in describing for us their process of development, both what they understood clearly, and what was more confusing, ambiguous, or ineffable. While each participant had a unique definition of "spirituality" or "religion," nearly all were able to distinguish the two for themselves, and verbalize differences between these domains and others in their lives. The process of conducting the interview provided an immediate context in which to observe and query, in the moment, the adolescents' degree and experience of spirituality and spiritual openness. A microcosm of the contextual expression of spiritual openness in other interpersonal domains (with friends and family), the teens were most easily open when that attitude was encouraged and reflected by the interviewer, who was trained to nonjudgmentally follow the discussion wherever it led. This created a space in which difficult topics emerged and were processed spontaneously, which was described as rare by many of the adolescents. Jonathan, 18, said,

R: This is great.

I: You like it?

R: Yes. It opens you up. Sometimes when you live your everyday life, you just go about your business. You don't think of certain things that aren't talked about. This is good, to talk about a lot of things. Makes you think more...

Of course, not all questions were easily answered, and contradictions, confusion, factual errors, and monosyllabic responses/shrugs were

common. However, rather than interpreting this as a deficient understanding of a religious tradition, it was experienced by the teens as an opportunity to pose questions and struggle with issues that were novel or had never required articulation. This led to participants expressing a desire to look more deeply into themselves and their beliefs, thus catalyzing spiritual openness and development in ways similar to what was expressed about other significant relational contexts in their lives. Matt, 18, said,

I wish I could have answered all the questions. There were questions that clicked, like you really got it... These questions were good, like, I couldn't answer them and I wonder why. And now I want to come up with an answer. It was fun, I enjoyed it. I feel more spiritual...

Several of the participants recommended the interview to friends, and then described having deep conversations afterward about their responses and reactions to the questions. Many of the most articulate and verbal adolescents were described by interviewers as most open to different religious or spiritual ideas and possibilities, suggesting an overlap between language sophistication, interpersonal openness, and spiritual curiosity. In sum, the interview itself provided an experiential opportunity for observing interpersonal openness around the topic of R/S, a quality that was influenced and magnified by an open style of interaction between participant and interviewer.

#### OPENINGS IN TIME AND SPACE

Participants described openings in time and space as the central frame allowing for personal exploration and contemplation of spiritual experiences and ideas. Time is defined literally as intervals of time in which the adolescents could disengage from their day-to-day schedule and responsibilities in order to evaluate spiritual/existential issues. Space refers to both actual physical locations and an orientation towards using free time that are conducive to spiritual or existential contemplation. Whether a locale or a mindset, this space creates the setting for R/S experiences and the re-interpretation of mundane events. The majority of participants identified the value of being given the time and space, whether at camp, in nature, or alone in their bedroom or backyard, to think about themselves in the world or other existential concerns that they otherwise do not have the time or occasion to think about in depth. For example, regarding time, Brian suggested the following to other teens,

I would say, just make some time for yourself. Just to try to speak it out with yourself, away from everyone else and how everyone else tells you to do it...set aside a little time every day for you, in bed or at some point when you get some alone time, and try to talk to yourself then.

Marissa, 17, described her take on the process of spiritual experiencing when alone,

All you have is your self and what's inside of you. It doesn't matter if your hair is sideways, it doesn't matter if you're late for work, or anything. You have the *time* to just sit by yourself in the dark with nothing but yourself, and then you really realize what's important, and what *yourself* actually *is*. So it is a really good experience.

These descriptions of the value of free time often accompanied complaints about the difficulties accessing these times of reflection. Max, 16, who has been raised by Buddhist parents, spoke directly to the over-scheduled nature of American adolescent life,

The thing that might inhibit [spirituality] is school, because I'm always busy. Usually I've been taking driving lessons early in the morning so I don't meditate. It's almost as if I don't have enough time to do this spiritual stuff because I have basketball practice and homework, and if I added [Buddhism] to it, I'd be up until midnight... You never stop and really think about these things, especially in New York City, because I'm constantly doing stuff. Especially my generation—we do so much homework, and school is 8 hours a day and there's so much to do.

When describing space, many adolescents reported rich experiences of spirituality in nature or other liminal spaces away from their everyday lives. Eva, 17, said, “We live in the city and we chill on our computers or talk on the phone all the time... [nature] just gives you a chance to get away from it all.” In the following quote from Rakib, 18, he describes how nature gives him the realization of life's cyclical workings, which he then explicitly connects to the normative teachings of his Muslim faith,

Back home I used to love to go on drives somewhere and just relax outside... Being out there does take you way from the hustle and bustle and allows you to analyze things, but there's also an element in nature where everything is just kind of happening along a cycle... In the Koran that cycle is there because it's G-d's intention. So it's being able to see G-d's work at play that is also a big part of it [why nature is so powerful].

Similarly, Mark, 18, finds confirmation of the interconnectedness of nature and G-d, “You kind of see how G-d works. How His hand is

everywhere. I mean you *know*.” The influence of time and space need not be a solitary one, and both religious and secular camps provided many teens with profound shared experiences and the opportunity to process and internalize realizations together. Jason describes this interaction of the private and public,

More of these issues come up with my camp friends and acquaintances. There're times when you are closer to the land because you have to live on a much smaller basis of everything...being in New York, you rarely see the stars. There, sitting in a field... it's an amazing place, to be there and think. You get [with] those other people and it evokes a lot of thoughts.

While institutional contexts are not a focus of this paper, it was striking how few of the adolescents reported finding the time or space to be spiritually engaged at their church or place of worship. Anna, 17, said, “I don't think that I need necessarily to go to church, that I need a priest to tell me that G-d is in my life, for me to *feel* that G-d is in my life.” Along with preferring an unmediated spirituality, the majority of adolescents described their congregations as judgmental and dogmatic, and only two participants reported having a spiritual experience at church. This suggests that for settings to be optimal for R/S contemplation, they must be neutral and open enough to not confine the adolescent to a prescribed set of experiences. To review, personal time and space are identified by the adolescents as the instrumental frame for spiritual experiencing and reflection, and having the opportunity to observe, think deeply, and internalize is viewed as both powerful and much too rare.

#### OPEN AND NONJUDGMENTAL FRIENDS

Nearly all of the adolescents described the beneficial influence of sympathetic and nonjudgmental friends who are open to discussing religious and spiritual issues, and the detrimental influence of those who were not. Positive friends did not have to meet in structured or specifically spiritual groupings (e.g., Bible study or religious camp), but these contexts often bring together likeminded teens who are interested and willing to discuss spiritual matters. Deeper exploration of spiritual questions *within* a teen's denomination is considered by the present authors as instances of *vertical openness*, whereby teens described “grappling” with what they do and do not believe and why, and the interpretation of



religious ideas and prescriptions. This is in contrast to *horizontal openness*, in which adolescents described gaining invaluable insight and flexibility through discussing religion and spirituality with friends from different denominations or traditions. Whether in formal or informal settings, these discussions often shed light on their own beliefs, familial practices, and religious questions, and lead to talking about other topics of immense importance in adolescence, such as sexuality, alcohol and drugs, and choice versus authority.

Rachel, 18, described the unifying power of spiritual questing:

In the summer program that I did last summer, there were people there from all different denominations. And we were all grappling, we all grappled together with our religion and we formed a community while this stuff was going on. I mean we had so many intense discussions about G-d and about theological issues, that when I'm with them I feel like they're going through the same things that I am. So it feels really good to be with them.

In one quote, Alex, 17, reveals the interconnectedness of secular and religious issues in the conversations he has with friends. Attributions of events, and religious and secular orientations segue into discussions of other difficult and rarely broached topics:

We talk about a lot of things, we talk about religion... the other day we had a conversation about how I don't believe in luck because I believe that G-d does everything and my friend's like, "you'll have bad luck," and I said, "I don't care about bad luck, I don't believe in that stuff." We talk about that, we talk about maybe someone had a problem with their pregnancy in my class, her getting pregnant at a young age. We talk about a lot of things like sex, pregnancy, and drugs and stuff like that... we talk about evolution, the facts versus the "could-be" facts...

Priya, an 18-year-old Hindu girl, in discussing her time at boarding school described her catalytic conversations with her non-Hindu friends as instrumental in reinforcing her personal faith in Hinduism, but not before she investigated the beliefs of other traditions (an instance of *horizontal openness* supporting *vertical openness*). "When I went there I met everyone from different religions, so I thought I'd look around and see whether I believed in anything else." She found herself mentally separating the friends she could discuss spiritual issues with from those she could not, saying about those with whom she felt were not open,

I think there's this entire topic that means a lot to me that they aren't even willing to discuss, and so the friendship is still there but it's more

distant... Because they're going to help me figure out my own spirituality and what it means to me, and so if someone can't help me figure that out and it's such a big part of my life, especially now, then I don't think they're entitled to more of my personal life. It just doesn't get much more personal.

In contrast to discussions with friends of different faiths, Rakib found that his most fertile conversations happened with friends who were also Muslim, which allowed him to go deeper into his faith and its expressions (an instance of *vertical* openness),

I find that particularly among my Muslim friends, we're all very open... We have a lot of religious discussions sometimes; someone might have a question about something, or an issue... As we are all discovering more and more about Islam, we talk about why did this happen, what is the intention behind this, et cetera... I talk about it less with my American friends, just because they have different beliefs, and it's not that I feel uncomfortable or anything, it's just because I don't want to seem like I'm imposing my beliefs on anyone.

Moreover, friends may serve as role models of how to incorporate religious or spiritual practices into daily life. Tara, 17 said,

I have one friend who is really seriously Jewish and keeps strictly kosher, and he's shown me how you can be very serious about Judaism and still be a teenager and be normal. So when I'm with him, I have a sense of, "I should go out and be more Jewish!"

However, the adolescents also described several ways in which friends inhibited their spiritual investigations, including the above-mentioned desire to not impose or be seen as proselytizing by their peers. Especially corrosive are sarcastic jokes deflating a moment of spiritual discussion, or an outright disregard for religious or spiritual topics. Tenzin, 17, commented regretfully, "If a [spiritual] topic comes up, it's not going to last more than five minutes. Somebody says something stupid and then it's all over." When the behavior of friends contradicts religious prescriptions, or is viewed as morally wrong, teenagers describe feeling further away from their religious or spiritual values. Briana, 14, says about this tension,

When you are out with your friends you act different and you do things that you normally wouldn't do, like cursing, but at church or home I don't. You do it because you don't want to be left out.

Overall, adolescents report desiring open and accepting spiritual discussions and activities within their peer group, and describe socially and

spiritually developing with the help of close friendships that include religious or spiritual openness.

#### PARENTAL OPENNESS AND FLEXIBILITY

The last interpersonal context to be explored in this paper concerns the facilitating and inhibiting effects of parents on adolescent spirituality. When asking about the teens' parents, we focused on the factors that most engendered personally satisfying spiritual development and experience. The factors that inductively emerged were parental transparency or openness and familial flexibility of expression, which also involved the issue of spiritual modeling.

A major aspect of parental openness is the willingness to discuss religious or spiritual issues that the adolescent may be struggling with or questioning. This took place at dinnertime, during long drives, family holidays, or other opportunities for deep conversation, and was characterized by first, a willingness to engage the topic, and second, an open give-and-take rather than an authoritarian lecture on what the teen *should* believe. The theme of remaining open to the experience of questioning, as opposed to prematurely foreclosing on that process was echoed by many participants as the most important quality of their R/S life with their parents. For some teens, their parents defaulting to their own or their tradition's authority led to either an estrangement from spirituality or religion, or finding creative alternatives for having these dialogues.

Accompanying the willingness to openly discuss and accept family members' perspectives is the family's ability to be flexible in how the family approaches the spiritual processes of its members. The ability of parents to supportively react to the experiences and desires of the entire family may be a salient aspect in the process described in the literature as Spiritual Modeling (Oman & Thoresen, 2003; Silberman, 2003), though evidence from this study suggests that adolescents can also serve as models within the family. Adolescents report looking to their parents and family members for models of how to apply spirituality to problems of living, and how to construct both a personally meaningful and socially congruent spirituality. Parents can also fail to support their teenager's spiritual exploration and commitment by being unable or unwilling to openly discuss those topics, being unwilling to reflect and implement flexibility in the family's practices, and by providing an incongruent, inauthentic, or dismissive spiritual model.

Openness in the family setting was described by Tony, 17, when speaking of the lively debates his family has on different interpretations of the Bible and their different denominations,

We usually have great conversations about, you know, different religions, 'cause some of my family grew up Pentecostal and some [are] Baptist, so they're always at each other, you know, like "No, this is what is says in the Bible," "No this it what it says." So, they're still trying to figure out which is the right religion for our family, but I think that they should just let everybody do what they want, do what they choose.

Note that Tony views this dilemma from a perspective of openness, demonstrating a comfort with ambiguity and a desire for his family to honor each individual's own experience and interpretation of the tradition, instead of hierarchically resolving the conflict. Similarly, Lauren, 18, and one of the more spiritual and religious teens interviewed, elaborated,

A big part of [my spirituality] was my parents and the way they raised me to be a spiritual person, but without ever saying, "This is what you have to do." They just exposed me to a lot of ideas and sort of let me try things out, I guess. But also kept—they made me go to church until I turned 18, but they always said that "it's not because we want you to be a hardcore Roman Catholic, but we want you to have the experience of being in a spiritual community and realize what an important thing that *can* be. This might be your spiritual community, it might not, but we want to give you that experience."

In these sentences Lauren reveals her interpretation of how her parents' philosophy impacted her spiritual life as a child and teenager: her parents' open and spiritual orientation towards the world allowed Lauren to overlay the meaning *she* felt onto experiences that were not cultivated per se, but were allowed to flow naturally from her personality and interests. She continued,

I've grown up sort of in a very interesting family situation I feel, in that my parents have always encouraged alternative methods of existing in the world and looking at things... [and having] experiences of being able to sit down with my parents and have these great intellectual, spiritual, philosophical discussions with them, ever since I was really little.

Lauren's experiences and questions were processed and internalized through deep negotiation amongst family members. Her family has purposefully and skillfully balanced responsibility with independence, creating an environment in which she could experience her spirituality and the world within parameters that maintained family tradition

while allowing the maximum of personal freedom. Contrast this with Uma's experience, in which her mother refused to explain or address her questions regarding adherence to Islamic practice,

I started wearing [the *hijab*] when I was about 9, and it was more because my mom wanted me to... It wasn't really until I was about 12, 13 when I really wanted to know more about Islam and more about why I should care about it, [but] my mom didn't talk to me too much about that. She was just like, "You should pray, it's really good and it's what you're supposed to do." The reasoning was not really broken down.

While Uma did not elaborate on where or whether she found alternative outlets for her questions, in the case of Hannah, 15, prayer *replaced* conversations with parents seen as inflexible, or even disengaged and dismissive of spiritual topics,

If I have a stressful day I can pray and I feel less stressed out. I feel a little calmer, like someone is there for things I can't discuss with my parents because I just don't think that they will get what I'm saying.

As discussed, all family members can act as models of influence as a result of how they broach and negotiate R/S matters. In one example, Maryam's family integrated the increasing religiosity of her brother by incorporating the rituals of their tradition:

He's [her brother] had the biggest role in turning my family towards religion. Definitely when my dad had surgery, my brother was the first one who started eating *halal* food. And he used to encourage us to pray more often. Soon after, my parents started following. It wasn't really my parents who started first, it was my brother.

Maryam went on to describe that the effect of her brother's newfound commitment served as a powerful example of letting spirituality change and transform her family, a transition that she too went on to make. Lauren also described how her father constituted a spiritual model, and the difference between the ability to articulate and the embodiment of R/S values:

I know people who are very... they just *live* their spirituality, and are very *good*, good people, and they couldn't describe that oh, "it's because of this, this, this, and this," but I can't say that they're not incredibly wholesome, spiritual people. Like with my parents—my parents are very different in this respect. My mother is very verbal like me and able to articulate this stuff, and my dad has gotten better at it living with the two of us, but that's not how he usually does things. He always leads by example and has been a very empathetic, caring, and spiritual person, and he doesn't

really talk about it. If you interview him, he probably won't say as much as my mother, but that doesn't mean that he's not an incredibly evolved spiritual person.

Conversely, with regards to authenticity and modeling, Sam, 17, had not thought or talked much about religion or spirituality, and as a result, reported confusion or disdain around issues of belief, tradition, or ethics. He said about his parents,

My dad, he's certainly not a religious man and if I asked him that, I think he'd like murder me or something, so I didn't. And my mom is pretty open, but I don't like to talk to her because she has loose lips and anything I mention to her is bound to get around the neighborhood... it almost seems like she's just faking religion. She, she talks about it enough, but there's no conviction. Yeah, so that's that.

To review, the openness and flexibility of the family is a critical influence on the spirituality of adolescents and the expression of religious or spiritual life within the family. Being able to honestly broach and discuss profound questions provides a setting in which adolescents can explore and commit to beliefs congruent with their worldview and experiences, in ways that most often uphold the religious tradition of the family. However, the counterpart to openness in conversation is the willingness to let the family's practices reflect the desires of its members. As a result of such familial flexibility, the experiences of the adolescent are affirmed and encouraged, while its absence can lead to an aborted or unshared spirituality.

### *Discussion*

This study explored the contribution of intra- and interpersonal openness to adolescent R/S development, and the social contexts that engender it. The qualitative data from this study suggest that R/S socialization is facilitated by open and flexible conversations and experiences within the social contexts most important in an adolescent's life, family and friends, with the concomitant time and space to contemplate the issues that drive and result from such interactions. This openness allows for a willingness to explore spiritual issues, and an encouragement of flexibility in how one assigns meaning and interprets experience and tradition from a spiritual or religious perspective (e.g., Silberman, 2005). It is closely aligned with the well-studied personality dimension of Openness to Experience (e.g., McCrae, 1996), and may provide an emic, qualitative description of the exploration and socialization

processes at the core of prominent theories of identity development (e.g., Erikson, 1968; Marcia, 1980).

Intrapersonally, openness refers to a willingness to explore various experiences, beliefs, and feelings, and flexibility in their assessment and integration. Openness, with regards to spirituality, can manifest *within* an adolescent's religious faith (i.e., vertical openness), becoming an in-depth dialogue with the many spiritual expressions found within the tradition, the particular congregation, and the self. Or, the exploration that follows openness can lead to experimenting with the ideologies of different religious traditions or spiritualities (i.e., horizontal openness), similar to the concept of inter-religious quest (Batson, Schoenrade, & Ventis, 1993; Batson & Ventis, 1985). Nowhere did openness emerge as an obstacle to personal spiritual development, including among adolescents highly committed to relatively fundamentalist faith traditions. Rather, openness supported the acknowledgement and pursuit of unanswered and personal spiritual questions, often to emerge into confirmatory spiritual experiences.

Interview data from this study suggests that adolescents find great value in having opportunities to contemplate and explore different R/S beliefs, ideas, and practices, and can easily cite specific times and spaces in which that process can occur, either privately (e.g., in nature) or publicly (e.g., camp). Although developmental psychologists maintain that the "over-scheduled" life of youth in the United States is debatable, noting that American teens spend less time on schoolwork, chores, and work than adolescents in other industrialized nations (e.g., Larson, 2001), our sample largely reported having too little free time. While desired free time may simply be an extra hour or two a week, "space" can be both an ontological/physical dimension, in which things exist and happen (as in a camp or youth group), or a mental orientation, involving a motivational stance of receptivity and contemplation (Adams, 1996; Hart, 1998). In considering these openings as times/spaces apart from their daily lives, the teens seem to be treating R/S growth opportunities as liminal events, occurring between separation and reintegration with the everyday (Turner, 1969). This quality of time and space can be thought of as similar to Piedmont's (1999) conceptualization of Spiritual Transcendence, which refers to "the capacity of individuals to stand outside their immediate sense of time and place and to view life from a larger, more objective perspective" (p. 988). In sum, time and space constitute the primary, *intra*-personal context or framework that facilitates adolescents' immersion in religious or spiritual issues, from

doubt over particular beliefs to transformative mystical experiencing. This idea has gained traction in the literature of religious education and R/S phenomenology (e.g., Van Brummelen, Koole, & Franklin, 2004), and has a decades-long history in anthropology (e.g., Turner, 1969), suggesting that it may be a fertile area for future qualitative and quantitative investigation with adolescents.

Interpersonally, adolescents describe openness as a critical component of the experiences and communication styles shared with influential figures in their lives, namely family and friends. These findings are supported by research describing the mechanisms of socialization for the transmission of R/S as involving a complex nexus of modeling, acceptance, and level of authoritativeness (Bao, Whitbeck, Hoyt, & Conger, 1999; Hoge, Petrillo, & Smith, 1982; Pearce, 2004; Pinquart & Silbereisen, 2004). Levenson and colleagues (2005) note, however, that a weakness of socialization theories of religious transmission is that scholars “remain in the dark about the process by which it occurs” (p. 150). Descriptions in this study from the adolescents themselves shed light on how interpersonal dynamics shape their R/S in their emphasis on the immediacy of listening and encouragement, which is characterized by receptivity, mutuality, and acceptance (Cooper, 2003; Frie, 2000).

King and Furrow (2004) have described the positive social capital associated with religious affiliation in adolescence, and data from the participants in this study substantiate that idea. The adolescents described open and nonjudgmental friends as critical to feeling that their R/S concerns were normal, which was communicated through conversations and shared experiences. All of the teens were able to identify the friends with whom they did and did not feel comfortable talking to about R/S topics, and most described feeling closest to friends with whom they could discuss existential and spiritual concerns (although the causality is not clear; they may also discuss these personal matters with those they feel most comfortable with). The empirical research to date on the topic of R/S and friends has delineated aspects of the significant impact of friendships on religious beliefs and practices (see King & Furrow, 2004; Schwartz, Bukowski, & Aoki, 2006). Friends have been found to influence religious participation and enjoyment of religious practices (Hoge & Petrillo, 1978), shape adolescents’ experience of G-d (King, Furrow, & Roth, 2002), and mediate the relationship between parents’ and adolescents’ beliefs (see Schwartz et al., 2006). Ozorak (1989) found that connectedness to friends is greatest when adolescents profess a different religion than their parents, and hypothesized that



adolescents seek friends with similar religious views, and may then rate them closer out of a need for emotional support. Similarly, relational styles with friends are associated with differing patterns of identity development and exploration, with perceived social support associated with higher exploration and commitment in multiple domains (e.g., Meeus & Dekovic, 1995; see Forthun et al., 2006, for a review). From the amount of interview data spontaneously devoted to friends, it is clear that adolescents consider them a primary socialization context, and that the degree of openness to R/S issues within a group of friends significantly affects the R/S of the adolescents involved.

While parents have been described as one of the strongest influences on R/S transmission in adolescence, few studies have qualitatively investigated the mechanisms of R/S parent-child interactions (Mahoney & Tarakeshwar, 2005; Regnerus et al., 2003). With regards to parenting practices, research findings from cross-sectional research on healthy identity development may be analogous to what adolescents in this study verbalized as most fundamental in promoting their R/S development. That research demonstrates that the ability to openly express differences within a warm and supportive parental relationship, without fear of losing family cohesion, was associated with greater exploration and less identity diffusion (Grotevant & Cooper, 1986; Jackson, Dunham, & Kidwell, 1990; Perosa & Perosa, 1993; Perosa, Perosa, & Tam, 1996; Willemsen & Waterman, 1991; as discussed in Forthun et al., 2006). Family cohesion is not to be confounded with lack of conflict in families, which may instead reflect a lack of communication around R/S topics. Notably, lack of family conflict has been shown to be related to higher identity foreclosure (Willemsen & Waterman, 1991), which is supported by the reports of the adolescents in this study, who enjoyed negotiating differences with their families. McRae (1996) has noted that openness may be most salient in the “intense intimacy of the family” (p. 330). Our data similarly suggest that the degree of parental openness should be considered, along with parental religiousness and disciplinary style, as important predictors of positive parent-adolescent relationships.

### *Limitations*

This qualitative study marks an attempt to explore spiritual development and its supports and obstacles in adolescence. Limitations of this study include the snowballing subject recruitment process, which purposefully

selects for adolescents who enjoy discussing spiritual issues, therefore making the study more likely to induce openness as a primary theme. In other words, highly open adolescents may have been more likely to self-select into our study than others would be. As is the case in any qualitative study, the methodology also calls into question the generalizability of the findings from a sample of 130 to adolescents as a whole. The deliberate sampling of a wide range of denominations and ages did not allow for focus upon the fine-grained thematic differences among developmental levels, religious traditions, and interpersonal relations. It is suggested that future research might target specific samples (defined by denomination, age, or other characteristics), ideally over time, to capture the progression of R/S in adolescence. This would also allow for the development of more refined definitions of adolescent religiosity and spirituality, which was not an explicit goal of this study. Future quantitative research might expand upon our findings by including measures of openness, such as the NEO-PI-R, to incorporate OTE into statistical testing of models of R/S, as many researchers have found that personality significantly mediates the association between spirituality measures and clinical and well-being outcomes (e.g., Ciarrocchi & Deneke, 2005).

Additionally, scholars have noted the negative potential inherent in openness (e.g., Hunt, Dougan, Grant, & House, 2002), in which what is described as openness actually reflects a pathological, disintegrative process. Hunt and colleagues (2002) describe openness as a bivalent phenomenon, with mystical experience and traumatic dissociation constituting the poles of one continuum. Others, such as Lynn and Rhue (1988), suggest different developmental pathways altogether from childhood, “depending on whether high openness to experience unfolds in a context of parental encouragement of creative and fantasy activities or as a compensation for trauma, loneliness, and isolation” (cited in Hunt et al., 2002, p. 91). While further research is needed to examine the associated risks and benefits of openness, the participants in this study described it in solely positive terms, as the most spirituality-enhancing aspect of the contexts influencing them.

## CONCLUSIONS

The overarching finding of contextually facilitated openness is consistent with the literature to date on adolescent development of nonspiritual

faculties. Scholars have observed that the primary domains of development, including the cognitive, moral, social, and spiritual, progress in synchrony towards increasing complexity and sophistication in response to biological (nature) and environmental influences (nurture) (see Templeton & Eccles, 2006, for a review). Historically, adolescence has been viewed as a critical developmental window in which resolution is the goal of a variety of crises of ambiguity, without a similar degree of attention paid to the exploration process preceding those commitments. The findings from this study, along with the literature most germane to investigating exploration—identity development and Openness to Experience—suggest that inter- and intrapersonal openness may be the common denominator facilitating growth across domains. The shared dimension of openness with other developmental processes may provide further evidence for a unified conception of human development, in which viewing different domains as distinct, or optional (as is often the case with R/S development), impedes the ability to accurately understand the whole individual in research and practice.

In the social sciences, the study of development has been disaggregated for purposes of specificity, but recent scholarship has focused on the overlapping and reciprocal nature of disparate processes within the holistic development of the individual (e.g., Roehlkepartain et al., 2006). This holistic reconceptualization requires a shift in method and models to include the social contexts of the individual, and their bidirectional influence. As Benson (2006) writes, “Central, then, to a theory of spiritual development are conceptions of the developing person, the contexts in which the person is embedded, and the dynamic interaction between the two” (p. 487). The results of this study support this conclusion and illuminate openness as a salient mechanism of R/S development in the multiple contexts of youth. However, while openness cannot be said to be *causing* increased spirituality or healthier R/S development, the adolescents in this study identified the two as co-occurring and mutually supportive. Like the caution granted to statistical correlations, the qualitative correlation between openness and spirituality must therefore be interpreted as a bidirectional relationship, without emphasis on causation.

Our findings address the contention that openness leads to a diffusion of R/S identity, or that religious traditions are being spurned in favor of a new-age bricolage of beliefs or practices (e.g., Arnett & Jensen, 2002; Roof, 1999; see Smith & Denton, 2005, for a discussion of free-market spirituality and religious individualism). What in this study is

interpreted as openness might arguably reflect the subversive rebellion and nonconformity typically ascribed to adolescents. Instead, the authors inductively conclude that this period of openness, mirrored in other developmental domains, is a gateway to potential self-transformation, in which a plurality of perspectives and experiences are integrated into an evolving spirituality, with consequences for well-being.

#### RECOMMENDATIONS

If openness is a hallmark of adolescent development, then how might it be harnessed within contexts to further R/S engagement? The interview process within this study, as an example of contextual openness, may provide clues. Adolescents described enjoying and learning about themselves through talking openly with another person about *their* own personal thoughts and beliefs. The questions and digressions of the interview process offered the opportunity to interpersonally organize and interpret personal R/S issues, which the overwhelming majority of adolescents responded to with enthusiasm. Those adolescents who seemed most to transform or deepen their inquiry between contacts with our study were often those who previously had little opportunity to express their lived spiritual experience, or doubts and questions around faith. The very process of discussing personal spirituality for many adolescents was legitimizing. Interviewers did not adopt the stance of spiritual teachers, but rather took interest in the participants—providing a rare opportunity for adolescents to learn and experience through dialogue.

It seems feasible that youth leaders (such as within places of religious teaching and worship, or community organizations) might support spiritual development in adolescents through interest and attention to adolescents' own spiritual experience. Encouragement to express personal spirituality, along with their questions and doubts, may allow adolescents to reach clarity and ultimately deepen their devotion within a range of faith traditions and nonreligious settings. Openness around adolescent R/S individuation need not suggest an ultimate relativism of conviction, but rather an acceptance of the authentic experience of the adolescent, and an encouragement of the adolescent to build an understanding of R/S buttressed by personal experience.

## REFERENCES

- Adams, W. (1996). Discovering the sacred in everyday life: An empirical phenomenological study. *Humanistic Psychologist*, 24, 28–54.
- Arnett, J., & Jensen, L. (2002). A congregation of one: Individualized religious beliefs among emerging adults. *Journal of Adolescent Research*, 17(5), 451–467.
- Atkinson, R., & Flint, J. (2001). Accessing hidden and hard-to-reach populations: Snowball research strategies. *Social Research Update*, 33, 1–4.
- Bao, W. N., Whitbeck, L. B., Hoyt, D. R., & Conger, R. D. (1999). Perceived parental acceptance as a moderator of religious transmission among boys and girls. *Journal of Marriage and the Family*, 61(2), 362–374.
- Batson, C. D., Schoenrade, P., & Ventis, W. L. (1993). *Religion and the individual: A social psychological perspective*. London: Oxford University Press.
- Batson, C. D., & Ventis, W. L. (1985). Misconception of quest: A reply to Hood and Morris. *Review of Religious Research*, 26, 398–407.
- Benson, P. L. (2004). Emerging themes in research on adolescent spiritual and religious development. *Applied Developmental Science*, 8(1), 47–50.
- Benson, P. L. (2006). The science of child and adolescent spiritual development: Definitional, theoretical, and field-building challenges. In E. Roehlkepartain, P. E. King, L. Wagener, & P. Benson (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 484–497). Thousand Oaks, CA: Sage Publications.
- Boyatzis, R. E. (1998). *Thematic analysis and code development: Transforming qualitative information*. Thousand Oaks, CA: Sage Publications.
- Boyatzis, C. J., Dollahite, D. C., & Marks, L. D. (2006). The family as a context for religious and spiritual development in children and youth. In E. Roehlkepartain, P. E. King, L. Wagener, & P. Benson (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 297–309). Thousand Oaks, CA: Sage Publications.
- Ciarrocchi, J. W., & Deneke, E. (2005). Happiness and the varieties of religious experience: Religious support, practices, and spirituality as predictors of well-being. *Research in the Social Scientific Study of Religion*, 15, 211–233.
- Clancy, S. M., & Dollinger, S. J. (1993). Identity, self and personality: Identity status and the five-factor model of personality. *Journal of Research on Adolescence*, 3, 227–245.
- Cooper, M. (2003). “I-I” and “I-Me”: Transposing Buber’s interpersonal attitudes to the intrapersonal plane. *Journal of Constructivist Psychology*, 16(2), 131–153.
- Costa, P. T., Jr., & McCrae, R. R. (1994). “Set like plaster?” Evidence for the stability of adult personality. In T. F. Heatherton & J. L. Weinberger (Eds.), *Can personality change?* Washington, DC: American Psychological Association.
- Cotton, S., Zebracki, K., Rosenthal, S. L., Tsevat, J., & Drotar, D. (2006). Religion/spirituality and adolescent health outcomes: A review. *Journal of Adolescent Health*, 38(4), 472–480.
- Cresswell, J. W. (1997). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage Publications.
- D’Onofrio, B. M., Eaves, L. J., Murrelle, L., Maes, H. H., & Spilka, B. (1999). Understanding biological and social influences on religious affiliation, attitudes, and behaviors: A behavior genetic perspective. *Journal of Personality*, 67(6), 953–984.
- Duriez, B., & Soenens, B. (2006). Personality, identity styles, and religiosity: An integrative study among late and middle adolescents. *Journal of Adolescence*, 29, 119–135.
- Erikson, E. H. (1968). *Identity, youth and crisis*. London: Faber & Faber.
- Forthun, L. F., Montgomery, M. J., & Bell, N. J. (2006). Identity formation in a relational context: A person-centered analysis of troubled youth. *Identity: An International Journal of Theory and Research*, 6(2), 141–167.
- Fowler, J. W. (1981). *Stages of faith*. San Francisco: Harper & Row.
- Fowler, J. W., & Dell, M. L. (2006). Stages of faith from infancy through adolescence:

- Reflections on three decades of faith development theory. In E. Roehlkepartain, P. E. King, L. Wagener, & P. Benson (Eds.), *Handbook of spiritual development in childhood and adolescence* (pp. 34–45). Thousand Oaks, CA: Sage Publications.
- Frie, R. (2000). The existential and the interpersonal: Ludwig Binswanger and Harry Stack Sullivan. *Journal of Humanistic Psychology, 40*(3), 108–129.
- Goldberg, L. R. (1990). An alternative “description of personality”: The big-five structure. *Journal of Personality and Social Psychology, 59*, 1216–1229.
- Gray, E. K., Haig, J., Vaidya, J., & Watson, D. (2001, February). Personality stability in young adulthood. Paper presented at the meeting of the Society for Personality and Social Psychology, San Antonio, Texas.
- Grotevant, H. D., & Cooper, C. R. (1986). Individuation in family relationships: A perspective on individual differences in the development of identity and role-taking skill in adolescence. *Human Development, 29*, 82–100.
- Hart, T. (1998). Inspiration: Exploring the experience and its meaning. *Journal of Humanistic Psychology, 38*(3), 7–35.
- Hill, P. C., Pargament, K. I., Hood, R. W., McCullough, M. E., Swyers, J. P., Larson, D. B. et al. (2000). Conceptualizing religion and spirituality: Points of commonality, points of departure. *Journal for the Theory of Social Behavior, 30*, 51–77.
- Hoge, D. R., & Petrillo, G. H. (1978). Development of religious thinking in adolescence: A test of Goldman’s theories. *Journal for the Scientific Study of Religion, 17*, 359–379.
- Hoge, D. R., Petrillo, G. H., & Smith, E. I. (1982). Transmission of religious and social values from parents to teenage children. *Journal of Marriage and the Family, 44*(3), 569–580.
- Hunt, H., Dougan, S., Grant, K., & House, M. (2002). Growth enhancing versus dissociative states of consciousness: A questionnaire study. *Journal of Humanistic Psychology, 42*(1), 90–106.
- Jackson, E. P., Dunham, R. M., & Kidwell, J. S. (1990). The effects of gender and of family cohesion and adaptability on identity status. *Journal of Adolescent Research, 5*, 161–174.
- Kneezel, T. T., & Emmons, R. A. (2006). Personality and spiritual development. In E. Roehlkepartain, P. E. King, L. Wagener, & P. Benson (Eds.), *Handbook of spiritual development in childhood and adolescence* (pp. 266–278). Thousand Oaks, CA: Sage Publications.
- Kendler, K. S., Gardner, C. O., & Prescott, C. A. (1997). Religion, psychopathology, and substance use and abuse: A multimeasure, genetic-epidemiologic study. *American Journal of Psychiatry, 154*(3), 322–329.
- King, P. E. (2003). Religion and identity: The role of ideological, social, and spiritual contexts. *Applied Developmental Science, 7*(3), 197–204.
- King, P. E., & Benson, P. L. (2006). Spiritual development and adolescent well-being and thriving. In E. Roehlkepartain, P. E. King, L. Wagener, & P. Benson (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 384–398). Thousand Oaks, CA: Sage Publications.
- King, P. E., & Boyatzis, C. J. (2004). Exploring adolescent spiritual and religious development: Current and future theoretical and empirical perspectives. *Applied Developmental Science, 8*(1), 2–6.
- King, P. E., & Furrow, J. L. (2004). Religion as a resource for positive youth development: Religion, social capital, and moral outcomes. *Developmental Psychology, 40*, 703–713.
- King, P. E., Furrow, J. L., & Roth, N. (2002). The influence of families and peers on adolescent religiousness. *Journal of Psychology & Christianity, 21*, 109–120.
- Larson, R. (2001). How U.S. children and adolescents spend time: What it does (and doesn’t) tell us about their development. *Current Directions in Psychological Science, 10*(5), 160–164.
- Lerner, R. M. (2004). Diversity in individual <-> context relations as the basis for positive development across the life span: A developmental systems perspective for theory,

- research and application. The 2004 Society for the Study of Human Development presidential address. *Research in Human Development*, 1(4), 327–346.
- Levenson, M. R., Aldwin, C. M., & D'Mello, M. (2005). Religious development from adolescence to middle adulthood. In R. Paloutzian and C. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pp. 144–161). New York: Guilford Press.
- Luyckx, K., Goossens, L., Soenens, B., Beyers, W., & Vansteenkiste, M. (2005). Identity statuses based on 4 rather than 2 identity dimensions: Extending and refining Marcia's paradigm. *Journal of Youth and Adolescence*, 34(6), 605–618.
- Lynn, S. J., & Rhue, J. W. (1988). Fantasy proneness: Hypnosis, developmental antecedents, and psychopathology. *American Psychologist*, 43(1), 35–44.
- Mahoney, A., & Tarakeshwar, N. (2005). Religion's role in marriage and parenting in daily life and during family crises. In R. Paloutzian and C. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pp. 177–195). New York: Guilford Press.
- Marcia, J. E. (1980). Identity in adolescence. In J. Adelson (Ed.), *Handbook of adolescent psychology* (pp. 159–187). New York: Wiley.
- Markstrom, C. A. (1999). Religious involvement and adolescent psychosocial development. *Journal of Adolescence*, 22, 205–221.
- Meeus, W., & Dekovic, M. (1995). Identity development, parental and peer support in adolescence: Results of a national Dutch survey. *Adolescence*, 30, 931–944.
- McCrae, R. R. (1996). Social consequences of experiential openness. *Psychological Bulletin*, 120(3), 323–337.
- McCrae, R. R. (1999). Mainstream personality psychology and the study of religion. *Journal of Personality*, 67(6), 1209–1218.
- McCrae, R. R., Costa, P. T., Terracciano, A., Parker, W. D., Mills, C. J., De Fruyt, F. et al. (2002). Personality trait development from age 12 to age 18: Longitudinal, cross-sectional, and cross-cultural analyses. *Journal of Personality and Social Psychology*, 83(6), 1456–1468.
- McCullough, M. E., & Snyder, C. R. (2000). Classical source[s] of human strength: Revisiting an old home and building a new one. *Journal of Social and Clinical Psychology*, 19, 1–10.
- Miller, L. (2006). *Spirituality and mental health in adolescents* [DVD]. World Congress of Spirituality and Health. Monterrey, Mexico: Department of Education.
- Miller, L., & Kelley, B. S. (2005). Relationships of religiosity and spirituality with mental health and psychopathology. In R. Paloutzian & C. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pp. 460–478). New York: Guilford Press.
- Oman, D., & Thoresen, C. E. (2003). Spiritual modeling: A key to spiritual and religious growth. *The International Journal for the Psychology of Religion*, 13(3), 149–165.
- Ozorak, E. W. (1989). Social and cognitive influences on the development of religious beliefs and commitment in adolescence. *Journal for the Scientific Study of Religion*, 28(4), 448–463.
- Pearce, L. D. (2004). Intergenerational religious dynamics and adolescent delinquency. *Social Forces*, 82(4), 1553–1572.
- Perosa, L. M., Perosa, S. L., & Tam, H. P. (1996). The contribution of family structure and differentiation to identity development in females. *Journal of Youth and Adolescence*, 25, 817–837.
- Perosa, S. L., & Perosa, L. M. (1993). Relationships among Minuchin's structural family model, identity achievement, and coping style. *Journal of Counseling Psychology*, 40, 479–489.
- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. New York: Oxford University Press.
- Piedmont, R. L. (1999). Does spirituality represent the sixth factor of personality? Spiritual transcendence and the five-factor model. *Journal of Personality*, 67, 985–1013.
- Piedmont, R. L. (2001). Cracking the plaster cast: Big 5 personality change during intensive outpatient counseling. *Journal of Research in Personality*, 35, 500–520.

- Piedmont, R. L. (2005). The role of personality in understanding religious and spiritual constructs. In R. Paloutzian and C. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pp. 253–274). New York: Guilford Press.
- Pinquart, M., & Silbereisen, R. K. (2004). Transmission of values from adolescents to their parents: The role of value content and authoritative parenting. *Adolescence*, 39(153), 83–100.
- Regnerus, M., Smith, C., & Fritsch, M. (2003). Religion in the lives of American adolescents: A review of the literature. Chapel Hill, NC: National Study of Youth and Religion.
- Regnerus, M. D., Smith, C., & Smith, B. (2004). Social context in the development of adolescent religiosity. *Applied Developmental Science*, 8(1), 27–38.
- Rew, L., & Wong, Y. (2006). A systematic review of associations among religiosity/spirituality and adolescent health attitudes and behaviors. *Journal of Adolescent Health*, 38(4), 433–442.
- Robbins, R. W., Fraley, R. C., Roberts, B. W., & Trzesniewski, K. H. (2001). A longitudinal study of personality change in young adulthood. *Journal of Personality*, 69, 617–640.
- Roehlkepartain, E. C., Benson, P. L., King, P. E., & Wagener, L. M. (2006). Spiritual development in childhood and adolescence: Moving to the scientific mainstream. In E. Roehlkepartain, P. E. King, L. Wagener, & P. Benson (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 1–15). Thousand Oaks, CA: Sage Publications.
- Roehlkepartain, E. C., King, P. E., Wagener, L., & Benson, P. L. (Eds.). (2006). *The handbook of spiritual development in childhood and adolescence*. Thousand Oaks, CA: Sage Publications.
- Roof, W. C. (1999). *Spiritual marketplace: Baby boomers and the remaking of American religion*. Princeton, NJ: Princeton University Press.
- Rosengren, K. S., Johnson, C. N., & Harris, P. L. (Eds.). (2000). *Imagining the impossible: Magical, scientific, and religious thinking in children*. New York: Cambridge University Press.
- Saroglou, V. (2002). Religion and the five-factors of personality: A meta-analytic review. *Personality and Individual Differences*, 32, 15–25.
- Schwartz, K. D., Bukowski, W. M., & Aoki, W. T. (2006). Mentors, friends, and gurus: Peer and nonparent influences on spiritual development. In E. Roehlkepartain, P. E. King, L. Wagener, & P. Benson (Eds.), *Handbook of spiritual development in childhood and adolescence* (pp. 310–323). Thousand Oaks, CA: Sage Publications.
- Silberman, I. (2003). Spiritual role modeling: The teaching of meaning systems. *The International Journal for the Psychology of Religion*, 13(3), 175–195.
- Silberman, I. (Ed.). (2005). Religion as a meaning system. *Journal of Social Issues* [special issue], 61(4).
- Smith, C., & Denton, M. L. (2005). *Soul searching: The religious and spiritual lives of American teenagers*. New York: Oxford University Press.
- Templeton, J. L., & Eccles, J. S. (2006). The relation between spiritual development and identity processes. In E. Roehlkepartain, P. E. King, L. Wagener, & P. Benson (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 252–265). Thousand Oaks, CA: Sage Publications.
- Turner, V. (1969). *The ritual process: Structure and anti-structure*. Chicago: Aldine Publishing Co.
- Van Brummelen, H., Koole, R., & Franklin, K. (2004). Transcending the commonplace: Spirituality in the curriculum. *Journal of Educational Thought*, 38(3), 237–253.
- Willemsen, E. W., & Waterman, K. K. (1991). Ego identity status and family environment: A correlational study. *Psychological Reports*, 69, 1203–1212.





## JUNG: MENTOR FOR PASTORAL COUNSELORS

*William J. Sneek, S.J., Ph.D.*

### ABSTRACT

Drawing from the research, writings, and clinical practice of Carl G. Jung, the author suggests 10 things to remember by pastoral counselors in their ministry. He offers an analysis and critique of the main contributions, theoretical, practical, and spiritual, of this “wisdom figure” for 21st century counselors and their clients.

I hope to provide some reflections concerning how the thought and writings of Swiss psychiatrist, Carl G. Jung (1875–1961), can be helpful for practitioners of the ministry and art of pastoral counseling. In the last third of the previous century, Jung had enjoyed immense popularity in both the helping-professional and popular cultures. His *Collected Works* (1979–1983) fill 20 volumes, not to mention all the pages penned by disciples and commentators, positive and negative. Hence, the challenge to this author presents itself as an exercise in fairness to focus the sweep of Jung’s vision while keeping in mind the real-life, practical needs of directors of souls, pastoral counselors, et al. Once before, the author had been requested to write an essay on “Guilt and Shame” (Sneek, 1993) in a volume, dedicated to hospital chaplains, that sought to offer “succinct practical material on key topics as well as suggested readings for those wishing a more extensive treatment of the subject in question” (Cheston & Wicks, 1993, p. v). Contributing writers were to provide “ten things to remember about...” In this article, I shall adopt the same goal and method.

1. Jung, in his person and writings, proves himself a competent and compassionate fellow-traveler and mentor for pastoral counselors on their own road to maturity and wholeness.

Jung’s autobiography, *Memories, Dreams, Reflections* (1963), unlike others’ such efforts, gives much more than factual accounts of events, important people, and places visited (though it does that to some extent). Rather, the work resembles a personal journal that records the struggles, hopes, failures—Jung is movingly honest in his record—and especially *dreams* of the writer. Much like a counselee’s or a retreatant’s journal, the book

narrates the journey of a soul searching, yearning for clarity, direction, and breakthroughs into new and better insights and ways of living. We watch Jung growing, regressing, pressing forward to personal truth that can be useful to anyone striving to live a deeply human, spiritual life, most especially any person embracing a call to counsel others.

Inspiring to the author will always be Jung's basically optimistic perspective on human being and reality. This is the case despite the fact that much of his early work was done in the *Burgholzli*, a state mental hospital in Zurich, where his patients were the dregs of humanity: poor, suffering souls whom he treated before the arrival of psychotropic drugs (1900–1915), psychotics whose accounts of wretched lives moved him to listen with reverent curiosity so that he could find a thread of sanity and hidden inner strength. To these he would fasten, on these he would concentrate and lead many to healing and restoration to their families, work, and “normal” life. Remembering Jung's experience and hope, the author has often been moved to resist giving up on problem clients, but search (as did Jung) for that inner, deepest “Self” where God still works and heals.

Of all the many psychologists/psychiatrists who have penned theories of personality, Jung exhibits perhaps the deepest familiarity with world cultures, philosophies, and literatures. Early reading in his parson-father's library acquainted him with a vast scope of knowledge and wisdom recorded in those texts upon whose musings and discoveries he comments in his autobiography/journal. His travels took him to the American southwest, Africa, India, and other realms where he met women and men who contributed to his awareness of human reality, human suffering, human insight—all of which added to his ever-maturing perspective.

One of the reasons that his writing can be difficult, however, is that he unselfconsciously quotes foreign words and sentences because he knew so many foreign (to an American reader) languages. Once when the author was teaching a course in which one of Jung's works was a required text, he had to supply a two-paged, single-spaced handout with translations of phrases so that the students could follow the argument! Furthermore, Jung's style sometimes more closely resembles a client's free associations than a logical argument.

Two anecdotes will illustrate Jung's skill.

Bill Wilson (Bill W.), the founder of Alcoholics Anonymous, consulted with Jung. His conversations with Jung contributed to the theory of the Twelve Step programs in which spirituality (without reference to

organized religion) led Bill W. to include dependence on a “Higher Power.” Contacting this Higher Power could lead to breaking the chains of addiction and lead to inner freedom, an approach and goal of pastoral counselors.

Secondly, the great Irish writer, James Joyce, had a psychotic daughter. Unlike many authors, Joyce achieved fame (and income) in his lifetime, rather than merely afterwards, so that he could travel up and down Europe to consult many doctors in his search for a cure for his child. Traveling to Zurich, he introduced his daughter to Jung who spent a long session with her. Afterwards, Jung told Joyce, “I’m sorry, Mr. Joyce. You want me to tell you that your daughter is really alright, but she is indeed a deeply troubled individual.” Joyce burst into tears and sobbed, “But she talks like I write!” Jung replied, “Ah yes, Mr. Joyce, but you are diving and she is drowning.”

By this, Jung was referring to “regression in service of the ego” by which artists and creative writers dive into their unconscious in search of poetic mystery and expression. Joyce’s daughter, however, suffered as a victim of her unconscious, its slave, rather than finding in it a source of Truth. These two stories, and many others that could be narrated, point to Jung’s experience of diagnosing and healing tormented sisters and brothers, and they invite enthusiasm to learn from him. Pastoral counselors too will want to travel into the outer world of places and writings, and the inner world of souls to deepen their own competence and compassion in working with the Holy Spirit and the inner Self of their clients to promote healing and growth.

2. In appreciating Jung’s psychological wisdom, pastoral counselors must sidestep his sometimes questionable ethical behavior, and will bracket his idiosyncratic theology.

Much ink has been spilled, and whole conferences have been devoted to Jung’s seeming acceptance of Nazi ideology. For this writer, this is an unsolved issue so far. More troubling, certainly, are Jung’s “barnyard morals,” behaviors that today would lead to his losing his license to practice. In particular, after his breakup with Freud in 1913, Jung went into a deep depression. He found consolation and solace in one of his younger colleagues, Toni Wolff, whom he took into his own home as his mistress! His wife, Emma, herself a psychologist and accomplished writer, tolerated this because she saw that somehow Ms. Wolff was enabling her husband, Carl, to get back to being his old and true self once again. Later, he had an affair with one of his former patients,

Sabina Spielrein, who after her recovery also became a professional colleague.

Theologically, Jung emended the Christian doctrine of the Trinity to make it a quaternity. In some of his writings, he makes the Blessed Virgin Mary into the fourth person of the Trinity; in other places, he calls Satan that fourth person.

To encounter Jung, we might adopt William James's axiom (an adaptation of Jesus's): "Not by their roots, but by their fruits shall ye judge them." In other words, like many great historical figures, Jung's life had its dark side. The author has mentioned this point early on so that it can be faced and put aside by today's helping professionals who want to learn from the wisdom of the past, and not discount it simply because its originator was in part unethical and unorthodox. Jung's psychiatric successes and wonderful legacy of insight can be appreciated without condoning his questionable behaviors nor agreeing with his theological speculations. He always protested that he was a psychologist, not a theologian.

Furthermore, Jung was a "hatched, matched, and dispatched" Christian, a member of the Swiss Reformed Church, and buried in the churchyard of his hometown, Kuesnacht. Yet he did not practice this religion in any consistent way. Hence, religious practitioners must bracket these actions and positions in order to learn what can be helpful and useful in their own work with clients.

3. Jung provides a marvelous "map" of the psyche that helps us name and understand the various inner and outer dynamics of human behavior. This framework can guide pastoral counselor' explorations into their clients' souls.

Reference has already been made to the Self, that inner core of the person, that source of health and growth which Jung discovered even in his most deeply troubled patients. He has sometimes been accused by his critics of equating the Self with God. Rather, a careful reading of his writings would lead us to say that the Self is that part of us through which God can contact us and lead us—where spiritual directors might say that the Holy Spirit touches us.

Nor did Jung equate the Self with the ego, a concept borrowed from Freud that for Jung meant a small but important part of the psyche, the center of consciousness. The ego is the executive of the person, the center of awareness and decision-making. But the Self includes much

more, the whole realm of the conscious *and* the unconscious. Often the ego, driven by ambitions in the outer world of persons and events, charts a path that is against the best interests of the whole Self. Then the unconscious intervenes.

The unconscious is that part of ourselves that is out of awareness, difficult to access, but nevertheless impacts much of our behavior. Some examples: our telephone number is out of awareness, but *easy* to access when we try to recall it. Our telephone number is not in the unconscious, but in the pre-conscious, out of awareness, but *easy* to access.

What we did on our second birthday is in our unconscious, difficult to access, but perhaps able to be recalled with hypnosis or sodium pentothal. Unless our second birthday, however, was traumatic or otherwise significant for our development, it is not an important part of our unconscious. Suppose, however, that a client had been molested in childhood and has “forgotten” this event. This experience is out of awareness, difficult to access, and does influence her present adult behavior. Any helping professional would be helped in his or her ministry by knowledge of this event so that he or she could restore it to consciousness where it can be “named, claimed, and tamed.”

Much of Jung’s therapeutic effort was directed toward “making the unconscious conscious.” (How he did that, and how pastoral counselors can, will be explored below.) Jung had learned about the unconscious from his colleague and mentor, Freud, but in addition to the “personal” unconscious, that reservoir of forgotten experiences as well as undeveloped and underdeveloped aspects of our Self, Jung also discovered and postulated the existence of a “collective” unconscious, perhaps his most controversial tenet. The collective unconscious has been inherited from the whole human race, much as is our biological makeup. It is similar to instinct in animals, but can be described as the inbuilt potential of organized mental templates (called archetypes) to interpret present data in the light of the accumulated experience of the race. A Jungian archetype can be considered to be the psychological counterpart of the philosopher Plato’s form.

A simple example: an infant does not need to take a three-credit course on how to recognize and interact with the “mother,” one of the many archetypes. It knows her and can respond appropriately, as also to “father,” and with fear toward “stranger.” Evidence for the reality of archetypes that Jung mustered included his own dreams and those of his patients, stereotyped behaviors, and especially figures and symbols

from world literature, myths, and fairytales. A persistent similarity in the latter across time and cultures could be best explained, Jung argued, by the existence of a collective unconscious.

The author remembers an experience that convinced him to believe in the reality of archetypes. Assigned to a three-year ministry in India, he recalls trudging through the back-country and coming to many school-houses with the six-pointed star of David hung over their entrances. “I didn’t know that the Jewish culture and influence had penetrated into India,” he commented to his guide. “There is the star of David.”

“No, Father,” explained my ever-patient companion. “That is the star of Saraswati, our goddess of wisdom, learning, and knowledge.” Amazing! The same symbol that the ancient Israelites had used to designate *their* hero of wisdom, learning, and knowledge was employed by the even more ancient Hindus to reference *their* source of insight!

Other important archetypes that come up in Jungian analysis (and in pastoral counseling/spiritual direction) are the persona, the shadow, and the animus/anima. The persona comprises that set of rules and roles that governs our behavior in the outer world of work and relationships. Doctor, priest, spiritual guide, chief—all these are in part learned and in part inherited from our collective past. Unconsciously, they impact our daily behavior. Balancing the persona is the shadow (both personal and collective), those undeveloped and underdeveloped aspects of our human nature that seek to be expressed.

The *animus* is the male psychological dimension of biological females; similarly, the *anima* is the female aspect of biological males. Just as each gene in our body derives from both mother and father, our psyche also has its unconscious masculine and feminine dimensions.

Balancing conscious and unconscious, persona and shadow, our contra-sexual self (animus or anima) with our gender-identity comprises one of the most important developmental challenges of adults. (See point nine below.)

These various descriptions of dimensions of the psyche fail to do justice to human being and behavior if they sound fixed and static. Jung did not concretize or reify these constructs, but rather used this language to point to the dynamic interplay of energies and tensions that flow within all of us. A skilled pastoral counselor will note the ebb and flow of psychological energies and pressures in the thoughts, emotions, and behavior of her clients. For example, rather than using the theological language of sin and temptation to describe sexual thoughts and desires, she may inquire whether there might be some inner pres-

sure from her male client's shadow or anima that is moving the man to integrate more of his unconscious, relational life that has been ignored because of ego-driven ambition and overwork.

4. Jung's typology, popularized in the Myers-Briggs Type Indicator (MBTI), aids counselors and counsees in discovering preferred preferences, strengths, and growing edges in our attitudes and functions.

The "attitudes" of extroversion and introversion designate whether we find most of our energy nourishment in the outer world ("in front of our eyeballs" = extroverts) or within our inner life ("behind our eyeballs" = introverts). The attitudes of judging and perceiving describe whether we prefer to deal with our outer life in a structured, organized, controlling way (judging), or simply to let events unfold and defer making decisions as long as possible (perceiving). Two of our "functions" denote how we take in information: in a "sensing" way by noticing lots of details or an "intuitive" way by grasping patterns, the whole picture. The two remaining functions of "thinking" and "feeling" indicate our habitual ways of coming to conclusions: thinkers employ thought-schemes and logic (maybe even a quite personal logic that might strike a counselor as illogical!); feelers evaluate what is to be done by how a planned behavior might impact humanly-related values. (Of course, thinkers have feelings and feelers have thoughts, but we are speaking of how individuals come to conclusions.)

Getting to know and practice one's preferred attitudes and functions is a major developmental task of the first half of life (up to about the age of 35, taught Jung, or up to the mid-life crisis, as we might say today, around the early forties.) During this earlier era of life, the less preferred functions and attitudes reside in the (personal) unconscious. In the second half of life, one is challenged to integrate and develop the less-preferred attitudes and functions. Thus an extrovert after early life is pushed by the Self in the second half of life to appreciate and value more introverted activities and goals. A dominant sensing person must learn to sit back and cultivate an awareness of the bigger picture (intuition); a dominant thinker must begin to appreciate the place of her own and others' values/human reactions in her way of coming to conclusions (feeling).

Awareness of type, and how it influences choices and actions, prevents a pastoral counselor from assuming that his client's seeming "stuckness" is due to perverse resistance to suggestion. Perhaps coming late to appointments points to a preferred attitude of perceiving where



schedule conveys merely a vague hint of a day's unfolding rhythm and events. A judging director might be tempted to lose patience with such seemingly insensitive, inconsiderate lateness. Or again, a chatty, extroverted client may strike an introverted counselor as superficial, whereas remembering Jung, the latter would understand that extroverts need to talk out loud to know what they are thinking. A sensing counselor may be disappointed with the sparse data about his life presented by an intuitive client, and may gently and patiently probe for more though the client may not see this process as necessary or helpful. To use an example from spiritual direction: in praying about Creation, thinkers may be awestruck by its order and harmony and feelers by God's reaching out to connect with us through our world's beauty.

These examples illustrate how pastoral counselors need to listen for nuances in their clients' reports, understand why (psychologically) they act and decide as they do, and provide questions, insights, and/or behavioral suggestions that strengthen (in the first half of life) their clients' conscious identity, but integrate unconscious attitudes and functions in the second half of life. Thus, counselors and directors can support and be assisted by the normal flow of energies in their clients' human development. To work at cross purposes with nature invites peril or, at least, frustration and failure.

5. Jung's goal of inviting the unconscious to become conscious is shared by pastoral counselors seeking to release clients from those out-of-awareness bonds that limit our freedom, and to tap into those energies from the unconscious through reverent curiosity.

This phrase, "reverent curiosity," had been used earlier to describe Jung's approach to the human (section one), and it can describe the prayerful, respectful attitude of any helping professional. One encounters the mystery of the human person, and especially her relationship with God, with the attitude Moses displayed in inspecting the Burning Bush (Ex. 3). Reverent curiosity connotes deep respect while also pointing toward questions like: "What is *really* happening between this person and others important to him?" "Beneath the words, what is the subtext?" "How can I, as a spiritual director, facilitate and foster a deeper union between God and God's servant/child/beloved?"

Concentrating only on his client's conscious ego with its thoughts, drives, goals, and decisions ignores the whole realm of the unconscious about which Jung can teach us so much. The unconscious "shows its hand"/influence through slips of the tongue, vague premonitions that

something is wrong or being ignored in a present course of action, dreams, sudden bursts of clarity and insight, and even physical symptoms and illnesses. A pastoral counselor does not need to become a trained Jungian analyst to employ Jung's many helpful clues and methods for tapping into the rich depths of the unconscious in assisting her client to gain greater self-knowledge and integration.

A first step might be the careful attending to and awareness of the hints mentioned in the next-to-last sentence. Slips of the tongue can reveal another level of emotion or tension that a client may wish consciously to ignore. Premonitions should be respected, not discounted. (The same principle applies to distractions in prayer, especially if they suggest a theme or pattern of concern. God may be working with a client's unconscious to bring something important to her notice.) Dreams, especially, focused Jung's curiosity, and their many levels of meaning can add richness to life, to relationships with God and others in one's life, and to one's overall way of being. Sudden, unexpected moments of "aha!" wisdom, like premonitions, must be deepened, explored, and developed in the therapeutic conversation, in the client's prayer about them, and through journaling. Even unexpected physical aches and pains remind us that the body has its own silent, nonverbal contribution to make to our ongoing quest for truth and healthy living/spirituality. The Self, through its marshaling of conscious and unconscious energies, seeks to release a person from inner bondage, and to move toward greater individuation, the term Jung employed to mean achieving one's most real and true identity.

6. Often during counseling sessions, dreams enter clients' conversation. Jung respected the message of dreams (so should we!), and offers many helpful clues for interpreting their content, and applying their wisdom to living.

Jung records many of his own and his clients' dreams and their interpretations in his voluminous writings. Two concise and precise essays summarizing his approach can be found in the first article in his *Modern Man in Search of a Soul* (1933) and in the first article of *Man and His Symbols* (1964). Limitations of space prevent summarizing his method, but three principles are especially useful.

Jung believed that every dream is part of the whole chain of a dreamer's history, and so can and should be interpreted in the light of all other dreams. Sometimes dreams refer to other dreams, as do repetitive dreams especially. If the dreamer doesn't get the message from a

dream, it will surely be repeated. An example from the author's dream life will illustrate this point: a recurring dream of the writer presents him hurrying to pack a suitcase and rushing to catch a train, bus, airplane, taxi, etc. He is always a bit late, and the dream shows him running to catch the departing vehicle. This dream reminds him that, once again, he has packed his schedule too full of many (admittedly good) commitments and activities. He must slow down, prayerfully discern what yeses and no's he must utter, and live more sensibly.

Secondly, unlike Freud who encouraged free association to various dream symbols (and thus to move away from the dream content), Jung practiced circumambulation, that is, "walking around" each dream symbol, describing it in detail, and unpacking its various levels of meaning as one would deal with a poem. Rather than trying to decode a dream, it must be befriended, and treated with reverent curiosity. Again as with a poem, a dream can be revisited later to discover still more implications for the life of the dreamer.

Thirdly, Jung carefully journaled his dreams and employed "active imagination." In his effort to invite the unconscious to become conscious, he would paint a dream, sculpture it in stone, even dance it. An easily teachable method of active imagination consists in writing out a dialogue with a dream figure—or even an inanimate symbol—as one would write a play. An example: a client with a complicated relationship with her mother dreamed of an early scene in which mother was scolding the dreamer-child. She had tried to reflect about the dream, but experienced only anxiety, anger, and frustration. I suggested that during her next journaling period, in the presence of the God who loves them both, she write out a conversation between her inner-child and her mother. The result was an honest exchange of views (not usually occurring in real life), apologies on both sides, and a movement toward unforced forgiveness by the client because she came to realize her mother's own concerns and sufferings. Imagination does not imply that one is a gifted artist, but merely that one employs inner speech and images to allow the unconscious to express itself. Active means that one uses one's conscious ego, with its powers of thought and logic, to interact with the hidden resources inside one's memory and inner depths.

Another method: a pastoral counselor once suggested that I bring one crayoned page to each session. She overcame my performance anxiety by urging me to use my non-dominant hand for the production. ("Who would expect a brilliant painting from any artist who used his/her non-dominant hand?") The results were extraordinary. To overcome

my initial hesitation, she allowed me time in session to do the first few pictures. These, and subsequent drawings done at home, produced a wealth of insight around the problems at hand, and led naturally to other, even more important issues.

Reading more writings of Jung and Jungians will add to pastoral counselors' expertise in dealing with dreams. After perusing Jung's two essays noted above, one might tackle his *Psychology and Religion* (1977/1938), a collection of a whole series of dreams by a young man, initially irreligious, who came to religious faith and commitment through working on his dreams with Jung. This outcome was not devised nor consciously intended by Jung, but occurred naturally through their work together.

From this experience and that of others in his practice, Jung concluded, "Among all my patients in the second half of life—that is to say, over thirty-five—there has not been one whose problem in the last resort was not that of finding a religious outlook on life (Jung, 1933, p. 229)." This single sentence summarizes Jung's tremendous respect for the importance of religion. As noted earlier, Jung was not a religious man in the conventional sense, but the whole course of his writings reveals his own struggle to discover that "religious outlook on life."

7. Pastoral counselors draw out the personal faith-histories of their clients and connect them with the Gospel story of Jesus. Similarly, Jung evoked the life-stories of his clients through the "*anamnesis*" (Greek for "the act of remembering"), and connected them with archetypal realities concretely embodied in the great symbols of world mythologies, folklore, and fairytales.

When pastoral counselors suggest prayer over a Gospel account of one of Jesus's healings (say the cure of blind Bartimaeus for a client struggling for inner freedom from a spiritual block), they are perhaps unconsciously imitating a Jungian approach. By getting in touch with the lived reality of Jesus and his compassion, they are allowing the Holy Spirit to initiate inner and outer change. Similarly, in reviewing a client's *anamnesis*, Jung would be wondering what great story was unconsciously being lived out by his client. Was he a hero on a quest, even within the mundane ordinariness of modern life? Was she a damsel in distress, unconsciously seeking her Prince Charming through a series of failed relationships?

Just as a pastoral counselor might invite interaction with the Gospel Jesus, so too might Jung use events from the Grail legend to illustrate

the victories and failures of his quester, and have him consciously imitate the actions of Parsifal. The damsel might be invited to do a bit of bibliotherapy by reading a modern story of a woman who finally grows through her relationships and eventually grows up.

Jung and Jungians read world literature voraciously so as to broaden their own inner contexts for use in interpreting the life-paths of their clients. A wonderful novelistic illustration of this process can be found in the second volume, *The Manticore* (Davies, 1990/1972), in *The Deptford Trilogy*. The manticore is an ancient figure of a man with a lion's head. In her discussions with David, her client, Dr. Joanna von Haller came naturally to this figure as symbolizing the complicated story of her analysand. Christian pastoral counselors most often employ the Gospels in their work with clients, but often a character from legend may spring to consciousness and become an adjunct-figure in interpreting the life-pattern of clients, and giving hints about a next step toward individuation.

8. In addition to the archetypes discussed above in number seven, Jung has written extensively about the psychological implications of many other archetypes. Familiarity with them would enrich what pastoral counselors can offer their clients.

A quick and easy way to enter the world of Jung's archetypes would be to read *A Guided Tour of the Collected Works of C. G. Jung* (Hopcke, 1992). Hopcke pens three or four pages on each of 40 major constructs and themes in Jung. To each chapter, he appends four sets of references: (a) "To Begin" collects sections from Jung that provide a more elementary, basic explanation of each concept; (b) "To Go Deeper" leads the reader through more specialized and technical applications of the idea; (c) "Related Works" provides parallel developments, but again from Jung himself, while (d) "Secondary Sources" connects the reader with commentary by Jung's disciples.

First in importance to Hopcke in his listing of the 40 Jungian principles is his beginning chapter on "Archetypes and the Collective Unconscious" (1992, 13–17). The archetypes discussed by Hopcke are the following: ego, shadow, *persona*, *anima/animus*, self, mother, father, *Puer*/divine child, *Kore*/the maiden, hero, wise old man, trickster, and *coniunctio*. Many more, of course, could be listed from the pages of Jung, like god, warrior/Amazon, lover, *hetaira* (Greek for woman-companion), mediumistic, totem animal, earth, spirit, etc.

What might a pastoral counselor do with this information? A wise teacher of mine once informed her audience, “Ninety percent of what I know I don’t use, and I carefully discern what to say from the remaining 10%.” Studying Jung broadens and deepens our understanding of the human person and how we function. In the author’s judgment, Jung provides the most comprehensive, accurate, and religion-friendly personality theory of all those ever constructed by psychologists or philosophers. Jung’s theoretical framework can orient and ground the work of a pastoral counselor or spiritual director as he or she encounters the mystery, human and divine, of his or her clients.

About archetypes in particular: all archetypes show up in all of us because they are the inbuilt structures of human consciousness, but typically a few are more prominent, play a greater role, and have a greater influence in each of us than do others. (This point is related to the notion, developed above in number seven, that each person today is living out one of the great mythological stories of the past.) For example, an adult male of any age or profession governed by the “father” archetype, will live life differently, pray differently, relate differently than will an “eternal youth.” A female “Amazon” will show much more assertiveness and concern about achievement at home and at work than will a “mediumistic” whose gift lies in mediating the realm of the unconscious to herself and those with whom she interacts. Sensitive therapists and spiritual directors will learn how to develop the strengths of each person’s dominant archetype(s) while challenging their excesses.

9. Jungian analysts, pastoral counselors, and spiritual directors share an important goal: to assist clients to achieve *balance* in understanding themselves, making decisions, and living out their lives and relationships.

The following citation from the Biblical wisdom book of *Sirach* captures Jung’s perspective on reality:

See now all the works of the Most High:  
 They come in pairs,  
 The one the opposite of the other.  
 The works of God are all of them good;  
 Every need when it comes He fills.  
 No cause then to say: “This is not as good as that”  
 For each shows its worth at the proper time.  
 So now with full joy of heart proclaim  
 And bless the name of the Holy One.

How beautiful are all His works,  
 Even to the spark and the fleeting vision!  
 The universe lives and abides forever;  
 To meet each need, each creature is preserved.  
 All of them differ, one from the other,  
 Yet none of them has he made in vain.  
 For each in turn, as it comes, is good;  
 Can one ever see enough of their splendor?  
 (*Sirach* 33:15; 39:33–35; 42:23–25.)

*Sirach* and Jung both draw our attention to balanced polarities in our universe: “They come in pairs, the one the opposite of the other”: ego and unconscious, personal and collective unconscious, *persona* and shadow, biological gender and *anima/animus*, extraversion and introversion, judging and perceiving, sensing and intuiting, thinking and feeling, etc. These works of God are “all of them good” and “none of them has He made in vain.” Reference has already been made (number one above) to Jung’s optimistic perspective. (In this, Jung’s outlook harmonizes with that of Ignatius of Loyola as sketched in the “Principle and Foundation” and the “Contemplation to Attain the Love of God” in the *Spiritual Exercises*.) Even the seemingly sinister name of “shadow” connotes both positive and negative energies: the shadow holds undeveloped potentialities for good in our future while also being the repository of our immoral, socially unacceptable side. (Thus it would be inaccurate to equate the shadow with Freud’s *id*, a center for all of our repressed sexual and aggressive *libido*.) Positive shadow projection can be observed in the (unconscious) imitation of older siblings by their younger brothers/sisters, due to idealization. Jung attributed the Germans’ persecution of the Jews to the projection of their (collective) negative shadow upon the whole Hebrew people. (To return to an earlier point, this is one reason why the author doubts the characterization of Jung as pro-Nazi and anti-Semitic.)

Similarly, the *anima/animus* provides the source of both positive and negative projections of idealized male/female images. Falling in love results in part from the idealization of the beloved through projection of the lovers’ positive *anima/animus* while, alas, later divorce gets a contribution from the projections of “witch” and “demon” by the (former) lovers’ same *anima/animus*, now reacting negatively.

The psyche most often seeks to balance some of the selfish (NOT true “Self”) drives and decisions of the ego through compensation via unconscious input in the form of slips of the tongue, dreams (*Sirach*’s

“fleeting vision”), and physical ailments. Examples of these have been discussed above, and here is another from the author: a usually physically healthy person, he rarely catches colds—only when, once again, he packs his date-book too fully and is forced to rest by the protesting but wise body! As a general principle, the unconscious can be characterized as working most frequently through sending compensatory messages. Too, the Holy Spirit can be described as communicating to our own spirits through the unconscious and its compensations. Pastoral counselors want to be attuned to and support these Divine and human nudges. Working with his client toward balance, a helper’s efforts can be elucidated by the perspective of Jung, energized by the unconscious, and empowered by the Holy Spirit.

10. A truly effective 21st century pastoral counselor employs an holistic approach, incorporating bodily, mental, spiritual, and social realities, and studies the disciplines that stretch her knowledge and competence. Jung’s psycho-spirituality can offer a rich contribution to her ministry.

Many of our contemporaries breezily proclaim, “Though I’m not really religious, I *am* spiritual.” Whether or not this phrase is employed by a client, it points to a dichotomy in American culture felt between “organized” religion and “spiritual” practices that may find their source in traditional religions or in New Age teachings. Though clients may not embrace New Age ideology, they breathe it through the media and may unconsciously participate in its spirit.

Jung himself expressed profound ambivalence throughout his life toward organized religion. The son of a Swiss Reformed pastor, and the nephew of four other ministers, Jung experienced religion “up close and personal!” He saved participation in religious ritual for life’s passages and not much more, and claimed that too often official religions deprive persons of genuine religious experience, that is, an actual and deep encounter with the divine. How many of our clients might say the same?

Jung would probably subscribe to the opening sentence of this section. For him, spiritual would mean an investigation of the broadest, deepest human values, a committed effort to live by them, and an interaction with one’s “God image.” (As a psychologist, Jung often repeated that because he was not a theologian, he preferred to stick to the observable data of psychology and so talk about God image instead of God.) Jung knew the power and reality of one’s God image. Because a God



image has real effects, it points to a real cause, an actually existent God. Thomas Aquinas would be pleased with this modern adaptation of his “third way” for demonstrating the existence of God. Whether or not the real cause behind the really effective God image was/is to be identified with the deity of conventional Christianity, Jung refused to speculate and left this argument to the theologians.

Still, by means of analysis, dream work, and active imagination, Jung encouraged his patients to get acquainted with *their* God images. He wanted them to learn how these God images impacted their lives, and to make choices about modifying their images in the light of lived experience, and the integration of the conscious and unconscious dimensions of their psyches. Do not pastoral counselors struggle toward the same goals with their clients?

Shortly before his death, Jung was interviewed by John Freeman of the BBC and was asked, “Dr. Jung, do you believe in God?” Puffing vigorously on his ever-present pipe, Jung responded, “Believe? Believe? No! I don’t believe; I *know!*”

This knowledge doubtless derived from his work with his patients, and his lifelong-developing religious outlook on life. Unlike many other mental health professionals, more influenced by Freud’s skepticism, Jung valued religion and spirituality not as a crutch but as a person’s noblest and deepest grounding. Jung’s split from his older colleague, Freud, was in part based on their disagreement over religion. Freud regarded religion as an illusion that humans must outgrow along with other superstitions. Yet for Jung, religious experience provided “symbols of transformation” (the title of a 1913 volume that precipitated his break with Freud) that aid the human drive toward individuation and true wholeness. Pastoral counselors view religious experience similarly.

Another commentator might suggest points other than these 10 to share with colleagues. As Peter said to the cripple, however, “what I have, I give you” (Acts 3:6). Hopefully, these reflections have stimulated in their readers an understanding of, respect for, and interest in the writings of Jung to encourage deeper familiarity with this great student of human behavior, and a beginner’s ability to apply his perspective and use some of his techniques in ministry.

## REFERENCES

- Bair, D. (2003). *Jung: A biography*. New York: Little, Brown & Company.
- Briggs Myers, I. (1980). *Gifts differing*. Palo Alto, CA: Consulting Psychologists Press, Inc.
- Cheston, S. E. & Wicks, R. J. (1993). *Essentials for chaplains*. New York: Paulist Press.
- Davies, R. (1983/1972). *The manticore: Vol. 2. The deptford trilogy*. New York: Penguin.
- Fordham, F. (1987). *An introduction to Jung's psychology*. New York: Viking Penguin.
- Hopcke, R. H. (1992). *A guided tour of the collected works of C. G. Jung*. Boston, MA: Shambhala.
- Jung, C. G. (1933). *Modern man in search of a soul*. New York: Harcourt, Brace, Jovanovich.
- Jung, C. G. (1963). *Memories, dreams, reflections*. New York: Random House.
- Jung, C. G. (1964). *Man and his symbols*. Garden City, NY: Doubleday & Company, Inc.
- Jung, C. G. (1977/1938). *Psychology and religion*. New Haven, CT: Yale University Press.
- Jung, C. G. (1979–1983). *The collected works of C. G. Jung* (Vols. 1–20). Princeton, NJ: Princeton University Press.
- Sneck, W. J. (1993). Guilt and shame. In S. E. Cheston & R. J. Wicks (Eds.), *Essentials for chaplains*. New York: Paulist Press.
- Wehr, G. (1989). *An illustrated biography of C. G. Jung*. Boston, MA: Shambhala.



## THE RELATIONS AMONG SPIRITUALITY AND RELIGIOSITY AND AXIS II FUNCTIONING IN TWO COLLEGE SAMPLES

*Ralph L. Piedmont, Catherine J. Hassinger, Janelle Rhorer,  
Martin F. Sherman, Nancy C. Sherman, and Joseph E. G. Williams\**

### ABSTRACT

Although there is a large literature linking religious and spiritual constructs to a wide range of mental and physical health outcomes, much less work has been done examining how the numinous relates to psychopathology, especially with regards to characterological impairment. The purpose of this report was twofold: (a) to examine how religious sentiments and spiritual motivations link with Axis II constructs, and (b) to evaluate the causal direction of that relationship. Two college student samples (a total of 591 women and 194 men) completed the *Schedule for Nonadaptive and Adaptive Personality* and the *Structured Clinical Interview for DSM-IV Disorders Questionnaire*, measures of Axis II characteristics. Scores on these instruments were related to the numinous scales of the *Assessment for Spirituality and Religious Sentiments*. It was found that spirituality was independent of the Axis II constructs while scores on the Religious Crisis scale evidenced significant overlap, even after controlling for personality. Structural Equation Modeling indicated that the model that posited Religious Crisis as a causal predictor of Axis II functioning was superior to models that hypothesized Religious Crisis as being caused by personality and psychopathology. The implications of these findings were discussed.

There is a large and growing body of literature examining the relations between spiritual and religious variables (numinous constructs) and a wide range of mental and physical health outcomes. The results of such investigations are creating a growing recognition of the positive value of numinous variables on psychosocial flourishing. Little research, however, has been devoted to an examination of spirituality's relation to psychological dysfunction, especially the more pervasive and chronic disorders associated with Axis II pathology. Given that spirituality has been shown to be independent of personality (e.g., Piedmont, 2001),

---

\* *Author Note:* Correspondence concerning this report should be addressed to Ralph L. Piedmont, Ph.D., Department of Pastoral Counseling, Loyola College in Maryland, 8890 McGaw Road, Suite 380, Columbia, MD 21045, or via e-mail at rpiedmont@loyola.edu.

should spirituality have any relation with the personality disorders? If so, what aspects of spirituality are related and in what ways? The goal of this study was to shed light on if and how spiritual and religious constructs are related to the chronic and pervasive character disorders. However, it is first necessary to define religiosity and spirituality.

#### DEFINING AND MEASURING RELIGIOSITY AND SPIRITUALITY

Despite widespread usage, the terms “spirituality” and “religiosity” do not have a universally accepted definition (e.g., Miller & Thoresen, 2003). Scott (cited in Hill et al., 2000) identified 31 different definitions of religiousness and 40 for spirituality, which she classified into nine different content areas (e.g., experiences of connectedness, systems of thought or beliefs, and capacities for transcendence). When the same term is used to define different concepts, clarity of understanding cannot be reached. Because spirituality and religiosity are seen by many as being conceptually overlapping, in that both involve a search for the sacred (e.g., Hill & Pargament, 2003), some researchers prefer to interpret these two dimensions as being redundant (e.g., Zinnbauer, Pargament, & Scott, 1999). Nonetheless, there are those who emphasize the distinctiveness of these two constructs (e.g., Piedmont, 2001; Piedmont & Leach, 2002). The conceptual confusion surrounding these two terms is reflected in numerous studies where multiple measures are glued together into a single instrument in an effort to ensure that both constructs are included. Seeman, Dubin, and Seeman (2003) have explicitly called for future research to “disaggregate” these two terms so that they may be differentially related to outcomes of interest.

For the purposes of this study, spirituality is viewed as an attribute of an individual (much like a personality trait) whereas religiosity is understood as encompassing more of the beliefs, rituals, and practices associated with an institution (Miller & Thoresen, 1999). Religiosity is concerned with how one’s experience of a transcendent being is shaped by, and expressed through, a community or social organization. Spirituality, on the other hand, is most concerned with one’s personal relationships to larger, transcendent realities, such as God or the Universe.

The *Assessment of Spirituality and Religious Sentiments* (ASPIRES; Piedmont, 2004a) was developed to provide an assessment tool that captured these constructs in a manner that appreciated these differences. The ASPIRES contains measures of both of these constructs.

The Spiritual Transcendence Scale (STS) operationalized spirituality from a trait perspective (see Piedmont, 2001). Spirituality was defined as an intrinsic motivation of individuals to create a broad sense of personal meaning within an eschatological context. In other words, knowing that we are going to die, spirituality represents our efforts to create meaning and purpose for our lives. This need for meaning is seen as an intrinsic, universal human capacity (see Piedmont & Leach, 2002). Religiosity, on the other hand, was viewed as a “sentiment,” a learned, emotional tendency that develops out of social traditions and educational experiences. Sentiments are not innate genotypic qualities (like traits), and therefore their expression can vary across contexts and are more amenable to change and modification. The ASPIRES has two measures of religiosity: the Religious Involvement Scale, which assesses the degree to which an individual is involved in the rituals and practices of a specific faith tradition; and the Religious Crisis Scale, which examines the extent to which “a person may be experiencing problems, difficulties or conflicts with the God of their understanding and/or their faith community” (Piedmont, 2004a, p. 4).

Researchers using the ASPIRES have accumulated a large amount of validity evidence (Piedmont, 2001; 2004a). The STS shows structural and predictive validity that generalizes across denominations and cultures (Goodman, Britton, Shama-Davis, & Jencius, 2005; Piedmont, *in press*; Piedmont & Leach, 2002). The scale was developed within the context of the Five-Factor Model of Personality (FFM) in an effort to capture aspects of spirituality that were nonredundant with these established personality domains (Piedmont, 2001). As a result, the STS has been used to predict a wide array of psychosocially salient outcomes (e.g., attitudes towards sexuality, interpersonal style, well-being, psychological maturity) even after the predictive effects of the FFM were removed (Piedmont, 2006). Finally, research has shown that the STS’s unidimensional conceptualization of spirituality seems well founded (e.g., Piedmont, Mapa, & Williams, 2006). The Religiosity Scale contains items that are considered the standard for assessing religious involvement (see Piedmont, 2004a; Piedmont et al., 2006) and the scale has been a useful predictor of psychosocial outcomes (Piedmont, 2006). The Religious Crisis Scale captures aspects of religious community that are nonredundant with the other two ASPIRES scales (Piedmont et al., 2006), yet seems to capture aspects of distress in one’s relationship with the Transcendent. This scale reflects an attitudinal perception of the Transcendent, and one’s religious community, as being hostile and

rejecting. Like the other scales, Religious Crisis assesses aspects of the individual independent of personality and therefore reflects a rather unique perspective on intra- and interpersonal conflict. Thus the measures that form the heart of this research have an extensive empirical pedigree few other scales have (see Hill & Hood, 1999).

#### RELATIONS BETWEEN THE NUMINOUS AND DISTRESS

There is a rich and extensive network of research studies documenting the relation between religious and spiritual activity and enhanced mental, physical, and social functioning. Thoresen (1999) provided an overview of these findings and noted that those who were involved religiously and spiritually had: (a) higher levels of well-being and life satisfaction; (b) lower rates of depressive symptoms and suicide; (c) lower rates of divorce and greater levels of marital satisfaction; and (d) lower rates of alcohol and drug abuse. Piedmont (2004b) noted that levels of spirituality were predictive of therapeutic outcome in an outpatient substance abuse treatment program. Seeman et al. (2003) provided a critical review of the spiritual-religious/health linkage literature and found substantive support for concluding that involvement with the numinous is significantly linked to positive health-related physiological processes. Powell et al. (2003) noted in their review of the literature that among healthy individuals involvement in religious services provided a consistent, prospective reduction in risk for mortality. In their meta-analytic study, Sawatzky, Ratner, and Chiu (2005) noted a moderately strong relation ( $r = .34$ ) between spirituality and Quality of Life. Finally, Piedmont (2006) demonstrated cross-culturally that spirituality and religiosity were positively related to well-being and psychological growth, even after controlling for the predictive effects of personality. Taken as a whole, the extant literature seems to convey a rather consistent effect for religious and spiritual constructs with general adaptive aspects of functioning.

The majority of research with numinous constructs has focused on general factors of well-being and life satisfaction. When research includes clinical dimensions, they are mostly affective in nature (e.g., depression, anxiety, hopelessness; e.g., Wink, Killon, & Larsen, 2005). Findings here support the positive relations between numinous constructs and affective dysphoria. In an epidemiologic survey of Canadians, Baetz, Griffin, Bowen, Koenig, and Maroux (2004) showed that

religious involvement was related negatively to depression. Wink et al. (2005), using a longitudinal community-based sample of adults born in the 1920s again indicated the value of religious involvement (as opposed to spirituality) for buffering the effects of depression. MacDonald and Holland (2003) examined the relations between measures of spirituality and religious involvement with the MMPI-2 scales. In general, involvement in religious activities and higher levels of spirituality were associated with lower levels of pathology. However, these studies did not attempt to examine causal hypotheses regarding how religious variables may affect or be affected by these clinical dimensions. Interestingly, both studies found that religious involvement was a better predictor than spirituality.

Very little research has been done examining how explicit psychopathologic variables (e.g., symptom dimensions, diagnostic criteria) are related to spiritual and religious constructs. Compton and Furman (2005) examined the relations between symptom scores and spiritual well-being in a sample of African-American patients with a first-episode schizophrenic disorder. Consistent with the literature for nonclinical samples, there was a negative correlation between these two sets of constructs. Carrico et al. (2006) applied a path model to examine the role of spirituality on depressive symptoms in HIV-positive persons. They found that a model specifying spirituality as a causal input (albeit an indirect effect) into the experience of depressive symptoms fit the data well. In contrast to the above research, both of these studies found spirituality negatively related to symptom experiences. Lavin (2001) employed a cross-lagged panel design to demonstrate in a sample of adults that negative images of God (i.e., high on Neuroticism and low on Agreeableness) led to higher self-ratings of symptomological distress over time. Although these studies provide support for the causal precedence of numinous constructs, it remains yet to determine the power of religious involvement and spirituality relative to each other in predicting symptom experience. Are both constructs equally related to psychopathology, or does one of them account for the majority of variance? This study will examine this issue by comparing the predictive contributions of each variable controlling for the other in explaining Axis II functioning.

Another feature of the research literature is that it treats numinous constructs as “inputs” into the psychic system, as implicit causal variables that can affect the course of symptom experience and expression (e.g., Compton & Furman, 2005). However, Hathaway (2003) has argued that



psychopathology can function to create clinically significant religious impairment. The onset of mental illness can impede a person's ability to reach religious and spiritual goals or experience religious states. This perspective views religion and spirituality as domains of general adaptation that can be adversely affected by psychopathology. The numinous here is seen as an "output" from the psychic system, an endogenous quality that is impacted by situational and characterological impairment. The output approach raises the larger, important conceptual issue about the causal nature of numinous constructs (see Piedmont, 2005, for a broader discussion of this issue). Are they aspects of functioning that can influence psychic stability and therefore be used as resources for clinical treatment? Are numinous processes sufficiently independent that they can develop their own unique aspects of pathology (e.g., Wagener & Malony, 2006)? Or, are they aspects of functioning that can be influenced by other internal factors (e.g., Hathaway, 2003; Rhi, 2001)?

Thus, another important question concerns the causal role of spirituality on mental illness. Can disturbances in our relationship with the Transcendent create intrapsychic conflicts? Does the development of mental illness undermine spiritual and religious strivings? Or are both processes occurring? Answers to these questions carry important conceptual implications for understanding the nature of the numinous and its role in the psychic system. Using Structural Equation Modeling (SEM), this study evaluated competing models of causal direction in an effort to provide data that can help answer these questions.

A final issue addressed by this study concerns Axis II pathology. As noted above, little research has been devoted to an examination of numinous constructs in the context of explicit psychopathological constructs. This is especially true regarding Axis II functioning. We have been unable to find any research that links characterological impairment to numinous functioning. Thus, this study represents a first look at how spiritual and religious sentiment scales relate to Axis II dynamics. Do these two sets of numinous variables have similar or different relations? Are these associations generalizable over different measures of Axis II functioning? Using two samples of college students and two different measures of personality pathology, this study aimed to address the following questions:

1. Would religious and spiritual constructs correlate with Axis II constructs, even after the controlling for the effects of personality?
2. Would both dimensions of the numinous (religious and spiritual

- constructs) be related equally to Axis II constructs or is one more predictive?
3. Are the numinous constructs better construed as causally predictive of characterological functioning (Axis II) or are they better conceived as being dependent upon characterological functioning factors?

## METHODS

### *Participants*

*Sample 1:* Participants included 443 students from a Midwestern state university who were aged 17 to 29 years (mean age of 18.8 yrs). Approximately 73% of the participants were female, and concerning ethnicity, 87% were Caucasian, 8% were African-American, and 3% were Hispanic. Asian-Pacific Islander and "Other" each accounted for 1% each of the participants, and less than 1% indicated an ethnicity of Middle Eastern. All participants completed informed consent forms and received class credit for participation in the study.

*Sample 2:* Participants consisted of 342 student volunteers from a Midwestern state university. The age of the participants ranged from 18 to 34 years (mean age of 18.9 years). Females comprised the bulk of survey respondents at 78.4%. Ethnicity revealed that 95% of survey respondents were Caucasian, 2% were Asian, 2% were African-American, and 1% were Hispanic. Three participants (.9%) described their race as "Other." All participants completed informed consent forms and received class credit for participation in the study.

### *Measures*

*Assessment of Spirituality and Religious Sentiments (ASPIRES):* Developed by Piedmont (2004a), the ASPIRES measures two broad numinous dimensions. The first is Religious Sentiments, which examines the extent to which an individual is involved in and committed to the religious practices outlined by his or her faith tradition. There are two scales in this domain: the Religiosity Index, an 8-item scale that queries the extent to which the person prays, reads religious literature, attends services, and values his or her religious beliefs. Answers to these questions are provided on Likert-type scales of various formats. The second scale is Religious Crisis, a 4-item measure examining the extent to which an individual feels isolated from God and his or her

faith community. Responses are made on a 5-point, Likert-type scale ranging from 1 (*strongly agree*) to 5 (*strongly disagree*). The second dimension measured by the ASPIRES is Spiritual Transcendence (ST). ST represents a motivational construct that reflects an individual's efforts to create a broad sense of personal meaning for his or her life. ST is a universal capacity to stand outside of one's own immediate existence and to view life from a broader, more integrated whole. This 23-item scale contains three facet scales: Prayer Fulfillment (the ability to feel a positive connection to some larger reality), Universality (the belief in a larger meaning and purpose to life), and Connectedness (feelings of belonging and responsibility to a larger human reality that cuts across generations and groups). Piedmont (2004a) provides psychometric data on the scale with alpha reliabilities ranging between .89 for the total ST score and to .89 and .75 for the Religiosity Index and Religious Crisis scales, respectively. This measure was completed by all participants.

*Bipolar Adjective Rating Scale (BARS)*: Developed and validated by McCrae and Costa (1985, 1987), this 80-item scale is designed to capture the Five-Factor Model personality domains (FFM) of adult personality, namely, Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. The responses to the scale have been shown to be reliable and structurally valid with college students (Piedmont, 1995). Responses are measured on a 1- to 7-point Likert-type scale, and FFM domain scores are found by summing the responses to items for each domain. This scale was completed by all participants.

*Schedule for Nonadaptive and Adaptive Personality (SNAP)*: Developed by Clark (1993), this self-report instrument contains 375 true/false items which are designed to assess trait dimensions important in the domain of personality disorders. It includes 13 diagnostic scales that reflect the Axis II disorders: paranoid, schizoid, schizotypal, antisocial, borderline, histrionic, narcissistic, avoidant, dependent, obsessive-compulsive, passive-aggressive, sadistic, and self-defeating. It also includes 15 temperament scales that assess both traits (mistrust, manipulativeness, aggression, self-harm, eccentric perceptions, dependency, exhibitionism, entitlement, detachment, impulsivity, propriety, and workaholism) and three temperaments (negative temperament, positive temperament, and disinhibition). Alpha reliabilities for responses to the trait and temperament scales in college students range from .77 for workaholism to .90 for the negative temperament domain (median = .81). For the diagnostic scales, alphas for college students range from .53 for obsessive-compulsive to .82 for antisocial (median = .72). Sample 1 completed this scale.

*Structured Clinical Interview for DSM-IV Personality Disorders Questionnaire (SCID-I/P)*: Developed by First, Gibbon, Spitzer, Williams, and Benjamin (1997), this scale contains items that are the diagnostic criteria for the 12 different Axis II categories. Of the 133 items, 118 are responded to on a Likert-type scale ranging from 1 (*strongly agree*) to 5 (*strongly disagree*). The remaining 15 items are responded to on a simple Yes/No scale. The one addition we made to this instrument concerned the Antisocial Personality Disorder subscale. The screener questionnaire uses only items that pertain to the respondent's life prior to age 15 (the 15 Yes/No items). However, we have found that this manner of presenting the Antisocial items may not be psychometrically useful (Piedmont & Sherman, 1998). As such, we added additional DSM-IV diagnostic items that pertain to adult behavior as well. Thus, there are two Antisocial subscales used in this study, one that focused on behavior prior to age 15 (and used the Yes/No format), and another that focused on adult behavior (and used a Likert-type format). Piedmont, M. Sherman, N. Sherman, and Williams (2003) have found this instrument to be reliable and valid in both college student and adult clinical samples. Reliabilities for the 13 scales ranged (among college students) from .53 (Obsessive-Compulsive) to .86 (Borderline), with a mean alpha of .74. Sample 2 completed this scale.

### *Procedure*

All participants completed materials in groups of between 5 and 25. Materials for this study were part of a larger project. The order in which scales were presented was randomized to control for order effects. Participants were volunteers and received course credit for their participation.

## RESULTS

Table 1 presents descriptive information for both samples on the personality and spirituality scales. As can be seen, participants scored in the average range (T-scores between 45 and 55) on all scales indicating that the two samples are comparable and relatively representative.

In order to determine whether the ASPIRES scales were related to the Axis II constructs, a canonical correlation analysis (CCA) was performed using data from both samples. For Sample 1, the five ASPIRES scales (not including the total Spiritual Transcendence score) were linked with

Table 1. *Descriptive Statistics on the BARS and ASPIRES Scales for All Subjects*

Scale	Study 1 (N = 443)			Study 2 (N = 342)		
	Mean	SD	$\alpha$	Mean	SD	$\alpha$
<i>Personality Scales</i>						
Neuroticism	49	8.69	.74	49	8.59	.73
Extraversion	50	9.20	.77	51	8.74	.76
Openness	47	10.22	.70	48	10.24	.66
Agreeableness	50	7.92	.78	51	8.48	.71
Conscientiousness	47	10.76	.82	47	9.98	.80
<i>ASPIRES Scales</i>						
Prayer Fulfillment	50	9.94	.93	49	9.64	.93
Universality	48	9.58	.74	47	10.48	.70
Connectedness	47	10.46	.40	47	9.23	.56
Total Spiritual Transcendence	52	10.44	.89	51	10.31	.89
Religiosity Scale	51	10.11	.87	51	10.52	.85
Religious Crisis Scale	50	10.95	.79	50	9.97	.82

*Note.* Scores are presented as T-scores with a Mean of 50 and SD of 10, based on normative data (Piedmont, 1995 for BARS, Piedmont, 2004 for ASPIRES).

the 13 Axis II scales from the SNAP. A statistically significant overall effect is found, Wilks lambda = .68, multivariate  $F(65, 2064.40) = 2.68$ ,  $p < .001$ . This results in an overall canonical correlation between the two sets of scores of  $R_c = .56$ . In order to interpret these relations, zero-order and partial correlations between the ASPIRES scales and the Axis II scales of the SNAP are presented in Table 2. A number of statistically significant associations emerge, even after controlling for the predictive effects of personality. Two important trends emerge in these data. First, in examining the Spiritual Transcendence Scales and the Religiosity Index, it is clear that the magnitudes of these associations are low (all zero-order values are below .20). The number of associations is also somewhat constricted, with only 25 of the 65 correlations (38%) statistically significant. This number decreases to 14% (9/65) when controlling for personality. Spirituality seems to have a very circumscribed relation with Axis II constructs. Where there is a relation, though, spirituality is mostly negatively related, suggesting that spirituality is not associated with maladaptive traits. Exceptions are with

Table 2. *Strength of the Relationship Between the SNAP Axis II Measures and Spirituality Zero-Order Correlations and Partial Correlations Controlling for Personality (in parentheses)*

SNAP Scale	ASPIRES Scale					
	Prayer Fulfillment	Universality	Connected-ness	Total Score	Religiosity	Religious Crisis
Paranoid	-.10*	-.08	.02	-.09	-.08	.24***
	(-.05)	(-.02)	(.06)	(-.02)	(-.02)	(.18)***
Schizoid	-.13**	-.14**	-.11*	-.16***	-.07	.11*
	(-.08)	(-.12)*	(-.04)	(-.10)*	(-.03)	(.13)**
Schizotypal	-.09	-.05	.06	-.06	-.06	.25***
	(-.03)	(-.02)	(.10)*	(.00)	(-.01)	(.20)***
Antisocial	-.12*	-.09	-.10*	-.14**	-.12*	.20***
	(-.07)	(-.05)	(-.08)	(-.09)	(-.07)	(.13)**
Borderline	-.15**	-.09	.05	-.12*	-.13**	.24***
	(-.09)	(-.05)	(.08)	(-.06)	(-.08)	(.15)**
Histrionic	.08	.11*	.12*	.13**	.05	.04
	(.08)	(.11)*	(.07)	(.11)*	(.04)	(-.02)
Narcissistic	.04	.11*	.08	.08	.04	.07
	(.07)	(.12)*	(.08)	(.10)*	(.07)	(.01)
Avoidant	-.13**	-.08	-.00	-.12*	-.09	.10*
	(-.11)*	(-.05)	(.04)	(-.08)	(-.06)	(.09)
Dependent	.01	.01	.08	.03	-.07	.11*
	(.03)	(.03)	(.07)	(.05)	(-.05)	(.04)
Obsessive-Compulsive	-.00	.02	.03	.01	-.03	.12*
	(.04)	(.04)	(.05)	(.06)	(.00)	(.07)
Passive-Aggressive	-.12*	-.08	.04	-.10*	-.18***	.16***
	(-.09)	(-.04)	(.05)	(-.06)	(-.16)**	(.11)*
Sadistic	-.06	-.12*	-.03	-.09	.01	.12*
	(-.02)	(-.07)	(-.02)	(-.04)	(.05)	(.07)
Self-Defeating	-.16**	-.09	.05	-.12*	-.12**	.27***
	(-.11)*	(-.04)	(.08)	(-.07)	(-.08)	(.21)***

$N = 443$ . \* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ .

histrionic and narcissistic traits, where there are positive associations. The second observation concerns the Religious Crisis scale, which has stronger and more pervasive associations with these Axis II constructs: 11 of 13 correlations are statistically significant (85%), even after controlling for personality (7/13, or 54% are statistically significant).

In order to examine the generalizability of these findings across samples and instruments, a similar set of analyses is conducted with Sample 2 and the SCID-IIP as the measure of Axis II constructs. The CCA between the ASPIRES scales and the SCID-IIP scales indicates

another overall statistically significant effect, Wilks lambda = .55, multivariate  $F(65, 1554.01) = 3.28, p < .001$ . This indicates a strong overall canonical correlation of  $R_c = .67$  between the two sets of scores. In order to interpret these relations, Table 3 presents the zero-order and partial correlations. As can be seen, there are numerous statistically significant correlations between the ASPIRES scales and the measures of psychopathology: 41 of the 78 correlations (53%) are statistically significant. The pattern of correlations is similar to those in Table 2: 18 of the 28 comparable zero-order correlations are replicated here. As noted in Table 2, Religious Crisis was statistically significantly positively related with all measures of psychopathology; the remaining ASPIRES scales were all negatively correlated, even after controlling for personality. Thus, measures of spirituality and religious sentiments appear to have low to moderate associations with psychopathology, and these relations are not mediated by personality.

#### *Regression Analyses*

In order to determine the relative contribution of the spirituality and religious sentiment scales to predicting Axis II functioning, hierarchical multiple regression analyses were conducted within each sample. The dependent variable in these analyses was a composite index of the Axis II scales. This composite was created by submitting the SNAP and SCID-IIP scales separately to a principal components analysis and extracting a single factor. This factor represented the overlapping variance among all the scales. For the SNAP, the Axis II scales loaded from .33 (for histrionic) to .83 (for borderline) on this single factor. For the SCID-IIP, the scales loaded from .34 for the Antisocial scale (adolescent) to .83 for the Passive-Aggressive scale. Thus the individual scales from each Axis II instrument loaded significantly on their respective dimension.

On the first step of the regression analyses, the FFM personality domains were entered. On step 2, using a forward entry procedure, the three STS scales and two religious sentiments scales were entered. With regards to the SNAP scale, the FFM dimensions explained a significant amount of the variance ( $R^2 = .18, F[5,437] = 18.98, p < .001$ ). The ASPIRES scales added significantly to the explained variance over personality ( $\Delta R^2 = .03$ , partial  $F[1,436] = 13.48, p < .001$ ). An examination of the beta weights shows only the Religious Crisis ( $\beta = .16, t[436] = 3.67, p < .001$ ) scale to be positively related to overall

Table 3. *Strength of the Relationship Between the SCID and Spirituality Showing Both Zero-Order Correlations and Partial Correlations Controlling for Personality (in parentheses)*

SNAP Scale	ASPIRES Scale					
	Prayer Fulfillment	Universality	Connectedness	Total Spiritual Transcendence	Religiosity	Religious Crisis
Paranoid	-.15** (-.05)	-.15** (-.07)	-.03 (.04)	-.15** (-.04)	-.19*** (-.07)	.28*** (.16)**
Schizoid	-.06 (-.01)	-.06 (-.03)	-.17** (-.13)*	-.10 (-.05)	-.01 (.03)	.19*** (.15)**
Schizotypal	.10 (.16)**	.12* (.15)**	.02 (.04)	.11* (.16)**	.02 (.08)	.22*** (.15)**
Antisocial-Adult	-.21*** (-.15)**	-.17** (-.11)*	-.08 (-.02)	-.21*** (-.14)**	-.31*** (-.25)***	.28*** (.21)***
Antisocial-Teen	.14* (.10)	.14** (.10)	.03 (-.01)	.15** (.10)	.19** (.15)**	-.07 (-.03)
Borderline	-.17*** (-.11)	-.10 (-.06)	-.02 (.02)	-.15** (-.08)	-.24*** (-.17)**	.35*** (.26)**
Histrionic	.01 (.04)	.02 (.07)	-.01 (.01)	.01 (-.06)	-.07 (-.02)	.15** (.13)*
Narcissistic	-.07 (.01)	-.09 (-.01)	-.08 (-.04)	-.09 (-.01)	-.17** (-.09)	.25*** (.16)**
Avoidant	-.14* (-.11)*	-.10 (-.12)*	-.08 (-.10)	-.14** (-.14)*	-.12* (-.09)	.23*** (.16)**
Dependent	-.06 (-.02)	-.06 (-.05)	.00 (.00)	-.06 (-.03)	-.07 (-.02)	.15** (.07)
Obsessive-Compulsive	.13* (.18)***	.06 (.11)*	.04 (.03)	.11* (.16)**	.17** (.24)***	.05 (.00)
Passive-Aggressive	-.09 (.01)	-.09 (-.01)	-.04 (.00)	-.10 (.01)	-.15** (-.03)	.32*** (.22)***
Depressive	-.17** (-.10)	-.15** (-.14)*	-.10 (-.09)	-.19*** (-.14)**	-.18** (-.12)	.33*** (.23)***

$N = 342$ . \* $p \leq .05$ ; \*\* $p \leq .01$ ; \*\*\* $p \leq .001$ .

Axis II functioning. Concerning the SCID-IIP scales, again personality explained a significant amount of the variance in the composite ( $R^2 = .30$ ,  $F[5,340] = 28.40$ ,  $p < .001$ ). The ASPIRES scales contribute an additional 5% of the predicted variance over personality ( $\Delta R^2 = .05$ , partial  $F[1,339] = 24.51$ ,  $p < .001$ ). An inspection of the beta weights shows that only the Religious Crisis scale is related to Axis II functioning ( $\beta = .23$ ,  $t[339] = 4.95$ ,  $p < .001$ ).



*Structural Equation Models*

The next phase of analysis concerns the causal relations between the numinous scales and Axis II pathology. Figure 1 presents the three models of interest. Model 1 posits both personality and all five ASPIRES scales as causal predictors of Axis II functioning. Given the multiple regression results, where the STS scales were not significant predictors, it is expected that this model will not fit the data well. As such, it is anticipated that the pathway from the Spirituality dimension to the Axis II dimension will be nonsignificant. Model 2 is similar in nature to Model 1, except it posits that the pathway from Religious Sentiments (this latent dimension is defined by the Religious Involvement and Religious Crisis scales) will have a significant causal impact on Axis II functioning. The pathway from Personality to Axis II is also expected to be significant. This model is expected to provide the best fit of all three models. Finally, Model 3 reverses the order of causality. It will examine the extent to which Religious Sentiments are a by-product of both personality and levels of psychopathology.

Table 4 presents the results of these analyses for both measures of Axis II functioning.<sup>1</sup> There are three points of interest here. First, in examining the results of Model 1, pathways from the Spirituality dimension to Axis II were nonsignificant with both Axis II measures (SNAP,  $\lambda = -.06$ ,  $t[179] = 1.26$ ,  $p = \text{ns}$ ; SCID-IIP,  $\lambda = -.03$ ,  $t[198] = -.53$ ,  $p = \text{ns}$ ). Consistent with the regression results, the STS scales do not provide any predictive power regarding Axis II functioning. Including them in this prediction model only served to compromise its predictive power. Second, when only the two Religious Sentiments scales are used, a better model fit is evidenced. The pathways from Religious Sentiments to Axis II are significant using both measures of functioning. The Akaike Information Criterion (AIC) is a measure of model fit that can be used to select among competing nonhierarchical models (as are these three models being tested here). The model with the *smallest* value is chosen as the one most likely to be replicated. This is the model with relatively better fit and fewer parameters compared with competing models. The AIC value for Model 2 is the smallest of the three, indicating that the data fit best the model where the direc-

---

<sup>1</sup> The covariance matrix used for these analyses is available upon request from the first author.

Table 4. *Comparison of Model Fits for Various Structural Equation Models*

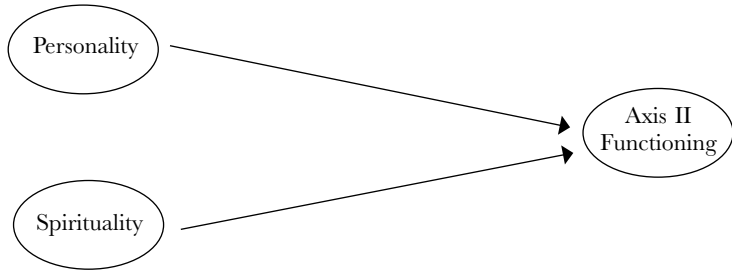
Model #	Model	df	X <sup>2</sup>	RMSEA	SRMR	AI
<i>SNAP Axis II Scales</i>						
1.	Personality and All Numinous Scales as Causes of Axis II Functioning	179	685.36	.078	0.81	879.36
2.	Personality and Religious Sentiments Scales as Causes of Axis II Functioning	121	537.99	.086	.077	715.99
3.	Personality as Cause of Religious Sentiments and Axis II Functioning; Axis II as Cause of Religious Sentiments	122	567.17	.089	.091	743.17
<i>SCID-I/P Axis II Scales</i>						
1.	Personality and All Numinous Scales as Causes of Axis II Functioning	198	686.06	.047	.096	842.06
2.	Personality and Religious Sentiments Scales as Causes of Axis II Functioning	138	536.00	.047	.080	680.00
3.	Personality as Cause of Religious Sentiments and Axis II Functioning; Axis II as Cause of Religious Sentiments	141	592.31	.053	.10	730.31

RMSEA-Root Mean Square Error of Approximation; SRMR-Standardized Root Mean Square Residual; AIC-Akaike Information Criterion.

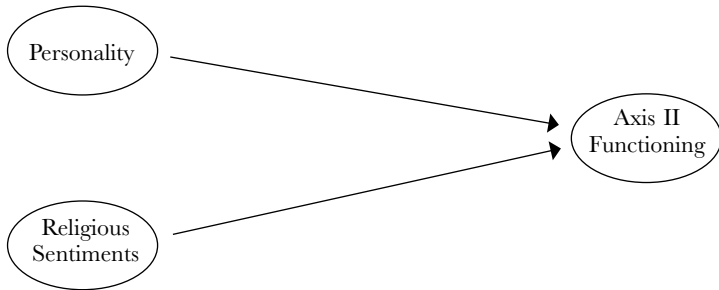
tion of causality goes from the numinous to dysfunction, not the other way around (as is depicted in Model 3). Finally, the pattern of findings is consistent across the two measures of Axis II functioning. Viewing Religious Sentiments as the causal predictor of pathology generates the best fitting model across these two different measures.

## DISCUSSION

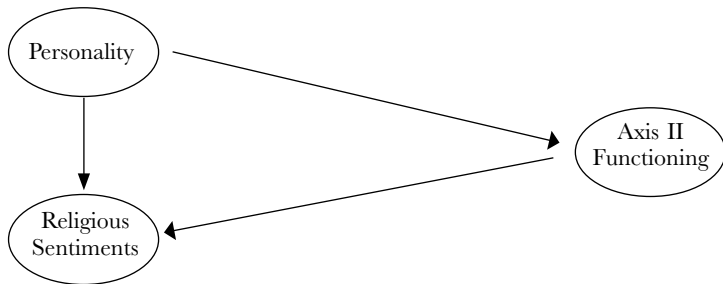
The results of this study present several points of interest. First, the pattern of findings between the spiritual and religious sentiments scales and psychopathology scales were consistent across the two different measures of Axis II constructs. Thus, we can be confident that the pattern of results is not atypical or a function of the specific Axis II measure used. Clearly, there are reliable associations between these two sets of constructs.



Model 1.



Model 2.



Model 3.

Figure 1. *Structural equation models relating numinous constructs to Axis II functioning*

Second, it is interesting to note that although the STS scales indicated some correlations with psychopathology, controlling for the religious sentiments scales essentially erased their effects. Spirituality does not seem to share much in common with characterological impairment. It appears that current conceptualizations of Axis II pathology do not include any dysfunction related to spiritual motivations. Given that spirituality has been conceptualized as a dimension of personality (e.g., Piedmont, 2001), and that the other major dimensions of personality have been linked to Axis II functioning (e.g., Saulsman & Page, 2004), it is possible that there may exist another class of personality disorders that may be linked to problems with spiritual motivations. Future research will need to explore what impaired spirituality may represent psychologically.

Third, the independence of spirituality from Axis II functioning raises the possibility that spirituality may serve as an important personal resource for treatment of these conditions. Spirituality's lack of involvement in the pathognomic process suggests that these motivations may not be distorted or impaired. Thus, they may be able to provide a more realistically-based set of perceptions and beliefs. Keks and D'Souza (2003) discussed how spirituality and religious involvement can be a critical therapeutic resource for helping those with psychotic disorders. Numinous constructs can help individuals gain a sense of self and develop a better sense of personal support for themselves. Khalsa (2005) believes that psychospiritual interventions can be very effective for treating various Axis II disorders (e.g., Borderline, Narcissistic). Spirituality can help clients create for themselves an inner mental state that is dynamic, attractive, peaceful, and creative. Martens (2003) argued that spiritually-oriented psychotherapy could be a powerful intervention for antisocial and psychopathic personalities. Spirituality can be useful in promoting authenticity, moral and social capacity, and a greater faith in life. The findings of this study support such positive therapeutic views of spirituality.

Finally, the SEM analyses indicated that it was the Religious Crisis scale that had the causal impact on psychopathology. Clearly, disturbances in one's relationship with a Transcendent Being has important causal implications for one's psychological stability (e.g., Lavin, 2001). It is important to note that these relationship problems with the Transcendent are not a function of one's innate interpersonal style (qualities of personality), nor a function of interpersonal impairment due to the personality disorder dynamics. The predictive power of the Religious

Crisis scale was not mediated by these other related constructs. There appears to be something unique about the relationship with the Transcendent that impacts one's affective and cognitive processes.

The issue needs to be discussed whether an individual with clinically significant religious impairment (e.g., Hathaway, 2003) is suffering as a result of some type of pathology or rather if the religious impairment *is* the cause of the larger psychological difficulties. Understanding the causal direction between the numinous and psychological dysfunction has important theoretical, clinical, and treatment implications. The data to date, including those found in the current study, suggests that spirituality should not be seen as an endogenous, or dependent, variable; rather it is an exogenous, or independent, variable that moves and directs the flow of psychosocial adjustment (e.g., Dy-Liacco, Kennedy, Parker, & Piedmont, 2005; Lavin, 2001; Piedmont, 2006). Therefore, the development of psychospiritual intervention strategies that are aimed at accessing these qualities of the individual may hold the promise of a new class of therapies (e.g., Khalsa, 2005; Murray-Swank, 2003).

#### *Limitations*

Although the findings of this study are consistent with those reported from other studies in the literature, there are several caveats that need mentioning. First, the student samples used here are clearly limited in their generalizability. It is not clear whether a similar set of findings would be observed if an adult, or even patient, sample had been used. More research is definitely needed that looks specifically at client-based samples. Second, given the clinical nature of the scales, score distributions may have been affected by floor effects, which in turn may reduce the magnitude of correlation between these scales and external criteria. Thus, the lack of strong findings between the STS and Axis II scales may be a function of the lowered power introduced by such restricted score ranges. Third, although these analyses are a useful first step in examining the relations between the numinous and Axis II functioning, there are certainly many other measures of Axis II constructs besides the two included here. Future research needs to determine levels and patterns of association with them as well. Finally, the SEM analyses employed here need to be supplemented with more explicit experimental designs. Longitudinal analyses that would follow both normal and clinical samples would be most helpful in determin-

ing whether the causal sequences identified here would be maintained in other contexts.

### *Conclusions*

These findings show that numinous constructs (especially those relating to conflict in one's relationship to the Transcendent) have significant causal influences on Axis II characteristics. These findings are consistent with a growing literature that demonstrates the causal precedence of spirituality and religious involvement on a wide range of psychosocial outcomes (e.g., Dy-Liacco et al., 2005). When observing clients with significant religious impairment, it should be considered that this religious impairment may be provoking other aspects of dysfunction and not the other way around. This is an important finding that needs to be explored more in-depth both clinically and conceptually. Spirituality's independence from impairment opens the possibility for it to be seen as a potential therapeutic resource for treating those with Axis II difficulties. New treatment modalities may be possible that employ numinous qualities. Finally, spirituality's independence from impairment may also suggest the potential for a new class of personality disorders based on this motivation. The current system of Axis II disorders has been criticized on numerous grounds, including excessive redundancy. This creates a nosology that has insufficient breadth and is unable to classify all individuals with characterological impairment (Trull, 2005). A consideration of dysfunctional spirituality may help to expand the diagnostic inclusiveness of Axis II. However, what would constitute a spiritual impairment is in need of further theoretical definition and clinical description.

### REFERENCES

- Baetz, M., Griffin, R., Bowen, R., Koenig, H. G., & Marcoux, E. (2004). The association between spiritual and religious involvement and depressive symptoms in a Canadian population. *Journal of Nervous and Mental Disease*, *192*, 818–822.
- Carrico, A. W., Ironson, G., Antoni, M. H., Lechner, S. C., Duran, R. E., Kumar, M. et al. (2006). A path model of the effects of spirituality on depressive symptoms and 14-h urinary-free cortisone in HIV-positive persons. *Journal of Psychosomatic Research*, *61*, 51–58.
- Clark, L. A. (1993). *Schedule for nonadaptive and adaptive personality: Manual for administration, scoring, and interpretation*. Minneapolis, MN: University of Minnesota Press.
- Compton, M. T., & Furman, A. C. (2005). Inverse correlations between symptom scores

- and spiritual well-being among African-American patients with first-episode schizophrenia spectrum disorders. *Journal of Nervous and Mental Illness*, 193, 346–349.
- Dy-Liacco, G. S., Kennedy, M. C., Parker, D. J., & Piedmont, R. L. (2005). Spiritual Transcendence as an unmediated causal predictor of psychological growth and worldview among Filipinos. *Research in the Social Scientific Study of Religion*, 16, 261–286.
- First, M. B., Gibbon, M., Spitzer, R. L., Williams, J. B. W., & Benjamin, L. S. (1997). *User's guide for the Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II)*. Washington, DC: American Psychiatric Press.
- Goodman, J. M., Britton, P. J., Shama-Davis, D., & Jencius, M. J. (2005). An exploration of spirituality and psychological well-being in a community of Orthodox, Conservative, and Reform Jews. *Research in the Social Scientific Study of Religion*, 16, 63–82.
- Hathaway, W. L. (2003). Clinically significant religious impairment. *Mental Health, Religion, & Culture*, 6, 113–129.
- Hill, P. C., & Hood, R. W., Jr. (1999). *Measures of religiosity*. Birmingham, AL: Religious Education Press.
- Hill, P. C., & Kilian, J. K. (2003). Assessing clinically significant religious impairment in clients: Applications from measures in the psychology of religion and spirituality. *Mental Health, Religion, & Culture*, 6, 149–160.
- Hill, P. C., & Pargament, K. I. (2003). Advances in the conceptualization and measurement of religion and spirituality: Implications for physical and mental health research. *American Psychologist*, 58, 64–74.
- Hill, P. C., Pargament, K. I., Hood, R. W., McCullough, M. E., Swyers, J. P., Larson, D. B. et al. (2000). Conceptualizing religion and spirituality: Points of commonality, points of departure. *Journal for the Theory of Social Behavior*, 30, 51–77.
- Keks, N., & D'Souza, R. (2003). Spirituality and psychosis. *Australian Psychiatry*, 11, 170–171.
- Khalsa, M. K. (2005). Alternative treatments for borderline and narcissistic personality disorders. In S. G. Kijares & G. S. Khalsa (Eds.), *The psychospiritual clinician's handbook: Alternative methods for understanding and treating mental disorders*. New York: Haworth Press.
- Lavin, L. P. (2001). *The effect of outpatient therapy on a client's image of God* (pp. 163–182). Unpublished doctoral dissertation, Loyola College in Maryland.
- MacDonald, D. A., & Holland, D. (2003). Spirituality and the MMPI-12. *Journal of Clinical Psychology*, 59, 399–410.
- McCrae, R. R., & Costa, P. T., Jr. (1985). Updating Norman's "Adequate Taxonomy": Intelligence and personality dimensions in natural language questionnaires. *Journal of Personality and Social Psychology*, 49, 710–721.
- McCrae, R. R., & Costa, P. T., Jr. (1987). Validation of the five-factor model of personality across instruments and across observers. *Journal of Personality and Social Psychology*, 52, 81–90.
- Martens, W. H. J. (2003). Spiritual psychotherapy for antisocial and psychopathic personalities: Some theoretical building blocks. *Journal of Contemporary Psychotherapy*, 33, 205–218.
- Miller, W. R., & Thoresen, C. E. (1999). Spirituality and health. In W. Miller (Ed.), *Integrating spirituality into treatment* (pp. 3–18). Washington, DC: American Psychological Association.
- Miller, W. R., & Thoresen, C. E. (2003). Spirituality, religion, and health: An emerging research field. *American Psychologist*, 58, 24–35.
- Murray-Swank, N. (2003). *Solace for the soul: An evaluation of a psycho-spiritual intervention for female survivors of sexual abuse*. Unpublished doctoral dissertation, Bowling Green State University, Bowling Green, Ohio.
- Piedmont, R. L. (1995). Big Five adjective marker scales for use with college students. *Psychological Reports*, 77, 160–162.
- Piedmont, R. L. (2001). Spiritual transcendence and the scientific study of spirituality. *Journal of Rehabilitation*, 67, 4–14.

- Piedmont, R. L. (2004a). *Assessment of Spirituality and Religious Sentiments, technical manual*. Baltimore, MD: Author.
- Piedmont, R. L. (2004b). Spiritual Transcendence as a predictor of psychosocial outcome from an outpatient substance abuse program. *Psychology of Addictive Behaviors, 18*, 212–222.
- Piedmont, R. L. (2005). The role of personality in understanding religious and spiritual constructs. In R. F. Paloutzian & C. L. Park (Eds.), *The handbook of the psychology of religion* (pp. 253–273). New York: Guilford.
- Piedmont, R. L. (2006). Spirituality as a robust empirical predictor of psychosocial outcomes: A cross-cultural analysis. In R. Estes (Ed.), *Advancing quality of life in a turbulent world*. New York: Springer.
- Piedmont, R. L. (in press). Cross-cultural generalizability of the Spiritual Transcendence Scale to the Philippines: Spirituality as a human universal. *Mental Health, Religion, & Culture*.
- Piedmont, R. L., & Leach, M. M. (2002). Cross-cultural generalizability of the Spiritual Transcendence Scale in India: Spirituality as a universal aspect of human experience. *American Behavioral Scientist, 45*, 1888–1901.
- Piedmont, R. L., Mapa, A. T., & Williams, J. E. G. (2006). A factor analysis of the Fetzer/NIA Brief Multidimensional Measure of Religiousness/Spirituality (MMRS). *Research in the Social Scientific Study of Religion, 17*, 177–196.
- Piedmont, R. L., Sherman, M. F., Sherman, N. C., & Williams, J. E. G. (2003). A first look at the DSM-IV Structured Clinical Interview for Personality Disorder Screening Questionnaire: More than just a screener? *Measurement and Evaluation in Counseling and Development, 36*, 150–160.
- Piedmont, R. L., & Sherman, M. F. (1998, April). *Psychometric utility of the SCID-I/II screening questionnaire*. Paper presented at the Annual Convention of the Eastern Psychological Association, Providence, RI.
- Powell, L. H., Shahabi, L., & Thoresen, C. E. (2003). Religion and spirituality: Linkages to physical health. *American Psychologist, 58*, 36–52.
- Rhi, B.-Y. (2001). Culture, spirituality, and mental health: The forgotten aspects of religion and culture. *Psychiatric Clinics of North America, 24*, 569–579.
- Saulsman, L. M., & Page, A. C. (2004). The five-factor model and personality disorder empirical literature: A meta-analytic review. *Clinical Psychology Review, 23*, 1055–1085.
- Sawatzky, R., Ratner, P. A., & Chiu, L. (2005). A meta-analysis of the relationship between spirituality and quality of life. *Social Indicators Research, 72*, 153–188.
- Seeman, T. E., Dubin, L. F., & Seeman, M. (2003). Religiosity/spirituality and health: A critical review of the evidence for biological pathways. *American Psychologist, 58*, 53–63.
- Thoresen, C. E. (1999). Spirituality and health: Is there a relationship? *Journal of Health Psychology, 4*, 291–300.
- Trull, T. J. (2005). Dimensional models of personality disorder: Coverage and cutoffs. *Journal of Personality Disorders, 19*, 262–282.
- Wagener, L. M., & Malony, H. (2006). Spiritual and religious pathology in childhood and adolescence. In E. C. Roehlkepartain, P. E. King, L. Wagener, & P. Benson (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 137–149). Thousand Oaks, CA: Sage Publications.
- Wink, P., Killon, N., & Larsen, B. (2005). Religion as moderator of the depression-health connection: Findings from a longitudinal study. *Research on Aging, 27*, 197–220.
- Zinnbauer, B. J., Pargament, K. I., & Scott, A. B. (1999). The emerging meanings of religiousness and spirituality: Problems and prospects. *Journal of Personality, 67*, 889–920.





## ASSOCIATIONS BETWEEN HUMILITY, SPIRITUAL TRANSCENDENCE, AND FORGIVENESS

*Christie Powers, Ruth K. Nam, Wade C. Rowatt, and Peter C. Hill\**

### ABSTRACT

Humility may play an important role in the forgiveness process. For example, awareness that one is not superior to others or the propensity to acknowledge mistakes could facilitate forgiveness. However, virtually no empirical research has examined possible connections between dispositional humility and different attitudes toward forgiveness or tendencies to forgive. Toward this end, undergraduates completed self-report measures of humility and forgiveness, and some dimensions known to correlate with self-reported forgiveness [e.g., spiritual transcendence (ST) and socially desirable responding]. Participants also completed Humility and Self-Esteem Implicit Association Tests. As predicted, moderate positive correlations were found between humility, ST, and forgiveness (when controlling for desirable responding). In particular, self-report measures of humility correlated highly with the self-reported tendency to forgive, whereas implicit humility correlated more strongly with attitudes towards forgiveness. No evidence of statistical mediation was found. That is, the positive humility-forgiveness associations remained when ST was controlled, and positive spiritual transcendence-forgiveness associations remained when humility was controlled. Finally, a statistical interaction between humility and ST was detected on self-reported likelihood of forgiving. When controlling for socially desirable responding, people with a combination of high humility and high spiritual transcendence self-reported being more likely to forgive than persons with any other combination of humility and ST. Taken together, these patterns offer some clues about the positive nature of humility and have implications for interventions aimed at increasing forgiving behaviors.

The primary purpose of this study was to examine statistical associations between measures of humility, spiritual transcendence, and forgiveness in a convenience sample of college students in the United States. Although there exists a large body of literature about religiousness-spirituality and forgiveness, much less empirical research documents the measurement or functions of dispositional *humility*—the quality of being more modest, humble, and self-effacing than immodest, arrogant, or conceited (Rowatt et al., 2006). Broadly, humility involves “an accurate

---

\* *Author Note:* Please address correspondence to: Wade C. Rowatt, Ph.D., Department of Psychology & Neuroscience, Baylor University, One Bear Place #97334, Waco, TX 76798-7334. Phone: 254-710-2961; fax: 254-710-3033; or email: wade\_rowatt@baylor.edu.

assessment of one's own characteristics, an ability to acknowledge limitations, and a forgetting of the self" (Tangney, 2002, p. 411). Humility also involves relinquishing one's own arrogant or narcissistic tendencies and viewing oneself realistically in relation to others. Such conceptions of humility imply that one is not conceited, haughty, or egotistical, but instead acknowledges mistakes, avoids bragging, and respects others (Clark, 1992; Emmons, 2000; Exline et al., 2004; Rowatt et al., 2006; Tangney, 2002). Most facets of humility appear to be consistent with the propensity to forgive.

The extent to which one is spiritual could also be important for the study and practice of humility and forgiveness. Spiritual Transcendence (ST) refers to the degree to which persons, "stand outside of their immediate sense of time and place to view life from a larger, more objective perspective" (Piedmont, 1999, p. 988). A sense of unity of all things is often experienced. The three components of ST could be important for forgiveness: *connectedness* (a belief that one is responsible to and connected with others), *universality* (a belief in the unity and purpose in life that is larger than self), and *prayer fulfillment* (a sense of joy and contentment that results from prayer). A more detailed discussion of the role of spirituality in humility and forgiveness is provided in the Possible Connections section.

For this investigation *forgiveness* was defined as an "interpersonal transaction in which a forgiver chooses to abandon his or her right to retaliate against or withdraw emotionally from the offender after an offense" (Worthington, 1998, p. 60). As noted by McCullough (2001), the essence of forgiveness appears to be a prosocial motivational change within the victim. Although forgiveness often occurs within a unique context, our primary focus will be on the disposition to forgive across various situations (see Berry et al., 2001). A recent flurry of research links dispositional forgiveness to a variety of positive psychological dimensions, such as empathy and commitment (Worthington, 1998), trust and compassion (McCullough, Worthington, & Rachal, 1997), religiousness-spirituality (McCullough, 2001), agreeableness and emotional stability (Berry et al., 2001; Brose et al., 2005; Leach & Lark, 2004; McCullough et al., 1998) and narcissism (inversely; Exline et al., 2004; Sandage et al., 2000). Despite strong conceptual links between humility and forgiveness (Emmons & Paloutzian, 2003; Sandage & Wiens, 2001; Worthington, 1998), virtually no empirical research has examined their connection.

POSSIBLE CONNECTIONS BETWEEN HUMILITY,  
RELIGIOUSNESS-SPIRITUALITY, AND FORGIVENESS

At first glance it seems quite logical to assume that humility and forgiveness are related. Both humility and forgiveness are positive psychological constructs (Peterson & Seligman, 2004), that may function to limit or control excessive thoughts or behaviors (e.g., self-righteousness, exploitation of others). Peterson and Seligman (2004) categorized humility and forgiveness as character strengths of temperance. They define temperance as “virtue of control over excess” (p. 38) and go on to explain that strengths in this category are indicative of an individual’s ability to exercise control over “one’s emotions, motivation, and behavior” (p. 38). Pride and arrogance, on the other hand, are negative psychological constructs that have been construed as sinful in many religious traditions, and could be conducive to hurting loved ones or even starting wars (Schimmel, 1992). Our thinking is that a humble disposition may be necessary for forgiveness of self or others.

A variety of other theorists have provided suggestions about how humility might lead to forgiveness, but there’s not much hard data on the subject. For example, when a mistake or transgression occurs, pride or narcissistic entitlement may reduce the likelihood of forgiving the self or others (Exline et al., 2004; Gassin, 2001). Humility, on the other hand, may promote forgiveness and aid in the inhibition of an impulsive or destructive response. Harvey and Pauwels (2004, p. 621) suggest that “humility and modesty are human qualities very likely derived from the experience of loss and coping with this experience.” Whether one loses on a playing field or loses a loved one, such experiences may lead to an awareness of one’s own limits and the finitude of human existence.

The realistic evaluation of oneself coupled with an acknowledgement that one is no better than the others, may also promote the tendency to forgive an offender (Worthington, 1998) rather than reciprocate negative behavior. Worthington (1998) also notes that simply experiencing an offender’s remorse through empathy can be a humbling experience that promotes forgiveness, as it creates awareness in the victim that one has personal vulnerabilities that could result in similar offenses. Hill, Welton, and Seybold (2002) suggested that it is this “empathic identification” that allows humility to affect an individual’s willingness to forgive. Exline (2005) found that individuals who were led to feel morally similar to their perpetrator indicated that the offense was more forgivable. Taken

together, these suggestions and findings seem to support the idea that people who possess humility, or approach an encounter with a humble mindset, will be more forgiving than persons who are arrogant.

Humility and forgiveness are also deeply held religious-spiritual concepts (McCullough, Bono, & Root, 2005; Smith, 2006). McCullough, Bono, and Root (2005) theorized that humility may be necessary for religiousness to lead to forgiveness. That is, an individual's religiousness/spirituality might foster the development of humility, which in turn may increase the likelihood and necessity for the act of seeking forgiveness from the offender. However, religiousness and spirituality are complex psychological and behavioral dimensions. Whereas, some facets of religiousness may be associated with more insularity, self-righteousness, arrogance (Rowatt, Ottenbreit, Nesselrode, & Cunningham, 2002), and lack of forgiveness (Tsang, McCullough, & Hoyt, 2005); other forms of religiousness may correspond with openness, humility, and forgiveness.

With regard to religiousness/spirituality-forgiveness connections, Leach and Lark (2004) reported that the religious well-being subscale of the spiritual well-being scale correlated positively with self-reported forgiveness of others ( $r = .39$ ) but not with self-reported forgiveness of self ( $r = -.02$ ). The existential well-being subscale of the spiritual well-being scale correlated positively with both self-reported forgiveness of others ( $r = .39$ ) and with self-reported forgiveness of self ( $r = .31$ ). Within the same sample of college students, they found that dimensions of spiritual transcendence also correlated positively with forgiveness of others ( $r = .14$  to  $.19$ ) but not with forgiveness of self ( $r = -.13$  to  $.01$ ). Within a diverse community sample, personal religiousness correlated positively with self-reported forgiveness (Gorsuch & Hao, 1993). A variety of other quantitative studies indicate that religiously committed persons often say they are forgiving and value forgiveness (cf. Exline et al., 2004), but may not be forgiving of specific transgressions (McCullough & Worthington, 1999; Tsang et al., 2005).

With regard to religiousness-humility connections, Rowatt et al. (2002) found that intrinsic religiousness in a Christian population was *negatively* correlated with an indirect measure of humility. That is, people who were more intrinsically religious were more likely to display a holier-than-thou effect (i.e., rating the self to be more adherent than others to biblical commandments) than people who reported less intrinsic religious orientation. When asked to rate the self and others on more general trait terms (e.g., attractive, unintelligent), highly religious people rated

the self to be more positive than they rated other people (Rowatt et al., 2002). From this finding one might conclude that religious persons display self-serving biases inconsistent with humility. However, more recently Rowatt et al. (2006) found that spiritual transcendence *positively* correlated with self-reported humility relative to arrogance when desirable responding was statistically controlled. As such, components of religiousness that reflect an underlying assuredness or arrogance may be unconnected to forgiveness and may even lead to being unforgiving; whereas dimensions of religiousness associated with openness (e.g., spiritual transcendence) may be a path toward humility and tendencies to forgive.

### MEASUREMENT ISSUES

Before presenting specific hypotheses and predictions, we discuss a few issues concerning the accurate measurement of humility and forgiveness. Although there appears to be an increased interest in humility, and researchers (Exline, 2005; Tangney, 2002) have identified the lack of a reliable measure as a major impediment to further research, there remains no published self-report measure of humility. Like many self-report measures of positive qualities, humility is subject to deliberate control and desirable responding. A truly humble person might underestimate his or her humility on a self-report measure. However, to mask enduring narcissism, some people with Narcissistic Personality Disorder reportedly endorse items like “I am humble” or “I value the opinions of others” in an attempt to create the appearance of humility (cf. American Psychiatric Association, 1994, p. 659).

C. S. Lewis (1952/2001, p. 128) surmised that, “if anyone would like to acquire humility...the first step is to realize that one is proud... If you think you are not conceited, it means you are very conceited indeed.” If Lewis is correct, a genuinely humble and honest person might think he or she is more arrogant or less humble than would a narcissist who is largely unaware of his or her self-deceptions. Within a small sample of Cistercian nuns and monks who were asked to self-report the degree to which they were successful, “always exhibiting humility in one’s heart and anywhere else,” (1 = *very successful*; 5 = *never successful*) only 3 out of 57 individuals (5%) indicated that they were *very successful* at exhibiting humility (Smith, 2006).

These and other limits to self-reported humility call for alternative approaches and countermeasures. Toward this end an implicit measure of humility (cf. Rowatt et al., 2006) will be used in this investigation along with a self-report humility scale (Hill, Welton, & Seybold, 2002). An implicit measure of self-esteem was also included to examine the degree to which humility associates with implicit self-evaluation. In general, the implicit measure to be used (the Implicit Association Test; IAT) is more resistant to deliberative control or faking than self-report measures (Fiedler & Bluemke, 2005; Kim, 2003). A self-report measure of desirable responding was also important to include so that variability in self-report measures of humility, spirituality, and forgiving due to impression management propensity can be statistically controlled.

Like the construct of humility, forgiveness presents some measurement challenges too. Berry et al. (2001) suggest that forgiveness can be measured in at least three ways: (a) as offense specific, (b) as dyadic, and (c) as dispositional (as referred to in the term “forgivingness”). Many measures of the first two types, such as the *Forgiveness Short-Form* (Fetzer Institute, 1999), the *Attitude Toward Forgiveness* scale (Brown, 2003), and the *Tendency to Forgive* scale (Brown, 2003; Brown & Phillips 2004), are highly dependent on the theoretical perspectives of the investigators (Berry et al., 2001). In an effort to reduce the impact of theoretical views, Berry et al. created a measure of dispositional forgiveness—the *Transgression Narrative Test of Forgiveness* (TNTF). In the current study we included each of these measures of forgiveness and explored their statistical association with dispositional humility and spiritual transcendence.

#### HYPOTHESES AND PREDICTIONS

Based on the ideas discussed, we developed and tested a few simple hypotheses about associations between humility, ST, and forgiveness. First, the *humility-forgiveness hypothesis* is that dispositional humility and forgiveness are positively associated. Specifically, we predict that humble people are more likely than arrogant persons to report both positive attitudes towards forgiveness as well as a greater tendency to forgive. Second, the *spirituality-humility hypothesis* is that spiritual transcendence and humility are connected. We predict that general ST and measures of humility will correlate positively. Third, the *spirituality-forgiveness hypothesis* is that spiritual transcendence and forgiveness are positively associated. Specifically, we predict that general ST will positively cor-

relate with measures of attitude toward forgiveness and likelihood of forgiveness of others (cf. Leach & Lark, 2004). Finally, we will test for a possible statistical interaction between self-reported humility (high, low) and ST (high, low) on self-reported likelihood of forgiving. We expect to find that persons who report both high humility and high ST will report being more likely to forgive an offender than persons with any other combination of humility and ST (i.e., high H/low ST, low H/high ST, low H/low ST).

## METHOD

### *Participants*

One hundred and twenty-four undergraduate college students at a private institution participated for monetary payment (\$12) or to fulfill a course research participation requirement (38 men, 86 women; mean age = 19.28 years,  $SD = 1.24$ ). The sample was somewhat diverse with regard to ethnicity (66.9% Caucasian, 15.3% Asian, 8.1% Hispanic, 6.5% African American, and 3.2% another ethnicity).

### *Measures and Procedures*

After consenting to participate, each participant was asked to complete a printed survey and two Implicit Association Tests described below. Descriptive statistics and internal consistency estimates for these measures are provided in Table 2.

The *Humility Scale* is a 21-item measure being developed by Hill et al. (2002) to assess low self-focus, human finiteness, and a faith basis using a 5-point rating scale (1 = *I do not at all identify with this item*; 5 = *I fully identify with this item*). Example items included “I know that I can learn from other people” and “I will never be happy until I get all that I deserve” (reverse-keyed).

A 7-item *Humility Semantic Differentials Scale* was created to assess degrees of humility relative to arrogance. The seven semantic differentials were arrogant/humble, immodest/modest, disrespectful/respectful, egotistical/not self-centered, conceited/not conceited, intolerant/tolerant, and closed-minded/open-minded. A 7-point rating scale was placed between the word pairs.

The *Spiritual Transcendence Scale* (Piedmont, 1999) assessed broad aspects of spirituality with three 3-item subscales: *prayer fulfillment* (e.g., In the



quiet of my prayers and/or meditations, I find a sense of wholeness); *universality* (e.g., I feel that on a higher level all of us share a common bond), and *connectedness* (e.g., I do not have any strong emotional ties to someone who has died (reverse-keyed)). A 5-point rating scale was used (1 = *strongly agree*; 5 = *strongly disagree*).

The *Forgiveness Short-Form* (Fetzer Institute, 1999) assessed forgiveness of self, forgiveness of others, and forgiveness by God with a 4-point rating scale (0 = *never*; 3 = *always or almost always*).

The *Tendency to Forgive scale* (Brown, 2003; Brown & Phillips 2004) is a 4-item scale used to assess individual differences in how participants usually respond when someone offends them. An example item reads, "I tend to get over it quickly when someone hurts my feelings" (1 = *strongly disagree*; 7 = *strongly agree*).

The *Attitude Toward Forgiveness scale* (Brown, 2003) is a 6-item measure designed to assess pro-forgiveness attitudes. An example item reads, "I believe that forgiveness is a moral value" (1 = *strongly disagree*; 7 = *strongly agree*).

The *Transgression Narrative Test of Forgiveness* (TNTF; Berry et al., 2001) is a 5-item scenario-based measure. Participants read a scenario about interpersonal incidents (e.g., peer plagiarizes, inattentive babysitter allows child to drink cleaning fluid, old friend gossips to coworkers) and then rate how likely forgiveness would be (1 = *definitely not forgive*; 5 = *definitely forgive*).

The *Balanced Inventory of Desirable Responding* (BIDR; Paulhus & Reid, 1991) tapped the degree to which people engage in self-deceptive enhancement and impression management (1 = *not true*; 7 = *very true*). Using the standard scoring method, participants received one point for each item rated 6 or 7 and zero for each item rated  $\leq 5$ .

Participants were also asked to complete two *Implicit Association Tests* (IAT). The first IAT assessed humility relative to arrogance (cf. Rowatt et al., 2006). The second IAT assessed self-esteem (cf. Greenwald & Farnham, 2000). The design for the humility-arrogance IAT is shown in Table 1. Reaction-time software (i.e., Inquisit) was used to administer the IATs. To complete an IAT, the participant situated at a PC and was instructed to categorize words that appear on the screen. In the critical trials (Blocks 4 & 7 in Table 1) categories into which participants sorted words were combined (e.g., self + humility, other + arrogant; other + humility, self + arrogant). The following stimulus words were categorized by participants: *self* (I, me, mine, self); *others* (they, them, their, it, other); *humility* (humble, modest, tolerant, down-to-earth, respectful,

Table 1. *Sequence of Trial Blocks in the Humility-Arrogance IAT*

Block	No. of trials	Task Function	Items assigned to left-key response	Items assigned to right-key response
1	24	Practice	Humility words	Arrogant words
2	24	Practice	Self words	Other words
3	24	Practice	Self + humility	Other + arrogant
4	40	Test	Self + humility	Other + arrogant
5	24	Practice	Humility words	Arrogant words
6	24	Practice	Self + arrogant	Other + humility
7	40	Test	Self + arrogant	Other + humility

*Note.* For half the participants the positions of Blocks 1, 3, & 4 are switched with Blocks 5, 6, & 7. The stimulus words used in the Humility IAT are as follows: *self* (I, me, my, mine, self); *others* (they, them, their, it, other); *humility* (humble, modest, tolerant, down-to-earth, respectful, open-minded); *arrogant* (arrogant, immodest, egotistical, high-and-mighty, closed-minded, conceited).

open-minded); *arrogant* (arrogant, immodest, egotistical, high-and-mighty, close-minded, conceited). The improved IAT scoring algorithm was used to compute the  $D_1$  measure with built-in error penalties described by Greenwald et al. (2003, pp. 208, 214). Among other steps, this algorithm included data from both practice and test blocks and eliminated trials  $> 10,000$  ms. The resulting  $D_1$  measures in this study were used as indicators of implicit humility (relative to arrogance) and implicit self-esteem (relative to others). In the analyses below we refer to these constructs simply as implicit humility and implicit self-esteem.

## RESULTS

### *Reliability of Measures*

Almost all of the measures used in this study were internally consistent (see last column in Table 2 and Footnote 1). For example, Cronbach

<sup>1</sup> To compute internal consistency of the IATs we followed procedures outlined by Egloff et al. (2005). For each administration of the IAT we subtracted each trial's log-transformed response latency in the self + humility block from the response latency of the corresponding trial in the self + arrogant block (i.e., first reaction time in Block 4 minus the first latency in Block 7, second reaction time in Block 4 minus the second latency in Block 7, etc.). Cronbach's alpha was then computed using the difference scores between trials. Spearman-Brown split-half correlations were also computed and were as follows: Humility IAT ( $r = .74$ ), Self-Esteem IAT ( $r = .81$ ).

alpha coefficients were greater than .70 for 10 of the 13 self-report scales. Likewise, the Humility IAT ( $\alpha = .88$ ) and Self-Esteem IAT ( $\alpha = .92$ ) were internally consistent.<sup>1</sup> Given the low internal consistency of three self-report measures (i.e., forgiveness short form  $\alpha = .47$ , ST universality subscale  $\alpha = .52$ , Hill humility  $\alpha = .53$ ), the few results that involve those variables should be interpreted with some caution.

### *IAT Effects Replicated*

Repeated-measures ANOVAs were computed to test for the Humility and Self-Esteem IAT effects. As expected, participants more quickly categorized terms in the Humility IAT *congruent* practice and test blocks (self + humility, other + arrogant;  $M = 804.61$  ms,  $SD = 257.52$ ) than *incongruent* practice and test blocks (self + arrogant, other + humility;  $M = 962.26$  ms,  $SD = 323.81$ ),  $F(1,242) = 109.64$ ,  $p < .001$ . In this case, it is assumed that associating the self with humility is congruent with a humble person's self-concept; whereas associating the self with arrogance is incongruent with the humble person's self-concept. A second repeated-measures ANOVA revealed participants more quickly categorized terms in the Self-Esteem IAT *congruent* practice and test blocks (self + good; other + bad;  $M = 670.07$  ms,  $SD = 169.78$ ) than *incongruent* practice and test blocks (self + bad; other + good;  $M = 853.72$  ms,  $SD = 244.45$ ),  $F(1,242) = 151.62$ ,  $p < .001$ . No order effects were found in either IAT. As shown in Table 2, these IAT effects are evidence of positive baseline levels of implicit humility relative to arrogance ( $M = .37$ ) and implicit self-esteem ( $M = .52$ ). Implicit humility and implicit self-esteem correlated positively; further evidence for humility as a positive component of the self (cf. Exline & Geyer, 2004; Rowatt et al., 2006).

### *Correlations with Socially Desirable Responding*

Zero-order correlations were computed between the impression management subscale of the BIDR and the measures of humility, ST, and forgiveness. As shown in Table 2 (row 13), impression management correlated positively with self-reported humility measures, each forgiveness scale, and the prayer-fulfillment subscale of ST. Impression management did not correlate appreciably with implicit humility, implicit self-esteem, overall ST, or the universality and connectedness subscales of ST. To rule out interpretations that associations between humility,

Table 2. Descriptive Statistics and Partial Correlations Between Measures of Humility, Spiritual Transcendence, and Forgiveness (Controlling for BIDR-Impression Management)

Personality/Self-Concept Measures	1	2	3	4	5	6	7	8	9	10	11	12	Mean	SD	$\alpha$
1. Hill humility													3.85	.36	.53
2. Humility-arrogance semantic differentials	.20*												5.60	.75	.79
3. Implicit humility	-.09	.00											.37	.37	.88
4. Implicit self-esteem	-.03	.18*	.15+										.52	.32	.92
5. Spiritual transcendence (ST)	.23**	.10	.01	.07									3.77	.59	.69
6. ST Prayer Fulfillment	.29***	.07	.12	.09	.67***								4.08	.83	.90
7. ST Universality	.26**	.03	.03	.13	.67***	.37***							3.84	.75	.52
8. ST Connectedness	-.02	.10	-.08	-.04	.69***	.09	.12						3.41	1.07	.75
9. Forgiveness short form	.30***	.34***	-.03	.21*	.19*	.30***	.14	-.01					2.42	.45	.47
10. Tendency to forgive	.29**	.30***	-.06	.11	.12	.14	.16+	-.02	.43***				3.96	1.21	.77
11. Attitude toward forgiveness	.31***	.05	.22**	.07	.34***	.53***	.21*	.01	.30***	.21			5.56	.85	.73
12. TNTF	.39***	.21*	-.00	.05	.32***	.38***	.22*	.10	.37***	.48***	.40		3.04	.90	.81
13. BIDR-Impression Management	.43***	.33***	.17	.13	-.01	.18	-.03	-.14	.32***	.27**	.38***	.24***	.32	.19	.79

Note. The coefficients in rows 1–12 are partial correlation coefficients (controlling for BIDR-IM). Zero-order correlations between impression management and the other variables are shown in row 13. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , +  $p < .10$ ;  $n = 122$ . Sample sizes vary by one or two depending on the predictor.

ST, and forgiveness are due to desirable responding, impression management was statistically controlled in the remaining analyses.

#### *Partial Correlations Between Humility and Forgiveness*

In support of the humility-forgiveness hypothesis, several positive associations were found between self-reported humility and forgiveness when impression management was controlled (see Table 2). For example, Hill's humility scale significantly and positively correlated with the forgiveness short form ( $r = .30$ ), the tendency to forgive ( $r = .29$ ), attitude toward forgiveness ( $r = .31$ ), and the TNTF ( $r = .39$ ). Furthermore, the self-reported humility relative to arrogance measure correlated significantly with implicit self-esteem ( $r = .18$ ), the forgiveness short form ( $r = .34$ ), the tendency to forgive ( $r = .30$ ), and the TNTF ( $r = .21$ ), but not with the attitude towards forgiveness measure ( $r = .05$ ). The implicit humility measure correlated positively with attitudes toward forgiveness ( $r = .22$ ) whereas implicit self-esteem correlated with the forgiveness short form ( $r = .21$ ).

#### *Partial Correlations Between Spiritual Transcendence and Measures of Humility and Forgiveness*

In partial support of the spirituality-humility hypothesis, only Hill's humility measure correlated significantly with ST. However, Hill's humility scale correlated with all measures of ST except the connectedness subscale: total spiritual transcendence ( $r = .23$ ), prayer fulfillment ( $r = .29$ ), and universality ( $r = .26$ ). ST did not correlate appreciably with self-reported humility relative to arrogance or implicit humility relative to arrogance.

In support of the spirituality-forgiveness hypothesis, ST correlated positively with attitudes toward forgiveness and likelihood of forgiving (see Table 2). The prayer fulfillment and universality facets of ST appeared to be responsible for the association between overall ST and forgiveness. The connectedness facet of ST was not correlated with forgiveness measures.

#### *Partial Correlations Between Forgiveness Measures*

Although we did not formulate hypotheses about interrelations between the forgiveness measures, as one might expect these forgiveness measures were positively correlated. For example, the forgiveness short form,

which taps dispositional forgiveness, significantly correlated with the tendency to forgive ( $r = .43$ ), attitude towards forgiveness ( $r = .30$ ), and the likelihood of forgiving (TNTF;  $r = .37$ ). The tendency to forgive correlated with attitude toward forgiveness ( $r = .21$ ) and likelihood of forgiving (TNTF;  $r = .48$ ).

*Measures of Humility and Spiritual Transcendence Account for Unique Variability in Forgiveness*

After we found that self-reported humility, ST, and forgiveness were positively inter-correlated, it seemed important to test for statistical mediation. For example, statistical associations between humility and forgiveness could be due to ST or associations between ST and forgiveness might be an artifact of dispositional humility. To test for mediators we computed partial correlations between Hill's humility scale, the total ST score, and two different forms of forgiveness (attitude toward forgiveness and forgiveness likelihood—TNTF). No evidence of statistical mediation was found. When ST was controlled, humility continued to correlate positively with attitude toward forgiveness ( $r = .38$ ,  $p < .001$ ) and forgiveness likelihood (TNTF;  $r = .41$ ,  $p < .001$ ). When Hill's humility scale scores were statistically controlled, ST continued to correlate positively with attitude toward forgiveness ( $r = .25$ ,  $p < .01$ ) and forgiveness likelihood (TNTF;  $r = .25$ ,  $p < .01$ ).

To test for unique associations between humility, ST, and forgiveness, each predictor variable in Table 3 was converted to a  $z$ -score and a series of regression analyses were conducted to predict attitude toward forgiveness and likelihood of forgiving (TNTF). As shown in Table 3, self-reported humility (Hill Scale) and ST were positive predictors of attitudes toward forgiveness and likelihood of forgiving (TNTF) when impression management was simultaneously controlled. It is important to notice that both self-reported humility and ST accounted for unique variability in these dimensions of forgiveness.

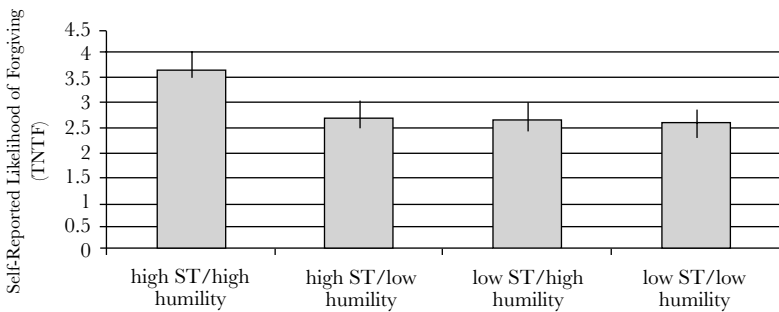
However, it is also important to notice that a statistical interaction was detected between self-reported humility and ST when predicting likelihood of forgiving (TNTF; see Figure 1), but not attitude toward forgiveness. For the final analysis, in which we explored this statistical interaction, we computed median splits on the self-report measure of humility (i.e., low humility  $\leq 3.81$  on the Hill Humility Scale; high humility  $\geq 3.82$  on the Hill Humility Scale) and ST scale (low ST  $\leq 3.68$ ; high ST  $\geq 3.69$ ) and used these variables in an ANCOVA to

Table 3. *Humility and Spiritual Transcendence Account for Unique Variation in Self-Reported Forgiveness*

Personality Measures	Attitude Toward Forgiveness	TNTF
Model 1		
Hill Humility Scale	.26**	.30**
Spiritual Transcendence	.23**	.31***
Impression Management	.26**	.13
Hill Humility $\times$ Spiritual Transcendence	-.11	.23 <sup>a</sup>
R <sup>2</sup>	.29	.27
Model 2		
Implicit Humility	.21**	.01
Spiritual Transcendence	.31***	.31**
Impression Management	.34***	.24**
Implicit Humility $\times$ Spiritual Transcendence	.02	.10
R <sup>2</sup>	.28	.14

*Note:* Each predictor variable was converted to a  $z$ -score and the  $z$ -scores were used in these analyses. Each column represents a separate regression analysis. Standardized regression coefficients are shown. TNTF = Transgression Narrative Test of Forgiveness.  $n = 112$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

<sup>a</sup> See Figure 1 for interpretation of this interaction.



*Note:* People who reported high levels of both humility and spiritual transcendence reported being most likely to forgive an offender. Impression management was statistically controlled in this analysis.

Figure 1. *Self-reported Humility, Spiritual Transcendence (ST), and Likelihood of Forgiving*

predict TNTF scores with impression management as the covariate. As shown in Figure 1, people who reported high levels of humility and ST reported being significantly more likely to forgive than people in any other group. That is, people in the high humility/high ST group reported being more likely to forgive an offender ( $n = 39$ ,  $M = 3.66$ ,  $SD = .69$ ) than people in the high humility/low ST group ( $n = 22$ ,  $M = 2.77$ ,  $SD = .80$ ), low humility/high ST group ( $n = 23$ ,  $M = 2.75$ ,  $SD = .79$ ) or low humility/low ST group ( $n = 31$ ,  $M = 2.58$ ,  $SD = .80$ ),  $F(1,114) = 6.91$ ,  $p = .01$ .

## DISCUSSION

We theorized that dispositional forgiveness may be intertwined with facets of humility (e.g., realizing that one is mistake-prone, being more down-to-earth than high-and-mighty, respecting others, not being conceited). Whereas a prideful or arrogant person may ridicule others or seek revenge, a person with humility may adopt a more benevolent attitude of forgiveness. The first hypothesis that humble people are more prone to report forgiveness was partially substantiated. The degree of relationship between humility and forgiveness, however, appears to depend upon how each construct is measured. The expectation that humble individuals are more likely to endorse positive attitudes towards forgiveness was supported by both self-report and implicit measures of humility.

The self-reported tendency to forgive was predicted by self-reported humility, but not implicit humility. In fact, results indicate that implicit humility correlates negligibly with both the *Forgiveness Short Form* and an individual's tendency to forgive; however implicit humility appears, as expected, to be positively associated with an individual's attitudes towards forgiveness and is not affected by social desirability. One possibility is that implicit humility is more an indicator of the individual's self-reported value of forgiveness and less an indicator of self-reported forgiveness behavior. Furthermore, the premise that humility may allow an individual to acknowledge one's own flaws and thus lead the person to be more willing to forgive another (Hill et al., 2002; Worthington, 1998) may depend on whether forgiveness is measured as a value or an actual behavior.

The second and third hypotheses—that ST positively correlates with both humility and forgiveness—were partially supported. Whereas Hill's measure of humility correlated positively with ST, other measures of



humility did not show significant correlations. ST did show a significant positive correlation with an individual's attitudes towards forgiveness, as well as an individual's evaluation of the likelihood that forgiveness would occur in the TNTF scenarios. These results may indicate that individuals who are more spiritual not only report greater humility but also place greater value on forgiveness. However, as noted before, valuing forgiveness does not necessarily imply that one's actions reflect this value consistently.

As reported in the text, partial correlations between self-reported humility and forgiveness remained positive and significant when ST was statistically controlled. Likewise, ST and forgiveness correlated positively when self-reported humility was controlled. Furthermore, when simultaneously entered in a multiple regression along with impression management to predict forgiveness, humility and ST continued to account for unique variability in forms of forgiveness (see Table 3). The consistency of these associations in the presence of other statistical controls and possible mediators is further support for the humility-forgiveness and spirituality-forgiveness hypotheses.

However, it appears that the likelihood of forgiving depends on a delicate combination of high humility and high ST. We find that people with high scores on measures of both humility and ST report being most likely to forgive. People who self-report possessing one quality but not the other (i.e., high humility and low ST; high ST and low humility) were no more likely to forgive an offender than people who reported low humility and low ST. It is important to note that these associations did not appear to be due to desirable responding. Rather, something about being high on both qualities (humility and ST) appears to be important for reported likelihood of forgiving.

#### *Limitations, Research Directions, and Implications*

As with most research with convenience samples of undergraduate college students, it is probable that this sample is not generally representative in terms of age, educational level, or other aspects of population diversity. Whereas college students may be in a process of personality and character growth, baseline levels of humility, ST, and forgiveness within this sample could be lower than in samples with increased cultural diversity (cf. Kim, Li, & Ng, 2005) or among self-actualized persons. However, the magnitude of correlations between humility, ST, and forgiveness detected in this sample should be similar in the general population.

It is widely known that self-report measures are susceptible to desirable responding, and the data in this study support this pattern. However, use of implicit measures and statistical controls for desirable responding partially address this limit. That is, associations between humility, ST, and forgiveness in this study are not entirely due to positive impression management. However, there are other possible limits to self-report measures of humility (see Rowatt et al., 2006) and forgiveness. With regard to forgiveness, one's self-reported attitude toward forgiveness could be very different from one's actual behavior toward a transgressor.

Having documented connections between humility, ST, and forgiveness, a variety of additional research methods could be used to flesh out the nature of the relations. Quasi-experiments, for example, will be needed to tease apart the causal directions of associations documented in this study. Longitudinal methods may be necessary to capture the transformational nature of the forgiving process (see Paleari, Regalia, & Fincham, 2005). It is possible that a life changing event could lead to increased personal humility or spiritual growth. It is also likely that considerable time, reflection, and some humility are necessary to arrive at the moment of forgiveness.

Further insights into the associations between humility, ST, and forgiveness may be gained by performing a situational study in which actual forgiving behavior is analyzed and one measures whether ST and humility (and other constructs) are of any predictive value. Such a study could take place in or out of the lab or within thriving or failing close relationships, businesses, or religious organizations. Whereas, arrogance and revenge likely contribute to bad leadership and poor personal or relational outcomes, humility (Collins, 2001; Vera & Rodriguez-Lopez, 2004) and other spiritual values (Reave, 2005), could be critical for effective leadership, forgiving others, and flourishing within a variety of social, religious, or political institutions.

## REFERENCES

- American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.). Washington, DC: Author.
- Berry, J. W., Worthington, E. L., Jr., Parrott, L., O'Connor, L. E., & Wade, N. G. (2001). Dispositional forgiveness: Development and construct validity of the transgression narrative test of forgiveness (TNTF). *Personality and Social Psychology Bulletin*, *27*, 1277–1290.
- Brose, L. A., Rye, M. S., Lutz-Zois, C., & Ross, S. R. (2005). Forgiveness and personality traits. *Personality and Individual Differences*, *39*, 35–46.

- Brown, R. P. (2003). Measuring individual differences in the tendency to forgive: Construct validity and links with depression. *Personality and Social Psychology Bulletin*, *29*, 759–771.
- Brown, R. P., & Phillips, A. (2004). Letting bygones be bygones: Further evidence for the validity of the Tendency to Forgive scale. *Personality and Individual Differences*, 1–12.
- Clark, A. T. (1992). Humility. In D. H. Ludlow (Ed.), *Encyclopedia of Mormonism* (pp. 663–664). New York: Macmillan.
- Collins, J. (January 2001). Level 5 leadership: The triumph of humility and fierce resolve. *Harvard Business Review*, *79*, 67–76.
- Egloff, B., Schwerdtfeger, A., & Schmukle, S. C. (2005). Temporal stability of the Implicit Association Test-Anxiety. *Journal of Personality Assessment*, *84*, 82–88.
- Emmons, R. A. (2000). Is spirituality an intelligence? Motivation, cognition, and the psychology of ultimate concern. *The International Journal for the Psychology of Religion*, *10*, 3–26.
- Emmons, R. A., & Paloutzian, R. F. (2003). The psychology of religion. *Annual Review of Psychology*, *54*, 377–402.
- Exline, J. J. (2005, January). *Not so innocent: Can recalling our own offenses promote forgiveness toward others?* In R. Brown and M. Wohl (Chairs), *Frontiers in forgiveness research*. Presented at the annual meeting of the Society for Personality and Social Psychology, New Orleans, LA.
- Exline, J. J., & Baumeister, R. F. (2000). Expressing forgiveness and repentance. In M. E. McCullough, K. L. Pargament, & C. E. Thoresen (Eds.), *Forgiveness: Theory, research, and practice* (pp. 133–155). New York: Guilford Press.
- Exline, J. J., Baumeister, R. F., Bushman, B. J., Campbell, W. K., & Finkel, E. J. (2004). Too proud to let go: Narcissistic entitlement as a barrier to forgiveness. *Journal of Personality and Social Psychology*, *87*, 894–912.
- Exline, J. J., Campbell, W. K., Baumeister, R. F., Joiner, T., Krueger, J., & Kachorek, L. V. (2004). Humility and modesty. In C. Peterson & M. Seligman (Eds.), *The Values in Action (VIA) classification of strengths* (pp. 461–475). Cincinnati, OH: Values in Action Institute.
- Exline, J. J., & Geyer, A. L. (2004). Perceptions of humility: A preliminary investigation. *Self and Identity*, *3*, 95–114.
- Fiedler, L., & Bluemke, M. (2005). Faking the IAT: Aided and unaided response control on the Implicit Association Tests. *Basic and Applied Social Psychology*, *27*, 307–316.
- Gassin, E. A. (2001). Interpersonal forgiveness from an Eastern Orthodox perspective. *Journal of Psychology and Theology*, *29*, 187–200.
- Gorsuch, R. L., & Hao, J. Y. (1993). Forgiveness: An exploratory factor analysis and its relationships to religious variables. *Review of Religious Research*, *34*, 333–347.
- Greenwald, A. G., & Farnham, S. D. (2000). Using the Implicit Association Test to measure self-esteem and self-concept. *Journal of Personality and Social Psychology*, *79*, 1022–1038.
- Greenwald, A. G., Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the Implicit Association Test: I. An improved scoring algorithm. *Journal of Personality and Social Psychology*, *85*, 197–216.
- Harvey, J. H., & Pauwels, B. G. (2004). Modesty, humility, character strength, and positive psychology. *Journal of Social and Clinical Psychology*, *23*, 620–623.
- Hill, P. C., Welton, G. L., & Seybold, K. S. (2002, August). *A take on forgiveness and humility, for what its worth*. Paper presented at the meeting of the American Psychological Association, Chicago, IL.
- Kim, B. S. K., Li, L. C., & Ng, G. F. (2005). The Asian American Values Scale—Multidimensional: Development, reliability, and validity. *Cultural Diversity and Ethnic Minority Psychology*, *11*, 187–201.
- Kim, D. Y. (2003). Voluntary controllability of the Implicit Association Test (IAT). *Social Psychology Quarterly*, *66*, 83–96.

- Leach, M. M. & Lark, R. (2004). Does spirituality add to personality in the study of trait forgiveness? *Personality and Individual Differences*, *37*, 147–156.
- Lewis, C. S. (1952/2001). *Mere Christianity: A revised and amplified edition*. New York: Harper-Collins.
- McCullough, M. E. (2001). Forgiveness: Who does it and how do they do it? *Current Directions in Psychological Science*, *10*, 194–197.
- McCullough, M. E., Bono, G., & Root, L. M. (2005). Religion and forgiveness. In R. F. Paloutzian & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pp. 394–411). New York: Guilford Press.
- McCullough, M. E., Pargament, K. I., & Thoresen, C. E. (2000). The psychology of forgiveness. In M. E. McCullough, K. I. Pargament, & C. E. Thoresen (Eds.), *Forgiveness: Theory, research, and practice* (pp. 1–14). New York: Guilford Press.
- McCullough, M. E., Rachal, K. C., Sandage, S. J., Worthington, E. L., Brown, S. W., & Hight, T. L. (1998). Interpersonal forgiving in close relationships: II. Theoretical elaboration and measurement. *Journal of Personality and Social Psychology*, *75*, 1586–1603.
- McCullough, M. E., & Worthington, E. L., Jr. (1999). Religion and the forgiving personality. *Journal of Personality*, *67*, 1141–1164.
- McCullough, M. E., Worthington, E. L., Jr., Rachal, K. C. (1997). Interpersonal forgiving in close relationships. *Journal of Personality and Social Psychology*, *73*, 321–336.
- Palcari, F. G., Regalia, C., & Fincham, F. (2005). Marital quality, forgiveness, empathy, and rumination: A longitudinal analysis. *Personality and Social Psychology Bulletin*, *31*, 368–378.
- Paulhus, D., & Reid, D. (1991). Enhancement and denial in socially desirable responding. *Journal of Personality and Social Psychology*, *60*, 307–317.
- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. Washington, DC: American Psychological Association; New York: Oxford University Press.
- Piedmont, R. L. (1999). Does spirituality represent the sixth factor of personality? Spiritual transcendence and the five-factor model. *Journal of Personality and Social Psychology*, *54*, 890–902.
- Reave, L. (2005). Spiritual values and practices related to leadership effectiveness. *The Leadership Quarterly*, *16*, 655–687.
- Rowatt, W. C., Ottenbreit, A., Nesselrode, K. P., Jr., & Cunningham, P. A. (2002). On being holier-than-thou or humbler-than-thee: A social-psychological perspective on religiousness and humility. *Journal of the Scientific Study of Religion*, *41*, 227–237.
- Rowatt, W. C., Powers, C., Targhetta, V., Comer, J., Kennedy, S., & LaBouff, J. (2006). Development and initial validation of an implicit measure of humility relative to arrogance. *Journal of Positive Psychology*, *1*, 198–211.
- Sandage, S. J., & Wiens, T. W. (2001). Contextualizing models of humility and forgiveness: A reply to Gassin. *Journal of Psychology and Theology*, *29*, 201–211.
- Sandage, S. J., Worthington, E. L., Jr., Hight, T. L., & Berry, J. W. (2000). Seeking forgiveness: Theoretical context and an initial study. *Journal of Psychology and Theology*, *28*, 21–35.
- Schimmel, S. (1992). *The seven deadly sins: Jewish, Christian, and classical reflections on human nature*. New York: The Free Press/Macmillan.
- Smith, W. L. (2006). Monastic spirituality beyond the cloister: A preliminary look at lay Cistercians. *Research in the Social Scientific Study of Religion*, *16*, 17–39.
- Tangney, J. R. (2002). Humility. In C. R. Snyder & S. J. Lopez (Eds.) *Handbook of positive psychology* (pp. 411–719). Oxford, England: Oxford University Press.
- Tsang, J., McCullough, M. E., & Hoyt, W. T. (2005). Psychometric and rationalization accounts of the religion-forgiveness discrepancy. *Journal of Social Issues*, *61*, 785–805.

- Vera, D., & Rodriguez-Lopez, A. (2004). Strategic virtues: Humility as a source of competitive advantage. *Organizational Dynamics*, *33*, 393–408.
- Worthington, E. L., Jr. (1998). An empathy-humility-commitment model of forgiveness applied within family dyads. *Journal of Family Therapy*, *20*, 59–76.

PART TWO

SPECIAL SECTION ON POSITIVE PSYCHOLOGY



## INTRODUCTION TO SPECIAL SECTION ON POSITIVE PSYCHOLOGY

As the coeditors of this special section on positive psychology and spirituality we are most excited to observe that the synchronicity revealed in these articles demonstrates how both fields are maturing and co-evolving. Spirituality research is coming into its own empirically, as readers of this journal can attest. Positive psychology, the study of character strengths and virtues, is rapidly becoming the most popular topic in applied psychology. Both are concerned with what it means to live a good life and both are countercultural to the zeitgeist of self-actualization in previous psychological models. That trend emphasized self-focused or self-promotional patterns as the path to human flourishing. Both positive psychology and spirituality promote moving beyond the self in order to find fulfillment.

Linked by this common theme the articles assembled here, nevertheless, approach the topic across a wide range of constructs, measures, and participant populations. They range from measurement refinements (spiritual strivings) to new settings (occupational satisfaction), to new constructs (patience and self-regulation) and new populations (Malta, India, adolescents, and pathological gamblers). Our overall conclusion is that spirituality and positive psychology are well on the road to establishing their theoretical and empirical utility for grasping a fuller understanding of human nature. These articles open the way to even more creative research integrating these two central aspects of the good life.

Joseph W. Ciarrocchi, Ph.D.

Gina M. Yanni-Brelsford, Ph.D.





## THE VOCATION IDENTITY QUESTIONNAIRE: MEASURING THE SENSE OF CALLING

*Diane E. Dreher, Katherine A. Holloway, and Erin Schoenfelder\**

### ABSTRACT

The Vocation Identity Questionnaire (VIQ), a 9-item scale, was developed to measure people's sense of calling, the extent to which they find joy and meaning in their life's work, including both paid and unpaid occupations. Criteria were based on Reformation descriptions of vocation supported by studies on intrinsic motivation, flow, perceived significance, and work satisfaction. The VIQ and the Work-Life Questionnaire (Wrzesniewski, McCauley, Rozin, & Schwartz, 1997) were administered to 86 faculty and staff at a private California university. Preliminary findings indicate high internal consistency and validity for the VIQ. Consistent with previous studies, we found significant correlations between calling and education, religious participation, and salience. Implications for future research are discussed.

Recent years have witnessed a renewed concern with vocation or calling: the process by which people find joy and meaning in their life's work (Davidson & Caddell, 1994; Wrzesniewski, McCauley, Rozin, & Schwartz, 1997; and discussions in Bloch & Richmond, 1997; Cochran, 1990; Hardy, 1990; Peterson & Seligman, 2004; Schwartz, 1994; Seligman, 2002). Although American popular culture equates happiness with money and material goods, studies have shown that once people have enough to satisfy their needs, increased affluence has little effect on overall happiness and that people with materialistic values are not nearly as happy as those involved in meaningful, challenging work (Csikszentmihalyi, 1999; Diener, 2000; Kasser & Ryan, 1993; Myers, 2000; Myers & Diener, 1995; Seligman, Verkuil, & Kang, 2002; see discussions in Csikszentmihalyi & Schneider, 2000; Kasser, Ryan, Couchman, & Sheldon, 2004). As research in positive psychology has indicated, healthy human development includes a sense of vocation: actively using our

---

\* *Author Note:* This work was supported by a Santa Clara University Bannan Center Dialog and Design Grant and a College of Arts and Sciences Research Grant to D. Dreher. The authors would like to thank Jerry Burger, Robert Numan, Ryan Olson, Tom Plante, and the members of Santa Clara's Spirituality and Health Institute for their help in developing the VIQ, as well as William Spohn, Mary Novak, and Chris Boscia of the Lilly DISCOVER Program for assistance with our pilot study.

talents or “signature strengths” to make a positive contribution to the world (Peterson & Seligman, 2004; Seligman, 2002).

This new emphasis on vocation follows decades of research on personality types and careers (Holland, 1997), career development (Gottfredson, 1981, 2002, 2005; Super, 1959, 1969, 1980; Tiedeman, 1961), lifetime development including work (Josselson, 1987; Levinson, 1978), career choice (Crites, 1965; Krumboltz, 1979; Super & Crites, 1962), job satisfaction (Blood, 1969; Hackman & Oldham, 1976, 1980; Organ, 1988; Pulakos & Schmidt, 1983), job attitudes (Staw, Bell, & Clausen, 1986), and changing work patterns of women (Astin, 1984; Gallos, 1989), while sharing a concern for personal meaning with recent constructivist and narrative approaches to work (Cochran, 1997; Savickas, 1997) and life-as-career or quantum careering (Miller-Tiedeman, 1988, 1989, 1997; Tiedeman, 1997).

A 1991 review article (Loscocco and Roschelle) called for more interdisciplinary research on work, and connections between work and spirituality have been made in a range of disciplines including counseling psychology (Cochran, 1990; Savickas, 1997), ethics (Raines & Day-Lower, 1986), management (Quinn, 1996, 2000), philosophy (Hardy, 1990), sociology (Davidson & Caddell, 1994), theology (Fowler, 1981, 1984, 1996; Fox, 1995; Huntley, 1997; Palmer, 2000), and vocational psychology (Bloch & Richmond, 1997, 1998). Three studies (Hardy, 1990; Raines & Day-Lower, 1986; Rayburn, 1997) have traced the concept of vocation from its Reformation roots to the challenge of finding meaningful work today; another (Davidson & Caddell, 1994) has examined the effect of religion on whether people consider their work a job, career, or calling; and two recent books on career counseling have discussed spirituality and work as a calling (Andersen & Vandehey, 2006; Sharf, 2006).

The sense of vocation was identified in the 1950s as an aspect of self-actualization (Maslow, 1954, 1971). Recent studies have identified meaningful work as one of the core domains of adult identity (Waterman, 1993) and a major source of personal fulfillment (see discussions in Csikszentmihalyi, 1996, 2000; Savickas, 1997; Seligman, 2002). Research on intrinsic motivation has identified three important aspects of vocation: challenge, personal engagement, and love (Amabile, Hill, Hennessey, & Tighe, 1994). Studies of *flow*, “the way people describe their state of mind when consciousness is harmoniously ordered, and they want to pursue whatever they are doing for its own sake,” show that people find work most meaningful when its challenges match their

skill levels (Csikszentmihalyi, 1990, p. 6; see also Csikszentmihalyi & Schneider, 2000; Locke & Latham, 1990). Research has revealed that people whose work involves the vocational qualities of personal growth, creativity, fulfillment, and social value are “much happier” and “more mature” than other workers (Heath, 1976, 1991), and a 12-year international study has shown that a sense of vocation transcends differences of age, culture, politics, and economic systems, and that finding fulfilling work was the “most important life value” for adults and students in Italy, Canada, Belgium, Portugal, South Africa, Poland, Croatia, Israel, Australia, and Japan (Super, Sverko, & Super, 1995).

A sense of vocation can arise from many different kinds of work: the determining factor is people’s attitude toward what they do (Schwartz, 1994; see also Blood, 1969; Davidson & Caddell, 1994; Staw, Bell, & Clausen, 1986; Waterman, 1993; Wrzesniewski et al., 1997, and discussions in Csikszentmihalyi, 2000; Cochran, 1990; and Richardson, 1993). People with vocations see their work as a meaningful connection with the world, combining personal fulfillment with altruistic service (Davidson & Caddell, 1994). It is “the place where your deep gladness and the world’s deep hunger meet” (Buechner, 1973, p. 95); being “inner directed and other-focused” (Quinn, 2000, p. 104); and using one’s “signature strengths” to contribute to “the greater good” (Seligman, 2002, p. 173). Discovering vocation is vital to adult identity formation and, for young people, one of the major decisions of their lives (Erikson, 1950/1963; Marcia & Archer, 1993; see discussion in LaGuardia & Ryan, 2002).

This concept of vocation originated over five centuries ago in Western Europe when Reformation theologians moved beyond the medieval belief that only a devout few were called by God to celibate religious lives as priests and nuns. Martin Luther, John Calvin, and their contemporaries upheld an alternative view, in which all men and women were called by God to use their talents (or “gifts”) in service to their neighbors as part of the divine plan (Calvin, 1536/1960; Luther, 1535/1963; see discussions in Hardy, 1990; Hill, 1979; and Taylor, 1989). As theologian William Perkins explained, “every person of every degree, state, sex, or condition, without exception must have some personal and particular calling” (1603/1970, p. 455). Thus, vocation expanded to include all occupations from kings to commoners: artists, craftsmen, diplomats, doctors, farmers, merchants, ministers, poets, teachers, tailors, and domestic servants, as well as family roles as sons and daughters, parents, husbands, and wives. English ministers

reminded their congregations that “by the ordinance of God, which hath set in the nature of man, every one ought, in his lawful vocation and calling, to give himselfe to labour” (Rickey & Stroup, 1623/1968, p. 249; see also Hooper, 1550/1843).

We know from dispositional studies that people’s attitudes toward work may become stable through consistent socialization (Staw & Ross, 1985). Early modern culture provided such socialization through religious institutions and customs that reinforced people for vocation (see *Ricky & Stroup*, 1623/1968; commentaries in *The Geneva Bible*, 1602/1984; and discussion in Bobrick, 2001). Pastor and poet George Herbert wrote that “All are either to have a Calling, or prepare for it,” and “every gift or ability is a talent to be accounted for” (1652/1945, pp. 275 and 274). Although the Weber thesis later defined vocation as a “devotion to the calling of making money” that gave rise to modern capitalism, this concept, in the 16th and 17th centuries, was clearly more than that (Weber, 1904/1958, p. 72; see discussion in Krapp, 1943). The concept of vocation was seen by generations of men and women as essential to their adult identities. Embraced by denominations including Lutherans, Calvinists, Anglicans, Puritans, and, later, Catholics, when it was incorporated into St. Ignatius’s *Spiritual Exercises*, vocation became a vital part of the culture, given eloquent expression by poets such as John Donne, George Herbert, and John Milton (Donne, 1635/1967; Herbert, 1633/1945; Milton, 1674/1957; Puhl, 1951; and discussion in Hardy, 1990).

However, only recently have instruments been developed to measure vocation in the sense described here (see Chartrand & Camp, 1991). There has long been confusion in terminology, with vocation used to refer to work in the trades or an occupation in general. Earlier studies of vocation, such as Super’s (1969) “Vocational Development Theory” and Holland, Draiger, and Power’s (1980) “My Vocational Situation” survey, used the term in this occupational sense, focusing on career development, personality types, and ensuring a good fit between people and jobs. What was missing was an attitudinal measure of vocation in its original sense: the meaning people associate with their work.

By focusing on issues of values and meaning, studies in vocational and positive psychology have begun to address the sense of vocation and provide new tools to measure it (Bloch & Richmond, 1997, 1998; Cochran, 1990; Savickas, 1997; Seligman, 2002). The Wellness Evaluation of Lifestyle (WEL) includes fulfillment in work and leisure as a major life task (Myers, Sweeney, & Witmer, 2000; Witmer & Sweeney,

1992) and the Salient Beliefs Review (SBR), which relates people's values to their work, includes a sense of calling as one of seven dimensions of spirituality (Bloch, 2000, 2003). Two studies have drawn upon Bellah, Madsen, Sullivan, Swidler, and Tipton's (1985) tripartite classification of work as a *job* (a means of earning money), *career* (a quest for advancement, status, and power), or *calling* (a source of fulfillment, purpose, and meaning), asking participants which definition best described their attitude about their work (Davidson & Caddell, 1994; Wrzesniewski et al., 1997).

While operational definitions for job and career are comparable in these two studies, calling is more narrowly defined in Davidson and Caddell's (1994) survey, which was designed for members of various Christian denominations. Their definition has more obvious religious associations than that in the nonsectarian Work-Life Questionnaire (Wrzesniewski et al., 1997). For example, Davidson and Caddell's items include "My work has special meaning because I have been called to do what I'm doing regardless of how much time it takes or how little money I earn," and "I was put on this earth to do what I am doing" (1994, pp. 138–139). This contrasts with the emphasis on personal fulfillment in the second study: "People with Callings find that their work is inseparable from their life. A person with a Calling works not for financial gain or Career advancement, but instead for the fulfillment that doing the work brings to the individual... Such people... love their work and think that it contributes to making the world a better place" (Wrzesniewski et al., 1997, p. 22).

The Work-Life Questionnaire (Wrzesniewski et al., 1997) offers an inclusive operational definition of calling based on work satisfaction, motivation, and involvement. Yet, while this scale is useful in studies of worker health, work performance, and lifetime career development, it still excludes many whose callings do not involve paid employment, such as artists whose day jobs only pay the bills, full-time students, and people whose callings involve caring for family members or volunteer work in the community. Vocation in the Reformation meant more than paid employment within an occupational structure, a category that excludes much of the daily work that sustains a culture. Richardson (1993) pointed out the need for a broader definition of work in contemporary research, to include the work lives of many women and members of traditionally underrepresented groups. The concept of vocation offers such a definition because it deals with people's attitudes toward work. Whether paid or unpaid, when work is a vocation, people use

their time and talents in meaningful ways, finding fulfillment, building community, and making their personal contributions to the world.

The Vocation Identity Questionnaire (VIQ) was designed to measure this sense of vocation. Our instrument consists of nine items, enough to allow for an assessment of internal consistency. Since no measures of calling outside of paid employment currently exist to validate our scale, we administered the VIQ along with the Wrzesniewski et al. (1997) Work-Life Questionnaire to a group of working adults. Because the VIQ measures the level of joy, satisfaction, social purpose, and meaning people find in their work, we predicted that participants who scored high on calling (“focus on enjoyment of fulfilling, socially useful work”) on the Work-Life scale would also score high on the VIQ. In addition, since the VIQ measures flow and intrinsic motivation, we expected low VIQ scores for participants who scored high on categories based on external rewards, job (“focus on financial rewards and necessity rather than pleasure or fulfillment”) or career (“focus on advancement”) (1997, p. 21).

## METHOD

### *Participants*

Our study used a sample of 86 faculty and staff members (29 males and 57 females) from a private west-coast Catholic university, ranging in age from 23 to 89 years ( $M = 45.38$ ,  $SD = 13.99$ ). They were recruited by a general e-mail sent out to the campus community, promising a \$25 stipend for completing the questionnaire. Further details of this sample will be provided in the results section.

### *Development of the Questionnaire*

Several considerations led to the format employed. We wanted a questionnaire that would measure participants' intrinsic motivation, joy, sense of engagement, meaning, and significance in their daily work, so we developed an initial set of 22 questions based on Reformation definitions of vocation supported by studies of intrinsic motivation, joy, flow, perceived significance, and work satisfaction (Amabile et al., 1994; Astin, 1984; Cochran, 1990; Csikszentmihalyi, 1990; Csikszentmihalyi & Schneider, 2000; Davidson & Caddell, 1994; Hackman & Oldham, 1976; Heath, 1991; Morse & Weiss, 1955; Richardson, 1993). The

9-item VIQ was drawn from this original set of 22 self-report items, which were administered to a convenience sample of college faculty (n = 17) in a pilot study. The scale was refined based on content analysis (e.g., removal of four items whose content overlapped in the judgment of the authors) and increases in coefficient alpha with the item deleted, which eliminated another nine items, reducing the initial items from 22 to 9.

*The Questionnaire*

The VIQ is comprised of nine questions dealing with attitudes about work, either paid or unpaid (see Table 1). Our fourth question, about satisfaction completing projects and solving problems, is designed to measure challenge, which Wrzesniewski et al. (1997) noted as an important intrinsic factor related to calling they had failed to include in their Work-Life scale. Table 2 describes the attitude measured by each question with relevant references.

Table 1. *Vocation Identity Questionnaire*

---

Please answer the following questions with 5 = strongly agree, 4 = agree, 3 = neither agree nor disagree, 2 = disagree, 1 = strongly disagree. (*If you are a student, "work" is your current school work, unless stated otherwise.*)

1. If I were independently wealthy, I would quit my current work or course of study	5	4	3	2	1
2. Most of the time I genuinely enjoy the work I do. (Students: answer re: your studies)	5	4	3	2	1
3. My daily routine is often so tedious that I feel I'm just putting in time until the end of the day	5	4	3	2	1
4. I get a sense of personal satisfaction completing projects and solving problems that come up.	5	4	3	2	1
5. I sometimes get so involved in my work that I lose track of time. (Students: answer re: your studies)	5	4	3	2	1
6. My major motivation in my work is making money. (Students: answer re: your future career)	5	4	3	2	1
7. I have a calling that enables me to develop my skills and talents and use them in a meaningful way.	5	4	3	2	1
8. In my daily life I often feel connected to larger patterns of joy and meaning.	5	4	3	2	1
9. I see my work as a way to make a positive difference in the world. (Students: answer re: your future)	5	4	3	2	1

---



Table 2. *Attitudes Toward Work on the Vocation Identity Questionnaire*

Question	Attitude	Supporting Research
1.	Quitting current work if independently wealthy <sup>a</sup>	Morse & Weiss, 1955.
2.	Joy while working	Astin, 1984; Heath, 1991.
3.	Work boring and tedious <sup>a</sup>	Hackman & Oldham, 1976.
4.	Satisfaction working on projects, solving problems	Amabile et al., 1994; Csikszentmihalyi, 1990; Csikszentmihalyi & Schneider, 2000.
5.	Flow	Csikszentmihalyi, 1990.
6.	Money as major motivation for work <sup>a</sup>	Amabile et al., 1994; Csikszentmihalyi, 1999; Morse & Weiss, 1955.
7.	Using skills in meaningful way	Csikszentmihalyi & Schneider, 2000; Hackman & Oldham, 1976.
8.	Connected to a larger pattern of meaning	Cochran, 1990; Davidson & Caddell, 1994; Seligman, 2002.
9.	Making a positive contribution	Astin, 1984; Hackman & Oldham, 1976; Richardson, 1993.

<sup>a</sup> Reverse-scored question

### Scoring

The nine questions in the VIQ are scored from 1–5 on a Likert scale ranging from *strongly disagree* to *strongly agree* with scores reversed for questions 1, 3, and 6. Higher scores indicate a higher sense of vocation in terms of: commitment to current work (question 1), finding work enjoyable and satisfying (questions 2 and 3), feeling a sense of accomplishment (question 4), experiencing flow (question 5), intrinsic motivation (question 6), and meaning and significance (questions 7, 8, and 9). The VIQ score is achieved by summing the scores for the nine items. Possible scores range from 9 to 45. This 9-item scale was previously administered to 106 undergraduates in an unpublished study. A normal distribution was found ( $n = 106$ , range = 20–45,  $M = 33.10$ ,  $Mdn = 33.09$ ,  $SD = 5.03$ ).

### *Administration*

The Vocation Identity Questionnaire (VIQ) was included in a longer survey of actions and attitudes that included 39 questions about religious beliefs, spiritual models, contemplative practice, introspection, reading, creative interests, disciplined habits, and exercise. On pages 3 and 4 of the survey was the 9-item VIQ, followed by nine demographic questions about gender, age, occupation, years of schooling, major, and participation in campus activities. These were followed by the Work-Life Questionnaire, comprised of three paragraphs describing job, career, and calling (A, B, and C). Participants were asked to read the three paragraphs and check the category that indicated how much they are like A, B, or C on a scale where 0 = *not at all*, 1 = *a little*, 2 = *somewhat*, and 3 = *very much*. Wrzesniewski et al. (1997) report strong inverse correlations between calling and job scores ( $r [n=135] = -.52, p < .01$ ) and no correlation between career scores and the other two categories ( $r = -.14$  and  $-.01$ ). As Wrzesniewski et al. (1997) recommended, we have removed references to gender, substituting gender-neutral language in the paragraphs.

### *Procedure*

Questionnaires were sent via campus mail to the first 96 participants who responded to our e-mail invitation, and 86 questionnaires were returned. Respondents gave informed consent by means of a cover sheet explaining the nature of the study and the confidential nature of their answers. Respondents completed questionnaires individually, then returned them via campus mail or US Postal Service to the primary investigator. After all identifying information was removed, the questionnaires were distributed to two student assistants who scored them anonymously.

## RESULTS

### *Characteristics of the Respondents*

Of the 86 respondents, 29 (33.7%) were male and 57 (66.3%) female ( $M = 45.38$  years,  $Mdn = 45.50$ ,  $SD = 14$ , range = 23–89). Respondents stated their occupations on the questionnaire and were classified in occupational levels adapted from the Authentic Happiness website ([www.authentichappiness.org/Registration2.html](http://www.authentichappiness.org/Registration2.html)), which offers a useful

range of occupations for paid and unpaid work. The sample included 30 faculty (from a total population of 706), 55 staff (from a total population of 776), and one individual who failed to designate an occupation. Among the staff were 2 priests, 12 administrators or managers, 21 white collar professionals, and 20 clerical workers. No manual laborers signed up for the survey (see Table 3).

All participants had at least some college experience, ranging from 34.9% ( $n = 30$ ) with doctoral degrees, 26.7% ( $n = 23$ ) with master's degrees, 32.6% ( $n = 28$ ) with bachelor's degrees, and 5.8% ( $n = 5$ ) with some college work. Their major areas of study were: 39.3% ( $n = 33$ ) humanities, 26.2% ( $n = 22$ ) social sciences, 15.5% ( $n = 13$ ) business, 11.9% ( $n = 10$ ) physical sciences, 3.6% ( $n = 3$ ) engineering, and 3.6% ( $n = 3$ ) arts.

#### *Scoring and Internal Reliability*

VIQ scores ranged from a low of 20 to a high of 45 ( $M = 37.90$ ,  $Mdn = 39.50$ ,  $SD = 5.93$ ). Checking for internal reliability using Cronbach's (1951) alpha revealed a respectable alpha coefficient of .84 for the nine

Table 3. *Occupations of Participants*

Category <sup>a</sup>	No.	%
Students	0	0.0%
Professors, doctors, attorneys, CEOs	30	34.9%
Priests, ministers, counselors	2	2.3%
Administrators, managers (nurses, pharmacists, opticians)	12	14.0%
White collar professionals (small business owners, journalists, artists)	21	24.4%
Administrative assistants, clerical workers	20	23.3%
Skilled manual workers (plumbers, technicians, electricians)	0	0.0%
Manual workers (painters, buildings and grounds workers)	0	0.0%
Unskilled labor (janitors, construction helpers)	0	0.0%
Homemakers	0	0.0%
Retired	0	0.0%
Missing	1	1.2%
Total	86	100%

<sup>a</sup> Adapted from Authentic Happiness website: [www.authentichappiness.org/Registration2.html](http://www.authentichappiness.org/Registration2.html)

items on the scale. A principal components analysis with a varimax rotation was performed. The rotated solution (shown in Table 4) revealed the presence of two factors with eigenvalues greater than 1.0. The first of these, which we have named “Intrinsic Motivation and Meaning” (IM), accounted for 47% of the variance. Six items loaded on this factor. The second factor, which we have named “Joy and Satisfaction” (JS), accounted for 12% of the variance. Three items loaded on this factor. Cronbach’s alpha for the two factors were .82 and .59, respectively.

### *Validity*

We investigated the relationship between the VIQ scores and the three separate variables on the Work-Life scale: job, career, and calling, using the Pearson product-moment correlation coefficient. We found a significant positive correlation between the VIQ and calling with a large effect size ( $r = .69, p < .01$ ). In addition, we found significant negative correlations between the VIQ and the scores for job ( $r = -.65, p < .01$ ) and career ( $r = -.37, p < .01$ ), with large and medium effect sizes, respectively.

Table 4. *Factor Loadings for VIQ Items*

Item	Component 1: Intrinsic Motivation and Meaning (IM)	Component 2: Joy and Satisfaction (JS)
Wealth would not make me quit my work	.70	
Consistently find work enjoyable	.71	
Daily routine not tedious	.72	
Not motivated by external rewards	.77	
My work involves meaningful use of my skills	.75	
My work makes a positive difference in the world	.61	
Personal satisfaction with the task		.84
Lose track of time doing the task		.67
Sense of joy while doing the task		.60
Percent of variance explained	46.99	12.34

*Demographic Data Correlations*

We also used the Pearson product-moment correlation coefficient to investigate the relationship between VIQ scores and the demographic criteria. We found a significant positive correlation with large effect size between a sense of vocation and years of education ( $r = .53, p < .01$ ). There was no significant correlation with age. A  $t$ -test was employed to determine if vocation scores differed between genders. The results were not statistically significant,  $t(84) < 1.00, p > .05$ .

We next considered VIQ scores by occupational category (see Table 5). Removing the categories with two or fewer participants (the participant who failed to declare an occupation [ $n = 1$ ] and the two priests [ $n = 2$ ]), a one-way ANOVA was performed to determine if the remaining four occupational groups (faculty, managers/administrators, white collar professionals, and administrative assistants) had significant differences in vocation. The results were highly statistically significant,  $F(3, 79) = 16.5, p < .001$ . The faculty participants had the highest mean score (range = 36–45,  $M = 42.13, SD = 2.66$ ). The lowest score (20 out of 45) occurred among the administrative assistants, although some scores in this occupational level were high (range = 20–44,  $M = 33.15, SD = 6.61$ ). A post hoc Scheffé test performed on the VIQ scores for the four occupational categories revealed that the faculty members' scores were significantly higher than both the white collar professionals ( $p < .001, d = 1.70$ ) and the administrative assistants ( $p < .001, d = 1.93$ ) and that the managers/administrators were significantly higher than the administrative assistants ( $p < .02, d = .98$ ), all with very high effect sizes. We found some people with a high sense of vocation across all occupational levels: with highs of 45 among the faculty, manager/administrators, and white collar professionals, and a high of 44 among the administrative assistants.

Table 5. *VIQ Scores by Occupational Categories*

Occupation	$n$	$M$	$SD$	$Mdn$	Minimum	Maximum
Faculty	30	42.13	2.66	43.00	36.00	45.00
Managers/Administrators	12	38.91	4.38	39.00	30.00	45.00
White collar professionals	21	35.48	5.22	36.00	24.00	45.00
Administrative assistants	20	33.15	6.62	33.00	20.00	44.00
Priests	2	39.50	4.95	39.50	36.00	43.00

Like Wrzesniewski et al. (1997), we found that people in the same occupation can have a range of attitudes about their work. The 24 administrative assistants in Wrzesniewski et al. had a broad range of work orientations, distributed almost evenly across the three categories of job, career, and calling. In our study, scores for the 20 administrative assistants were distributed between a high of 44 to a low of 20.

In addition to demographics, our survey included questions about religious *participation*, the extent to which participants were involved in regular spiritual practices (MacIntyre, 1984), such as private devotion and public worship, as well as religious *salience*, the perceived importance of faith in their lives. A Pearson product-moment correlation coefficient revealed findings consistent with those of Davidson and Caddell (1994), that a sense of vocation was positively correlated with religious participation ( $r = .29, p < .01$ ) and salience ( $r = .38, p < .01$ ). There was also a positive correlation in our study between a sense of vocation and the belief that life has a higher purpose ( $r = .28, p < .01$ ).

## DISCUSSION

In accord with our predictions, we found that the VIQ showed a significant positive correlation with the measure of calling in the Wrzesniewski et al. (1997) scale, as well as a significant negative correlation with that scale's measure of both job and career. The two factors identified in the principal components analysis are intrinsic motivation and meaning associated with the work (IM) and a sense of joy and satisfaction while actually performing the work (JS). As our evidence indicates, the VIQ measures the level of personal fulfillment (joy, flow, intrinsic motivation, social value, and meaning) people find in their work, as opposed to external reward motivation. Compared with other scales in their initial stages of development, the VIQ seems satisfactory in its internal consistency and validity. Measuring people's attitudes about their work in a broader context than paid employment, it promises to be a valuable tool in future research.

Our study found a significant correlation between years of education and vocation, which concurs with the research of Davidson and Caddell (1994) and Wrzesniewski et al. (1997) who found significant positive correlations between education and the tendency to see one's work as a calling. We found the highest percentage of vocation scores among the faculty, all of whom had doctoral degrees. Faculty participants

scored significantly higher than white collar professionals and administrative assistants, while the managers/administrators scored significantly higher than the administrative assistants. These findings concur with Wrzesniewski et al., who found that “respondents in lower level occupations are likely to see themselves as having either a job or career” than a calling (1997, p. 31).

We found no significant correlation between vocation and gender, which contrasts with Davidson and Caddell (1994) who found females significantly more likely than males to view their work as a calling. However, since all of our participants had at least some college and many had advanced degrees, our findings are consistent with studies by Hawley and Even (1982) and Nevill and Super (1986), who found that college-educated men and women did not differ significantly in attitudes toward work.

Our study found people with high vocation scores (44–45 out of a possible 45) in all occupational levels, which concurs with Wrzesniewski et al. (1997) who found that people can exhibit a high sense of calling in many occupations. In that study, 32.5% ( $n = 44$ ) of the participants saw their work as a job, 32% ( $n = 43$ ) as a career, and 35.5% ( $n = 48$ ) as a calling.

One surprising result of our study was the much higher percentage of vocation among our participants. While calling scores were only 15% in Davidson and Caddell (1994) and 35.5% in Wrzesniewski et al. (1997), 71% of our participants were in the top quartile of possible scores (range = 9–45, negative skew,  $M = 37.90$ ,  $Mdn = 39.50$ ,  $SD = 5.93$ ). This contrasts markedly with the normal distribution of our unpublished college student sample ( $n = 106$ ,  $M = 33.10$ ,  $Mdn = 33.09$ ,  $SD = 5.03$ ). One possible reason for the high vocation scores among the adults in our study could be the higher level of education in our sample.

All of our participants had attended college and 61.6% had graduate degrees. In Davidson and Caddell (1994), only 21.6% ( $n = 405$ ) had graduate degrees and 44.8% ( $n = 839$ ) had a bachelor’s degree or some college, while 18.8% of participants ( $n = 352$ ) had only a high school education or less. Although Wrzesniewski et al. (1997) did not offer percentages in each category, their mean years of education for participants were 14.8 for 32% ( $n = 44$ ) in job, 15.1 for 31.8% ( $n = 43$ ) in career, and 16.6 for 35.5% ( $n = 48$ ), in calling, whereas in our study, 26.7% ( $n = 23$ ) had master’s degrees with 17 to 18 years of

education and 34.9% ( $n = 30$ ) had doctoral degrees with at least 20 years of education.

We believe that VIQ could contribute to further research in a number of areas. First, more studies could be done to explore connections between vocation and religious faith, world view, and sense of purpose. Davidson and Caddell (1994) began investigating these connections by surveying 1,869 members of 31 Protestant and Catholic churches. Although membership in a particular denomination was not a significant factor, their study found positive correlations between calling and religious salience, participation, and a commitment to social justice, all of which provide "a context in which some people, especially people with rewarding jobs, come to think of their work in sacred, not just secular terms" (1994, p. 146). In addition to replicating their findings on religious participation and salience, our study found that people with high vocation scores have a stronger sense of purpose, seeing their efforts as part of a larger pattern of meaning (see discussion in Fowler, 1981). Future studies could combine the VIQ with measures of faith (Plante & Boccaccini, 1997), purpose (Crumbaugh, 1968; Crumbaugh & Maholick, 1964, 1981), spiritual modeling (Oman & Thoresen, 2003), and practices such as prayer, meditation, and volunteer work to gain further insights into the beliefs and behavior associated with vocation.

The VIQ could also help researchers examine the relationship between a sense of vocation and health. Many studies have found significant correlations between health and attitude (e.g., Peterson, Seligman, & Vaillant, 1988) as well as between health and religion or spiritual practice (e.g., Plante & Sherman, 2001; Plante, Yancey, Sherman, & Guertin, 2000; and discussion in Myers & Diener, 1995). Wrzesniewski et al. (1997) found a significant correlation between a sense of calling and a greater degree of health and well being. With today's increasing social isolation wrought by rapid technological change, a stronger sense of vocation could provide people with a vision of meaning and purpose that reconnects them with the larger community (see Davidson & Caddell, 1994; discussions in Fowler, 1981; Gore, Leuwerke, & Krumboltz, 2002).

Because work satisfaction has been found to be a major contributing factor in life satisfaction (Campbell, Converse, & Rodgers, 1976), the VIQ could add to future studies of life satisfaction (Diener, Emmons, Larson, & Griffin, 1985; see also Pavot, Diener, Colvin, & Sandvik,



1991) and subjective happiness (Lyubomirsky & Lepper, 1997; Myers & Diener, 1995). By expanding the parameters of work to include caregivers, homemakers, and full-time students, the VIQ would help identify individuals in these categories who experience greater meaning and purpose in their life's work.

The VIQ could also support future research on work in positive psychology (see discussion in Seligman, 2002, 2003; Seligman & Csikszentmihalyi, 2000). Peterson and Seligman's (2004) Values in Action (VIA) Classification of Character Strengths identifies 24 positive character traits, supported by data from more than 30 nations. Their VIA Inventory of Strengths (VIA-IS) reveals an individual's top five character traits, or "signature strengths," (see Seligman, 2002, p. 160). Peterson and Seligman's theory that people can use their signature strengths in their daily work to create happier, more fulfilling lives is comparable to the Reformation belief that people could reach their highest potential by using their personal talents (or gifts) in their vocations. The VIQ could be used in conjunction with the VIA-IS in ongoing research to explore the relationship between work and happiness. This is especially relevant for today's Americans, many of whom suffer from depression (see Csikszentmihalyi, 1999; Robins et al., 1984; discussion in Seligman, 1991). Subjects who discovered their signature strengths with the VIA-IS and used them in their work could be tested with the VIQ and measures of subjective well-being to determine the effect of this contemporary approach to vocation.

The VIQ could be especially helpful in measuring vocation development among college students. We did not include college students in this study because we needed to validate our instrument with working adults, although for comparison purposes, we have cited the normal distribution from an unpublished study of 106 undergraduates. The VIQ was developed in response to what Seligman has called a "national epidemic of depression" (1991, p. 70) on college campuses. Ironically, at the same time research has paid increasing attention to the importance of work, a number of American youth are experiencing what we see as a crisis of vocation. Confused, depressed, and disengaged, they are unable to commit time to their studies or pursue a meaningful philosophy of life (Sax, Lindholm, Astin, Korn, & Mahoney, 2001; Sax et al., 2003; see also discussions in Csikszentmihalyi & Schneider, 2000, and Seligman, 2002). Our culture reinforces young people to be passive consumers, not active citizens working to create their own and our collective future (see discussions in Kasser, 2002; Kasser & Kanner,

2004; and LaGuardia & Ryan, 2002). Used in conjunction with studies of students' habits and lifestyles, the VIQ could enable researchers to identify activities that promote a stronger sense of vocation. Findings in this area could help parents and educators encourage young people to discover their strengths and use them in meaningful, creative work.

Finally, we believe it necessary to broaden the pool of participants for a more complete view of vocation. Although Davidson and Caddell (1994) drew their sample from a population of church members with a wide range of occupations, both the VIQ and the Work-Life Questionnaire were administered to a more limited population: college and university employees. Neither study included blue collar workers. Morse and Weiss (1955) and Nevill and Super (1986) have noted significant differences between middle class and working class participants in their attitudes toward work, and Davidson and Caddell (1994) found working class participants significantly less likely to see their work as a calling. Furthermore, none of the studies, to date, has included college students or people whose work does not involve paid employment. To overcome this limited sampling, future studies should include more members of the working class and members of other occupations (such as lawyers, culinary workers, police officers, firefighters, and members of the armed forces) as well as caregivers, homemakers, and full-time students in order to obtain a more complete understanding of the implications of vocation and the degree to which people experience a sense of meaning and purpose in their life's work.

#### REFERENCES

- Amabile, T. M., Hill, K. G., Hennessey, B., & Tighe, E. M. (1994). The work preference inventory: Assessing intrinsic and extrinsic motivational orientations. *Journal of Personality and Social Psychology*, *66*, 950–967.
- Andersen, P., & Vandehey, M. (2006). *Career counseling and development in a global economy*. Boston: Houghton Mifflin.
- Astin, H. S. (1984). The meaning of work in women's lives: A sociopsychological model of career choice and work behavior. *The Counseling Psychologist*, *12*, 117–126.
- Bellah, R. N., Madsen, R., Sullivan, W. M., Swidler, A., & Tipton, S. M. (1985). *Habits of the heart: Individualism and commitment in American life*. Berkeley, CA: University of California Press.
- Bloch, D. P. (2000). The Salient Beliefs Review: A new instrument for connecting spirit and work. *Career Planning and Adult Development*, *15*, 71–81.
- Bloch, D. P. (2003). *Salient Beliefs Review (SBR): Connecting spirit to work*. Indianapolis, IN: JIST Publishing.
- Bloch, D. P., & Richmond, L. J. (Eds.) (1997). *Connections between spirit and work in career development*. Palo Alto, CA: Davies-Black.

- Bloch, D. P., & Richmond, L. J. (1998). *Soul work: Finding the work you love, loving the work you have*. Palo Alto, CA: Davies-Black.
- Blood, M. R. (1969). Work values and job satisfaction. *Journal of Applied Psychology*, *53*, 456–459.
- Bobrick, B. (2001). *Wide as the waters: The story of the English Bible and the revolution it inspired*. New York: Simon & Schuster.
- Buechner, F. (1973). *Wishful thinking: A theological ABC*. New York: Harper & Row.
- Calvin, J. (1960). *Institutes of the Christian religion* (J. T. McNeill, Ed., & F. L. Battles, Trans.). Philadelphia: Westminster. (Original work published 1536)
- Campbell, A., Converse, P. E., & Rodgers, W. L. (1976). *The quality of American life*. New York: Sage Foundation.
- Chartrand, J. M., & Camp, C. C. (1991). Advances in the measurement of career development constructs: A 20-year review. *Journal of Vocational Behavior*, *39*, 1–39.
- Cochran, L. (1990). *The sense of vocation: A study of career and life development*. Albany, NY: SUNY Press.
- Cochran, L. (1997). *Career counseling: A narrative approach*. Thousand Oaks, CA: Sage.
- Crites, J. O. (1965). *Measurement of vocational maturity in adolescence*. New York: American Psychological Association.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*, 297–334.
- Crumbaugh, J. C. (1968). Cross-validation of Purpose in Life Test based on Frankl's concepts. *Journal of Individual Psychology*, *24*, 74–81.
- Crumbaugh, J. C., & Maholick, L. T. (1964). An experimental study in existentialism: The psychometric approach to Frankl's concept of noogenic neurosis. *Journal of Clinical Psychology*, *20*, 200–207.
- Crumbaugh, J. C., & Maholick, L. T. (1981). *Manual of instructions for the Purpose-in-Life Test*. Murfreesboro, TN: Psychometric Affiliates.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper & Row.
- Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention*. New York: HarperCollins.
- Csikszentmihalyi, M. (1999). If we are so rich, why aren't we happy? *American Psychologist*, *54*, 821–827.
- Csikszentmihalyi, M., & Schneider, B. (2000). *Becoming adult: How teenagers prepare for the world of work*. New York: Basic Books.
- Davidson, J. C., & Caddell, D. P. (1994). Religion and the meaning of work. *Journal for the Scientific Study of Religion*, *33*, 135–147.
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, *55*, 34–43.
- Diener, E., Emmons, R. A., Larson, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*, 71–76.
- Donne, J. (1967). *John Donne: Poetry and prose* (F. J. Warnke, Ed.). New York: Modern Library. (Original work published 1635)
- Erikson, E. H. (1963). (Original work published 1950). *Childhood and society*. New York: Norton.
- Fowler, J. W. (1981). *Stages of faith: The psychology of human development and the quest for meaning*. San Francisco: Harper & Row.
- Fowler, J. W. (1984). *Becoming adult, becoming Christian*. New York: Harper & Row.
- Fowler, J. W. (1996). *Faithful change: The personal and public challenges of postmodern life*. Nashville: Abingdon Press.
- Fox, M. (1995). *The reinvention of work*. San Francisco: Harper & Row.
- Gallos, J. V. (1989). Exploring women's development: Implications for career theory, practice, and research. In M. B. Arthur, D. T. Hall, & B. S. Lawrence (Eds.), *Handbook of career theory* (pp. 110–132). New York: Cambridge University Press.
- The Geneva Bible: The annotated New Testament 1602 edition*. (1989). G. T. Sheppard (Ed.). Cleveland, OH: Pilgrim Press. (Original work published 1602)

- Gore, P. A., Leuwerke, W. C., & Krumboltz, J. D. (2002). Technologically enriched and boundaryless lives: Time for a paradigm upgrade. *The Counseling Psychologist, 30*, 847–857.
- Gottfredson, L. S. (1981). Circumscription and compromise: A developmental theory of occupational aspirations. *Journal of Counseling Psychology, 28*, 545–579.
- Gottfredson, L. S. (2002). Gottfredson's theory of circumscription, compromise, and self-creation. In D. Brown & Associates (Eds.), *Career choice and development* (4th ed., pp. 85–148). San Francisco: Jossey-Bass.
- Gottfredson, L. S. (2005). Applying Gottfredson's theory of circumscription and compromise in career guidance and counseling. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 71–100). New York: Wiley.
- Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance, 16*, 250–279.
- Hackman, J. R., & Oldham, G. R. (1980). *Work redesign*. Reading, MA: Addison-Wesley.
- Hardy, L. (1990). *The fabric of this world: Inquiries into calling, career choice, and the design of human work*. Grand Rapids, MI: Eerdmans.
- Hawley, P., & Even, B. (1982). Work and sex-role attitudes in relation to education and other characteristics. *The Vocational Guidance Quarterly, 31*, 101–108.
- Heath, D. H. (1976). Adolescent and adult predictors of vocational adaptation. *Journal of Vocational Behavior, 9*, 1–19.
- Heath, D. H. (1991). *Fulfilling lives: Paths to maturity and success*. San Francisco: Jossey-Bass.
- Herbert, G. (1945). *The temple*. In F. E. Hutchinson (Ed.), *The works of George Herbert* (pp. 1–199). Oxford: Oxford University Press. (Original work published 1633)
- Herbert, G. (1945). *A priest to the temple, or the country parson*. In F. E. Hutchinson (Ed.), *The works of George Herbert* (pp. 223–290). Oxford: Oxford University Press. (Original work published 1652)
- Hill, J. S. (1979). *John Milton: Poet, priest and prophet*. Totawa, NJ: Rowman & Littlefield.
- Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Odessa, FL: Psychological Assessment Resources.
- Holland, J. L., Draiger, D. C., & Power, P. O. (1980). *My vocational situation inventory test booklet*. Palo Alto: Consulting Psychologists Press.
- Hooper, J. (1848). An oversight and deliberation upon the holy prophet Jonas. In *Early writings of John Hooper* (pp. 431–558). Cambridge: Cambridge University Press. (Original work published 1550)
- Huntley, H. L., Jr. (1997). How does “God-talk” speak to the workplace? An essay on the theology of work. In D. P. Bloch & L. J. Richmond (Eds.), *Connections between spirit and work in career development* (pp. 115–136). Palo Alto, CA: Davies-Black.
- Josselson, R. (1987). *Finding herself: Pathways to identity development in women*. San Francisco: Jossey-Bass.
- Kasser, T. (2002). *The high price of materialism*. Cambridge, MA: MIT Press.
- Kasser, T., & Kanner, A. (Eds.). (2004). *Psychology and consumer culture*. Washington, DC: American Psychological Society.
- Kasser, T., & Ryan, R. M. (1993). A dark side of the American dream: Correlates of financial success as a central life aspiration. *Journal of Personality and Social Psychology, 65*, 410–422.
- Kasser, T., Ryan, R. M., Couchman, C. E., & Sheldon, K. M. (2004). Materialistic values: Their causes and consequences. In T. Kasser & A. Kanner (Eds.), *Psychology and consumer culture* (pp. 11–28). Washington, DC: American Psychological Society.
- Krapp, R. M. (1943). A note on the Puritan “calling.” *The Review of Religion, 7*, 242–251.

- Krumboltz, J. D. (1979). A social learning theory of career decision making. In A. M. Mitchell, G. B. Jones, & J. D. Krumboltz (Eds.), *Social learning and career decision making* (pp. 19–49). Cranston, RI: Carroll Press.
- LaGuardia, J. G., & Ryan, R. M. (2002). What adolescents need: A self-determination theory perspective on development within families, school, and society. In F. Pajares & T. Urdan (Eds.), *Academic motivation of adolescents* (pp. 193–220). Greenwich, CN: Information Age.
- Levinson, D. (with Darrow, C. N., Klein, E. B., Levinson, M. H., & McKee, B.). (1978). *The seasons of a man's life*. New York: Knopf.
- Locke, E. A., & Latham, G. P. (1990). Work motivation and satisfaction: Light at the end of the tunnel. *Psychological Science*, 1, 240–246.
- Loscocco, K. A., & Roschelle, A. R. (1991). Influences on the quality of work and nonwork life: Two decades in review. *Journal of Vocational Behavior*, 39, 182–225.
- Lyubomirsky, S., & Lepper, H. S. (1997). A measure of subjective happiness: Preliminary reliability and construct validation. *Social Indicators Research*, 46, 137–155.
- Luther, M. (1963). Lectures on Galatians. Chapters 1–4. In J. Pelikan (Ed.), *Luther's works* (Vol. 26, pp. 3–461). St. Louis, MO: Concordia. (Original work published 1535)
- MacIntyre, A. (1984). *After virtue*. Notre Dame, IN: University of Notre Dame Press.
- Marcia, J. E., & Archer, S. L. (1993). Identity status in late adolescence: Scoring criteria. In J. E. Marcia, A. S. Waterman, D. R. Matteson, S. L. Archer, & J. L. Orlofsky (Eds.), *Ego Identity* (pp. 205–240). New York: Springer-Verlag.
- Maslow, A. H. (1954). *Motivation and personality*. New York: Harper & Row.
- Maslow, A. H. (1971). *The farther reaches of human nature*. New York: Viking.
- Miller-Tiedeman, A. (1988). *LIFECAREER®: The quantum leap into a process theory of career*. Vista, CA: Lifecareer® Foundation.
- Miller-Tiedeman, A. (1989). *How not to make it... and succeed: The truth about your lifecareer*. Vista, CA: Lifecareer® Foundation.
- Miller-Tiedeman, A. (1997). The Lifecareer process theory: A healthier choice. In D. P. Bloch & L. J. Richmond (Eds.), *Connections between spirit and work in career development* (pp. 87–113). Palo Alto, CA: Davies-Black.
- Milton, J. (1957). *Paradise Lost*. In M. Y. Hughes (Ed.), *John Milton: Complete poetry and major prose* (pp. 207–469). New York: Odyssey. (Original work published 1674)
- Morse, N. C., & Weiss, R. S. (1955). The function and meaning of work and the job. *American Sociological Review*, 20, 191–198.
- Myers, D. G. (2000). The funds, friends, and faith of happy people. *American Psychologist*, 55, 56–67.
- Myers, D. G., & Diener, E. (1995). Who is happy? *Psychological Science*, 6, 10–19.
- Myers, J. E., Sweeney, T. J., & Witmer, J. M. (2000). The wheel of wellness counseling for wellness: A holistic model for treatment planning. *Journal of Counseling & Development*, 78, 251–266.
- Nevill, D. D., & Super, D. E. (1986). *The salience inventory: Theory, application, and research manual (research edition)*. Palo Alto, CA: Consulting Psychologists Press.
- Oman, D., & Thoresen, C. E. (2003). Spiritual modeling: A key to spiritual and religious growth? *The International Journal for the Psychology of Religion*, 13, 149–165.
- Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington, MA: Lexington Books.
- Palmer, P. (2000). *Let your life speak: Listening for the voice of vocation*. San Francisco: Jossey-Bass.
- Pavot, W., Diener, E., Colvin, C. R., & Sandvik, E. (1991). Further validation of the satisfaction with life scale: Evidence for the cross-method convergence of well-being measures. *Journal of Personality Assessment*, 49, 71–75.
- Perkins, W. (1970). *A treatise of the vocations or callings of men*. In I. Breward (Ed.), *The work of William Perkins* (pp. 441–476). Abingdon, Berkshire, England: Sutton Courtenay. (Original work published 1603)

- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. New York: Oxford University Press.
- Peterson, C., Seligman, M. E. P., & Vaillant, G. E. (1988). Pessimistic explanatory style as a risk factor for physical illness: A thirty-five year longitudinal study. *Journal of Personality and Social Psychology*, *55*, 23–27.
- Plante, T. G., & Boccaccini, M. (1997). The Santa Clara Strength of Religious Faith Questionnaire. *Pastoral Psychology*, *45*, 375–387.
- Plante, T. G., & Sherman, A. C. (2001). Research on faith and health: New approaches to old questions. In T. G. Plante & A. C. Sherman (Eds.), *Faith and Health: Psychological Perspectives*. New York: Guilford Press.
- Plante, T. G., Yancey, S., Sherman, A., & Guertin, M. (2000). The association between strength of religious faith and psychological functioning. *Pastoral Psychology*, *48*, 405–412.
- Puhl, L. J. (Ed.) (1951). *The spiritual exercises of St. Ignatius*. Chicago: Loyola Press. (Original work published 1548)
- Pulakos, E. D., & Schmitt, N. (1983). A longitudinal study of a valence model approach for the prediction of job satisfaction of new employees. *Journal of Applied Psychology*, *68*, 307–312.
- Quinn, R. E. (1996). *Deep change: Discovering the leader within*. San Francisco: Jossey-Bass.
- Quinn, R. E. (2000). *Change the world: How ordinary people can accomplish extraordinary results*. San Francisco: Jossey-Bass.
- Raines, J. C., & Day-Lower, D. C. (1986). *Modern work and human meaning*. Philadelphia: Westminster Press.
- Rayburn, C. A. (1997). Vocation as calling: Affirmative response or “wrong number.” In D. P. Bloch & L. J. Richmond (Eds.), *Connections between spirit and work in career development* (pp. 163–183). Palo Alto, CA: Davies-Black.
- Richardson, M. S. (1993). Work in people’s lives: A location for counseling psychologists. *Journal of Counseling Psychology*, *40*, 425–433.
- Rickey, M. E., & Stroup, T. B. (Eds.) (1968). *Certain sermons or homilies appointed to be read in churches in the time of Queen Elizabeth I*. Gainesville, FL: Scholars’ Facsimiles. (Original work published 1623)
- Robins, L., Helzer, J., Weissman, M., Orvaschel, H., Gruenberg, E., Burke, J. et al. (1984). Lifetime prevalence of specific psychiatric disorders in three sites. *Archives of General Psychiatry*, *41*, 949–958.
- Savickas, M. L. (1997). The spirit in career counseling: Fostering self-completion through work. In D. P. Bloch & L. J. Richmond (Eds.), *Connections between spirit and work in career development* (pp. 3–25). Palo Alto, CA: Davies-Black.
- Sax, L. J., Astin, A.W., Lindholm, J. A., Korn, W. S., Saenz, V. B., & Mahoney, K. M. (2003). *The American freshman: National norms for Fall 2003*. Los Angeles: Higher Education Research Institute.
- Sax, L. J., Lindholm, J. A., Astin, A. W., Korn, W. S., & Mahoney, K. M. (2001). *The American freshman: National norms for Fall 2001*. Los Angeles: Higher Education Research Institute.
- Schwartz, B. (1994). *The costs of living: How market freedom erodes the best things in life*. New York: Norton.
- Seligman, M. E. P. (1991). *Learned optimism*. New York: Knopf.
- Seligman, M. E. P. (2002). *Authentic happiness*. New York: Simon & Schuster.
- Seligman, M. E. P. (2003). Positive psychology: Fundamental assumptions. *The Psychologist*, *16*, 126–127.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, *55*, 5–14.
- Seligman, M., Verkuil, P., Kang, T. (2002). Why lawyers are unhappy. *Cardozo Law Journal*, *23*, 33–53.

- Sharf, R. S. (2006). *Applying career development to counseling* (4th ed.). Belmont, CA: Thomson, Brooks/Cole.
- Staw, B. M., Bell, N. E., & Clausen, J. A. (1986). The dispositional approach to job attitudes: A lifetime longitudinal test. *Administrative Science Quarterly*, *31*, 56–77.
- Staw, B. M., & Ross, J. (1985). Stability in the midst of change: A dispositional approach to job attitudes. *Journal of Applied Psychology*, *70*, 469–480.
- Super, D. E. (1957). *The psychology of careers*. New York: Harper.
- Super, D. E. (1969). Vocational development theory: Persons, positions, and processes. *The Counseling Psychologist*, *1*, 2–9.
- Super, D. E. (1980). A life-span, life-space approach to career development. *Journal of Vocational Behavior*, *16*, 282–298.
- Super, D. E., & Crites, J. O. (1962). *Appraising vocational fitness*. New York: Harper & Row.
- Super, D. E., & Sverko, B. with Super, C. M. (1995). *Life roles, values, and careers*. San Francisco: Jossey-Bass.
- Taylor, C. (1989). *Sources of the self: The making of the modern identity*. Cambridge, MA: Harvard University Press.
- Tiedeman, D. V. (1961). Decision and vocational development: A paradigm and its implications. *Personnel and Guidance Journal*, *40*, 15–21.
- Tiedeman, D. V. (1997). Ready, set, grow: An allegoric induction into quantum careering. In D. P. Bloch & L. J. Richmond (Eds.), *Connections between spirit and work in career development* (pp. 61–86). Palo Alto, CA: Davies-Black.
- Waterman, A. S. (1993). Overview of the identity status scoring criteria. In J. E. Marcia, A. S. Waterman, D. R. Matteson, S. L. Archer, & J. L. Orlofsky (Eds.), *Ego identity: A handbook for psychosocial research* (pp. 156–176). New York: Springer-Verlag.
- Weber, M. (1958). *The Protestant ethic and the spirit of capitalism*. New York: Scribner's. (Original work published 1904)
- Witmer, J. M., & Sweeney, T. J. (1992). A holistic model for wellness and prevention over the life span. *Journal of Counseling & Development*, *71*, 140–148.
- Wrzesniewski, A., McCauley, C., Rozin, P., & Schwartz, B. (1997). Jobs, careers, and callings: People's relations to their work. *Journal of Research in Personality*, *31*, 21–33.

# SPIRITUALITY AND GOD-ATTACHMENT AS PREDICTORS OF SUBJECTIVE WELL-BEING FOR SEMINARIANS AND NUNS IN INDIA

*Dudley Mendonca, K. Elizabeth Oakes, Joseph W. Ciarrocchi,  
William J. Sneek, and Kevin Gillespie\**

## ABSTRACT

The present study was a cross-sectional study of spirituality and views of God as predictors of subjective well-being (SWB) over and above a comprehensive measure of personality. The total sample of 321 participants consisted of 121 Catholic religious women and 200 Jesuit seminarians in India whose overall mean age was 34 years. Family of origin backgrounds of the participants were severely impoverished economically. Hierarchical multiple regression found that personality explained a significant amount of variance for all three facets of SWB including positive affect, negative affect, and cognitive well-being. Faith maturity and positive God image each contributed significant independent variance in predicting increased positive affect and cognitive well-being. Negative God-image, in contrast, predicted reduced positive affect and cognitive well-being, and increased negative affect. Analysis by gender indicated that spirituality and God image predict differentially to subjective well-being components for men and women. The findings replicate cross-culturally the utility of viewing spiritual transcendence as related to human flourishing.

Religiosity, personality, and subjective well-being are three characteristics that have independently generated considerable cross-cultural research. They are topics well-suited to teasing out emic (what is unique to a culture) and etic (what is generalizable across cultures) dimensions of the human person. Progress in understanding the cross-cultural features of personality and subjective well-being are currently more advanced than is either religion or spirituality. A wide body of empirical work has found the five-factor model to represent an adequate taxonomy that holds up well across many cultures (McCrae & Allik, 2002). Similarly, the cross-cultural study of subjective well-being has established common

---

\* *Author Note:* Dudley Mendonca is now at Sadhana Institute, Old Khandala Road, Pune DT Maharashtra Lonavla 410401, India. The authors thank Monique Daniels and Agnes Jo Tepe for manuscript preparation. Correspondence concerning this article should be addressed to Joseph W. Ciarrocchi, Pastoral Counseling Department, Loyola College in Maryland, 8890 McGaw Road, Suite 380, Columbia, Maryland, 21045. Dr. Ciarrocchi's email is [jwc@loyola.edu](mailto:jwc@loyola.edu).



measures of its components and has reliably determined which variables and conditions consistently predict happiness (Diener & Diener, 1995; Diener & Suh, 1999).

Not as much progress has occurred for religious and spiritual variables. The preponderance of research has been conducted in Western societies where Christianity is the majority religion thus leaving unknown to what degree the findings pertain either to Christianity specifically or Western culture generally.

The present study is a cross-cultural examination of a minority religion—Catholicism—in India, an Asian country. To what degree do empirical constructs such as spirituality, religion, personality, and their relationship to subjective well-being resemble patterns established in Western society where Christianity is the majority religion? Since Western findings are largely based on middle socioeconomic class participants, will these findings replicate in a group of seminarians and nuns from mostly rural and extremely poor family backgrounds?

Early research on the connection between religiosity and subjective well-being was open to the criticism of not adequately controlling for plausible alternative explanations. Some have criticized religious research as discovering little more than “mundane mediators,” or represent the “religification” or “parasitization” of already established psychological constructs (Buss, 2002; Joiner, Perez, & Walker, 2002; VanWicklin, 1990).

In response to these objections recent research has examined the relationship between spirituality and subjective well-being that controlled for one psychological construct that has consistently been shown to carry the largest variance for subjective well-being, namely, personality (DeNeve, 1999; DeNeve & Cooper, 1998). The studies, using different measures for the individual constructs, including participants from general adult samples in the United States, England, and Malta, as well as trauma victims, Protestant clergy, sex offenders, and problem gamblers have established that spirituality adds moderate and significant additional variance over and above personality (Ciarrocchi & Deneke, 2004; Francis & Katz, 2002; Galea, 2003; Geary, Ciarrocchi, & Sheers, 2004; Golden, Piedmont, Ciarrocchi, & Rodgeron, 2004; Walsh, 2001).

Furthermore, this research has extended the earlier well-established finding that different forms of religious experience predict uniquely to subjective well-being components. Seeing God as a close friend or collaborator predicts to positive aspects of subjective well-being while viewing God as punishing or abandoning is related to negative aspects

of subjective well-being (Pargament, 1997; 2002b). In the studies just cited and consistent with spirituality as a positive psychology variable, spirituality predicts positive aspects of subjective well-being, but does not reduce negative affect or psychological distress.

### HISTORICAL BACKGROUND

According to the traditions of the Syrian Christians of Malabar in South India, Christianity was brought to India about the year 52 CE (i.e., AD) by St. Thomas, one of the twelve apostles. Tradition holds that he was martyred in the year 72. By the year 345 Christians from Persia and other Middle Eastern countries were well-established and preceded a larger wave of Christian proselytizing by the Portuguese in the early 16th century. Today the Catholic Church in India consists of about 16 million people (less than 1.5%) in a country of over one billion, representing both a minority religion and the subject of physical persecution and attack in some areas.

At first glance, focusing on a religious outlier within a culture may not seem to be a wise strategy for examining broad findings and theoretical relationships to other cultures. Nor does focusing on those who are preparing to be religious leaders within that outlier group appear to be productive. Several reasons, however, suggest otherwise. First, although representing several language groups, all participants have learned English in school as an official language. This eliminates the costly and time-consuming process of developing translations for existing research instruments—never completely eliminating doubts about the adequacy of a given translation. Second, the use of identical instruments permits conclusions regarding the generalizability of established findings. Third, although Christianity is ordinarily thought of as a “western” religion, historically this is untrue, and doubly incorrect for the group under investigation. When the Western nations reached India, they found Christianity already established through its earlier Middle Eastern roots, as noted above. Studying this group may illuminate to what degree the findings generalize to Christians within a distinct culture or to what degree the cultural group demonstrates patterns that are distinct from Westernized Christians. Fourth, the significant poverty by Western standards that characterizes the participants’ family backgrounds further differentiates this group from typical studies on religiosity and subjective well-being.

POSITIVE AND NEGATIVE SPIRITUAL CONNECTIONS AND  
SUBJECTIVE WELL-BEING

There are at least two strains of research on the positive and negative dimensions of religiosity and their relationship to subjective well-being. The first group represents the extensive body of empirical work Pargament and his colleagues have conducted around the construct of religious coping (Pargament, 1997). In this framework people use their religion and spiritual worldviews as forms of coping with stress as a means to decrease their personal vulnerabilities. Positive forms of religious coping involve seeing God as a collaborator and a valued partner in managing life's difficulties. Negative forms of religious coping are those that tend to see God or religious congregations as punitive, abandoning, or alienating. This research has focused on people dealing with losses and stress that include terrorist bombings, acute or chronic physical illness, and death of a loved one. Consistently this work has demonstrated that forms of religious coping add additional independent variance to traditional psychological forms of coping (for example, problem-solving, reframing). Further, positive religious coping relates specifically to positive psychological outcomes, while negative religious coping relates to psychological distress and decreased well-being.

A second stream of research examines people's judgments of their spiritual connections or attachments without reference to any particular crisis or stress. Both spiritual attachment and spiritual trait models followed this approach, which resembles traditional personality explanatory models (Kirkpatrick, 2005). Although they have a slightly different emphasis than the religious coping approach, the findings are similar. People who view God positively generally report higher subjective well-being, and people who describe God negatively report greater emotional and cognitive distress.

The current study intends to extend the findings that personality is a partial mediator for subjective well-being to a unique group of Christian leaders in India. Spiritual commitment and images of God will predict dimensions of subjective well-being and, more specifically, spiritual commitment and positive images of God will predict greater subjective well-being, while negative images of God will predict decreased subjective well-being, controlling for personality. Personality, as represented in the five-factor model, will partially mediate but not totally eliminate this relationship.

## METHOD

### *Participants*

The participants recruited for this study ( $N = 321$ ) belonged to two Indian Catholic populations: male seminarians in the Jesuit religious order, and Catholic nuns from various religious orders. The male sample ( $n = 200$ ) was drawn from a population of 359 men who were studying philosophy or theology as part of their priestly training. They were attending one of three ecclesiastical colleges situated in the Indian cities of Chennai, Pune, and Delhi. Each was an Indian citizen and together they represented 20 of the 29 states and six union territories of the country. The entire Jesuit sample was comprised of the St. Thomas Christians, men whose ancestors were Hindu converts to the Portuguese church in India, or whose ancestors were converts from tribal religions to the church in India established by missionaries. The female participants ( $n = 121$ ) came from an estimated population of 206 religious congregations that totaled over 69,000 women. They too were comprised of the St. Thomas Christians.

*Participant recruitment.* For the male participants, the first author contacted the religious superiors of the three Jesuit regional communities and provided information about the nature of the study. The superiors then forwarded this information to prospective participants. The first author subsequently met with each group in person to solicit volunteers following bulletin-board announcements in the educational institutions. A total of 56% from all three groups volunteered to fill out the questionnaires.

The first author recruited female participants in three ways. He (a) invited students attending a course at a religious institute, (b) asked for religious superiors to announce the project and have volunteers contact him by mail, and (c) personally visited community residences to describe the project and seek volunteers. Each participant signed an informed consent statement and was given a statement about the anonymity and confidentiality of all collected information.

*Participant characteristics.* The final sample was comprised of 121 females (37%, mean age = 41) and 200 males (63%, mean age = 30). Seventy-five percent of the total sample had either rural (village) or sub-urban (town) education, while the rest had urban (city) education. Seventy-one percent (228) had an undergraduate degree, 21% had a graduate degree, and 8% had a Secondary School Certificate. The

median family annual income for participants when growing up was 25,000 Rupees or 544 United States dollars annually.

## MEASURES

### *Subjective Well-Being*

The Satisfaction with Life Scale (SWLS) was developed as a single-factor 5-item measure of cognitive global life satisfaction (Diener, Emmons, Larsen, & Griffin, 1985). It is a widely used instrument in cross-cultural studies to obtain an index of happiness. In a cross-cultural study of 12,600 college students from 31 countries on five continents, including India, the SWLS had moderately strong correlations with self-esteem, family satisfaction, satisfaction with friends, and satisfaction with finances, thereby illustrating its cross-cultural consistency (Diener & Diener, 1995).

In the current study the affective component of well-being was measured by the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988), which contains two subscales—one with 10 positive affect (PA) items and an equal number of negative affect (NA) items. The PANAS is scored using self-ratings on a 5-point scale, from *very slightly or not at all* to *extremely*.

### *Personality*

The International Personality Item Pool (Goldberg et al., 2006; IPIP, 2001; <http://ipip.ori.org/>, 2001) is a broad-bandwidth personality inventory in the public domain that consists of 100 items. The instrument consists of a hierarchy of traits consisting of the big-five factors (Goldberg, 1990). The five factors are the traditional ones (McCrae & Allik, 2002) of neuroticism (the level to which a person experiences emotional distress), extraversion (the experience of positive emotion particularly as related to social interactions), openness (degree of openness to new experiences), agreeableness (degree to which one is other-oriented versus self-focused), and conscientiousness (degree to which a person is disposed to be dutiful to one's role and obligations). The scale utilizes a 5-point Likert-type scale with responses ranging from *very inaccurate* to *very accurate*.

*Spirituality Measures*

The Faith Maturity Scale (FMS) is a 12-item questionnaire (Benson et al., 1993) abbreviated from its original 38-item format. It consists of two subscales, where the horizontal subscale measures the degree to which a faith commitment orients a person's life toward helping others, and the vertical subscale assesses a person's perceived intimacy with God. This 12-item version of the FMS has been shown to predict emotional distress and prosocial behavior after controlling for personality (Ciarrocchi & Deneke, 2004; Ciarrocchi, Piedmont, & Williams, 2002), has strong internal consistency, and multivariate analysis supports its factor structure (Piedmont & Nelson, 2001). For this study analysis was limited to the Vertical subscale due to item redundancy between the Horizontal subscale and Satisfaction with Life.

Positive and negative images of God were derived from the God Image Scale (GIS; Lawrence, 1997), the research version of the God Image Inventory, a 156-item instrument designed to measure the image of God. The development of the original scale was based on Ana-Maria Rizzuto's distinction between the God concept and the God image (Rizzuto, 1970, 1979, 1982). The GIS used contains two scales with 12 items each. They include Presence and Acceptance images of God. The Acceptance and Presence subscales contained items that referred to views emphasizing God's nearness and support, or God's displeasure and absence. Accordingly, two subscales were created that separated the positive images of God from the negative ones. Inspired by the subscales of positive and negative religious/spiritual coping in the Brief RCOPE (Pargament & Koenig, 1997), the positive items from the Presence and Acceptance GIS subscales were collapsed to form a positive image scale and the negative items from both were collapsed to form a negative image scale.

## RESULTS

*Descriptive Statistics*

Table 1 presents the correlations, means, standard deviations, and alpha reliabilities for the predictor and outcome variables. The table is striking for the large number of significant intercorrelations (89.5%), a common finding in positive psychology that replicates in this cross-cultural

Table 1. *Correlations, Means, Standard Deviations, and Reliabilities*

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age													
2. Gender	<b>-.52</b>												
3. Neuroticism	-.10	<b>.12</b>											
4. Extraversion	-.03	.03	<b>-.36</b>										
5. Openness	-.09	.10	<b>-.18</b>	<b>.41</b>									
6. Agreeableness	.08	-.03	<b>-.32</b>	<b>.47</b>	<b>.37</b>								
7. Conscientiousness	<b>.18</b>	<b>-.18</b>	<b>-.20</b>	<b>.24</b>	<b>.32</b>	<b>.34</b>							
8. Faith Maturity Vertical	<b>.17</b>	<b>-.13</b>	<b>-.23</b>	<b>.28</b>	<b>.38</b>	<b>.39</b>	<b>.29</b>						
9. Positive God Image	<b>.22</b>	<b>-.26</b>	<b>-.23</b>	<b>.25</b>	<b>.22</b>	<b>.33</b>	<b>.27</b>	<b>.50</b>					
10. Negative God Image	<b>-.22</b>	<b>.35</b>	<b>.42</b>	<b>-.26</b>	<b>-.20</b>	<b>-.29</b>	<b>-.31</b>	<b>-.33</b>	<b>-.57</b>				
11. Satisfaction with Life	<b>.18</b>	<b>-.12</b>	<b>-.24</b>	<b>.31</b>	<b>.29</b>	<b>.22</b>	<b>.28</b>	<b>.37</b>	<b>.35</b>	<b>-.33</b>			
12. Positive Affect	-.05	-.00	<b>-.23</b>	<b>.35</b>	<b>.42</b>	<b>.36</b>	<b>.24</b>	<b>.34</b>	<b>.27</b>	<b>-.30</b>	<b>.26</b>		
13. Negative Affect	<b>-.19</b>	<b>.22</b>	<b>.45</b>	<b>-.34</b>	<b>-.22</b>	<b>-.24</b>	<b>-.25</b>	<b>-.14</b>	<b>-.24</b>	<b>.39</b>	<b>-.20</b>	<b>-.16</b>	
Mean	33.80	—	56.40	62.00	64.20	77.70	72.50	39.70	40.50	21.40	22.10	34.70	21.40
Standard Deviation	10.20	—	11.20	10.90	9.80	8.90	10.20	6.70	4.50	5.00	5.20	5.50	6.80
Alpha	—	—	.80	.82	.85	.80	.83	.78	.83	.82	.62	.85	.78

Note: Correlations in bold,  $p < .05$ .

survey. The only low alpha reliability was Satisfaction with Life (.62), while the others ranged from .78 to .85.

Other noteworthy features include the relative independence between positive and negative affect (accounting for less than 3% variance). This is consistent with empirical and theoretical work that sees these emotions as arising in separate neurobiological systems (Diener & Emmons, 1985; Watson, 2000). The correlations among the spirituality variables also indicate that they are not redundant with each other. Correlations between faith maturity and positive God images are in the moderate range, but the correlations for each of these variables with negative God images are in the small range.

### *Tests of Hypotheses*

A series of multiple regression analyses tested the main hypothesis, which stated that subjective well-being is related to personality, God-image, and faith maturity. The analyses were further specified to determine the differential predictability between positive and negative God images. In keeping with previous work, both faith maturity and positive God images were hypothesized to predict positive aspects of well-being, but to have no relationship to negative emotion. An identical series of exploratory hypotheses were conducted for negative God images to determine if they also predicted aspects of subjective well-being differentially but in reverse fashion to positive God images.

To determine whether spirituality improves predictability of SWB over personality, a series of hierarchical regressions was performed with satisfaction with life, positive affect, and negative affect as criterion variables. For the main hypothesis three regression models were run where the three independent variable sets—age and gender, personality, and spirituality—were entered at Steps 1, 2, and 3, respectively. Partial *F*-tests were calculated at each step of the three models to determine whether a particular set of variables significantly increased the proportion of explained variance.

Table 2 presents the results of the regression models with satisfaction with life, positive affect, and negative affect as the criterion variables. In each of the models personality explained a significant amount of variance for satisfaction with life, positive affect, and negative affect over and above the contribution of age and gender. The effect sizes for personality ranged from .17 to .25.



Table 2. *Hierarchical Regression for Subjective Well-Being*

Hierarchical Step	Predictor Variable	R <sup>2</sup>	ΔR <sup>2</sup>	F Change
Positive Affect				
1	Personality	.25	.25	20.72***
2	Faith Maturity	.26	.02	6.76**
2	Positive God Image	.26	.01	4.40*
2	Negative God Image	.26	.02	8.04**
Negative Affect				
1	Age, Gender	.06	.06	9.77***
2	Personality	.29	.23	20.85***
3	Faith Maturity	.30	.01	2.95
3	Positive God Image	.29	.00	.41
3	Negative God Image	.31	.02	7.06**
Satisfaction with Life				
1	Age, Gender	.03	.03	5.66**
2	Personality	.20	.17	13.17***
3	Faith Maturity	.24	.04	15.03***
3	Positive God Image	.24	.04	14.27***
3	Negative God Image	.22	.02	8.77**

Note:  $N = 325$ .

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

As hypothesized, faith maturity predicted positive affect and satisfaction with life over and above age, gender, and personality, and had no relationship to negative affect. Positive God image outcomes were identical to faith maturity. Positive God image also had no relationship to negative affect.

Table 2 reveals, on the other hand, that negative God image predicted all three aspects of subjective well-being. That is, unlike faith maturity and positive God image, which differentially predicted only to positive aspects of subjective well-being, negative God image not only predicted an increase in negative affect, it also predicted decreases in positive affect and cognitive well-being.

Table 3 clarifies the overall effects for the predictor variables by presenting their beta weights in relationship to the components of subjective well-being. The demographic variables are both consistent and inconsistent in comparison with other studies on subjective well-being. One outcome was consistent in that age was related to satisfaction

with life. The literature supports the notion that people's well-being generally increases as they get older (Mroczek & Kolarz, 1998). On the contrary, the higher levels of negative affect for men is inconsistent with the preponderance of work that finds women being higher on both positive and negative affect (Nolen-Hoeksema & Rusting, 1999). This finding contributes to the need for the further gender analysis conducted below.

Table 3 reveals the relationship between the five factors of personality with the subjective well-being components. Again, consistent with the literature, neuroticism, extraversion, agreeableness, and conscientiousness predict multiple aspects of subjective well-being. Somewhat inconsistent is the relationship between openness to experience with both positive affect and satisfaction with life (Watson, 2000, p. 179).

Finally, Table 3 reveals the differential impact of spiritual variables on subjective well-being. Both faith maturity and positive God image predict increased positive affect and satisfaction with life, whereas negative God image predicts increased negative affect but decreased positive affect and satisfaction with life.

Table 3. *Beta Weights for Predictor Variables According to Entry Order*

Predictor Variable	Positive Affect	Negative Affect	Satisfaction With Life
Gender	-.05	.17**	-.03
Age	-.08	-.11	.16**
Neuroticism	-.08	.33***	-.10
Extroversion	.13*	-.18**	.19**
Openness	.28***	-.09	.18**
Agreeableness	.15**	.02	-.02
Conscientiousness	.05	-.07	.13*
Faith Maturity	.14**	.09	.22***
Positive God Image	.11*	-.03	.21***
Negative God Image	-.16**	.15**	-.18**

Note:  $N = 325$ .

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

*Gender Analysis*

Table 1 reveals that gender correlates significantly with many of the predictor variables and two of the outcome variables (satisfaction with life and negative affect). This suggests that it would be worthwhile to conduct further analyses for a better understanding of how men and women in this study differ regarding the predictability of spiritual variables to subjective well-being. Therefore, an entirely new series of multiple regressions was conducted following the procedures described above to examine the connection between spirituality and subjective well-being for men and women.

Tables 4, 5, and 6 indicate that for women faith maturity does not predict any subjective well-being component. Positive God image predicts cognitive well-being over and above age and personality, while negative God image predicts reduced positive affect. For men faith maturity predicts all three components of subjective well-being. Positive God image predicts both positive affect and cognitive well-being, while negative God-image predicts increased negative affect and decreased cognitive well-being.

Table 4. *Hierarchical Regression for Positive Affect by Gender*

Hierarchical Step	Predictor Variable	R <sup>2</sup>	ΔR <sup>2</sup>	F Change
<b>Females</b>				
1	Personality	.19	.19	5.48***
2	Vertical Faith	.20	.01	1.24
2	Positive God Image	.19	.00	.10
2	Negative God Image	.22	.03	4.78*
<b>Males</b>				
1	Personality	.29	.29	16.12***
2	Vertical Faith	.31	.02	5.07*
2	Positive God Image	.32	.03	8.33**
2	Negative God Image	.31	.01	3.79

Note: N = 121 women and 200 men.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Table 5. *Hierarchical Regression for Negative Affect by Gender*

Hierarchical Step	Predictor Variable	R <sup>2</sup>	ΔR <sup>2</sup>	F Change
Females				
1	Age	.02	.02	2.31
2	Personality	.34	.32	11.12***
3	Vertical Faith	.34	.00	.10
3	Positive God Image	.34	.00	.38
3	Negative God Image	.35	.01	2.16
Males				
1	Age	.01	.01	1.54
2	Personality	.23	.22	11.39***
3	Vertical Faith	.25	.02	4.31*
3	Positive God Image	.23	.00	.02
3	Negative God Image	.25	.02	4.93*

Note:  $N = 121$  women and 200 men.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Table 6. *Hierarchical Regression for Satisfaction with Life by Gender*

Hierarchical Step	Predictor Variable	R <sup>2</sup>	ΔR <sup>2</sup>	F Change
Females				
1	Personality	.11	.11	2.87*
2	Vertical Faith	.13	.02	2.71
2	Positive God Image	.17	.06	8.15**
2	Negative God Image	.13	.02	2.46
Males				
1	Personality	.25	.25	12.31***
2	Vertical Faith	.30	.05	13.29***
2	Positive God Image	.27	.02	5.92*
2	Negative God Image	.27	.02	5.93*

Note:  $N = 121$  women and 200 men.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

## DISCUSSION

Although this particular sample represented a cross-cultural and specialized group of religious practitioners, the overall findings regarding subjective well-being are highly consistent with those generally found in the literature. Demographic variables had a modest relationship with subjective well-being while personality had a considerably stronger effect size. The sizable range of the effect sizes for the personality dimensions indicates the importance of controlling for personality in subjective well-being research. This is equally true for research investigating spiritual and religious dimensions as predictors of subjective well-being. Unfortunately, only a small portion of empirical research in the psychology of religion controls for the effects of personality when studying subjective well-being. This renders the field vulnerable to complaints that psychology of religion research does not support causal inferences for its variables and that the results have more plausible explanations (Sloan, Bagiella, & Powell, 2001).

The importance of the present study begins with its replication in a cross-cultural context of the predictability of spirituality for subjective well-being. Although the group is Christian, it is distinct culturally and ethnically from westernized Christian populations. Approximately three fourths of the sample size were raised outside of major urban areas and came from family backgrounds that would represent extreme poverty by western standards. Nevertheless, participants who viewed God as a benevolent, caring individual and who made their faith a central component had both higher levels of positive affect and the cognitive component of happiness. This outcome held even when controlling for age, gender, and a comprehensive measure of personality.

The results also contribute to research that attempts to tease out the differential predictability of positive and negative God image. Although there is a large body of research on image of God, few studies examine the effects of these images while controlling for personality. No studies, to our knowledge, examine positive and negative God image controlling for personality in a cross-cultural sample. From the standpoint of God image the current study replicates previous work that found positive spirituality predicted the positive components of subjective well-being, but infrequently predicted negative affect (Ciarrocchi & Deneke, 2004). That is, the bulk of the research indicates that positive spirituality—whether in the form of God image or spiritual attachment—is associated with positive affect but has no relationship with

negative affect. Those relationships were replicated in this study using different measures of personality and God image.

The differential impact of positive and negative God image is in itself intriguing. We found that, unlike positive spirituality, negative God image predicted all components of subjective well-being. That is, it not only predicted increases in negative affect, it also predicted decreases in positive affect and cognitive well-being. If replicated, these findings point to the subtlety of religion and spirituality's influence on happiness. The findings are consistent with prominent researchers in the field who have argued cogently that various forms of faith can be for good or ill (Pargament, 2002b).

A third feature of the study is an understanding of gender differences that emerged from analyzing the various components of spirituality in relationship to subjective well-being. Men and women seem to use their spirituality differently whether in terms of motivation or outcomes. Women consistently score higher than men across cultures on almost every measure of spirituality and religiosity. How, then, is one to understand the current finding that for men seven of the nine outcomes between spiritual predictors and subjective well-being were significant, whereas for women only two of the nine analyses were? That is, spiritual variables carry more variance in predicting happiness for men than they do for women even though women are more spiritual and religious to begin with. This replicates a finding from a large sample of college undergraduates that found men's spirituality but not women's predicted prosocial behavior controlling for personality (Ciarrochi, Piedmont, & Williams, 2003). Such findings not only highlight the importance of attending to gender differences, they highlight once more the importance of controlling for personality if the field is to develop a better grasp of the individual differences in the function of religion and spirituality. However these findings are eventually explained, it appears that spirituality and temperament interact differently in men and women. The current study along with the prosocial study cited suggest that men may use spirituality either as a motivational impetus to arrive at behavioral outcomes (e.g., prosocial behavior), or need certain forms of spirituality to achieve happiness. For women, on the other hand, spirituality and temperament may be more intertwined and perhaps there is less of a need to access a discrete spiritual-religious cognitive-motivational sub-system to thrive. To be even more speculative perhaps men require the more intentional use of religion and spirituality if they are to experience the psychosocial benefits accruing

to them, for example, greater cultural and social harmony as well as happiness. These speculations require a good deal more empirical research and indicate the importance of research designs that manage confounding variables.

This study has several implications for the field of positive psychology. First, spirituality continues to have a consistent, robust relationship to subjective well-being. Just as the social and demographic correlates of subjective well-being are consistent cross-culturally (Diener & Diener, 1995), so now an accumulating body of evidence indicates that spirituality and religion also are linked to subjective well-being cross-culturally. This supports the current taxonomic strategy in positive psychology to develop character strengths and virtues that are human universals (Peterson & Seligman, 2005). Transcendence is clearly emerging as one of those human universals which is related to human flourishing.

At the same time that the taxonomic strategies of positive psychology are gaining momentum, there is development in the conceptual area. After moving from an enthusiastic embrace of all that is positive about human functioning, researchers in the field are expanding their models to find a proper place for the negative and painful aspects of human life. The current approach de-emphasizes ranking either positive or negative aspects of human life as the only proper focus of psychology. Rather, the emphasis is on seeing the relationship between the two while making up for past neglect in the field through intensive research on what contributes to human flourishing (Linley, Joseph, Harrington, & Wood, 2006). The current study follows that same approach. The field of psychology once gave preponderant weight to the negative aspects of religion, particularly as they related to clinical phenomena such as anxiety, guilt, repression, etc. The current study supports the idea that spirituality has an important role to play in human happiness. Nevertheless, its methodology also suggests which components of spirituality and religion may play a role in diminishing happiness. Viewing God as caring and benevolent has important psychological payoff whereas a view of God that emphasizes punishment and abandonment is related to increased emotional distress. This finding echoes the consummate literature review on negative affect that “bad is stronger than good” (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). Simply put, images of a good God can boost positive affect but leave one’s emotional pain untouched. Images of a punitive God go farther in their association with increased emotional pain and decreased joy. Research projects such as this appear to answer positive psychology’s call to balance

both the positive and negative aspects of human functioning, and at the same time give priority to research agendas that emphasize positive components.

The study's conclusions are limited by the cross-sectional nature of the design. More robust relationships could be determined through longitudinal designs or through experimental projects which could allow the introduction of various religious or spiritual perspectives as related to specific outcomes. However, as informative as experimental designs might be, the connection between emotional distress and negative God image may eliminate certain manipulations for ethical reasons.

Future research of a cross-sectional nature would benefit from expanding the sample to include other regional religions such as Muslim, Hindu, and Buddhist. Encouraging work in this region has recovered the five factor model of personality (Piedmont & Leach, 2002), suggesting that these personality dimensions at least provide a platform from which to understand the operations of religion and spirituality in India. Although positive psychology pays heed to cross-cultural differences, its conceptual and research agenda is to determine the universal aspects of character strengths and virtue that enhance human life. Combining a universalistic positive psychology research agenda with cross-culturally robust measures of personality and spirituality may bring differing cultures closer to understanding what is common to their own well-being, and help motivate them to find cooperative means to achieve their mutual goals.

#### REFERENCES

- Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology*, *5*, 323–370.
- Benson, P. L., Donahue, M. J., & Erickson, J. A. (1993). The faith maturity scale: Conceptualization, measurement, and empirical validation. *Research in the Social Scientific Study of Religion*, *5*, 1–26.
- Benson, P., & Spilka B. (1973). God image as a function of self-esteem and locus of control. *Journal for the Scientific Study of Religion*, *12*, 297–310.
- Buss, D. M. (2002). Sex, marriage, and religion: What adaptive problems do religious phenomena solve? *Psychological Inquiry*, *13*, 201–203.
- Ciarrocchi, J. W. (2000). Images of God, faith maturity, and emotional distress: Gender differences. In R. L. Piedmont (Chair), *Racial, clinical, and gender issues surrounding image of God*. Symposium conducted at the Annual Convention of the American Psychological Association, Washington, D.C.
- Ciarrocchi, J. W., & Deneke, E. (2004). Happiness and the varieties of religious experience: Religious support, practices, and spirituality as predictors of well-being. *Research in the Social Scientific Study of Religion*, *15*, 209–233.



- Ciarrocchi, J. W., Piedmont, R. L., & Williams, J. E. G. (2002). Image of God and personality as predictors of spirituality in men and women. *Research in the Social Scientific Study of Religion, 13*, 55–73.
- Ciarrocchi, J. W., Piedmont, R. L., & Williams, J. E. G. (2003). Love thy neighbor: Spiritual motivations as predictors of prosocial behavior. *Research in the Social Scientific Study of Religion, 14*, 61–75.
- DeNeve, K. M. (1999). Happy as an extraverted clam? The role of personality for subjective well-being. *Current Directions in Psychological Science, 8*, 141–144.
- DeNeve, K. M., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin, 124*, 197–229.
- Diener, E., & Diener, M. (1995). Cross-cultural correlates of life satisfaction and self-esteem. *Journal of Personality and Social Psychology, 68*, 653–663.
- Diener, E., & Emmons, R. (1985). The independence of positive and negative affect. *Journal of Personality and Social Psychology, 47*, 1105–1117.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*, 71–75.
- Diener, E., & Suh, E. (1999). National differences in subjective well-being. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 434–450). New York: Russell Sage Foundation.
- Francis, L. J., & Katz, Y. J. (2002). Religiosity and happiness: A study among Israeli female undergraduates. *Research in the Social Scientific Study of Religion, 13*, 75–86.
- Galea, M. (2003). *The impact of child abuse on the psycho-spiritual status, religious behavior, and family dynamics of Maltese college students*. Unpublished doctoral dissertation, Loyola College in Maryland.
- Geary, B., Ciarrocchi, J. W., & Scheers, N. J. (2004). Spirituality and religious variables as predictors of well-being in sex offenders. *Research in the Social Scientific Study of Religion, 15*, 167–187.
- Goldberg, L. W. (1990). An alternative “description of personality”: The big-five structure. *Journal of Personality and Social Psychology, 59*, 1216–1229.
- Goldberg, L. R., Johnson, J. A., Eber, H. W., Hogan, R., Ashton, M. C., Cloninger, C. R., et al. (2006). The international personality item pool and the future of public-domain personality measures. *Journal of Research in Personality, 40*, 84–96.
- Golden, J., Piedmont, R. L., Ciarrocchi, J. W., & Rodgeron, T. (2004). Spirituality and burnout: An incremental validity study. *Journal of Psychology and Theology, 32*, 115–125.
- International Personality Item Pool. (2001). *A scientific collaboratory for the development of advanced measures of personality traits and other individual differences*. Retrieved March 1, 2003 from <http://ipip.ori.org>.
- Joiner, T. E., Jr., Perez, M., & Walker, R. L. (2002). Playing devil’s advocate: Why not conclude that the relation of religiosity to mental health reduces to mundane mediators? *Psychological Inquiry, 13*, 214–216.
- Kirkpatrick, L. A. (2005). *Attachment, evolution, and the psychology of religion*. New York: Guilford Press.
- Lawrence, R. T. (1991). The God image inventory: The development, validation and standardization of a psychometric instrument for research, pastoral and clinical use in measuring the image of God. *Dissertation Abstracts International, 52*(3-A), 952 (Knapp, 1993)
- Lawrence, R. T. (1997). Measuring the image of God: The God image inventory and the God image scales. *Journal of Psychology and Theology, 25*, 214–226.
- Leach, M. M., Piedmont, R. L., & Monteiro, D. (2001). Images of God among Christians, Hindus, and Muslims in India. *Research in the Social Scientific Study of Religion, 12*, 207–225.
- Linley, P. A., Joseph, S., Harrington, S., & Wood, A. M. (2006). Positive psychology: Past, present, and (possible) future. *The Journal of Positive Psychology, 1*, 3–16.

- Lodhi, P. H., Deo, S., & Belhekar, V. (2002). The five-factor model of personality: Measurement and correlates in the Indian context. In R. R. McCrae & J. Allik (Eds.), *The five-factor model of personality across cultures* (pp. 227–248). New York: Kluwer Academic/Plenum Publishers.
- McCrae, R. R., & Allik, J. (Eds.). (2002). *The five-factor model of personality across cultures*. New York: Kluwer Academic/Plenum.
- Mroczek, D. K., & Kolarz, C. M. (1998). The effect of age on positive and negative affect: A developmental perspective on happiness. *Journal of Personality and Social Psychology*, *75*, 1333–1349.
- Nolen-Hoeksema, S., & Rusting, C. L. (1999). Gender differences in well-being. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 330–350). New York: Russell Sage Foundation.
- Pargament, K. I. (1996). Religious methods of coping: Resources for the conservation and transformation of significance. In E. P. Shafranske (Ed.), *Religion and the clinical practice of psychology* (pp. 215–239). Washington, D.C.: American Psychological Association.
- Pargament, K. I. (1997). *The psychology of religion and coping: Theory, research, practice*. New York: Guilford Press.
- Pargament, K. I. (2002a). Is religion nothing but...? Explaining religion versus explaining religion away. *Psychological Inquiry*, *13*, 239–244.
- Pargament, K. I. (2002b). The bitter and the sweet: An evaluation of the costs and benefits of religiousness. *Psychological Inquiry*, *13*, 168–181.
- Pargament, K. I., & Koenig, H. G. (1997). *A comprehensive measure of religious coping. Development and initial validation of the RCOPE*. Chicago: Retirement Research Foundation.
- Pavot, W., & Diener, E. (1993). Review of satisfaction with life scale. *Psychological Assessment*, *5*, 164–172.
- Pavot, W., Diener, E., Colvin, R., & Sandvik, E. (1991). Further validation of the satisfaction with life scale: Evidence for the cross-method convergence of well-being measures. *Journal of Personality Assessment*, *57*, 149–161.
- Peterson, C., & Seligman, M. E. P. (Eds.). (2004). *Character strengths and virtues: A handbook and classification*. Oxford: American Psychological Association & Oxford University Press.
- Piedmont, R. L. (1999). Does spirituality represent the sixth factor of personality? Spiritual transcendence and the five-factor model. *Journal of Personality*, *67*, 985–1011.
- Piedmont, R. L. (2001). Spiritual transcendence and the scientific study of spirituality. *Journal of Rehabilitation*, *67*, 4–14.
- Piedmont, R. L., & Leach, M. M. (2002). Cross-cultural generalizability of the Spiritual Transcendence Scale in India. *American Behavioral Scientist*, *45*, 1886–1899.
- Piedmont, R. L., & Nelson, R. (2001). A psychometric evaluation of the Short form of the faith maturity scale. *Research in the Social Scientific Study of Religion*, *12*, 165–183.
- Piedmont, R. L., Ciarrocchi, J. W., & Williams, J. E. G. (2002). A components analysis of one's image of God. *Research in the Social Scientific Study of Religion*, *13*, 109–123.
- Plymer, R., Ciarrocchi, J. W., & Deneke, E. (2004). *Positive and negative faith: Are there healthy and unhealthy forms of religious coping in men and women?* Poster session to be presented at the Annual Meeting of the Association for the Advancement of Behavior Therapy, New Orleans, LA.
- Pollner, M. (1989). Divine revelations, social relations, and well-being. *Journal of Health and Social Behavior*, *30*, 92–104.
- Porter, J. (1990). Nature and grace. In *Dictionary of pastoral care and counseling* (p. 777). Nashville, TN: Abingdon Press.
- Rahner, K. (1966). Nature and grace. *Theological Investigations. IV*, 165–188.
- Rahner, K. (1978). *Foundations of Christian faith*. New York: Seabury Press.
- Rizzuto, A. M. (1970). *Critique of the contemporary literature in the scientific study of religion*. Paper presented at the annual meeting of the Society for the Scientific Study of Religion, New York.

- Rizzuto, A. M. (1979). *The birth of the living god*. Chicago: University of Chicago Press.
- Rizzuto, A. M. (1982). The father and the child's representation of God: A developmental approach. In S. H. Cath, A. R. Gurwitt, & A. M. Ross (Eds.), *Father and child* (pp. 357–381). Boston: Little, Brown.
- Sloan, R. P., Bagiella, E., & Powell, T. (2002). Without a prayer: Methodological problems, ethical challenges, and misrepresentations in the study of religion, spirituality, and medicine. In T. G. Plante & A. C. Sherman (Eds.), *Faith and health: Psychological perspectives* (pp. 339–354). New York: Guilford Press.
- Van Wicklin, J. F. (1990). Conceiving and measuring ways of being religious. *Journal of Psychology & Christianity*, 9, 208–219.
- Walsh, J. M. (2001). *Spirituality and recovery from pathological gambling*. Unpublished doctoral dissertation, Loyola College in Maryland.
- Watson, D. (2000). *Mood and temperament*. New York: Guilford Press.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect. *Journal of Personality and Social Psychology*, 54, 1063–1070.

# CHILD ABUSE, PERSONALITY, AND SPIRITUALITY AS PREDICTORS OF HAPPINESS IN MALTESE COLLEGE STUDENTS

*Michael Galea, Joseph W. Ciarrocchi, Ralph L. Piedmont,  
and Robert J. Wicks\**

## ABSTRACT

This study examined the incremental validity of spirituality and religiosity controlling for personality and child abuse history among Maltese college students. A total of 214 female and 98 male undergraduates completed the Spiritual Transcendence Scale, the Brief Adjective Rating Scale, the Childhood Trauma Questionnaire, items about religious practices, a positive affect scale, a negative affect scale, and the Satisfaction with Life scale. Multiple regression analysis indicated that spirituality but not religious practices predicted positive affect and satisfaction with life after controlling for child abuse history and personality. The study suggests that spirituality may be an important potential source of resiliency for persons with a childhood history of abuse. Spirituality's ability to predict positive but not negative affect suggests it may be especially suited as a useful variable in the positive psychology movement.

Research has established a consistent relationship between important life events and one's tendency toward transcendence (Ellison, 1991; Marrone, 1999; Pargament, 1992; Young, Cashwell, & Shcherbakova, 2000). Adjustment to negative events in one's life often results in seeking spiritual consolation and meaning. For example childhood trauma is related to increased religious behaviors such as frequency of prayer and self-reported spiritual experience (Lawson, Debring, Berg, Vincelle, & Penk, 1998).

Spirituality can serve both as a predictor variable and an outcome variable. Most studies have found that spirituality was negatively affected in victims of child abuse. This finding was consistent across gender and types of abuse (Hall, 1995; Rossetti, 1995). A closer look at this research, however, indicates that the picture is complex. The destruction of the

---

\* Michael Galea is now in Malta working with the education department, and lectures at the psychology department at the University of Malta. The authors thank Monique Daniels for manuscript preparation. Correspondence concerning this article should be addressed to Joseph W. Ciarrocchi, Pastoral Counseling Department, 8890 McGaw Road, Suite 380, Columbia, Maryland, 21045. Dr. Ciarrocchi's email is jwc@loyola.edu.

parent-child relationship by child abuse predicts a distrust of God and a perception of God permitting the abuse, but does not erase victims' expressed need for a spiritual connection (Kane, Cheston, & Greer, 1993). Similarly, child abuse is related to religious injury and spiritual distress, as well as to increased frequency of prayer and spiritual seeking (Lawson et al., 1998). Finally, many studies even suggest the potential resourcefulness of spirituality against negative events (Marrone, 1999; Pargament, 1997; Sullivan, 1993; Young, Cashwell, & Shcerbakoua, 2000), but it remains unclear how such effects occur.

Another potential confound in understanding the relationship between religiosity and child abuse is how religion and spirituality are operationalized in different studies. Are religious practices and spirituality precisely the same dimension? Even though they are highly correlated, they predict differentially to a variety of outcomes (Ciarrocchi & Deneke, 2004; Zinnbauer, Pargament, & Scott, 1999).

For the purpose of this study, spirituality was understood as the individual's "efforts to construe a broad sense of personal meaning within an eschatological context" (Piedmont 2001, p. 5). As people question their purpose in life, they construct spiritual answers that give meaning to life. Empirical research has looked at the functional value of spirituality to well-being specifically from three perspectives: as a coping mechanism against negative events, as social support, and as providing meaningfulness in life (Ellison, 1991; Marrone, 1999; Young et al., 2000). All three aspects of spirituality are potentially relevant for mediating or moderating the effects of child abuse.

Positive psychology may shed new light on this complex reality. Crises challenge our deepest beliefs and assumptions: that good people are somehow immune from harmful events, that life makes sense, and that we have control over what happens. Tedeschi (1998) found that for most people life crises ultimately lead to what he calls "post-traumatic growth." After basic assumptions are shattered most people construct a new framework for understanding their life narratives that incorporates the tragic event. Campbell (1999) calls this phenomena "ego shock." Such negative events could change old habits, self-perceptions, and assumptions, leaving only the raw experience of the world.

Campbell found that for more than half the people who took part in his studies, ego shock resulted in positive long-term effects on their lives. The new framework that develops does not cancel out what happened but replaces it with a different perspective. Accordingly, through

expanding a person's worldview, resiliency drives a successful recovery by motivating people to discover new strengths in the midst of adversity.

This study is meant to explore the well-documented effects of child abuse on well-being and also to determine whether spirituality may have a relationship to the well-being of victims. Baumeister (1991) noted that "suffering stimulates the need for meaning" because "people analyze and question their sufferings far more than their joys" (p. 232). It seems that as meaning-seekers, humans find different ways of arriving at this point in their life (Wink, 1999). Religious beliefs may counter hopelessness and form an important part of this equation. Such a pattern was found for depressed psychiatric inpatients (Murphy et al., 2000).

Finally, to attain methodological rigor in understanding the relationship between child abuse and religious variables it is important to rule out alternative explanations. Personality, for example, is a robust predictor of subjective well-being and accounts for the largest portion of variance over other psychosocial variables (DeNeve & Cooper, 1998). Failure to control for plausible explanations is a recurrent criticism of religious research (Sloan, Bagiella, & Powell, 2001).

The purpose of this study, therefore, was to measure the relationship between spirituality and religious practices to determine how well they predicted subjective well-being in a population of college students with or without a history of child abuse. We hypothesized, based on previous research that controlled for personality (Ciarrocchi & Deneke, 2004), that spirituality but not religious practices would predict subjective well-being. In keeping with this same research we hypothesized further that spirituality would predict the positive aspects of subjective well-being, namely positive affect and cognitive well-being, but would have no relationship to negative affect. The literature on child abuse suggests that a reported history of such events would be related to decreased positive aspects of subjective well-being and increased negative affect. We presumed that such would be the case and predicted that this effect would occur in a cross-cultural sample. The design chosen here will help determine whether spirituality and religious practices could compensate, as it were, for the negative impact of child abuse. The final research question, therefore, is whether reported abuse in childhood will totally attenuate the relationship between spirituality and religious practices with subjective well-being.

## METHOD

### *Participants*

Data were collected from students of the University of Malta and the Gozo Sixth Form College during a single semester. The student population from which these two samples were selected represented 13% of the Maltese general population between the ages of 18 and 25 years old. Table 1 illustrates that the mean age represents a typical student population. Surveys were sent to 800 students randomly selected by computer from among a pool of students who volunteered for such studies. Participants consisted of 312 students, for a response rate of 39%. Six surveys were invalid due to incomplete data. The sample included 214 female respondents (68.6%), and 98 male respondents (31.4%).

### *Measures*

*Childhood Trauma Questionnaire.* The Childhood Trauma Questionnaire (CTQ) is a 28-item Likert-scale, which captures a history of child abuse and neglect across multiple dimensions (Bernstein et al., 1994). Five subscales form the CTQ: emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect. The alpha reliabilities for this Maltese sample are .82, .77, .93, .83, and .46, respectively. More recently, a 28-item short form CTQ has been further validated in a large sample (Bernstein & Fink, 1998). Clinical cutoffs for the 28-item version are used to categorize history of abuse against no history of abuse. For the purpose of this study, an overall composite abuse index score was created based on the total scores of the five subscales. This composite score was then reciprocally transformed to meet the assumptions of normal distribution.

In this sample, 11% of respondents fell in the severe abuse and neglect range, 25% qualified as moderately abused, 57% reported minimal abuse, and 7% reported none, based on the criteria described above. These percentages are highly similar to rates in the United States based on the studies that validated the CTQ (Bernstein & Fink, 1998).

*The Spiritual Transcendence Scale.* Spirituality was measured through the Spiritual Transcendence Scale (STS), a 24-item measure scored on a Likert-type scale (Piedmont, 1999). The STS is a unidimensional factor structure comprised of three facet scales: Universality, Prayer Fulfillment, and Connectedness. Alpha reliabilities for these three facets for

the Maltese sample are .78, .67, and .47, respectively. Piedmont (1999) found that the STS has significant cross-observer validity. Furthermore, the STS was found to predict important psychological outcomes such as stress experience and well-being, even after controlling for personality's predictive effects.

*Religious Practice Scale.* Religious practices were measured by combining two items from the demographic section: frequency of prayer and church attendance. The alpha reliability of the scale was .71.

*Brief Adjective Rating Scale.* Developed by McCrae and Costa (1985), the Brief Adjective Rating Scale (BARS) is an 80-item bipolar adjective measure of personality based on the five-factor model of personality. The alpha reliabilities of the five dimensions, neuroticism (tendency to experience negative emotions), extraversion (tendency to experience positive emotions), openness to experience (interest in a variety of internal and external experiences), agreeableness (tendency to be cooperative and agreeable in human relationships), and conscientiousness (degree to which a person is disposed to be dutiful to one's role and obligations), for this sample are .71, .80, .75, .72, and .82, respectively. The BARS was found to have good psychometric properties both in adult and college student samples (McCrae & Costa, 1985).

### *Subjective Well-Being*

Well-being was examined from three different dimensions: cognitive well-being or global life satisfaction, positive affect, and negative affect.

*Satisfaction with Life scale (SWL).* The Satisfaction with Life Scale (SWL) is a 5-item scale that measures life satisfaction and cognitive well-being (Diener, Emmons, Larsen, & Griffin, 1985), and is a staple of research in subjective well-being. The alpha reliability of our Maltese sample was .95.

*Affect Measures.* The Affect Balance Scale is a 10-item *yes-no* questionnaire which consists of five items each measuring positive and negative affect (Bradburn & Noll, 1969). It is widely used in research on subjective well-being and has shown good to excellent internal consistency. The alpha reliability for this sample was .62.

### *Procedure*

The questionnaires were mailed to participants who agreed to participate. Students were sent a packet containing a cover letter, an informed consent form, and the surveys. They had one week to respond. An



Table 1. *Descriptive Statistics for Study Variables*

Variable	<i>M</i>	<i>SD</i>	Range
Age	20.45	2.37	18–25
Neuroticism	52.36	8.56	26–72
Extraversion	49.06	9.60	24–76
Openness	51.23	11.61	27–85
Agreeableness	48.55	8.20	24–89
Conscientiousness	46.96	11.09	11–75
Spirituality	80.93	11.12	43–111
Religious Practices	7.40	1.90	2–10
Positive Affect	3.14	1.32	0–5
Negative Affect	2.37	1.57	0–5
Cognitive Well-being	23.66	6.59	6–35
Total Abuse	.21	.72	0–5

*N* = 312.

incentive was offered in the form of two drawings from among the participants, each receiving a gift voucher.

## RESULTS

### *Demographics*

Of the 312 students who participated in this study, 97% identified themselves as Roman Catholic, 0.6% as Protestant, and 2.2% did not define their religion. The majority of the respondents' parents have at least a high school education. Twenty-two percent and 12% of participants' fathers and mothers had college-level education, respectively. Most of the respondents are religiously active people: over 61% pray often and more than 65% attend church services regularly.

### *Descriptive Statistics*

Table 1 presents the means, standard deviations, and alpha reliabilities for the study variables. Table 2 shows the intercorrelations for all variables. The correlation between religiosity and spirituality was significant ( $r = .28, p < .001$ ), but did not reach redundancy. Consistent with research that does not control for personality, significant correlations were obtained for both religiosity and spirituality with subjective

Table 2. *Correlations Among the Study Variables*

Variables	1	2	3	4	5	6	7	8	9	10
Neuroticism										
Extraversion	-.12*									
Openness	-.10	.38*								
Agreeableness	-.24*	.38*	.04							
Conscientiousness	-.29*	.39*	.24*	.43*						
Total Childhood Abuse	.18*	-.20*	.11	-.21*	-.29*					
Religious Practices	-.09	.13*	-.15*	.22*	.19*	-.26*				
Spirituality	-.07	.19*	.00	.23*	.26*	-.16*	.28*			
Positive Affect	-.27	.23*	.12*	.04	.19*	-.14*	.06	.24*		
Negative Affect	.36*	-.15*	-.02	-.17*	-.22*	.16*	-.15*	-.04	-.15*	
Cognitive Well-Being	-.38*	.33*	.07	.13*	.40*	-.34*	.17*	.24*	.47*	-.37*

*N* = 312. \**p* < .05.

well-being measures, although neither correlated with negative affect or neuroticism.

### *Hypothesis Testing*

It was hypothesized that spirituality and religiosity would have unique variance in predicting the components of well-being over and above the contribution of personality and history of child abuse. To determine this possibility, a series of hierarchical regressions were performed for all predictor variables with each subjective well-being criterion variable, namely, positive affect, negative affect, and cognitive well-being. For each model, total child abuse history was entered in step one, personality variables in step two, and either spirituality or religiosity in step three.

Table 3 presents the results for these hierarchical regressions. Reported history of child abuse was significantly related to all three components of subjective well-being as was demonstrated in the zero-order correlations. Child abuse had its greatest association with cognitive well-being explaining four to six times more variance than it did for either positive or negative affect. Personality was strongly related to all aspects of subjective well-being as predicted. Even controlling for child abuse, personality explained from 12% to 22% of the variance for the separate subjective well-being components.

The first hypothesis concerning spirituality was confirmed. Table 3 illustrates that spirituality contributed significant additional variance to both positive affect and cognitive well-being even after controlling for child abuse and personality. The hypothesis that spirituality would not predict negative affect was also confirmed.

Religious practices, as predicted, did not contribute additional significant variance to any subjective well-being component when controlling for childhood abuse and personality. This is noteworthy in that the zero-order correlations (Table 2) indicate significant associations between religious practices with negative affect and cognitive well-being. Personality and child abuse history appear to fully mediate these effects.

The beta weights in Table 4 further clarify the relationship between the predictor variables and the subjective well-being components. Neuroticism, extraversion, and agreeableness carried the majority of the predictive variance for the outcomes. The negative beta weights, however, for agreeableness predicting to positive affect and cognitive

Table 3. *Hierarchical Regression Predicting Subjective Well-Being*

Criterion Step	Predictor Variable	$R^2$	$\Delta R^2$	$F$ Change
<b>Positive Affect</b>				
1	Total Abuse	.02	.02	5.71*
2	Personality	.14	.12	8.23***
3	Spirituality	.17	.04	14.21***
3	Religious Practices	.14	.00	.02
<b>Negative Affect</b>				
1	Total Abuse	.03	.03	8.22**
2	Personality	.15	.13	9.23***
3	Spirituality	.16	.00	.36
3	Religious Practices	.16	.01	1.76
<b>Cognitive Well-Being</b>				
1	Total Abuse	.12	.12	41.04***
2	Personality	.33	.22	19.73***
3	Spirituality	.35	.02	6.85**
3	Religious Practices	.33	.00	.57

Note: Each step 3 predictor variable entered separately.  
 $N = 312$ . \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Table 4. *Beta Weights for Predictors of Subjective Well-Being*

Predictor Variable	Positive Affect	Negative Affect	Cognitive Well-Being
Neuroticism	-.24***	.32***	-.30***
Extroversion	.22***	-.10	.26***
Openness	.01	.07	-.10
Agreeableness	-.15*	-.01	-.18***
Conscientiousness	.09	-.08	.26***
Total Childhood Abuse	-.14**	.16**	-.34***
Religious Practices	.01	-.08	.04
Spirituality	.21***	.03	.13**

$N = 312$ . \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

well-being are counterintuitive. Most previous empirical research links agreeableness in a positive direction with these outcomes (Watson, 2000). This result may be related to agreeableness' entry into the regression equation as a block with the other personality factors. The zero-order correlations for agreeableness with positive affect and cognitive well-being, in contrast, were significant in the predicted direction. Finally, conscientiousness predicted to cognitive well-being, thus rounding out the importance of personality in its myriad facets as related to subjective well-being. The beta weights also confirmed that spirituality is positively related to positive affect and cognitive well-being, whereas religious practices have no relationship whatsoever to the subjective well-being outcomes.

#### DISCUSSION

Spirituality contributed positively to cognitive well-being and positive affect after controlling for personality and child abuse history. Religious practices have no significant effect on subjective well-being. These findings replicate a series of studies ranging from nonclinical to clinical samples (Ciarrocchi & Deneke, 2004; Francis & Katz, 2002; Geary, Ciarrocchi, & Sheers, 2004). The current study extends this pattern for spirituality and religious practices to a cross-cultural sample of young adults. Cross-cultural research is thus consistent with research in the United States that the degree of spiritual transcendence has a stronger relationship to subjective well-being than do religious practices.

Any number of explanations is possible for these findings. It may well be that, as sociologist of religion Rodney Stark has put it, the gods of one's religion are more important than its rituals (Stark, 2001, 2002). That is, religious practices may be important in many aspects of religion's role in society, but the religious beliefs that people maintain have a stronger relationship with their overall sense of well-being. The mechanism by which this relationship occurs is purely speculative at this point. Meaning making is certainly a plausible explanation. Spiritual transcendence, which often is attached to religious beliefs, may provide broad enough forms of meaning to allow people to adapt to the vicissitudes of everyday life and thus maintain an emotional homeostasis. Religious practices themselves, however, are well-known to have a variety of motivations (Allport, 1964), and these motivations predict differentially to subjective well-being. This does not

mean necessarily that all forms of spiritual transcendence are equally positive. There is an equally large literature which suggests that certain forms of religious beliefs and coping are detrimental in that they are related to increased emotional distress (Pargament, 1997). Nevertheless, the evidence suggests that feeling a sense of connection to a purpose greater than oneself is related to human flourishing. Of all the available meaning-making systems that allow people to transcend their self-centered focus, religion and spirituality rank as the most readily available to the largest number of individuals.

From the standpoint of positive psychology these results extend the concept of human flourishing in the face of potentially traumatic childhood experiences. Roughly the same percentage of students in this sample reported childhood abuse events as in the United States. There are many clinical and empirical reports of people using spiritual and religious forms of coping in the face of such experiences (Pargament, 1997). This research consistently points out that religious and spiritual coping enable people to experience less distress. This is one of the first empirical studies to indicate that childhood abuse does not take away the benefits of spiritual transcendence. This finding is noteworthy in that it controlled for personality, which is a highly salient predictor of happiness. For positive psychology to continue to progress as a science as well as to develop scientifically derived applications for everyday life, it must address the issue of resilience. Given that tragedy and setbacks are integral to life, what we learn from positive psychology must have application to coping with such events if it is to have credibility in the larger social world. Child abuse is a particularly good platform from which to study variables related to positive psychology. Society's concern for victims of child abuse is well-intentioned and necessary. It is equally important that victims themselves and society discard notions that the effects of such experiences are incompatible with eventual psychological well-being. Positive psychology can have a most useful role in allowing people to access their strengths in the wake of such untoward events.

Child abuse is also important for the social scientific study of religion because it is at the nexus of spirituality and meaning making. As is well-known clinically, many victims blame God for what happened to them, so that a form of meaning making that might be solace for some becomes suffering for others. This reaction is heightened for those victimized by religious leaders or people who profess strong religious beliefs. How people assimilate and accommodate their religious world-views in the face of child abuse can add a dimension of understanding

to trauma recovery precisely because it is so often connected to noteworthy parental figures. Object relation theorists have led the field in noting the spiritual and emotional confabulation that results in these cases (Rizzuto, 1979, 1982).

A second implication for the field of positive psychology to arise from research in spirituality is that it predicts positive affect and cognitive well-being and tends to have little or no relationship to negative affect. This phenomenon suggests that some effects of spirituality may be counterintuitive. That is, many of the conceptual and practical approaches to religion and spirituality have seen its role in terms of coping with emotional pain. Ironically, multiple studies now demonstrate that, when controlling for personality, including neuroticism, spirituality has little ability to reduce negative affect (Ciarrocchi & Deneke, 2004; Geary et al., 2004; Walsh, 2001). These results suggest that positive psychology would do well to continue its interest in spirituality and transcendence as key character strengths (Peterson & Seligman, 2004). Far from being a human quality that speaks only to the dark side of human nature and experience, the real power of spirituality from a functional psychological standpoint may be its ability to enhance human flourishing.

This study has several limitations. It was a sample of convenience in university students. The cross-sectional nature of the design limits causal inferences. Obviously, longitudinal research with child abuse victims will permit stronger conclusions. Similarly, all the measures were self-report, thus raising questions as to the accuracy of the participants' memory. As noted above, however, the fact that students in a different culture reported similar rates of child abuse as in the United States at least provides some face validity for the veracity of the child abuse history. The study's strength includes its relatively large sample size and the measure of control that was utilized to rule out plausible alternative explanations.

The study points to the continued utility of an incremental validity model for religious research (Piedmont, 1999). Although this series of investigations has utilized the five-factor model of personality, it is particularly noteworthy that research with different five-factor instruments has demonstrated the incremental validity of spirituality. In other words, spirituality's ability to predict to salient psychosocial outcomes over and above personality does not result from some artificial relationship to a single instrument, but can hold its own with a variety of comprehensive measures of personality.

## REFERENCES

- Allport, G. W. (1964). *Religion and prejudice: Personality and social encounter, selected essays*. Boston: Beacon Press.
- Baumeister, R. F. (1991). *Meanings of life*. New York: Guilford.
- Bernstein, D. P., Fink, L., Handelsman, L., Foote, J., Lovejoy, M., Wenzelf, K. et al. (1994). Initial reliability and validity of a new retrospective measure of child abuse and neglect. *American Journal of Psychiatry*, *151*, 1132–1136.
- Bernstein, D. P., & Fink, L. (1998). *Childhood trauma questionnaire: A retrospective self-report, Manual*. The Psychological Corporation. San Antonio: Harcourt Brace & Co.
- Bradburn, N. M., & Noll, E. (1969). *The structure of psychological well-being*. Chicago: Alding.
- Campbell, W. K., & Sedikides, C. (1999). Self-threat magnifies the self-serving bias: A meta-analytic integration. *Review of General Psychology*, *3*, 23–43.
- Capps, D. (1992). Religion and child abuse: Perfect together. *Journal for the Scientific Study of Religion*, *31*(1), 1–14.
- Cheston, S. (1993). Counseling adult survivors of childhood sexual abuse. In R. Parsons & R. Wicks (Eds.), *Pastoral counseling handbook II* (pp. 447–488). Mahwah, NJ: Paulist Press.
- Ciarrocchi, J. W., Piedmont, R. L., & Williams, J. E. (2003). Love thy neighbor: Spirituality and personality as predictors of prosocial behavior in men and women. *Research in the Social Scientific Study of Religion*, *14*, 61–75.
- Ciarrocchi, J. W., & Deneke, E. (2004). Happiness and the varieties of religious experience: Religious support, practices, and spirituality as predictors of well-being. *Research in the Social Scientific Study of Religion*, *15*, 204–233.
- DeNeve, K. M., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin*, *124*, 197–229.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, *49*(1), 71–75.
- Ellison, C. G. (1991). Religious involvement and subjective well-being. *Journal of Health and Social Behavior*, *32*(1), 80–99.
- Francis, L. J., & Katz, Y. J. (2002). Religiosity and happiness: A study among Israeli female undergraduates. *Research in the Social Scientific Study of Religion*, *13*, 75–86.
- Geary, B., Ciarrocchi, J. W., & Scheers, N. J. (2004). Spirituality and religious variables as predictors of well-being in sex offenders. *Research in the Social Scientific Study of Religion*, *15*, 167–187.
- George, L. K., Ellison, C. G., & Larson, D. B. (2002). Explaining the relationships between religious involvement and health. *Psychological Inquiry*, *13*, 190–200.
- Hall, T. A. (1995). Spiritual effects of childhood sexual abuse in adult Christian women. *Journal of Psychology and Theology*, *23*(2), 129–134.
- Ingersoll, R. E. (1998). Refining dimensions of spiritual wellness: A cross-traditional approach. *Counseling & Values*, *42*(3), 156–166.
- Kane, D., Cheston, S. E., & Greer, J. (1993). Perceptions of God by survivors of childhood sexual abuse: An exploratory study in an under researched area. *Journal of Psychology and Theology*, *21*(3), 228–237.
- Kennedy, J. E., Davis, R. C., & Taylor, B. G. (1998). Changes in spirituality and well-being among victims of sexual assault. *Journal for the Scientific Study of Religion*, *37*(2), 322–329.
- Lawson, R., Drebing, C., Berg, G., Vincelle, A., & Penk, W. (1998). The long term impact of child abuse on religious behavior and spirituality in men. *Child Abuse and Neglect*, *22*(5), 369–380.
- Marrone, R. (1999). Dying, mourning and spirituality: A psychological perspective. *Death Studies*, *23*(6), 495–520.



- McCrae, R. R., & Costa, P. T., Jr. (1985). Updating Norman's "Adequate Taxonomy": Intelligence and personality dimensions in natural language and in questionnaires. *Journal of Personality and Social Psychology*, *49*, 710–721.
- Miller, W. R., & Thoresen, C. E. (1999). Spirituality and Health. In W. R. Miller (Ed.), *Integrating spirituality into treatment* (pp. 3–18). Washington D.C.: American Psychological Association.
- Murphy, P. E., Ciarrocchi, J. W., Piedmont, R. L., Cheston, S., Peyrot, M., & Fitchett, G. (2000). The relation of religious belief and practices, depression, and hopelessness in persons with clinical depression. *Journal of Consulting and Clinical Psychology*, *68*, 1102–1106.
- Pargament, K. I. (1992). Of means and ends: Religion and the search for significance. *The International Journal for the Psychology of Religion*, *2*(4), 201–209.
- Pargament, K. I. (1997). *The psychology of religion and coping*. New York: Guilford Press.
- Pavot, W., & Diener, E. (1993). Review of the satisfaction with life scale. *Psychological Assessment*, *5*, 164–172.
- Peterson, C., & Seligman, M. E. P. (Eds.) (2004). *Character strengths and virtues: A handbook and classification*. Oxford: American Psychological Association & Oxford University Press.
- Piedmont, R. L. (1999). Does spirituality represent the sixth factor of personality? Spiritual transcendence and the five-factor model. *Journal of Personality*, *67*, 985–1013.
- Piedmont, R. L. (2001). Spiritual transcendence and the scientific study of spirituality. *Journal of Rehabilitation*, *67*(1), 4–15.
- Rizzuto, A. M. (1979). *The birth of the living God*. Chicago: University of Chicago Press.
- Rizzuto, A. M. (1982). The father and the child's representation of God: A developmental approach. In S. H. Cath, A. R. Gurwitt, & A. M. Ross (Eds.), *Father and child* (pp. 357–381). Boston: Little, Brown.
- Rossetti, S. J. (1995). The impact of child sexual abuse on attitudes toward God and the Catholic Church. *Child Abuse and Neglect*, *19*(12), 1469–1481.
- Sloan, R. P., Bagiella, E., & Powell, T. (2002). Without a prayer: Methodological problems, ethical challenges, and misrepresentations in the study of religion, spirituality, and medicine. In T. G. Plante & A. C. Sherman (Eds.), *Faith and health: Psychological perspectives* (pp. 339–354). New York: Guilford Press.
- Stark, R. (2001). *One true God: Historical consequences of monotheism*. Princeton, NJ: Princeton University Press.
- Stark, R. (2003). *For the glory of God: How monotheism led to reformations, science, witch-hunts, and the end of slavery*. Princeton, NJ: Princeton University Press.
- Sullivan, W. P. (1993). "It helps me to be a whole person": The role of spirituality among the mentally challenged. *Psychosocial Rehabilitation Journal*, *16*(3), 125–135.
- Tedeschi, R. G., Park, C. L., & Calhoun, L. G. (Eds.) *Post-traumatic growth: Positive changes in the aftermath of crisis*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Walsh, J. M. (2001). *Spirituality and recovery from pathological gambling*. Loyola College in Maryland. Unpublished doctoral dissertation.
- Watson, D. (2000). *Mood and temperament*. New York: Guilford.
- Wink, P. (1999). Addressing end-of-life issues: Spirituality and inner life. *Generations Spring*, *23*(1), 75–81.
- Young, J. S., Cashwell, C. S., & Shcherbakova, J. (2000). The moderating relationship of spirituality on negative life events and psychological adjustment. *Counseling & Values*, *45*(1), 49–58.

SPIRITUAL TRANSCENDENCE AND RELIGIOUS  
PRACTICES IN RECOVERY FROM PATHOLOGICAL  
GAMBLING: REDUCING PAIN OR ENHANCING  
QUALITY OF LIFE?

*James M. Walsh, Joseph W. Ciarrocchi, Ralph L. Piedmont,  
and Deborah Haskins\**

ABSTRACT

In a sample of pathological gamblers from Gamblers Anonymous and a variety of treatment programs ( $N = 100$ ), spiritual transcendence and religious experiences have significant and predictive relationships with subjective well-being and attainment of abstinence in persons with a diagnosis of pathological gambling. The five-factor model of personality was used to test whether personality fully mediated the relationships to subjective well-being for spiritual transcendence and religious practices. Spiritual transcendence was assessed using the Spiritual Transcendence Scale and by gathering data describing certain religious practices and experiences. Personality fully mediated the effect of religious practices on subjective well-being, but spiritual experience made a significant independent contribution to both reducing negative affect and increasing cognitive well-being. The incorporation of spiritual and religious constructs into treatment programs may facilitate improvement in recovery from pathological gambling.

This study explores the role of spirituality and religious practices in recovery from pathological gambling. The importance of treatment of psychiatric distress as a component of recovery from pathological gambling is well documented in the literature, and inpatient and outpatient psychological treatments repeatedly have been shown to be effective (Murray, 1993; Toneatto & Ladouceur, 2003; Toneatto & Millar, 2004). No study, to date, has examined the role that spirituality plays in that recovery, including studies of the spiritually-based self-help group Gamblers Anonymous (GA; Brown, 1986; Browne, 1994). Attendance at GA meetings has been incorporated as a component of several multimodal treatment studies (Russo, Taber, McCormick, & Ramirez, 1984; Taber, McCormick, Russo, Adkins, & Ramirez, 1987) and a study of cognitive-behavioral treatment (Petry et al., 2006), but

---

\* The authors thank Monique Daniels for manuscript preparation. Correspondence concerning this article should be addressed to James M. Walsh. His email is james.m.walsh@wilmcoll.edu.

the role of spiritual change was not investigated. Additionally, studies of behavioral therapy (Blaszczynski, McConaghy, & Frankova, 1991; Blaszczynski & Silove, 1995; McConaghy, Blaszczynski, & Frankova, 1991), cognitive therapy (Echeburua, Baez, & Concepcion, 1994; Petry et al., 2006; Sylvain, Ladouceur, & Boisvert, 1997), and pharmacotherapy (DeCaria, Begaz, & Hollander, 1998; Haller & Hinterhuber, 1994; Hollander et al., 1998; Moskowitz, 1980) have demonstrated effective treatment of pathological gambling, but have not addressed the issue of spirituality.

There is a substantial history of religious and spiritual thought regarding gambling. Until the 20th century gambling, along with alcohol and drug use, was considered a moral failure in the individual, and characterized as sinful behavior leading to death and destruction. This moral model, seen in the literature of various religious movements such as the Women's Christian Temperance Union (Flexner, 1975), emphasized the need for religious conversion in order to recover from gambling and other addictions.

The moral model of addiction was challenged in the first half of the 20th century by William James in his book, *The Varieties of Religious Experience* (1902/1990). James articulated a spiritual model of addiction based on his understanding of the motivation of the alcoholic. James understood the use of alcohol as artificial stimulus intended to arouse a spiritual awakening. A passage from James' *The Varieties of Religious Experience* evoked the nature of this spiritual experience:

The sway of alcohol over mankind is unquestionably due to its power to stimulate the mystical faculties of human nature. Sobriety diminishes, discriminates, and says no; drunkenness expands, unites, and says yes. It is in fact the great exciter of the *l'es* function in man. It makes him for the moment one with truth. (James, 1902/1990, p. 348, emphasis in original)

James' spiritual model of addiction influenced the founders of Alcoholics Anonymous (AA, Alcoholics Anonymous, 1976), who encoded their strategy for recovery from alcoholism in the Twelve Steps. In 1939 Bill W. composed the movement's basic textbook, *Alcoholics Anonymous*, stating "that we are willing to grow along *spiritual* lines. We claim spiritual progress rather than spiritual perfection" (Alcoholics Anonymous, 1976, p. 60, emphasis in original).

Programs based on the Twelve Steps of AA believe that there is a latent dispositional motivation in all people for attainment of spiritual

transcendence. By adopting the beliefs and practices articulated in the Twelve Steps, the recovering addict seeks to stimulate this latent dispositional motivation toward a transcendent higher power. In his book Bill W. described this motivation by stating that

deep down in every man, woman, and child, is the fundamental idea of God. It may be obscured by calamity, by pomp, by worship of other things, but in some form or other it is there . . . We finally saw that faith in some kind of God was a part of our make-up, just as much as the feeling we have for a friend. Sometimes we had to search fearlessly, but He was there. He was as much a fact as we were. We found the Great Reality deep down within us. In the last analysis it is only there that He may be found. It was so with us. (Alcoholics Anonymous, 1976, page 55)

The successful growth of AA across the United States and Europe led to the formation in 1957 of Gamblers Anonymous (GA), the first gambling self-help movement. GA adopted the Twelve Steps of AA and modified them to reflect addiction to gambling rather than alcohol (Gamblers Anonymous, 1984, 1996). GA, a spiritually-based fellowship, is still the primary recovery resource for pathological gambling in the United States (National Research Council, 1999).

Also during the first half of the 20th century, Freud (1928) promulgated his view that pathological gambling was better understood as one portion of an addiction triad. Freud's addiction triad included alcoholism, drug addiction, and gambling. Freud thought that it was not for money that the gambler gambled but for sadomasochistic excitement, and attributed this excitement-seeking to a need for self-punishment, expiation of guilt and, in the male gambler, ambivalence toward the father. Though psychoanalytic and psychodynamic treatment approaches have not proven effective through evaluation research (National Research Council, 1999), Freud's reformulation of pathological gambling as a psychiatric disorder laid the groundwork for the psychological treatment of pathological gambling.

Studies of gambling treatment have consistently focused on establishing gambling abstinence through reduction of negative affect and modification of gambling beliefs and practices (Toneatto & Ladouceur, 2003; Toneatto & Millar, 2004). Given the success of psychotherapeutic and pharmacological treatment programs it is evident that reduction in negative affect is an important component in establishing gambling abstinence, but the frequent inclusion in these treatment modalities of attendance at GA meetings (Petry et al., 2006), a spiritually-based gambling recovery program, leads one to surmise that changes in

spirituality may also be predictive of gambling abstinence. Also excluded from these studies is the role that positive psychology, the “science of positive subjective experience, positive individual traits, and positive institutions” (Seligman & Csikszentmihalyi, 2000, p. 5), which counts spirituality among its positive features of the life worth living, plays in establishing gambling abstinence. The lack of study of the role of positive psychology and spirituality in recovery from pathological gambling is surprising given the growing body of outcome research documenting the relationship between spirituality and subjective well-being as well as the history of gambling treatment outcomes research, which frequently includes a spiritual element in the form of GA attendance.

When the relationship between spirituality and well-being has been studied, the findings generally have predicted a positive relationship between spirituality and two of the components of well-being, cognitive-based life satisfaction and positive affect, but no relationship between spirituality and the third component of well-being, negative affect (Ciarrocchi & Deneke, 2004). Spirituality has been found to have a positive impact on well-being among a number of treatment samples including gifted adults (Perrone, Webb, Wright, Jackson, & Ksiazak, 2006), men with prostate cancer (Krupski et al., 2006), and individuals with spinal cord injuries (Matheis, Tulskey, & Matheis, 2006). Myers and Diener (1995) have reported that people who purport to have a strong spirituality are more likely to report a higher level of cognitive life satisfaction.

There is a stream of research that documents the influence of spirituality on recovery from addictive behaviors and subjective well-being. Most such studies attempt to determine the influence of active participation in Twelve Step self-help groups, primarily Alcoholics Anonymous, which are known for their promotion of spirituality as a means to develop and maintain abstinence from addictive behaviors (Alcoholics Anonymous, 1976). Gorsuch (1993), in an analysis of research into Twelve Step spirituality as practiced by members of AA, has summarized the empirical relationship between spirituality and alcohol abuse and found that most measures of spirituality correlate negatively with consumption of alcohol. For instance, the most widely used measures of spirituality were questionnaires that assessed religious preferences and practices. Frequently these instruments were single item in design. Despite measurement limitations, being an active member of any U.S. religious tradition, whether Jewish, Catholic, or Protestant,

has been shown conclusively to be related to less alcohol consumption. Hood, Spilka, Hunsberger, and Gorsuch (1996) also cited the negative relationship between religiosity and substance abuse. Numerous scales have been developed that seek to measure one's adoption of Twelve Step spirituality with somewhat consistent results finding a relationship between spiritual variables and abstinence from alcohol (Tonigan, Toscova, & Connors, 1999). One may also look at the motivation for religious commitment, as measured by the Allport and Ross (1967) Intrinsic/Extrinsic (I/E) Scale. This scale assesses whether one is motivated to be religious for the sake of being religious (intrinsic), or is motivated to be religious for some other reason, such as to develop social relationships or gain comfort in a time of crisis (extrinsic). Like the religious preferences and practices questionnaires, both the intrinsic and extrinsic components of the I/E Scale related positively to reduced alcohol consumption (Gorsuch, 1993).

Further support for the role of spirituality in developing abstinence from an addictive behavior was provided by Brown and Peterson (1991), who found that endorsement of Twelve Step spiritual beliefs and practices was significantly related to length of abstinence from alcohol and decreases in psychiatric symptomology. Spalding and Metz (1997) assessed spirituality in a sample of alcohol dependent individuals using a religious coping styles measure (Pargament et al., 1988) and the I/E Scale (Allport & Ross, 1967). They defined recovery using a measure of cognitive well-being, the Satisfaction with Life Scale (Diener, Emmons, Larson, & Griffin, 1985), and found that a collaborative religious coping style, in which one actively seeks to work with God in resolving problems, was predictive of cognitive well-being.

One other vein of spirituality and well-being research are those studies that have explored the relationship of spirituality and well-being while controlling for the influence of personality variables, including studies of Methodist ministers (Golden, Piedmont, Ciarrocchi, & Rodgeron, 2004), undergraduate students from Malta (Galea, 2003), sex offenders (Geary, Ciarrocchi, & Scheers, 2004), and breast cancer patients (Grogan-Henderson & Ciarrocchi, 2003). In each study spirituality predicted cognitive well-being and failed to predict negative affect. In two of the studies spirituality also predicted positive affect. These results indicate that spiritual variables make a unique contribution to the explanation of well-being variables, which critics had previously challenged by suggesting that existing psychosocial variables were more

plausible predictors (Van Wicklin, 1990). These recent studies responded to this criticism by using an incremental validity paradigm to control for potential confounds (Piedmont, 1999a).

One purpose of the present study will be to understand the relationship between three outcome variables, the cognitive and affective components of subjective well-being and gambling abstinence. The study's main focus is to examine the relationship between spiritual beliefs and religious practices of persons with a gambling disorder with the three components of subjective well-being: positive affect, negative affect, and cognitive well-being or life satisfaction. This will be accomplished through a series of hierarchical multiple regression analyses in order to determine whether spiritual transcendence makes a contribution over and above personality in predicting subjective well-being outcomes.

## METHOD

### *Participants*

Participants consisted of 100 people identified as pathological gamblers from a variety of sources. Members of GA were identified as pathological gamblers by that group's "20 Questions" instrument (GA-20; Gamblers Anonymous, 1996; Ursua & Uribelarrea, 1998). Gamblers who received inpatient or outpatient counseling treatment were identified as pathological gamblers by a diagnostic assessment carried out by treatment providers using the South Oaks Gambling Screen (SOGS; Lesieur & Blume, 1987) and/or the National Opinion Research Center *DSM-IV* (1994) Screen for Gambling Problems (NODS; National Opinion Research Center, 1999).

### *Measures*

*Revised NEO Personality Inventory.* The NEO Personality Inventory-Revised (NEO-PI-R; Costa & McCrae, 1992) was designed to assess five personality factors: neuroticism, extraversion, openness, agreeableness, and conscientiousness. This instrument is a comprehensive measure of personality traits intended for use in normal and clinical populations. The NEO-PI-R consists of 240 items which are answered on a five-point Likert-scale ranging from *strongly agree* to *strongly disagree*. The developers reported strong evidence of internal consistency for the domain scales (alphas ranging from .86 to .92), and provided evidence

regarding the stability of adult personality traits over time, with three- and six-year test-retest coefficient scores ranging from .63 to .83 (Costa & McCrae, 1988; 1992). The scale has also shown convergent and discriminant validity across numerous theoretically diverse instruments (Piedmont, 1998). Additionally the NEO-PI-R is related to a number of life outcomes including subjective well-being, frequency of somatic complaints, ability to cope with stress, and burnout (Costa & McCrae, 1980; Costa & McCrae, 1989; Piedmont, 1993).

*The Spiritual Transcendence Scale.* The Spiritual Transcendence Scale (Piedmont, 1999b) is a 24-item self-administered instrument that captures spiritual aspects of the individual found to be independent of the five-factor model of personality. Like the NEO-PI-R, the Spiritual Transcendence Scale is scored according to a five-point Likert scale ranging from *strongly agree* to *strongly disagree*. This instrument measures spirituality in three domains: prayer fulfillment (“An experienced feeling of joy and contentment that results from prayer,” Piedmont, 1999b, p. 995), universality (“A beliefs in the unity and purpose of life,” Piedmont, 1999b, p. 995), and connectedness (“A sense of personal responsibility to others,” Piedmont, 1999b, p. 995). The test developer reported strong evidence of internal consistency for the three domain scales with alphas of .65, .85, and .85 for the Connectedness, Universality, and Prayer Fulfillment sub-scales, respectively (Piedmont, 1999b). The Spiritual Transcendence Scale was shown to be orthogonal to the five-factor model, and showed substantial and significant correlations with a variety of religious practices and the Faith Maturity Scale (Benson, Donahue, & Erickson, 1993). Additionally, the Spiritual Transcendence Scale showed incremental validity over and above the five-factor model in predicting prosocial behavior (DeConcilis, 1993/1994), self-actualization (Jones & Crandall, 1986), and purpose in life (Crumbaugh, 1968). Most notably the Spiritual Transcendence Scale predicted an additional 44% of the variance in prosocial behavior over and above that predicted by the five-factor model.

*Satisfaction with Life Scale.* The Satisfaction with Life Scale (SWLS; Diener et al., 1985) is a five-item, unidimensional instrument that measures the cognitive element of subjective well-being. The scale is not redundant with measures of affect intensity (Lucas, Diener, & Suh, 1996; Pavot & Diener, 1993a; Pavot & Diener, 1993b). Two decades of research have shown the scale to be consistently related to the five-factor model (Diener, Suh, Lucas, & Smith, 1999).



*Affect Balance Scale.* The Affect Balance Scale (Bradburn, 1969) is a 10-item scale that measures the affective element of subjective well-being. The scale contains five items assessing negative affect and five items assessing positive affect as they have been experienced by the individual during the past few weeks. High positive affect scores correlate significantly with self-reports of being "very happy" and "pretty happy," while high negative affect scores correlate significantly with self-reports of "not too happy" (Bradburn, 1969).

*Demographic Questionnaire.* The Demographic Questionnaire was designed to elicit demographic data and information regarding religious practices and experiences. The questions regarding religious beliefs and experiences offered multiple choice responses. Questions included one's frequency of reading the Bible, Torah, or Koran, frequency of reading other religious literature, frequency of prayer, and attendance at religious services. The demographic data also included a question regarding the length of time in months since the respondent had placed a bet.

#### *Procedure*

A total of 450 packets of information were distributed through a variety of outlets including GA meetings in northern Delaware and Arizona and several outpatient and inpatient treatment programs. All packets included an addressed, stamped envelope to return the materials to the first author. The response rate was 22%.

#### RESULTS

Table 1 presents descriptive statistics for all study scales. The mean scores for the personality domains demonstrated that pathological gamblers have an elevated level of neuroticism, indicating a high level of negative affect and pervasive emotional dysphoria. The low level of conscientiousness suggests that this group tended to be lackadaisical in working toward goals and not exacting in applying principles. The sample's low normal level of agreeableness indicated a tendency to be antagonistic and suspicious.

The mean scores for the STS were consistent with values found in other samples (Piedmont, 1999b). The subjective well-being scores are comparable to those of mentally ill patients in outpatient treatment (Pavot & Diener, 1993b). Overall, the internal consistency of responses for all scales was similar to published reports.

Table 1. *Descriptive Statistics for Study Variables*

Variable	<i>M</i>	<i>SD</i>	<i>Alpha</i>
<b>NEO PI-R</b>			
Neuroticism	63	11.06	.91
Extraversion	49	9.15	.84
Openness	50	9.33	.83
Agreeableness	45	11.10	.88
Conscientiousness	39	11.16	.89
<b>Spiritual Transcendence</b>			
Connectedness	21	4.20	.65
Prayer Fulfillment	29	5.79	.75
Universality	33	6.42	.83
<b>Outcome Variable</b>			
Life Satisfaction	16	7.33	.83
Positive Affect	3.04	1.34	.64
Negative Affect	2.89	1.60	.67
Time Since Last Bet <sup>a</sup>	21	37.63	—

*Note.* <sup>a</sup> Measured in months. *N* = 100.

Table 2 presents the intercorrelations between the study variables. The STS facets had significant relationships with all three of the outcome variables. Individuals who were able to stand outside of their immediate sense of time and place and view life from a larger perspective reported that they were more likely to be happy and to be experiencing longer periods of abstinence from gambling. Specifically the STS facets of prayer fulfillment, reflecting joyful experiences from personal encounters with a transcendent reality, and connectedness, the belief that one is part of a larger human reality cutting across generations and groups, were related significantly to achieving gambling abstinence, further underscoring the relationship between spiritual transcendence and cessation of gambling behavior.

Time since last bet, the measure of gambling abstinence, had a significant relationship with two of the three subjective well-being variables, cognitive life satisfaction and negative affect. Individuals who reported high levels of personal happiness attained longer periods of time abstinent from gambling. Consistent with the outcomes literature describing inpatient and outpatient treatment models, which focus on reduction of psychiatric symptomology, individuals who reported reduced levels of negative affect had longer periods of time away from gambling behaviors.

Table 2. Correlations between Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12
Neuroticism												
Extraversion	-.30*											
Openness	.00	.31*										
Agreeableness	-.26*	.00	.12									
Conscientiousness	-.57*	.26*	-.11	.14								
Satisfaction with Life	-.44*	.30*	.03	.07	.30*							
Positive Affect	-.19	.31*	.13	-.04	.36*	.45*						
Negative Affect	.50*	-.17	-.04	-.15	-.32*	-.57*	-.28*					
Connection	-.26*	.17	.33*	.36*	.26*	.20*	.15	-.14				
Fulfillment	-.26*	.06	.12	.31*	.08	.34*	.09	-.29*	.36*			
Universality	-.09	.11	.45*	.34*	-.07	.20*	.16	-.08	.55*	.60*		
Religious Practices	-.25*	-.01	.11	.31*	.11	.15	.03	-.27	.14	.41*	.31*	
Time Last Bet <sup>a</sup>	-.15	.17	.12	.19	.13	.24*	.16	-.34*	.20*	.22*	.19	.12

Note: <sup>a</sup> Measured in months.  
 $N = 100$ . \* $p < .05$ .

The personality domains had significant relationships with the subjective well-being variables, but not with gambling abstinence. Not surprisingly low levels of emotional dysphoria (neuroticism) and high levels of social surgency (extraversion) were associated with personal happiness. High conscientiousness was also associated with personal happiness, suggesting that those who utilized self-control and organization to solve personal problems maintained higher life satisfaction.

Table 3 presents the incremental validity of the STS scales and the religious practices and experiences variables by examining their relationships to these outcome variables after controlling for the effects of personality. This was done by performing a series of hierarchical multiple regression analyses. In each analysis the five personality domains were entered on the first step as a block. Then either the subscales of the STS or total religious practices were entered on the second step. A partial *F*-test was calculated to determine if the increase in explained variance over the personality domains was significant.

The personality domains explained a significant amount of variance in three of the outcome variables. Personality explained 23% of the variance in cognitive well-being, 20% of the variance in positive affect, 25% of the variance in negative affect, but none of the variance in time since last bet. Though personality explained the largest portion of these three outcome variables, spiritual transcendence predicted cognitive well-being over and above personality. This 7% additional variance explained by spiritual transcendence represents a 30% gain in predictive power over personality. Neither personality nor the spiritual and religious variables explained a significant portion of the variance in the time since the participants' last bet.

Table 4 presents the beta weights for the predictor variables according to entry order. This table clarifies the relationship between the subscales of the various measures with the outcome variables. Inspection of this table reveals that neuroticism, extraversion, and conscientiousness had a significant relationship with subjective well-being: the first in terms of increasing negative affect and cognitive well-being with the latter two related only to increased positive affect. In terms of the Spiritual Transcendence Scale facets, only prayer fulfillment predicted any of the subjective well-being components, namely, decreased negative affect and increased cognitive well-being. None of the subscales of the predictor variables had a significant relationship with time since last bet.

Table 3. *Hierarchical Regression for Outcome Variables*

Criterion Step	Predictor Variable	R <sup>2</sup>	ΔR <sup>2</sup>	F Change
<b>Positive Affect</b>				
1	Personality	.20	.20	4.69**
2	Spirituality	.23	.03	1.25
2	Religious Practices	.20	.00	.08
<b>Negative Affect</b>				
1	Personality	.25	.25	6.23**
2	Spirituality	.28	.04	1.47
2	Religious Practices	.27	.02	2.71
<b>Cognitive Well-Being</b>				
1	Personality	.23	.23	5.56**
2	Spirituality	.30	.07	3.14*
2	Religious Practices	.23	.01	.68
<b>Time Last Bet<sup>a</sup></b>				
1	Personality	.07	.07	1.50
2	Spirituality	.10	.03	.92
2	Religious Practices	.08	.00	.23

Note: <sup>a</sup> Measured in months. Each step 2 predictor variable entered in separately. *N* = 100. \**p* < .05; \*\**p* < .01; \*\*\**p* < .001.

Table 4. *Beta Weights for Predictors of Subjective Well-Being*

Predictor Variable	Positive Affect	Negative Affect	Cognitive Well-Being	Time Since Last Bet <sup>a</sup>
Neuroticism	.05	.46***	-.36**	-.03
Extraversion	.26*	-.00	.19	.13
Openness	.12	-.05	-.01	.06
Agreeableness	-.09	-.02	-.03	.17
Conscientiousness	.36**	-.06	.05	.06
Connectedness	-.07	-.01	.04	.06
Universality	.25	.13	.08	.01
Prayer Fulfillment	-.03	-.24*	.23*	.15
Religious Practices	.03	-.16	.08	.05

Note: <sup>a</sup> Measured in months. *N* = 100. \**p* < .05; \*\**p* < .01; \*\*\**p* < .001.

## DISCUSSION

Overall the results support the importance of spiritual transcendence in predicting recovery from pathological gambling. The zero-order correlations indicate that the STS scales were related to all of the outcome variables in interesting ways. In particular, prayer fulfillment and religious practices were significantly related to increased cognitive well-being and decreased negative affect. No spiritual or religious variable, on the other hand, was related to positive affect. The zero-order correlations also indicate a significant relationship between prayer fulfillment and connectedness with time since last bet.

These results suggest that Twelve-Step participation is associated with the effective activation of spiritual resources. Direct or indirect references to establishing a relationship to God are found in six of the twelve steps. Perhaps this emphasis is most clearly stated in the words of the 11th Step of Alcoholics Anonymous: "Sought through prayer and meditation to improve our conscious contact with God *as we understood Him*, praying only for knowledge of His will for us and the power to carry that out" (Alcoholics Anonymous, 1976, p. 59, emphasis in original). The link between spiritual transcendence and abstinence indicates that program attendance will predict recovery.

The importance of addressing psychiatric comorbidity found in pathological gamblers was also supported by these results. Negative affect was related to decreased abstinence whereas cognitive well-being was related to increased abstinence. These results support the value of addressing emotional pain in addition to the traditional emphasis on gambling abstinence. Recovery appears to involve aspects of both positive and negative psychology. That is, decreasing emotional distress and increasing the overall level of a person's life satisfaction may be both important avenues to long-term abstinence. This finding points to an observation numerous clinicians have made, namely, that gambling and other addictions are often used as a form of relief from emotional distress. At the same time these data support a strengths-based approach to recovery as exemplified in such strategies as motivational interviewing (Ciarrocchi, 2002).

There are two further implications of this study for the broader fields of psychology of religion and positive psychology. First, an anomaly in the data is a relationship between spirituality and the positive affect components. A body of previous research (Ciarrocchi & Deneke, 2004) indicates that in nonclinical populations spiritual variables predict to

positive affect but have no relationship with negative affect after controlling for personality. In other words, personality appears to mediate the relationship between spirituality and negative affect in many of the samples. This was also true in two clinical samples of sex offenders and substance abusers with serious histories of childhood abuse (Geary, Ciarrocchi, & Scheers, 2004; VanDeusen & Way, 2006). The present study suggests that this may not be the case for problem gamblers. If these results are replicated, they suggest that spirituality in the form of prayer fulfillment has potential for reducing emotional distress for this subset of problem behaviors.

A second implication of this study is its contribution to understanding the mediation role of personality in predicting subjective well-being along with the incremental validity of spirituality as predicting over and above personality. The findings here are somewhat typical for research that investigates the effect of spirituality in predicting to psychosocial outcomes. That is, there are often many zero order correlations between spirituality and religious practices with various outcomes, but personality attenuates these relationships, and in many cases eliminates them. Critics of research in the area of health and spirituality, for example, point to this phenomenon to question the claims regarding spirituality's effect (Sloan, Bagiella, & Powell, 2001). The current results indicate that personality does indeed mediate some relationships between spirituality and well-being—particularly in relationship to positive affect. At the same time, when spirituality does make a significant contribution, it does so in important areas. For example, in the current study spiritual transcendence amounted to a 30% gain in predictive power to cognitive well-being over and above personality. A variable improving predictability to that degree is worthy of further investigation.

The inability of the NEO-PI-R to predict time since last bet was unexpected. This instrument ordinarily predicts a multitude of salient psychosocial outcomes in clinical and nonclinical groups (Piedmont, 1998). It may be that it would predict more strongly for persons who were in the acute phase of the disorder. The mean average for time since last bet was 21 months, indicating that the participants had considerable abstinence. The NEO-PI-R was also unable to predict drop-outs from an outpatient drug vocational rehabilitation program (Piedmont & Ciarrocchi, 1999). In that study the participants had to have at least 30 days abstinence for eligibility and the average length of time since their previous treatment was four months. The NEO-PI-R, however,

predicted many aspects of psychological functioning, such as number of personal problems, psychiatric symptoms, and coping resources. Thus, personality measures may have trouble classifying specific behavioral outcomes for persons with a substantial period of recovery from alcohol, drug, and gambling problems. The inability of personality measures to “type” substance abusers was noted early on in addiction research (Pattison, Sobell, & Sobell, 1977).

There are several important limitations in this study. First, the variable time since last bet is probably too simplistic for measuring gambling recovery. Rarely do addictive behaviors cease suddenly and without a series of progressively shorter slips and relapses (Miller & Rollnick, 1991; Prochaska & DiClemente, 1982, 1984). In a longitudinal study the change process could be more accurately captured. The all-or-nothing approach to gambling abstinence used in this study may be responsible for the paucity of significant relationships between the independent variables and the time since last bet.

A second shortcoming of this study is that it was unable to take into account the presence or absence of comorbid psychiatric disturbance. Given the high rate of comorbid psychiatric disturbance in this population, it is reasonable to assume that some portion of the sample is psychiatrically ill and these conditions may moderate rates of recovery. The presence of comorbid psychiatric illness may be somewhat inferred from the high mean score on neuroticism but this scale measures dispositional motivation, not symptomatic psychiatric illness. Future research should include the use of an instrument such as the Brief Symptom Inventory (Derogatis, 1993).

A third limitation faced by this study was the paucity of demographic information and descriptive data obtained in our sampling. Members of GA and gambling treatment professionals consulted in preparation for gathering data alerted the researchers that this population is very sensitive to issues concerning confidentiality and could be easily discouraged from participation if demographic information was deemed intrusive. We believe this may be one reason for the low response rate. Given the personality findings of this study, which indicated that this sample tended to be lackadaisical in working toward goals, not exacting in applying principles, antagonistic, and suspicious, this caution in demanding precise demographic details was most likely warranted. Details concerning each individual's scores on the assessment instruments used by GA (GA-20) and treatment programs (SOGS, NODS)



were not collected for the same reason, but the presence of an individual in these treatment groups was deemed sufficient evidence for their inclusion in a study of pathological gamblers. We did not gather detailed demographic data and thus were unable to determine whether GA groups differed from treatment groups in their descriptive characteristics or whether the severity of pathological gambling, as determined by differences in scores on the assessment instruments, was significantly related to the personality, spirituality, or outcome variables. Future research should determine whether individuals seeking professional services for pathological gambling have different characteristics than individuals who seek recovery from self-help groups.

While the authors tried to minimize any selection bias in individuals that chose to participate, the title of this study alone may have created a self-selection process among GA members and individuals in treatment who were interested in spirituality as part of their recovery process. The instructions that GA members and individuals in treatment followed were neutral concerning spirituality, but the original title of this study included the word "spirituality" as did one of the instruments used in this study, the STS.

Finally, this study did not capture the level of each participant's involvement in treatment. As it is clear that therapeutic treatment is effective, the frequency and duration of treatment may have contributed to time since last bet as well as the subjective well-being variables. Future research in this area should include treatment history.

There is an aura of mystery about creating the necessary and sufficient conditions that facilitate therapeutic change in the gambling client. When working with pathological gamblers it is easy to become enmeshed in premature attempts to stop the gambling behavior. This effort at establishing gambling abstinence, when demanded too early in the therapeutic process, can easily become a source of frustration for both the therapist and the client. Given the high rates of emotional pain, as illustrated by the scores on neuroticism and subjective well-being found in this study, it seems that attention to the emotional well-being of the gambler is essential if there is to be a cessation of the harmful behavior.

Indeed, changes in the internal compass of the gambler will presage the remittance of the harmful behavior. This internal compass includes the poles of improved cognitive and affective well-being, reduced levels of neuroticism, and enhancement in the client's sense of

social surgency (extraversion) and persistence in organization and goal directed behavior (conscientiousness). Both William James and Bill W., early pioneers in the recovery movement from addiction, named God as a lodestone for finding the internal compass lost through the addiction process. Though Twelve Step programs are open to vague understandings of a transcendent higher power, James and the founders of the Twelve Step tradition were concerned with the development of a unique and personal relationship with the monotheistic God. The way to developing this relationship, as described in the 11th Step of Alcoholics Anonymous and as found in the results of this study, is through the development of spiritual transcendence. The results of this study provide support for incorporation of therapeutic interventions, such as prayer and meditation, reflection on one's religious history, participation in Twelve Step groups and/or religious groups, and reflection on issues of spiritual meaning and purpose in life, that are intended to enhance the gambler's experience of spiritual transcendence. Nevertheless, the measure of spirituality used here does not limit itself to theistic systems of spirituality, thus creating promise for pluralistic notions of spirituality in relationship to the quality of life in recovery.

Exploration of the client's system of spiritual and religious beliefs is essential. Both James and the Twelve Step movement described a compassionate, loving God that suffers with the sufferer and always invites the sufferer back into relationship. As described by Hopson (1996) in his excellent essay on AA, the addicted person seems to have adopted a belief in the wrong kind of God. As noted by William James and Bill W., the search for the *It's* function in recovery is actually a search for a certain kind of spirituality. The most interesting results for future research are twofold. When controlling for personality spiritual transcendence predicts overall life satisfaction for persons with gambling disorders. Second, prayer fulfillment in the sense of a personal relationship with a Higher Power predicts less emotional pain controlling for personality. Furthermore, none of the factors in a comprehensive well-validated personality measure predicted gambling abstinence, whereas both a personal relation with God and a spiritual connection with others correlated with abstinence. Surely, this represents at least one fruitful path to an ongoing *It's* that pioneers in the addiction field sought.

## REFERENCES

- Alcoholics Anonymous. (1976). *Alcoholics Anonymous* (3rd ed.). New York: Alcoholics Anonymous World Services, Inc.
- Allport, G. W., & Ross, J. M. (1967). Personal religious orientation and prejudice. *Journal of Personality and Social Psychology*, *5*, 432–443.
- Benson, P. L., Donahue, M. J., & Erickson, J. A. (1993). The Faith Maturity Scale: Conceptualization, measurement, and empirical validation. *Research in the Social Scientific Study of Religion*, *5*, 1–26.
- Blaszczynski, A. P., McConaghy, N., & Frankova, A. (1991). A comparison of relapsed and non-relapsed abstinent pathological gamblers following behavioral treatment. *British Journal of Addiction*, *86*, 1485–1489.
- Blaszczynski, A. P., & Silove, D. (1995). Cognitive and behavioral therapies for pathological gambling. *Journal of Gambling Studies*, *11*(2), 195–220.
- Bradburn, N. M. (1969). *The structure of psychological well-being*. Chicago: Aldine.
- Brown, H. P., & Peterson, J. H. (1991). Assessing spirituality in addiction treatment and follow-up: Development of the Brown-Peterson Recovery Progress Inventory (B-PRPI). *Alcoholism Treatment Quarterly*, *8*, 21–50.
- Brown, R. (1986). Dropouts and continuers in Gamblers Anonymous: IV. Evaluation and summary. *Journal of Gambling Behavior*, *3*, 202–210.
- Browne, B. R. (1994). Really not God: Secularization and pragmatism in Gamblers Anonymous. *Journal of Gambling Studies*, *10*, 47–260.
- Ciarrocchi, J. W. (2002). *Counseling problem gamblers: A self-regulation manual for individual and family therapy*. San Diego: Academic Press.
- Ciarrocchi, J. W., & Deneke, E. (2004). Happiness and the varieties of religious experience: Religious support, practices, and spirituality as predictors of well-being. *Research in the Social Scientific Study of Religion*, *15*, 209–233.
- Costa, P. T., & McCrae, R. R. (1980). Influence of extraversion and neuroticism on subjective well-being: Happy and unhappy people. *Journal of Personality and Social Psychology*, *38*, 668–678.
- Costa, P. T., & McCrae, R. R. (1988). Personality in adulthood: A six-year longitudinal study of self-reports and spouse ratings on the NEO Personality Inventory. *Journal of Personality and Social Psychology*, *54*, 853–863.
- Costa, P. T., & McCrae, R. R. (1989). Personality, stress, and coping: Some lessons from a decade of research. In K. S. Markides & C. L. Cooper (Eds.), *Aging, stress, and health* (267–283). New York: Wiley.
- Costa, P. T., & McCrae, R. R. (1992). *Revised NEO Personality Inventory and NEO Five-Factor Inventory: Professional Manual*. Odessa, FL: Psychological Assessment Resources, Inc.
- Crumbaugh, J. (1968). Purpose-in-Life test. *Journal of Individual Psychology*, *24*, 74–81.
- DeCaria, C. M., Begaz, T., & Hollander, E. (1998). Serotonergic and noradrenergic function in pathological gambling. *CNS Spectrum*, *3*, 38–47.
- DeConciliis, A. J. (1993/1994). Individual correlates of prosocial behavior: Comparison of three models (Doctoral dissertation, Loyola College in Maryland, 1993). *Dissertation Abstracts International*, *54*(08), 2892. (University Microfilms No. AAC 93–23130).
- Derogatis, L. R. (1993). *Brief Symptom Inventory Manual*. Minneapolis, MN: National Computer Systems.
- Diener, E., Emmons, R. A., Larson, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*, 71–75.
- Diener, E., Suh, E. M., Lucas, R., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, *125*, 276–302.
- Echeburua Odriozola, E., Bacz, G., & Concepcion, F. (1994). Comparative effectiveness of different therapeutic modalities in psychological treatment of pathological gambling: An experimental study. *Analisis y Modificacion de Conducta*, *20*, 617–643.

- Flexner, E. (1975). *Century of struggle: The Woman's Rights Movement in the United States*. Cambridge, MA: Harvard University Press.
- Freud, S. (1928). Dostoyevsky and parricide. In J. Strachey (Ed.), *Standard edition of the complete psychological works of Sigmund Freud* (pp. 175–196). London: Hogarth.
- Galea, M. (2003). *The impact of child abuse on the psycho-spiritual status, religious behavior, and family dynamics of Maltese college students*. Unpublished doctoral dissertation, Loyola College in Maryland.
- Gamblers Anonymous. (1984). *Sharing recovery through Gamblers Anonymous*. Los Angeles: Author.
- Gamblers Anonymous. (1996). *Gamblers Anonymous yellow pamphlet*. Los Angeles: Author.
- Geary, B., Ciarrocchi, J. W., & Scheers, N. J. (2004). Spirituality and religious variables as predictors of well-being in sex offenders. *Research in the Social Scientific Study of Religion, 15*, 167–187.
- Golden, J., Piedmont, R. L., Ciarrocchi, J. W., & Rodgeron, T. (2004). Spirituality and burnout: An incremental validity study. *Journal of Psychology and Theology, 32*, 115–125.
- Gorsuch, R. L. (1993). Assessing spiritual variables in Alcoholics Anonymous research. In B. S. McCreedy & W. R. Miller (Eds.), *Research in Alcoholics Anonymous: Opportunities and alternatives* (pp. 301–318). New Brunswick, NJ: Rutgers Center of Alcohol Studies.
- Grogan-Henderson, K., & Ciarrocchi, J. W. (2003, April). *Optimism and spirituality as predictors of subjective well-being in breast cancer patients*. Poster session presented at the Sixth World Congress of Psycho-Oncology, Banff, Alberta, Canada.
- Haller, R., & Hinterhuber, H. (1994). Treatment of pathological gambling with carbamazepine. *Pharmacopsychiatry, 27*, 129.
- Hollander, E., DeCaria, C. M., Mari, E., Wong, C. M., Mosovich, S., Grossman, R. et al. (1998). Short-term single-blind fluvoxamine treatment of pathological gambling. *American Journal of Psychiatry, 155*, 1781–1783.
- Hopson, R. E. (1996). The 12-step program. In E. P. Shafranske (Ed.), *Religion and the clinical practice of psychology* (pp. 533–560). Washington, DC: American Psychological Association.
- Hood, R. W., Spilka, B., Hunsberger, B., & Gorsuch, R. L. (1996). *The psychology of religion*. New York: The Guilford Press.
- James, W. (1902/1990). *The varieties of religious experience*. New York: Vantage Books.
- Jones, A., & Crandall, R. (1986). Validation of a short index of self-actualization. *Personality and Social Psychology Bulletin, 12*, 63–73.
- Krupski, T. L., Kwan, L., Fink, A., Sonn, G. A., Maliski, S., & Litwin, M. S. (2006). Spirituality influences health related quality of life in men with prostate cancer. *Psycho-Oncology, 15*, 121–131.
- Lesieur, H. R., & Blume, S. (1987). The South Oaks Gambling Screen (SOGS): A new instrument for the identification of pathological gamblers. *American Journal of Psychiatry, 144*, 1184–1188.
- Lucas, R. E., Diener, E., & Suh, E. (1996). Discriminant validity of well-being measures. *Journal of Personality and Social Psychology, 71*(3), 616–628.
- Matheis, E., Tulsy, D. S., & Matheis, R. J. (2006). The relation between spirituality and quality of life among individuals with spinal cord injury. *Rehabilitation Psychology, 51*(3), 265–271.
- McConaghy, N., Blaszczynski, A., & Frankova, A. (1991). Comparison of imaginal desensitisation with other behavioral treatments of pathological gambling: A two- to nine-year follow-up. *British Journal of Psychiatry, 159*, 390–393.
- Miller, W. R., & Rollnick, S. (1991). *Motivational interviewing: Preparing people to change addictive behavior*. New York: Guilford Press.
- Moskowitz, J. A. (1980). Lithium and lady luck: Use of lithium carbonate in compulsive gambling. *New York State Journal of Medicine, 80*, 785–788.

- Murray, J. B. (1993). Review of research on pathological gambling. *Psychological Reports*, 72, 791–810.
- Myers, D. G., & Diener, E. (1995). Who is happy? *Psychological Science*, 6, 10–19.
- National Opinion Research Center at the University of Chicago. (1999). *Gambling impact and behavior study: Final report to the National Gambling Impact Study Commission*. Chicago: Author.
- National Research Council. (1999). *Pathological gambling: A critical review*. Washington, DC: National Academy Press.
- Pargament, K. I., Kennell, J., Hathaway, W., Grevengoed, N., Newman, J., & Jones, W. (1988). Religion and the problem solving process: Three styles of coping. *Journal for the Scientific Study of Religion*, 27, 90–104.
- Pattison, E. M., Sobell, M. B., & Sobell, L. C. (1977). *Emerging concepts of alcohol dependence*. New York: Springer.
- Pavot, W., & Diener, E. (1993a). The affective and cognitive context of self-reported measures of subjective well-being. *Social Indicators Research*, 28, 1–20.
- Pavot, W., & Diener, E. (1993b). Review of the satisfaction with life scale. *Psychological Assessment*, 5, 164–172.
- Perrone, K. M., Webb, L. K., Wright, S. L., Vance, J. Z., & Ksiazak, T. M. (2006). Relationship of spirituality to work and family roles and life satisfaction among gifted adults. *Journal of Mental Health Counseling*, 28, 253–268.
- Petry, N. M., Ammerman, Y., Bohl, J., Doersch, A., Gay, H., Kadden, R., Molina, C., & Steinberg, K. (2006). Cognitive-behavioral therapy for pathological gamblers. *Journal of Consulting and Clinical Psychology*, 74(3), 555–567.
- Piedmont, R. L. (1993). A longitudinal analysis of burnout in the health care setting: The role of personal dispositions. *Journal of Personality Assessment*, 91, 457–473.
- Piedmont, R. L. (1998). *The revised NEO personality inventory: Clinical and research applications*. New York: Plenum Press.
- Piedmont, R. L. (1999a). Strategies for using the five-factor model of personality in religious research. *Journal of Psychology and Theology*, 27, 338–350.
- Piedmont, R. L. (1999b). Does spirituality represent the sixth factor of personality? Spiritual transcendence and the five-factor model. *Journal of Personality*, 6, 985–1013.
- Piedmont, R. L., & Ciarrocchi, J. W. (1999). The utility of the Revised NEO Personality Inventory in an outpatient, drug rehabilitation context. *Psychology of Addictive Behaviors*, 13, 213–226.
- Prochaska J. O., & DiClemente, C. C. (1982). Transtheoretical therapy: Toward a more integrative model of change. *Psychotherapy: Theory, Research, and Practice*, 19, 276–288.
- Prochaska J. O., & DiClemente, C. C. (1984). *The transtheoretical approach: Crossing traditional boundaries of therapy*. Homewood, IL: Dow Jones/Irwin.
- Russo, A. M., Taber, J. I., McCormick, R. A., & Ramirez, L. F. (1984). An outcome study of an inpatient treatment program for pathological gamblers. *Hospital & Community Psychiatry*, 35, 823–827.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55, 5–14.
- Sloan, R. P., Bagiella, E., & Powell, T. (2001). Without a prayer: Methodological problems, ethical challenges, and misrepresentations in the study of religion, spirituality, and medicine. In T.G. Plante (Ed.), *Faith and health: Psychological perspectives* (pp. 339–354). Guildford Press: New York.
- Spalding, A. D., & Metz, G. J. (1997). Spirituality and the quality of life in Alcoholics Anonymous. *Alcoholism Treatment Quarterly*, 15, 1–14.
- Sylvain, C., Ladouceur, R., & Boisvert, J. M. (1997). Cognitive and behavioral treatment of pathological gambling: A controlled study. *Journal of Consulting and Clinical Psychology*, 65, 727–732.

- Taber, J. I., McCormick, R. A., Russo, A. M., Adkins, B. J., & Ramirez, L. F. (1987). Follow-up of pathological gamblers after treatment. *American Journal of Psychiatry*, *144*, 757–761.
- Toneatto, T., & Ladouceur, R. (2003). Treatment of pathological gambling: A critical review of the literature. *Psychology of Addictive Behaviors*, *17*, 284–292.
- Toneatto, T., & Millar, G. (2004). Assessing and treating problem gambling: Empirical status and promising trends. *Canadian Journal of Psychiatry*, *49*, 517–525.
- Tonigan, J. S., Toscova, R. T., & Connors, G. J. (1999). Spirituality and the Twelve Step programs: A guide for clinicians. In W. R. Miller (Ed.), *Integrating spirituality into treatment: Resources for practitioners* (pp. 111–131). Washington, DC: American Psychological Association.
- Ursua, M. P., & Uribelarrea, L. L. (1998). Twenty questions of Gamblers Anonymous: A psychometric study with population of Spain. *Journal of Gambling Studies*, *14*, 3–15.
- VanDeusen, K. M., & Way, I. (2006). Vicarious trauma: An exploratory study of the impact of providing sexual abuse treatment on clinicians' trust and intimacy. *Journal of Child Sexual Abuse*, *15*, 69–85.
- Van Wicklin, J. F. (1990). Conceiving and measuring ways of being religious. *Journal of Psychology and Christianity*, *9*, 208–219.



PATIENCE AS A VIRTUE:  
RELIGIOUS AND PSYCHOLOGICAL PERSPECTIVES

*Sarah A. Schmitker and Robert A. Emmons*

ABSTRACT

For millennia, theologians, moral philosophers, and writers have identified patience as an important aspect of virtue and excellence of character. This study seeks to understand the religious and psychological underpinnings of patience and presents the Patience Scale to measure individual differences in the trait. Undergraduate psychology students ( $n = 324$ ) completed survey packets containing items to measure patience as well as the Values in Action Strengths Scale (VIA-IS), measures of religiousness/spirituality, and measures of self-control, time perspective, the Big Five, and mindfulness. The 24 strengths of the VIA-IS were related in varying degrees to patience, but sufficient independence from existing strengths was demonstrated. Patience was significantly related to spiritual transcendence and to religious behaviors. Anticipated uses of the Patience Scale and implications for future research are discussed.

“A person is said to be patient . . . because he acts in a praiseworthy manner by enduring things which hurt him here and now and is not unduly saddened by them.”

—St. Thomas Aquinas

“Genius is eternal patience.”

—Michelangelo

“Patience is the companion of wisdom.”

—Saint Augustine

“The key to everything is patience. You get the chicken by hatching the egg, not smashing it.”

—Arnold Glasgow

Patience has long been recognized as a human strength and critical component of moral excellence. Familiar maxims such as “patience is a virtue” exemplify the desirability of the trait, and moral philosophers and religious leaders emphasize the importance of developing patience to achieve the “good life.” Virgil states, “Every misfortune is to be subdued by patience” (*Aeneid* V, p. 710), and the Christian scriptures include patience as a key component of righteous character: “But the fruit of the Spirit is love, joy, peace, *patience*, kindness, goodness, faithfulness, gentleness, and self-control” (Galatians 5:22, New International Version, emphasis added).



## THEOLOGICAL PERSPECTIVES

Virtually all major world religions acclaim patience as a fundamental virtue and worthy character goal.

*Jewish perspectives.* Patience is a fundamental component of the Jewish faith. Throughout the Hebrew Scriptures, God is described as patient. The refrain, “The LORD, the LORD, the compassionate and gracious God, slow to anger, abounding in love and faithfulness, maintaining love to thousands, and forgiving wickedness, rebellion and sin” (Exodus 34:6–7), echoes throughout the Torah reminding the Jewish people of God’s patience and love. Numerous narratives from the Old Testament illustrate God’s patience toward the nation of Israel. In the book of Nehemiah, the Jewish priests recount Israel’s rebellion against Yahweh and Yahweh’s great patience, “For many years you [Yahweh] were patient with them . . . in your great mercy you did not put an end to them or abandon them” (Nehemiah 9:29–31). Throughout Jewish history, God is seen as patiently waiting for his chosen people to repent and turn toward him. Even God’s acts of judgment, punishment, or discipline are a sign of his patience because “the essential message is always the same: I have not finished with you yet” (Harned, 1997, p. 29). Just as a parent’s discipline of a child is an act of patience and love, so too are God’s chastisements of Israel acts of patience.

In addition to characterizing God as patient, Judaism conceptualizes patience as a virtue for humans to foster in themselves. The Jewish people are implored throughout the Tanakh to develop patience as an aspect of wise living. In the book of Ecclesiastes, Jews are instructed, “the end of a matter is better than its beginning, and patience is better than pride” (Ecclesiastes 7:8). The book of Proverbs frequently implores its readers to practice patience with adages such as, “Better a patient man than a warrior, a man who controls his temper than one who takes a city” (Proverbs 16:32), or “A patient man has great understanding, but a quick-tempered man displays folly” (Proverbs 14:29).

*Christian perspectives.* Christianity also imputes great importance to the virtue of patience. As in the Jewish scriptures, patience is depicted as a core component of God’s character in the New Testament. In the book of I Timothy, the Apostle Paul describes Christ’s patience towards humanity, “But for that very reason I was shown mercy so that in me, the worst of sinners, Christ Jesus might display his unlimited patience as an example for those who would believe in him and receive eternal life” (I Timothy 1:16). Moreover, the patience of God is presented as

allowing for the salvation of humankind. The New Testament scriptures state, “The Lord is not slow in keeping his promise, as some understand slowness. He is patient with you, not wanting anyone to perish, but everyone to come to repentance... Bear in mind that our Lord’s patience means salvation” (II Peter 3:9, 15).

Christians are instructed in Ephesians 4:2 to display patience towards other people, “Be completely humble and gentle; be patient, bearing with one another in love.” Also, patience is to be exhibited as the believer patiently waits for the second coming of Christ as portrayed in the imperative, “You too, be patient and stand firm, because the Lord’s coming is near” (James 5:8). This usage of patience shows that the term does not denote a passive surrender but instead connotes joyful hope, long-suffering, and expectant waiting. This Christian conceptualization is distinct from a stoic notion of patience as a passionless detachment from life.

Great theologians in the Christian tradition have expounded on the importance of patience. Tertullian viewed patience as the highest of virtues and impatience as the root of all sin (Harned, 1997). Augustine viewed patience as a gift of grace, stressed the interdependence of patience, humility, and gratitude (Augustine, 1952), and focused on the nuance of perseverance in the virtue (Augustine, 1992). Aquinas conceptualized patience as a median between the extremes of apathy and impatience. He also distinguished between patience (the endurance of difficulties) and perseverance (the continued action toward a goal) (Aquinas, 1947). In the *Institutes of Christian Religion*, John Calvin primarily portrayed patience as expressing confidence in the providence and sovereignty of God (Calvin, 1990). Finally Soren Kierkegaard emphasized that patience, displayed in the face of unavoidable suffering, imbues the individual with a sense of freedom (Kierkegaard, 1956). Harned comments that for Kierkegaard, “Patience is not resignation, passivity, or inaction; rather, it is the emergence of freedom within the domain where necessity rules” (1997, p. 101).

*Islamic perspectives.* Patience is also a fundamental virtue of Islam. As in Judaism and Christianity, patience is a part of Allah’s nature. In the Koran, it is written “Our Lord! pour out on us patience and constancy, and take our souls unto thee as Muslims” (7:126, Shakir Translation). Additionally, the demonstration of patience is charged to those who follow Allah, “O ye who believe! Persevere in patience and constancy; vie in such perseverance; strengthen each other; and fear Allah that ye may prosper” (Koran 3:200). Also, patience is upheld as a virtuous trait

as is reflected in the *Ash-Shura* of the Koran, “But indeed if any show patience and forgive, that would truly be an exercise of courageous will and resolution in the conduct of affairs” (42:43).

Islamic scriptures also present the idea that the Muslim is to wait patiently for the judgment of Allah, as reflected in the *Al-A’raf*, “And if there is a party among you who believes in the message with which I have been sent, and a party which does not believe, hold yourselves in patience until Allah doth decide between us: for He is the best to decide” (Koran, 7:87) and in the *Hud*, “Be steadfast in patience; for verily Allah will not suffer the reward of the righteous to perish” (Koran 11:115).

*Eastern perspectives (Buddhism, Hinduism, Taoism)*. Patience is strongly upheld as a core virtue by many Eastern religions. Patience is seen as a central component of Buddhism, and it is one of the six paramitas (perfections) that a bodhisattva practices to realize perfect Bodhi (enlightenment; Rinpoche, 1992). The 14th Dalai Lama comments, “In order to have pure ethics, it is necessary to cultivate patience” (Gyatso, 1991, p. 101). Rahula (1974) further explains the necessity of fostering patience in Buddhist living and eradicating impatience:

Although there is suffering in life, a Buddhist should not be gloomy over it, should not be angry or impatient at it. One of the principal evils in life... is “repugnance” or hatred. Repugnance (*pratigha*) is explained as “ill will with regard to living beings, with regard to suffering and with regard to things pertaining to suffering.” Thus it is wrong to be impatient at suffering. Being impatient or angry at suffering does not remove it. On the contrary, it adds a little more to one’s trouble, and aggravates and exacerbates a situation already disagreeable. (p. 28)

Moreover, patience is particularly seen as an antidote to anger. The 14th Dalai Lama’s book, *Healing Anger: The Power of Patience from a Buddhist Perspective* (Gyatso, 1997), indicates that patience is viewed almost as a mediator between anger and compassion. Patience leads to compassion because “the practice of patience... is the main bulwark for training in the equalizing and switching of self and others” (Gyatso, 1991, p. 101).

The Hindu religion also promotes the development of patience as part of a virtuous life. The secondary scriptures of the Hindus, based on the Vedic teaching, express regard for the virtue of patience. For example, in the *Mahabharata* the royal prince is extolled for his patience. He is described as “Meek and graced with patient virtue he controls his noble mind, Modest in his kindly actions, true to friends and ever kind”

(Dutt, 1899, Book V). Moreover, the Code of Manu calls individuals to live a life of patience: "...let him be patient of hardships, friendly (towards all), of collected mind, ever liberal and never a receiver of gifts, and compassionate towards all living creatures" (Code of Manu 6:8). Practicing patience, in addition to following other spiritual disciplines, is also thought to expunge guilt and lead to heavenly bliss. The Code states: "The daily study of the Veda, the performance of the great sacrifices according to one's ability, (and) patience (in suffering) quickly destroy all guilt, even that caused by mortal sins" (Code of Manu 11:246), and that "He who is persevering, gentle, (and) patient... gains, if he constantly lives in that manner... heavenly bliss" (Code of Manu 4:246).

Similarly, patience is a central character trait in Taoism. Lao-tzu, the founder of Taoism, states, "I have just three things to teach: simplicity, patience, and compassion. These three are your greatest treasures" (Lao-tzu, *Tao Te Ching*). He further elucidates the value of patience, "Patient with both friends and enemies, you accord with the way things are," thus highlighting the idea that patience allows the individual to act with the flow of nature. Lao-tzu particularly conceptualizes patience as allowing events to unfold in their own way and manner and abstaining from the impulse to fight against the way.

### *The Psychological Study of Patience (or Lack Thereof)*

In light of the religious traditions emphasizing the importance of patience for human flourishing, it would seem most advisable for psychologists who are interested in human strengths and flourishing to examine this strength. However, there is a marked dearth of research on patience within psychology. A PsycInfo search reveals very few publications concerning the construct. Darwin (1872) describes the bodily expression of patience in *Emotion in Man and Animals*, and Kunz (2002) discusses the deficiency of research on the "passive" virtues of patience, simplicity, and humility in relation to Levinas ethics. The only modern work empirically examining the psychological trait of patience is that of Mehrabian (1999), who defined patience as the tendency to be deliberate, steadfast, restrained, and able to endure difficulties (e.g., as when working toward goals) in which patience was distinguished from delay of gratification, impulsivity, and procrastination. A brief four-item patience subscale is a component of his Disciplined Goal Orientation Scale.

Additionally, limited discussion on patience is evident in other disciplines. Moral philosopher and Christian theologian David Baily Harned (1997) notes that patience has nearly vanished as a topic in Christian theology since the mid-18th century. He remarks that patience has become an “outdated” virtue in our high-tech and fast-paced world, and as humans have been more able to manipulate their environments through technology, patience has “frequently seemed childlike . . . an unimaginative failure of nerve” (p. 3). Waiting is no longer seen as a natural part of life, but as a “deprivation enforced upon us by an unfriendly environment” (Harned, 1997). In modern times, many individuals have discarded patience as a virtue worthy of human striving and study.

Looking specifically at positive psychology, Peterson and Seligman (2004) do not include patience as one of the 24 human strengths listed in their *Values In Action* virtue classification (VIA-IS; a classification of mental health and flourishing that the authors compare to the *Diagnostic and Statistical Manual of Mental Disorders* [American Psychiatric Association, 1994]). Instead they maintain that patience is merely a combination of persistence, open-mindedness, and self-regulation.

In response, this study attempts to rectify the deficiency of research on patience in the positive psychology and psychology of religion literatures by creating a measure of patience that may be utilized in future research and by evaluating patience against the criteria set forth by Peterson and Seligman (2004) for inclusion of a trait into their list of character strengths (see Table 1).

#### *Defining Patience: Patience Is Not Just . . .*

When thinking about the trait of patience several related psychological constructs spring to mind as equivalent to patience. However, it is important to distinguish patience from these related traits and abilities.

First, patience is not just the opposite of impatience. Impatience has been explicated in studies focusing on the *Impatience-Irritability* factor of the Type A personality (Spence, Helmreich, & Pred, 1987). Specifically, the concept of time urgency (or impatience; Landy, Rastegary, Thayer, & Colvin, 1991) is particularly associated to the study of patience. Although patience and impatience are highly related, they are not necessarily congruent opposites. Just as positive emotionality does not directly mirror negative emotionality (Clark & Watson, 1999), we expect that patience may not maintain parallel properties with impatience. However, research on time urgency helps to clarify the definition and highlight the negative correlates of impatience.

Second, patience is not just the ability to delay gratification. The ability to forego present reward for some future incentive seems synonymous with patience at first glance. However, patience is not analogous to delay of gratification. Delay of gratification typically involves an overt choice between choosing a small reward now versus a larger reward later. Conversely, paradigms in which patience is demonstrated do not always involve a choice to wait, and there may be no overt behavioral distinction between an impatient and patient response. Instead, patience is much more focused on the internal response of the individual.

Lastly, patience is not just self-regulation. Laypersons and psychologists often conceptualize patience as involving self-regulation or self-control. For instance, Peterson and Seligman (2004) mention self-regulation as one of the three virtues composing patience. However, patience seems quite distinct from self-regulation as it fundamentally involves an inner emotional response. Consequently, it appears more reasonable to examine emotion-regulation in regards to patience. Most likely, patient individuals adaptively implement regulation strategies such as attentional deployment and reappraisal (Gross, 1999) to proficiently down-regulate negative emotions such as frustration or anger in waiting situations. Although individual differences in patience are most likely related to regulatory abilities, other antecedents may contribute toward one's patience.

Table 1. *VIA-IS Criteria for a Character Strength\**

- 
1. Fulfilling—contributes to individual fulfillment, satisfaction, and happiness broadly construed.
  2. Morally valued—is valued in its own right and not for tangible outcomes it may produce.
  3. Does not diminish others—elevates others who witness it, producing admiration, not jealousy.
  4. Nonfelicitous opposite—has obvious antonym that are “negative”.
  5. Traitlike and Measurable—is an individual difference with demonstrable generality and stability that has been successfully measured by researchers.
  6. Distinctiveness—is not redundant (conceptually or empirically) with other character strengths.
  7. Paragons—is strikingly embodied in some individuals.
  8. Prodigies—is precociously shown by some children or youth.
  9. Selective absence—is missing altogether in some individuals.
  10. Institutions—is the deliberate target of societal practices and rituals that try to cultivate it.
- 

\* Park, Peterson, and Seligman (2004); Peterson and Seligman (2004).

*The Present Study*

In light of these diverse religious and psychological perspectives, we aim to: (a) create a valid and reliable measure of patience and establish its predictive, construct, and discriminant validity; (b) examine whether patience qualifies as a character strength; and (c) explore the relationships between patience and other psychological constructs including subjective well-being, health, personality, and spirituality.

## METHOD

*Participants*

The participants were 324 undergraduate psychology students from the University of California, Davis (253 females, 69 males, 2 unrecorded). Participants' mean age was 21 years (range = 18–44). Most were Caucasian or Asian American/Pacific Islander (45% Caucasian, 32% Asian American/Pacific Islander, 11% Other, 8% Latino, 2% African American, and 0.5% Native American).

*Procedure*

Several samples of participants were instructed to download the survey from a course website, complete the questionnaires, and return the survey in class one week later for course extra credit.

*Self-Report Items Measuring Patience*

All participants were administered 27 positively and negatively worded items to assess dispositional patience as well as 13 filler items. We wrote the original pool of items after extensive consideration of theological and philosophical writings and perspectives on patience. Moreover, we examined time urgency—a facet of the Impatience/Irritability factor of the Type A personality—to generate items measuring patience by scrutinizing its opposite, impatience. Conte, Landy, and Mathieu (1995), through factor analytic techniques, have established that time urgency is a multidimensional individual difference variable with five components: time awareness, scheduling, list making, eating behavior, and deadline control. We utilized these different behavioral domains to construct items measuring patience. In the end, the 27 patience items reflected evaluations of one's patience ("Most people would say that

I am a patient person.”), beliefs about the importance of patience (“I agree with the old saying, ‘patience is a virtue.’”), patient behaviors (“I run red lights fairly often.”), pacing (“I am always in a hurry.”), and attitudes toward waiting (“In general, waiting in lines does not bother me.”). Items were rated on a 5-point scale ranging from 1 (*very much unlike me*) to 5 (*very much like me*).

*Measures of Religiousness, Spirituality, and Virtue*

*Spiritual Transcendence Scale.* Piedmont’s (1999) scale measures three factors of spiritual transcendence—prayer fulfillment, universality, and connectedness—on a 5-point Likert scale (1 = *Strongly Agree* to 5 = *Strongly Disagree*). Prayer fulfillment includes sample items such as “I meditate and/or pray so that I can reach a higher spiritual plane of consciousness” and “I have had a spiritual experience where I lost track of where I was or the passage of time.” Items such as “I believe that on some level my life is intimately tied to all of humankind” and “I feel that on a higher level all of us share a common bond” measure universality. Finally, items such as, “I am a link in the chain of my family’s heritage, a bridge between past and future” and “Although there is good and bad in people, I believe that humanity as a whole is basically good” load on the connectedness factor.

*Values in Action Inventory.* The VIA-IS (Peterson & Seligman, 2001) is a 240-item measure of 24 character strengths (10 items per strength). Each item is rated on a 1 (*Very Much Unlike Me*) to 5 (*Very Much Like Me*) scale.

*Gratitude Questionnaire.* The GQ-6 (McCullough, Emmons, & Tsang, 2002) is a 6-item measure of gratitude that includes items such as “If I had to list everything that I feel grateful for, it would be a very long list” rated on a 1 (*strongly disagree*) to 7 (*strongly agree*) Likert scale.

*Gratitude Resentment and Appreciation Test (GRAT).* Watkins, Woodward, Stone, and Kolts’ (2003) 44-item scale measures three dimensions of gratitude on a 1 (*I strongly disagree*) to 9 (*I strongly agree with the statement*) Likert scale. The three dimensions are Sense of Abundance (e.g., “Life has been good to me”), Simple Appreciation (e.g., “I really enjoy a crackling fire on a cold winter’s day”), and Appreciation of Others (e.g., “Although I’m basically in control of my life, I can’t help but think about all those who have supported me and helped me along the way”).

*Other religious variables.* Participants completed several items related to religiousness, spirituality, and religious behaviors including items



assessing the importance of religion (“How important is religion in your life?”), religious identification (“What religion do you most closely identify with?”), religious description (“Do you consider yourself to be: spiritual, religious, and/or atheist?”), religious attendance (“On average, how often do you attend religious services?”), the number of religious friends they have (“Are your friends involved in religious activities?” with *none*, *a few*, *most*, and *all* as response options), amount of time spent reading sacred scriptures (“How often do you read sacred scriptures?”) and other religious literature (“How often do you read other religious literature?”), frequency of prayer (“How often do you pray?”), the extent to which they felt a personal relationship with God (“To what extent do you have a personal, unique, close relationship with God?”), and the extent to which they experience union with God (“Do you have experiences where you feel a union with God and gain spiritual truth?”).

#### *Measures of Affectivity, Health, and Life Satisfaction*

*Satisfaction with Life Scale.* This 5-item scale (Diener, Emmons, Larsen, & Griffin, 1985) measures global satisfaction with life. Items such as “In most ways, my life is close to my ideal” were rated on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

*Positive and Negative Affect Schedule.* The PANAS (Watson, Clark, & Tellegen, 1988) is used to assess the extent to which subjects feel positive (interested, enthusiastic, determined, excited, inspired, alert, active, strong, proud, attentive) and negative (hostile, irritable, guilty, ashamed, nervous, jittery, distressed, upset, afraid, scared) emotions over the past week on a 1 (*very slightly or not at all*) to 5 (*extremely*) scale.

*Depression.* Radloff’s (1977) 20-item CES-D is a self-report measure of depression. The participants rate how often they exhibit depressive symptoms during the week prior to completing the questionnaire. Rated on a scale from 1 (*rarely or none of the time*) to 4 (*most or all of the time*), sample items include “I thought my life had been a failure” and “I could not get ‘going’.”

*Health Problems Questionnaire.* Participants were asked to state how many times they had experienced 36 health problems (e.g., headache, ear infection, cough, ulcer, diarrhea, acne flare-up, muscle strain, etc.) as well as how often they had visited the doctor, missed a commitment because sick, or taken antibiotics over the past month.

*Lifestyle Questionnaire.* Participants were asked to indicate how often and the typical duration of which they exercised, felt stressed out, felt angry or irritated, felt depressed, drank alcohol (rated beer, wine, hard liquor on a 1 = *every day* to 5 = *not at all* scale and indicated how many glasses/shots per sitting), smoked tobacco, smoked marijuana, and binged on food over the past month.

### *Measures of Personality*

*Mindful Attention Awareness Scale.* Brown and Ryan's (2003) 15-item scale measures dispositional mindfulness on a 6-point scale (1 = *Almost Always* to 6 = *Almost Never*). Example items include "It seems I am 'running on automatic' without much awareness of what I'm doing" and "I could be experiencing some emotion and not be conscious of it until some time later."

*Self-Control Scale.* Tangney, Baumeister, and Boone's (2004) scale measures self-control/self-regulation on a 1 (*Not at All*) to 5 (*Very Much*) Likert scale. Example items include "I am good at resisting temptation" and "I am always on time."

*Zimbardo Time Perspective Inventory.* The ZTPI (Zimbardo & Boyd, 1999) is a 56-item questionnaire measuring five global time perspective dimensions or orientations on a 1 (*very uncharacteristic*) to 5 (*very characteristic*) Likert scale. The five dimensions include Past-Negative (e.g., "It's hard for me to forget unpleasant images of my youth"), Past-Positive (e.g., "It gives me pleasure to think about my past"), Present-Hedonistic (e.g., "Ideally, I would live each day as if it were my last"), Present-Fatalistic (e.g., "It doesn't make sense to worry about the future, since there is nothing I can do about it anyway"), and Future (e.g., "When I want to achieve something, I set goals and consider specific means for reaching those goals").

*Big Five Inventory.* The 44-item BFI (John, Donahue, & Kentle, 1991) measures the personality factors of extraversion (e.g., "I see myself as someone who is talkative"), agreeableness (e.g., "I see myself as someone who is helpful and unselfish with others"), conscientiousness (e.g., "I see myself as someone who does things efficiently"), neuroticism (e.g., "I see myself as someone who worries a lot"), and openness to experience (e.g., "I see myself as someone who is original, comes up with new ideas") on a 5-point Likert scale (1 = *Disagree Strongly* to 5 = *Agree Strongly*).

*Maximization Scale.* Schwartz et al. (2002) measure individual differences in the desire to maximize (or optimize choice) and tendency toward regret. Rated on a 7-point Likert scale (1 = *Completely Disagree* to 7 = *Completely Agree*), items such as “No matter how satisfied I am with my job, it’s only right for me to be on the lookout for better opportunities” and “Renting videos is really difficult. I’m always struggling to pick the best one” measure maximization; and items such as “If I make a choice and it turns out well, I still feel like something of a failure if I find out that another choice would have turned out better” measure regret.

#### *Measures of Social Traits and Behaviors*

*Interpersonal Reactivity Index.* The IRI (Davis, 1996) is a 28-item self-report questionnaire examining four aspects of empathy on a 5-point scale (1 = *Does Not Describe Me Well* to 5 = *Describes Me Very Well*). The perspective-taking subscale measures the tendency to adopt another person’s point of view (e.g., “I try to look at everybody’s side of a disagreement before I make a decision”). The fantasy subscale assesses the tendency to transpose oneself into fiction or imagination (e.g., “When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me”). The tendency to experience feelings of warmth, compassion, and concern for others is measured by the empathic concern subscale (e.g., “I often have tender, concerned feelings for people less fortunate than me”). The personal distress subscale measures feelings of personal discomfort and unease in reaction to the emotion of others (e.g., “When I see someone who badly needs help in an emergency, I go to pieces”).

*Experiences in Close Relationships Inventory.* The ECR is a 36-item measure of adult attachment (Brennan, Clark, & Shaver, 1998) indicating secure, insecure-anxious, or insecure-avoidant attachment in close relationships. Rated on a 7-point Likert scale (1 = *Disagree Strongly* to 7 = *Agree Strongly*), items such as “I get uncomfortable when someone wants to be very close to me” indicate an insecure-avoidant style, and items such as “I worry about being rejected or abandoned” indicate an insecure-anxious style.

*R-UCLA Loneliness Scale (Short Form).* This 3-item scale of general loneliness (Hughes, Waite, Hawkey, & Cacioppo, 2004) asks subjects to rate “How often do you feel that you lack companionship,” “How often do you feel left out,” and “How often do you feel isolated from

others” on a 3-point Likert scale (1 = *Hardly ever*, 2 = *Some of the time*, and 3 = *Often*).

*Balanced Inventory of Desirable Responding*. The BIDR (Paulhus, 1998) assesses social desirability. The 40-item measure examines two self-promoting defensive tendencies (Self-deceptive enhancement [SDE] and impression management [IM]) on a 1 (*totally disagree*) to 7 (*totally agree*) scale.

## RESULTS

### *Scale Construction: Initial Analyses*

Correlational, reliability, and exploratory factor analyses were conducted on the initial pool of 27 items measuring the patient disposition, resulting in a reduction of the number of items to 10. An exploratory factor analysis of these 10 items revealed one large factor accounting for 34% of the variance and a second factor accounting for 15% of the variance. Although there was a third possible factor extracted with an eigenvalue of unity, it only accounted for 10% of the variance and had only two items loading onto it. A scree plot suggested two meaningful factors. Therefore, a two-factor solution for the 10 patience items was retained.

### *Scale Construction: Confirmatory Analyses*

The validity of the two-factor solution was assessed with structural equation models using maximum-likelihood estimation in LISREL Version 8.54. To assess goodness of fit, the chi-square, comparative fit index (CFI), and root mean square of approximation (RMSEA) statistics were examined. For the CFI and RMSEA, values as low as .90 and as high as .10, respectively, are considered to reflect acceptable fit (Byrne, 1998). The two-factor model yielded a large and significant chi-square,  $X^2(34, N = 323) = 127.41, p < .001$ . The CFI was also acceptable (.92) as was the RMSEA (.098). The internal consistency reliability of the 10 item scale was  $\alpha = .78$ , and the two factors were correlated at  $r = .39, p < .01$ .

The viability of the two-factor structure model was compared against a competing one-factor model, which posited that the scale is measuring a unidimensional construct with no distinct facets. The LISREL results indicated that the one-factor model provided a far worse fit than the

two-factor model with standard index values far outside the acceptable range for satisfactory model fit (CFI = .82; RMSEA = .15). Moreover, the difference in chi-square between the one-factor and two-factor models was significant,  $\Delta X^2 = 122.60$ ,  $p < .01$ .

The adopted 2-factor model demonstrated a normal distribution and acceptable reliability. Factor 1 seems related to an evaluation of one's own patience and patient behaviors (mean = 3.37, SD = .71, range = 1.00–5.00, Cronbach's alpha = .76). Factor 2 seems to reflect one's beliefs about the importance of patience (mean = 4.02, SD = .61, range = 1.75–5.00, Cronbach's alpha = .70). Moreover, all 10 items of the Patience Scale together are reliable and normally distributed (mean = 3.60, SD = .56, range = 1.90–4.90, Cronbach's alpha = .78). See Appendix 1 for Patience Scale items.

#### *Correlations of Patience with Religiousness, Spirituality, and Virtue*

As predicted, patience was positively correlated with a composite measure of religiousness ( $r = .23$ ,  $p < .05$ ) as well as with specific items measuring spiritual transcendence, gratitude, frequency of prayer, importance of religion, experience of union with God, personal relationship with God, scripture reading, number of religious friends, and religious service attendance. As a general trend, the Importance of Patience was significantly correlated with the religious variables while Self-Evaluations of Patience was not; only the Universality and Connectedness factors (from the Spiritual Transcendence Scale), the GQ-6, and Abundance factor (from the GRAT) were significantly correlated with Self-Evaluations of Patience from the Patience Scale (at  $p < .05$ ).

#### *Correlations of Patience with VIA*

To examine the distinctiveness of patience in comparison to the VIA-IS, we examined the correlations between the 24 strengths of the VIA-IS and the Patience Scale. These correlations appear in Table 2. The strength most highly associated with patience, equity, was correlated at  $r(324) = .41$ . The strengths Peterson and Seligman (2004) hypothesized to comprise patience (persistence, open-mindedness, and self-regulation) all correlated below .3, and a composite of the three virtues was not highly correlated with either factor of patience (Self-Evaluations of Patience:  $r = .22$ ,  $p < .01$ ; Importance of Patience:  $r = .26$ ,  $p < .01$ ). Instead, the strengths of equity, forgiveness, leadership, citizenship, and

Table 2. *Correlations of 24 VIA Character Strengths with Patience*

Character Strength	PS-10	Factor 1	Factor 2
<i>Strengths of Temperance</i>			
Forgiveness	.383**	.365**	.253**
Modesty	.267**	.259**	.168**
Prudence	.288**	.252**	.229**
Self-regulation	.226**	.199**	.178**
<i>Strengths of Justice</i>			
Citizenship	.318**	.227**	.343**
Equity	.411**	.320**	.396**
Leadership	.334**	.270**	.304**
<i>Strengths of Courage</i>			
Integrity	.280**	.198**	.305**
Perseverance	.202**	.178**	.158**
Valor	.180**	.119*	.211**
Zest	.160**	.111*	.177**
<i>Strengths of Transcendence</i>			
Beauty	.188**	.124*	.220**
Gratitude	.206**	.077	.347**
Hope	.212**	.149**	.233**
Humor	.147**	.114*	.142*
Spirituality	.205**	.108	.288**
<i>Strengths of Wisdom</i>			
Curiosity	.271**	.200**	.282**
Judgment	.265**	.164**	.331**
Love of Learning	.193**	.152**	.183**
Originality	.118*	.073	.148**
Perspective	.251**	.176**	.277**
<i>Strengths of Humanity</i>			
Kindness	.315**	.237**	.318**
Love	.191**	.084	.298**
Social Intelligence	.245**	.162**	.288**

*Note:* Factor 1 = Self evaluation of patience and patient behaviors.

Factor 2 = Importance of Patience.

\* $p < .05$ ; \*\* $p < .01$ .

kindness correlated most highly with patience. A regression of all the 24 strengths on patience accounted for 26% of the variance, indicating distinctiveness of the virtue, but also demonstrating some overlap with the other strengths.

We also examined patience in relationship to the six core virtues of the VIA-IS: courage, humanity, wisdom and knowledge, justice, temperance, and transcendence. Peterson and Seligman (2004) theorize that these six overarching virtues are the core characteristics valued by moral philosophers and religious thinkers that underlie the 24 character strengths, which represent the psychological processes and mechanisms. We calculated participant scores for each virtue by averaging the character strength scores underlying the virtue.

Three regressions were then performed to test the predictive value of the six virtues on (a) the PS-10 score from all ten items of the patience scale, (b) Factor 1 (Self-Evaluations of Patience), and (c) Factor 2 (Importance of Patience). Table 3 contains the regression analysis. For the regression on the PS-10, higher scores on the virtues of Temperance and Justice predicted higher patience (Temperance:  $b = .36$ ,  $\beta = .26$ ,  $t(324) = 3.78$ ,  $p < .001$ ; Justice:  $b = .33$ ,  $\beta = .25$ ,  $t(324) = 2.94$ ,  $p < .01$ ) while higher scores on Courage predicted lower patience ( $b = -.26$ ,  $\beta = -.19$ ,  $t(324) = -2.08$ ,  $p < .05$ ). All six of the virtues explained 21% of the variance in PS-10 scores ( $R = .45$ ,  $p < .001$ , adjusted  $R^2 = .19$ , and constant = 1.17). For Self-Evaluations of Patience, higher scores on the virtues of Temperance and Justice predicted higher patience (Temperance:  $b = .54$ ,  $\beta = .32$ ,  $t(324) = 4.44$ ,  $p < .001$ ; Justice:  $b = .29$ ,  $\beta = .18$ ,  $t(324) = 2.02$ ,  $p < .05$ ). ), and all six of the virtues explained 15% of the variance in Self-Evaluations of Patience ( $R = .39$ ,  $p < .001$ , adjusted  $R^2 = .14$ , and constant = 1.00). For Importance of Patience, higher scores on the virtues of Justice and Transcendence predicted higher patience (Justice:  $b = .38$ ,  $\beta = .27$ ,  $t(324) = 3.16$ ,  $p < .01$ ; Transcendence:  $b = .27$ ,  $\beta = .20$ ,  $t(324) = 2.35$ ,  $p < .05$ ), and higher scores on Courage predicted lower patience ( $b = -.36$ ,  $\beta = -.25$ ,  $t(324) = -2.70$ ,  $p < .01$ ). All six of the virtues explained 20% of the variance in Importance of Patience scores ( $R = .44$ ,  $p < .001$ , adjusted  $R^2 = .18$ , and constant = 1.42).

#### *Correlations of Patience with the Big Five*

Both factors of the Patience Scale were positively correlated with Agreeableness (Self-Evaluations of Patience:  $r = .27$ ,  $p < .01$ ; Importance of

Table 3. *Regression of Patience on Six Overarching Virtues of the VIA*

Predictor Variable	PS-10			F1			F2		
	$\beta$	$t$	$p$	$\beta$	$t$	$p$	$\beta$	$t$	$p$
Temperance	.26	3.78	.00**	.32	4.44	.00**	.05	.77	.44
Justice	.25	2.94	.00**	.18	2.02	.04**	.27	3.16	.00**
Courage	-.19	-2.08	.04*	-.11	-1.19	.24	-.25	-2.70	.01**
Transcendence	.04	.45	.65	-.06	-.72	.47	.20	2.35	.02*
Wisdom	.09	1.11	.27	.08	.97	.33	.07	.82	.41
Humanity	.05	.56	.57	-.02	-.18	.86	.14	1.63	.10

\* $p < .05$ ; \*\* $p < .01$ .

VIA = Values in Action Questionnaire.

Factor 1 = Self evaluation of patience and patient behaviors.

Factor 2 = Importance of Patience.

Patience:  $r = .28$ ,  $p < .01$ ) and Openness (Self-Evaluations of Patience:  $r = .18$ ,  $p < .05$ ; Importance of Patience:  $r = .33$ ,  $p < .01$ ), and Importance of Patience was positively correlated with Conscientiousness ( $r = .22$ ,  $p < .05$ ). Neuroticism was negatively correlated with Self-Evaluations of Patience ( $r = -.35$ ,  $p < .01$ ), and there were no significant correlations between patience and Extraversion.

Three regressions were performed to test the predictive value of the Big Five on (a) the PS-10 score from all ten items of the patience scale, (b) Self-Evaluations of Patience, and (c) Importance of Patience. See Table 4 for the regression analysis. For the regression on the PS-10, a higher score on Openness predicted higher patience ( $b = .25$ ,  $\beta = .27$ ,  $t(120) = 3.25$ ,  $p < .001$ ) while higher scores on Neuroticism and Extraversion predicted lower patience (Neuroticism:  $b = -.24$ ,  $\beta = -.31$ ,  $t(120) = -3.21$ ,  $p < .01$ ; Extraversion:  $b = -.15$ ,  $\beta = -.20$ ,  $t(120) = -2.24$ ,  $p < .05$ ). Although not significant, Agreeableness and Conscientiousness had positive Betas. The Big Five combined explained 24% of the variance in PS-10 scores ( $R = .49$ ,  $p < .001$ , adjusted  $R^2 = .21$ , and constant = 3.25). For Self-Evaluations of Patience, a higher score on Openness predicted higher patience ( $b = .20$ ,  $\beta = .18$ ,  $t(120) = 2.07$ ,  $p < .05$ ), and higher scores on Neuroticism and Extraversion predicted lower patience (Neuroticism:  $b = -.37$ ,  $\beta = -.38$ ,  $t(120) = -3.91$ ,  $p < .01$ ; Extraversion:  $b = -.27$ ,  $\beta = -.28$ ,  $t(120) = -3.01$ ,  $p < .01$ ). The Big Five explained 22% of the variance in Self-Evaluations of Patience ( $R = .47$ ,  $p < .001$ , adjusted  $R^2 = .19$ , and constant = 4.15). For Importance of Patience, a higher score on Openness predicted higher patience



Table 4. *Regression of Patience on the Big Five*

Predictor Variable	PS-10			F1			F2		
	$\beta$	$t$	$p$	$\beta$	$t$	$p$	$\beta$	$t$	$p$
Neuroticism	-.31	-3.21	.00**	-.38	-3.91	.00**	-.05	-.46	.65
Openness	.27	3.25	.00**	.18	2.07	.04**	.32	3.69	.00**
Extraversion	-.20	-2.24	.03*	-.28	-3.01	.00**	.02	.16	.87
Agreeableness	.17	1.75	.08	.14	1.42	.16	.14	1.44	.15
Conscientiousness	.05	.57	.57	-.04	-.38	.71	.18	1.91	.06

\* $p < .05$ ; \*\* $p < .01$ .

Factor 1 = Self evaluation of patience and patient behaviors.

Factor 2 = Importance of Patience.

( $b = .32$ ,  $\beta = .32$ ,  $t(120) = 3.69$ ,  $p < .01$ ). None of the other Big Five had significant Betas for the Importance of Patience. All five factors explained 20% of the variance in Importance of Patience ( $R = .44$ ,  $p < .001$ , adjusted  $R^2 = .16$ , and constant = 1.90).

#### *Correlations of Patience with Other Constructs*

*Affect, health, and life satisfaction.* As Table 5 shows, as predicted, both factors of patience from the Patience Scale were negatively correlated with negative affect from the PANAS (Self-Evaluations of Patience:  $r = -.31$ ,  $p < .01$ ; Importance of Patience:  $r = -.14$ ,  $p < .01$ ). However, patience was uncorrelated with positive affect.

The Self-Evaluations of Patience factor was negatively correlated with depression ( $r = -.15$ ,  $p < .05$ ). Satisfaction with life was not significantly correlated with patience, but the correlations approached significance (Self-Evaluations of Patience:  $r = .06$ ,  $p = .37$ ; Importance of Patience:  $r = .13$ ,  $p = .08$ ). Patience was not significantly correlated with loneliness.

Patience was significantly correlated with a frequency of occurrence for a composite of several health symptoms (Self-Evaluations of Patience:  $r = -.14$ ,  $p < .05$ ; Importance of Patience:  $r = -.15$ ,  $p < .05$ ) including headaches, acne flair-ups, ulcers, pneumonia, and diarrhea.

*Time perspective, self-control, and mindfulness.* Looking at time perspective, Importance of Patience was positively correlated to Future ( $r = .21$ ,  $p < .01$ ), Past-Positive ( $r = .23$ ,  $p < .01$ ) and Present-Hedonistic ( $r = .17$ ,  $p < .01$ ) orientations. The Self-Evaluations of Patience factor was negatively correlated with a Past-Negative perspective ( $r = -.16$ ,

$p < .01$ ), and the Present-Fatalistic perspective was not significantly correlated with patience.

Both factors of the Patience Scale were positively correlated with self-control (Self-Evaluations of Patience:  $r = .38, p < .01$ ; Importance of Patience:  $r = .20, p < .01$ ) as well as mindfulness (Self-Evaluations of Patience:  $r = .35, p < .01$ ; Importance of Patience:  $r = .24, p < .01$ ). Maximization and regret were not significantly correlated with patience.

*Social traits and behaviors.* Looking at dispositional empathy, Empathic Concern was positively correlated with Self-Evaluations of Patience ( $r = .15, p < .05$ ), and Perspective Taking was positively correlated with the two factors of the PS-10 combined ( $r = .14, p < .05$ ). The Fantasy subscale was unrelated to patience.

Both factors of the Patience Scale were positively correlated with the SDE (Self-Evaluations of Patience:  $r = .20, p < .05$ ; Importance of Patience:  $r = .20, p < .05$ ) and IM (Self-Evaluations of Patience:  $r = .27, p < .01$ ; Importance of Patience:  $r = .21, p < .05$ ) subscales of the social desirability scale. Looking at attachment, Importance of Patience was negatively correlated with avoidant attachment and uncorrelated with anxious attachment.

## DISCUSSION

Taken together, the results indicate a valid and reliable 2-factor measure of patience, present a preliminary portrait of the dispositionally patient person, and provide evidence that patience is a unique human strength. First, we have created the Patience Scale to measure dispositional patience. The 10-item scale measures a self-evaluation of one's own patience and patient behaviors as well as the individual's beliefs about the importance of patience. The scale shows good psychometric properties, including a robust two-factor structure and high reliability. Moreover, the Patience Scale displays discriminant validity from other measures of virtue and personality. A regression of patience on the 24 VIA-IS strengths revealed that all 24 character strengths combined account for only 26% of the variance in patience scores, so patience is not reducible to some combination of the other character strengths. Also, a regression of patience on the Big Five revealed that the Big Five only account for 25% of the variance in the patient disposition, supporting that patience is not merely a combination of them.

Table 5. Correlations of Patience with Measures of Affectivity and Well Being, Social Traits and Behaviors, Personality Variables, and Spiritual and Religious Variables

	PS-10	F1	F2	PS-10	F1	F2
<i>Affectivity, Health, and Life Satisfaction</i>						
Positive and Negative Affect <sup>2</sup>						
Positive subscale	.11	.08	.13	.13	.15*	.04
Negative subscale	-.29**	-.31**	-.14*	.14*	.12	.13
Life satisfaction (SWLS) <sup>2</sup>	.10	.06	.13	.07	.06	.06
Depression (CES-D) <sup>2</sup>	-.14	-.15*	-.06			
Loneliness	.02	-.01	.07			
Health Problems <sup>2</sup>	-.17*	-.14*	-.15*	-.10	-.05	-.15*
				-.08	-.12	.02
<i>Social traits and behaviors</i>						
Dispositional empathy <sup>2</sup>				.24**	.20*	.20*
Empathic concern				.30**	.27**	.21*
Perspective taking						
Fantasy						
Attachment <sup>2</sup>						
Avoidance						
Anxiety						
Social desirability (BIDR) <sup>1</sup>						
Self-deception						
Impression management						
<i>Other personality variables</i>						
Big Five personality traits <sup>1</sup>				.32**	.27**	.28**
Agreeableness	.19*	.08	.30**	.13	.04	.22*
Conscientiousness	.29**	.20*	.32**	-.01	-.09	.13
Extraversion	.29**	.20*	.32**	-.33**	-.34**	-.16
Neuroticism				.29**	.18*	.33**
Openness	.24**	.14*	.32**	.38**	.38**	.20**
Self-control (SCS)				.37**	.35**	.24**
Mindfulness	.20**	.13*	.22**	.08	-.02	.21**
Time perspective	.23**	.08	.39**	-.15**	-.16**	-.07
Future	.21**	.06	.38**	.16**	.07	.23**
Past-negative	.23*	.09	.35**	-.06	-.05	-.06
Past-positive	.25**	.14	.34**	.05	-.03	.17**
Present-fatalistic	.18	.04	.34**			
Present-hedonistic	.16	.05	.29**			
Maximizing/Satisficing	.15	.03	.28**			
Maximizing <sup>1</sup>	.10	.00	.23*	-.08	-.14	.08
Regret	.16	.10	.18*	.00	-.05	.08
Religious service attendance <sup>1</sup>	.12	.03	.22*			
<i>Religiosity, Spirituality, and Virtue</i>						
Spiritual transcendence (STS) <sup>1</sup>						
Prayer fulfillment						
Universality						
Connectedness						
Gratitude						
GQ-6						
GRAT						
Abundance						
Simple pleasures						
Social appreciation						
Religious behaviors <sup>1</sup>						
Importance of religion <sup>1</sup>						
Experience union with God <sup>1</sup>						
Personal relationship with God <sup>1</sup>						
Read sacred scriptures <sup>1</sup>						
Religious friends <sup>1</sup>						
Religious service attendance <sup>1</sup>						

N = 324 unless otherwise designated; <sup>1</sup> = Sample 1 (n = 120); <sup>2</sup> = Sample 2 (n = 204).  
 Factor 1 = Self evaluation of patience and patient behaviors; Factor 2 = Importance of Patience.  
 \*p < .05; \*\*p < .01.

Moreover, the Patience Scale correlates in theoretically expected ways with other psychological constructs, providing evidence of criterion-related validity. Still examining the Big Five, evaluation of one's own patience and patient behaviors was negatively correlated to Neuroticism and Extraversion and positively correlated with Openness and Agreeableness. This is theoretically supported, as the patient person would be experiencing less negative emotions and more likely to get along with others. A patient person may be less extroverted as he or she may have less of an approach orientation towards situations, and the patient individual would rate higher on Openness because he or she is willing to put up with obstacles to undergo new experiences. Similarly, the second factor of the Patience Scale, beliefs about the importance of patience, was positively correlated with Openness, Agreeableness, and Conscientiousness.

As was predicted both factors of the patience scale were positively correlated with self-control, providing evidence that patience does overlap with self-regulatory and emotion-regulatory processes to some extent yet is distinct from self-control. Additionally, time perspective, that is, one's general focus on the past (in a positive or negative manner), present (in a nihilistic or hedonistic manner), or future, was also related to scores on the Patience Scale. The factor measuring an evaluation of one's patience was negatively correlated with a Past-Negative perspective, indicating that those who tend to focus on the past in a negative manner are also less patient. Beliefs about the importance of patience were positively correlated with Future, Past-Positive, and Present-Hedonistic time perspectives, indicating that those who are more focused on the future, view the past positively, and focus on enjoyment of the here and now are also more patient.

Patience was also positively correlated with mindfulness. This correlation leads us to conjecture about the relationship between mindfulness and patience. One possibility involves individual differences in time estimation. It may be that mindful individuals estimate time differently which leads to differences in patience. Glickson (2001) proposes absorption as a moderating factor of time estimation. He notes that when an individual is highly absorbed in a task (such as when reading a good book or performing an intrinsically rewarding activity) he or she has little or no attention left for temporal cues and so will drastically underestimate the actual duration of time passed. Glickson's idea of absorption fits well with other well-established constructs from positive psychology such as flow and mindfulness (Brown & Ryan, 2003; Csikszentmihalyi,

1999; Langer, 2000). When describing flow experience, Csikszentmihalyi (1999) states, "involvement in the activity [is] so demanding that no surplus attention is left to monitor any stimuli irrelevant to the task at hand" (p. 825), and Langer (2000) defines mindfulness as a heightened state of involvement, absorption, or being in the present. Thus it may be that patience is positively correlated with mindfulness because patient individuals are more mindful and absorbed in everyday tasks, so they devote less attentional resources to temporal cues. This may then produce an underestimation of time passage, which would lead to less frustration and impatience.

#### *Patience as a Buffer Against Negative Affect*

Patience (especially beliefs about one's own patience and patient behaviors) was inversely correlated with negative affect, but it was not significantly correlated with positive affect. Moreover, patience was not significantly correlated with life satisfaction, but it was negatively associated with depression as well as headaches and acne flare ups. This pattern of correlations with affectivity, health, and life satisfaction variables leads us to propose that patience acts as a buffer against negative affectivity. It seems that high trait patience precludes individuals from getting upset and physiologically aroused by stressful situations. Thus, they experience less negative emotions. However, patience does not seem to actively increase positive emotions, nor are persons high in positive affectivity necessarily patient.

#### *The Relation Between Patience and Spirituality/Religiosity*

Both factors of the Patience Scale were positively correlated with the Universality and Connectedness factors of the Spiritual Transcendence Scale. Beliefs about the importance of patience were correlated with Prayer Fulfillment. Also, patience is positively correlated with several variables pertaining to religiousness including frequency of prayer, importance of religion, experience of union with God, personal relationship with God, sacred scripture reading, and religious service attendance. However, correlations are significant only for the second factor of the Patience Scale pertaining to beliefs about the importance of patience.

Viewing the relationship between patience and spirituality, it may be that possessing high trait patience allows individuals to be more fulfilled

in their spiritual lives, as they are able to slow down their existence enough to take time out for spiritual disciplines such as gratitude journaling, fasting, and prayer. Moreover, the patient individual may be more apt to experience a connection with God as he or she is willing to wait patiently for answers to prayers and for a feeling of intimacy with God. Conversely, religious practice may foster patience as adherents practice the contemplative disciplines that emphasize waiting on God and read sacred texts extolling the virtue. For example, the practice of saying prayers and then waiting for God to respond may increase willingness to wait in other life domains.

*VIA-IS Strengths Criteria: Is Patience a Character Strength?*

In light of our data, as well as the philosophical and religious perspectives discussed, there is sufficient evidence to demonstrate that patience may be considered a human strength under the 10 criteria set forth by Peterson and Seligman (2004) for inclusion of a trait into their virtue classification system (See Table 1 for criteria). First, as established in the introductory discussion of religious conceptualizations of patience, religious leaders and moral philosophers have long upheld that patience leads to fulfillment and is morally valuable; thus supporting the first two criteria of a character strength. Looking at the present data, the correlations between patience and affectivity, health, and life satisfaction variables also support that patience is fulfilling. Moreover, the second factor of the Patience Scale, beliefs about the importance of patience, attests to the morally salient aspects of patience.

Examining the third criterion that a strength must not diminish others, patience meets this requirement. Theoretically, Kunz supports that patience does not diminish others; he states, "Patience is the disposition to suffer as responsible sacrifice...patience is self-sacrifice inspired in me by others to suffer for their sake" (Kunz, 2002, p. 121). Empirically, patience is positively correlated with pro-social outcomes, such as empathy, and is also positively correlated with all 24 VIA-IS character strengths.

In regards to criterion # 4, patience obviously possesses a non-felicitous opposite, impatience, which is well described in the Type A literature (Landy et al., 1991). Patience is also traitlike (Criterion # 5), as evidenced by the fact that participants in the present study provide self-evaluations of their own trait patience in our new measure. Moreover, if impatience has been described as a trait (Landy et al.,

1991), it seems most logical that patience may also be conceptualized as a trait. In the future, we hope to further support that patience is a stable personality trait by demonstrating that patience is consistent across time and situations.

Moreover, the distinctiveness of patience (Criterion # 6) is supported in the present study. First, we demonstrated that patience is distinct from the other 24 VIA-IS strengths as all 24 character strengths combined can account for only 26% of the variance in scores on the Patience Scale. Moreover, we demonstrated that patience, while related to a wide variety of personality, social, and religious variables, is still distinct from each of these variables (none of the correlations between patience and other psychological constructs was above .4). Moreover, we substantiated conceptual distinctiveness in our introductory discussion of the related psychological constructs.

Religious perspectives provide a plethora of exemplars of patience to fulfill Criterion # 7. Job is extolled for his great patience in suffering in Judaism and Christianity. Hindu leader Mahatma Ghandi preached and displayed great patience as he led the nonviolent protests against British rule in India. Additionally, the ascetic Kshantivadin, referred to as The Preacher of Patience, is venerated for his great patience displayed as a jealous king cuts off his arms, ears, nose and feet in the Buddhist *Jataka Tales*.

Evidence for the selective absence of patience (Criterion # 9) abounds in modern culture. The recent media attention on an *Archives of General Psychiatry* study highlighting the considerable prevalence of Intermittent Explosive Disorder (Kessler et al., 2006), said to underlie road rage, has propelled the impatience of automobile drivers into media discussion. It seems not at all unfeasible to say that there abound a large number of drivers who demonstrate a selective absence of patience. Moreover, demonstrations of impatience can be seen in a wide variety of waiting situations ranging from checkout lines to slow computer downloads. Finally, religions afford an overabundance of institutions and rituals (Criterion # 10) to foster the development of patience ranging from meditative practices of the Buddhists to the “expectant waiting” practices of Quaker meetings.

Thus, patience seems to satisfy at least 9 of Peterson and Seligman’s (2004) 10 criteria of a character strength. The only criterion for which we have yet to provide evidence is the existence of prodigies of patience. Examples of precociously patient children do not readily come to mind; however, we do not out rule the possibility that such children could exist.

*The Relationship Between Patience and Other VIA-IS Virtues*

Although patience is distinct from other character strengths, it does show some interesting relationships to other virtues. The first factor of the Patience Scale, dealing with evaluation of one's own patience and patient behaviors, positively correlates with the virtue of temperance (includes strengths such as forgiveness, humility, prudence, and self-regulation) and justice (includes strengths such as fairness, loyalty, and leadership). Patience may enable individuals to tolerate flaws in others therefore displaying more generosity, compassion, mercy, and forgiveness. Secondly, beliefs about the importance of patience are positively correlated with the virtues of justice and transcendence, and not significantly correlated with temperance. It may be that those who are especially concerned with equity and spirituality are more likely to focus on the importance of fostering patience in daily living.

## THE DARK SIDE OF PATIENCE?

Some philosophers argue that patience is not always a virtue. For example, Edmund Burke comments, "there is however a limit at which forbearance ceases to be a virtue" (1769), and American satirist Ambrose Bierce defines patience as "a minor form of despair, disguised as a virtue" (1958, p. 98). Moreover, one can imagine situations in which impulsivity and impatience may be more adaptive and beneficial than waiting patiently. For example, if a father is too patient with a recalcitrant child, he may end up raising a brat. If a girlfriend is too patient in waiting for her boyfriend to propose, he may never conjure up enough motivation to ask her to marry him. Or, if a victim of domestic violence is too patient in waiting for her husband to reform, she may be endangering herself and her children. So, can one be too patient? Is patience at times maladaptive for goal achievement?

First, our data do not support the purported "dark side" of patience. Patience positively correlates with all 24 character strengths of the VIA-IS, and we find only beneficial relationships between patience and well-being variables. Second, patience should not be conceptualized as passive resignation or learned helplessness, but instead as an assertive acceptance of waiting. The individual is not unreceptively accepting present circumstances, but instead is choosing to contentedly accept the waiting or hardships presented to the self. Patience is demonstrating ego-strength as one chooses to actively accept waiting without negativity.



Patience may also be conceptualized as a mean between two poles of behavior. According to Aristotle (Rorty, 1980), a virtuous action is always an intermediate state between two extremes of vice that are reflected in excess and deficiency. Too much and too little are always wrong; the right kind of action always lies in the mean. In this case, patience is a mean between the excess of *recklessness* and the deficiency of *sloth*.

Additionally, what may be thought of as too much patience may actually be a general deficiency of character. Classical Greek philosophers conceptualized virtuous character as a more unified entity than do modern thinkers (Annas, 1993). According to classical thought, it could be that the person who is “too patient” may actually be lacking in other virtues such as discernment, wisdom, or prudence so that they are unable to decide when a patient response is beneficial. William James (1902) makes a similar argument considering the seemingly negative effects of “too much spirituality.” He maintains that one cannot be too spiritual and instead that the disadvantageous consequences related to an excess of spirituality are really a result of some other weakness of character or intellect.

Equally, it may be that patience falls in line with the construct of secondary control or socioinstrumental control. Rothbaum, Weisz, and Snyder (1982) proposed two types of control—primary and secondary. Primary control refers to the agentic actions of the individual to change external circumstances. Conversely, secondary control refers to changes in the self to fit the external environment. Research on locus of control has found that individuals from collectivist cultures tend to be lower on primary control and higher on secondary control as well as socioinstrumental control (i.e., control via interpersonal relationships; Spector, Sanchez, Siu, Salgado, & Ma, 2004). We propose that patient individuals may use more secondary control strategies in coping with life circumstances, especially in those circumstances for which there is no viable means of exerting primary control (i.e., when stuck in a traffic jam or waiting to hear about the progress of one’s cancer). For the most part our data demonstrated favorable relationships between patience and measures of well-being and virtue.

### LIMITATIONS

We do recognize several limitations in the present study. First, a large number of statistical tests have been performed on a sizeable sample, and some of our statistically significant findings may only highlight relationships of minor importance in the real world. Therefore, a certain amount of prudence should be invoked when interpreting the data. As this study is a commencement in the work considering patience, we expect that future research will clarify and winnow the present findings.

Additionally, we recognize that our sample is composed primarily of Caucasian and Asian female college students. This limits the generalizability of our findings in several ways. First, it may be that patience is less or more adaptive for certain groups of individuals than represented by well-being correlations in the present study. For example, patience may play a more important role in subjective well-being for the elderly as they more often face situations outside of their instrumental control (i.e., illness, disability, death of loved ones, etc.). Additionally, the correlates of patience may shift given a more diverse sample. For instance, college students most likely have higher and less variable future orientation scores when measuring time perspective than other members of the general population, so researchers may find that future time perspective is more strongly related to patience were they to utilize a more diverse sample. Also, college students may have stronger self-regulatory and delay of gratification abilities than the general population as they must employ these abilities to succeed as students. We may find that our sample has higher average scores on the patience scale than the general population. Thus, we stress the importance of replication of the present findings across a diverse array of samples.

### FUTURE DIRECTIONS

Much research will be required to move beyond the current embryonic state of understanding patience. Further validation of the Patience Scale is needed, adding to its predictive and construct validity. For example, we would like to demonstrate that those who rate themselves higher in patience do in fact wait without getting upset in an experimental paradigm.

Additionally, an examination of the antecedents and consequences of patience is in order. Looking at the antecedents of patience, which variables make someone a patient person? Is it because of individual differences in general arousability, emotion-regulation, and/or temporal cognition that one individual is more patient than another? Could differences be due to perceptual biases such that patient people have different construals of waiting situations? Or, could patience be related to personality variables such as humility, or lack thereof (as in narcissism)? Examining the consequences of patience, what is the relationship between patience and various outcome variables? Academic/career success, problem solving, relationship success, adaptive and proactive coping, and other significant life outcomes need to be studied.

Moreover, the relationship between patience and spirituality needs to be further explored. What is the direction and causality of the correlation? Are there spiritual disciplines that may help to foster patience and further examine how those may be incorporated into everyday life? Eventually, we would like to develop patience-increasing exercises or interventions and then test if such manipulations can lead to increases in positive life outcomes.

We hope that the present study will serve to illuminate the nascent topic of patience as well as spark interest within the psychological community. However, we do realize that much research is still needed to understand patience. Just as Stanislaw Lec said, "You must first have a lot of patience to learn to have patience," we say "You must first have a lot of patience to study patience."

## REFERENCES

- American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Annas, J. (1993). *The morality of happiness*. New York: Oxford University Press.
- Augustine (1952). *On patience* (L. Meagher, Trans.). Washington, DC: Catholic University of America Press. (Original work published 418)
- Augustine (1992). *On the gift of perseverance* (J. Mourant, Trans.). Washington, DC: Catholic University of America Press. (Original work published 428)
- Aquinas, Thomas (1947). *Summa theologica* (Fathers of the English Dominican Province, Trans.). New York: Benzinger Brothers. (Original work published 1225?–1274)
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment Theory and Close Relationships* (pp. 46–76). New York: Guilford Press.
- Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, *84*, 822–848.
- Burke, E. (1791). *Observations on late publication on the present state of the nation*, *1*, 273.

- Byrne, B. M. (1998). *Structural equation modeling with Lisrel, Preslis, and Simplis: Basic concepts, applications, and programming*. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Calvin, J. (1990). *Institutes of Christian religion* (H. Beveridge, Trans.). Grand Rapids, MI: Wm. B. Eerdmans Publishing Co. (Original work published 1536)
- Clark, L. A., & Watson, D. (1999). Temperament: A new paradigm for trait psychology. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and Research* (pp. 399–423). New York: Guilford.
- Conte, J. M., Landy, F. J., & Mathieu, J. E. (1995). Time urgency: Conceptual and construct development. *Journal of Applied Psychology*, *80*, 178–185.
- Csikszentmihalyi, M. (1999). If we are so rich, why aren't we happy? *American Psychologist*, *54*, 821–827.
- Darwin, C. (1872). *Disdain—contempt—disgust—guilt—pride, etc.—helplessness—patience—affirmation and negation*. London: England: John Murray.
- Davis, M. A. (1996). *Empathy: A social psychological approach*. Boulder, CO: Westview Press.
- Diener, E., Emmons, R. A., Larsen, R. E., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, *49*, 71–75.
- Dutt, R. C. (1899). *The Mahabharata: Condensed into English verse*. [Electronic Version]. Retrieved May 23, 2006 from <http://www.sacred-texts.com/hin/dutt/>
- Eckel, M. D. (2000). Buddhism in the world and in America. In J. Neusner (Ed.), *World religions in America: An introduction* (pp. 143–153). Louisville, KY: Westminster John Knox Press.
- Glickson, J. (2001). Temporal cognition and the phenomenology of time: A multiplicative function for apparent duration. *Consciousness and Cognition: An International Journal*, *10*, 1–25.
- Gross, J. J. (1999). Emotion regulation: Past, present, future. *Cognition & Emotion*, *13*(5), 551–573.
- Gyatso, T. (1991). *Path to bliss: A practical guide to stages of meditation*. (T. Jinpa & G. T. Huboam, Trans.; C. Cox, Ed.). Ithaca, NY: Snow Lion Publishers.
- Gyatso, T. (1997). *Healing anger: The power of patience from a Buddhist perspective* (T. Jinpa, Trans.). Ithaca, NY: Snow Lion Publishers.
- Harned, D. B. (1997). *Patience: How we wait upon the world*. Cambridge, MA: Cowley Publications.
- Hughes, M. E., Waite, L. J., Hawkey, L. C., & Cacioppo, J. T. (2004). A short scale for measuring loneliness in large surveys. *Research on Aging*, *26*, 655–672.
- James, W. (1902). *The varieties of religious experience*. New York: Longmans.
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). *The Big Five Inventory—Versions 4a and 5a*. Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.
- Kessler, R. C., Coccaro, E. F., Fava, M., Jaeger, S., Jin, R., & Walters, E. (2006). The prevalence and correlates of DSM-IV Intermittent Explosive Disorder in the National Comorbidity Survey replication. *Archives of General Psychiatry*, *63*, 669–678.
- Kierkegaard, S. (1956). *Purity of heart* (D. V. Steere, Trans.). New York: Harper and Brothers. (Original work published 1847)
- Kunz, G. (2002). Simplicity, humility, patience. In E. E. Gantt & R. N. Williams (Eds.), *Psychology for the other: Levinas, ethics and the practice of psychology* (pp. 118–142). Pittsburgh, PA: Duquesne University Press.
- Landy, F. J., Rastegary, H., Thayer, J., & Colvin, C. (1991). Time urgency: The construct and its measurement. *Journal of Applied Psychology*, *76*, 644–657.
- Langer, E. J., & Moldoveanu, M. (2000). The construct of mindfulness. *Journal of Social Issues*, *56*, 1–9.
- McCullough, M. E., Emmons, R. A., & Tsang, J. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology*, *82*, 112–127.

- Mehrabian, A. (1999). Manual for the Revised Achieving Tendency (MACH) and Disciplined Goal Orientation (CGO) Scales. (Available from Albert Mehrabian, 1130 Alta Mesa Road, Monterey, CA 93940).
- Peterson, C., & Seligman, M. E. P. (2001). VIA Inventory of Strengths (VIA-IS).
- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook of classification*. Washington, DC: American Psychological Association; New York: Oxford University Press.
- Piedmont, R. L. (1999). Does spirituality represent the sixth factor of personality? Spiritual transcendence and the five-factor model. *Journal of Personality*, 67, 985–1013.
- Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385–401.
- Rahula, W. (1974). *What the Buddha taught*. New York: Grove Press.
- Rinpoche, K. K. (1992). *Dharma paths* (N. Burkhar & C. Radha, Trans.; L. M. Roth, Ed.). Ithaca, NY: Snow Lion Publishers.
- Rorty, A. (1980). *Essays on Aristotle's ethics*. Berkeley, CA: University of California Press.
- Rothbaum, F., Weisz, J. R., & Snyder, S. S. (1982). Changing the world and changing the self: A two-process model of perceived control. *Journal of Personality and Social Psychology*, 42, 5–37.
- Spence, J. T., Helmreich, R. L., & Pred, R. S. (1987). Impatience versus achievement strivings in the Type A pattern: Differential effects on students' health and academic achievement. *Journal of Applied Psychology*, 72, 522–528.
- Schwartz, B., Ward, A., Monterosso, J., Lyubomirsky, S., White, K., & Lehman, D. R. (2002). Maximizing versus satisficing: Happiness is a matter of choice. *Journal of Personality and Social Psychology*, 83, 1178–1197.
- Spector, P. E., Sanchez, J. I., Siu, O. L., Salgado, J., & Ma, J. (2004). Eastern versus western control beliefs at work: An investigation of secondary control, socioinstrumental control, and work locus of control in china and the US. *Applied Psychology: An International Review*, 53, 38–60.
- Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality*, 72, 271–322.
- Virgil (1990). *Aeneid* (R. Fitzgerald, Trans.). New York: Random House.
- Watkins, P. C., Woodward, K., Stone, T., & Kolts, R. L. (2003). Gratitude and happiness: Development of a measure of gratitude and relationships with subjective well-being. *Social Behavior and Personality*, 31, 431–452.
- Watson, D., Clark, L. A., Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063–1070.
- Zimbardo, P. G., & Boyd, N. J. (1999). Putting time in perspective: A valid, reliable individual-differences metric. *Journal of Personality and Social Psychology*, 77, 1271–1288.

## APPENDIX

## THE PATIENCE SCALE (PS-10)

Using the 5-point scale below as a guide, write a number beside each statement to indicate how much you agree with it.

1 = *very much unlike me*

2 = *unlike me*

3 = *neutral*

4 = *like me*

5 = *very much like me*

- \_\_\_ 1. Most people would say that I am a patient person.
- \_\_\_ 2. Patience is a characteristic that I admire in others.
- \_\_\_ 3. I have to admit that patience is not one of my strengths.
- \_\_\_ 4. I agree with the old saying, "patience is a virtue."
- \_\_\_ 5. In general, waiting in lines does not bother me.
- \_\_\_ 6. I believe that when it comes to getting along with others, patience is an important factor.
- \_\_\_ 7. I get very upset when stuck in a traffic jam.
- \_\_\_ 8. I agree with the adage "good things come to those who wait."
- \_\_\_ 9. My friends would say that I am calm even if there is a delay in our plans.
- \_\_\_ 10. When waiting in a checkout line, I get annoyed when cashiers chat with customers ahead of me.

*Items 1, 3, 5, 7, 9, and 10 comprise the first factor and are related to evaluation of one's patience and patient behaviors.*

*Items 2, 4, 6, and 8 load on the second factor and reflect beliefs about the importance of patience*

*Items 3, 7, and 10 are reversed scored.*



## INWARD, OUTWARD, UPWARD PRAYERS AND PERSONAL CHARACTER

*Kevin L. Ladd, Meleah L. Ladd, Peter Ashbaugh, Danielle Trnka,  
Julie Harner, Kate St. Pierre, and Ted Swanson*

### ABSTRACT

Previous literature argued that in a secular context, self-control (self-discipline) and personal character (virtue) were related in a positive fashion. The present study notes that in a religious context, the frequency and content of prayer are forms of spiritual self-discipline and therefore should relate to discrete aspects of personal character. One-hundred and ninety-five individuals responded to multidimensional indices of virtue (24 scales) and of prayer (8 scales; 5 additional measures). Canonical correlations revealed 4 theoretically meaningful variate pairs. These variates show the character virtues of humanity, justice, and transcendence as linked to prayers focusing on outward relations (e.g., intercession) and the intensity level of prayer. Data also suggest that the character virtues of caring for others are related to prayers with similar themes and the sex of respondent. Wisdom, justice, and transcendence character virtues further associate with prayers seeking explanations and comfort. Results reveal as well that relative prayer novices relying on formalized prayers in corporate contexts display the character virtues of high energy and humor, but lower levels of modesty.

The early 20th century evangelist Dwight L. Moody is widely reported to have said, "Character is what you are in the dark." In this estimation, character, the living of a life commonly accepted as virtuous, is an intensely personal facet of the individual. Not distracted by the public personae projected, generations of clerics from a variety of religious traditions have contended likewise that the "real" nature of any particular human becomes evident upon the removal of external forces that mandate what is or is not socially acceptable. In short, allow a person to operate purely under the auspices of self-control if you want to really know the depth of her or his virtue.

### RELIGION, PRAYER, AND SELF-CONTROL

In the religious context, an emphasis on self-control abounds, whether the nature of that restraint concerns an afterlife reward, the turning away of anger with soft words, or a sense that one should behave nobly in the face of extreme adversity. Belief systems frequently expect



adherents to delay self-gratification and replace the desires of the self with an attitude of service to human or spiritual others. In order to achieve this goal of self-control, a variety of spiritual disciplines are recommended: Fasting, scarification, silence, poverty, chastity, and prayer are but some of the options offered.

Among the available practices, prayer stands apart as a form of discipline accessible to individuals at all levels of spiritual development and commitment. This may be one reason that prayer is widely considered the center of religion (Heiler, 1932). Prayer is also unique among spiritual exercises in that one of its principal goals is to strengthen associations rather than weaken them. For instance, while disciplines such as fasting and silence eliminate meals and verbal communication, hence reducing options for interaction, prayer encourages development of connectivity with the self (inward), a concern for others (outward), and a communion with the divine (upward; Ladd & Spilka, 2002, 2006). From this perspective, it is not at all unexpected that the other acts of discipline are undergirded with prayers that serve to maintain connectivity even in the midst of self-denial.

Within each of these types of connectivity it is possible to discern more fine grained distinctions. For instance, inward prayers may consist of an honest examination of one's spiritual performance in relation to an ideal or they may be comprised of deep inner turmoil (tears). Outward prayers can help establish connections by intercession on behalf of others' needs, asking to experience compassion toward people's suffering, requesting material assistance (petition), or asserting one's own will (radical). Upward connectivity contains aspects of searching for rest in the divine presence and using familiar ritual or sacrament as places in which to encounter the divine or sacred.

Inward (I), outward (O), and upward (U) connecting prayers are helpful to describe the spiritual practice with respect to theory development, but such prayers rarely happen in strict isolation from each other. Rather, there exists an ebb and flow of the prayer experience as the person moves among the connective states. In particular, intercession (O), suffering (O), and examination (I) prayers frequently link together via their common emphasis on *internal concerns*. As a group they represent a honing of one's ability to reach out by reaching deep within the self. In other instances, rest (U), sacrament (U), and tears (I) connections *embrace paradox*. They recognize that the quest for peace often carries with it the burden of full honesty with the self; a truly bittersweet event in many cases. Making petition (O) and radical (O) prayers represent

a *bold assertion* of what the person thinks is correct. Fervent praying in the face of perceived injustice is a classic example.

In each of the above ways of thinking about prayer, the notions of self-control, compassion, and betterment are readily evident: A central aspect of prayer's connective power is to keep the practitioner alert for potential avenues of personal growth. Content alone, however, speaks to only one facet of what happens during prayer. Also important is the intensity of the prayer. The frequency, duration, years of practice, and context contribute to this intensity, and additionally speak to the extent to which praying plays a central role in a person's spiritual life, or more directly, a person's self-imposed spiritual discipline.

While the first three of these elements of intensity are self-explanatory, context requires a bit of explanation. A context can either increase or decrease perceived intensity; consider the difference between a preseason game and a championship match. We believe that there are two distinguishable forms of context that bear directly on the current topic. First is the common idea centering on attendance; to what extent does the person have a chance to pray in a group context as opposed to a private context. Praying when everyone around you is praying requires a different level of intensity than does praying when no other people are in the vicinity.

In the second sense of context, we consider the sex of the one who is praying. The observation is well established that women, as opposed to men, are more likely to engage in behaviors and beliefs associated with religion (Ozorak, 2003). One result of this situation is that women, more so than men, may be stereotyped as religious. For instance, we would anticipate that observers given a choice between characterizing a photo of a group of people as "discussing poker, politics, or prayer" would be more likely than chance to select prayer if the group consisted largely of women, while a predominately male group would be identified as either poker or politics more so than prayer. In other words, we are arguing that the sex of the respondent is influential in the establishing of context. From this perspective, being a woman could increase the intensity of prayer behaviors because women by stereotypic default have more opportunities to engage in religious beliefs and behaviors in general and prayer in particular.

Most of the components of intensity (frequency, duration, years of practice, and context in the sense of attendance) do not happen by accident. They are intentional and require some planning and time management, all fundamental qualities associated with self-control.

The single exception here is context with regard to the sex of the respondent, a variable that contributes very unique information of meaningful depth to the concept of intensity and by extension to the concept of prayer.

### PSYCHOLOGY, VIRTUE, AND SELF-CONTROL

The distance from theological to psychological constructs is not exceptionally far in this instance. Baumeister and Exline (1999) suggest that virtue (character) consists of three components at the individual level: desiring to act in accord with an accepted set of standards, possessing the capacity to maintain compliance with those standards, and self-monitored adhering to those standards. These aspects of personality, according to Baumeister and Exline (1999), fall under the influence of one's self-control. In particular, the adherence component receives attention using the metaphor of muscle tissue. The more often virtuous behaviors (and presumably thoughts) are chosen, the stronger the "moral muscle" grows. A well-maintained virtue takes on a quality of automaticity that requires a reduced amount of psychic or physical energy to enact. This feature is of special importance when a person's coping resources are heavily employed. While Baumeister and Exline (1999) dedicate most of their consideration to the social role of morality, they briefly note the overlap between religious and social conceptions of virtue.

These emphasized qualities of self-awareness, compassion, and attunement with a bigger picture are quite compatible with recent definitions of virtue advanced by Peterson and Seligman (2001, 2004). Under the rubric of positive psychology, Peterson and Seligman recast ancient ideas concerning what makes for well-rounded, healthy humans. The 24 individual characteristics they describe (e.g., wisdom, courage, humanity, justice, temperance, and transcendence) are all part of an age old formula brought to the table for explicit empirical verification.

### PRAYER AND VIRTUE AS MECHANISMS OF CONNECTIVITY

One way to conceptualize this confluence of theology and psychology is under the rubric of connectivity. As we have argued extensively elsewhere, prayer can serve as "the typically intentional expression

of one's self in an attempt to establish or enhance connectivity with the divine, with others in a religious or spiritual framework, and with the self" (Ladd & McIntosh, in press). With slight modifications, it is possible to read "character" as a similar construct: Character is the typically intentional expression of one's self in an attempt to establish or enhance connectivity with the sacred, with others, and with the self. Personal character contains a quality of nonrandom reflection the purpose of which may be to better know one's self, to better honor or respect one's peers, and to determine one's relation to the rest of the cosmos. Linking this to the work of Baumeister and Exline (1999), the more these two muscles (morality and prayer) receive regular workouts, the more effective and thorough will be their influence.

#### RESEARCH QUESTIONS AND HYPOTHESES

More important than specific hypotheses, we believe, is the opportunity this work provides to establish a broad platform from which to launch subsequent direct tests of association between individual character virtues and prayer foci. With 24 aspects of character and 8 of prayer, an extensive itemizing of hypotheses and the accompanying capitalization on chance is hardly desirable. We can, however, state our belief that given the multidimensionality of the present conceptions of both prayer and character, it is likely that certain broad categories of prayers and certain character strengths will coincide. For instance, prayers that are centered on internal concerns, stressing how a person's inward experience fits her or him to reach outward to help others, should relate to humanity and justice character strengths. A prayer emphasis on embracing the paradox that divine or sacred encounters are often bittersweet might relate strongly not only to the character virtues of transcendence, but also to wisdom. Bold assertion as a form of prayer, where the petitioner's will takes center stage, may link positively to aspects of courage and inversely to temperance. A plethora of additional theoretically driven hypotheses are feasible, but given the number of variables included, the interpretive task would soon take on the characteristics of a hallway of mirrors.

## METHOD

### *Participants*

A snowball methodology recruited 195 participants (115 women; 80 men) who ranged in age from 17 to 79 years ( $M = 38$ ). Most self-identified as White (83%) while the others claimed equally the identifications of African-, Asian-, Latino-American or "other." Approximately 55% were married, 34% single, 10% divorced, and the remainder had lost a spouse to death. At least 61% had completed some post high school education; only 8% had not completed high school. Catholic (27%) and Protestant (35%) were the most frequently selected religious affiliations while an additional 23% reported "other." Examination of the "other" category revealed that the bulk of these respondents belonged in the Protestant category. Nearly 10% reported no formal affiliation and the remainder split evenly among Atheist, Agnostic, Buddhist, Hindu, Islamic, and Jewish orientations. Half of the participants reported attending services at least once or twice a week. Those who reported never praying at all (10%) are excluded from the remaining analyses.

### *Measures*

*Measuring virtue.* To assess qualities not explicitly included in traditional personality instruments, we utilized the *Values in Action Classification of Strengths* questionnaire (Peterson & Seligman, June, 2001). There are only a few relatively minor differences between this version and the more recent instrument (Peterson & Seligman, 2004). For instance, the version to which we had access at the time of data collection included no reverse scored items, a psychometric issue not deemed critical in the current application (see also Peterson & Seligman, 2004, p. 628). Peterson and Seligman (2004) report on a variety of studies attesting to the reliability and validity of this instrument across samples.

The version employed consists of 24 aspects of virtue (see Table 1), each of which is comprised of approximately 10 items (total instrument = 240 items). These 24 aspects of virtue are theoretically reducible to 6 primary character strengths (wisdom, courage, humanity, justice, temperance, and transcendence). Given the exploratory nature of the present investigation, however, analysis centered on the 24 individual aspects of character in an attempt to garner as much specific information as possible. Table 1 provides information concerning scale

Table 1. *Character Virtues and Prayer Content Scale Properties*

	Items	$\alpha$	$M$	$SD$
	Character Virtues			
WISDOM	Curiosity	.89	3.80	.59
	Love of Learning	.81	3.38	.64
	Open Minded	.78	3.80	.50
	Creative	.87	3.64	.65
	Social Intelligence	.74	3.71	.47
	Wisdom	.74	3.65	.48
COURAGE	Valor	.83	3.69	.58
	Industry	.80	3.70	.57
	Integrity	.76	3.98	.47
	Zest	.84	3.65	.62
HUMANITY	Intimacy	.74	4.05	.50
	Kindness	.80	4.03	.52
JUSTICE	Citizenship	.75	3.80	.51
	Equity	.81	3.94	.53
	Leadership	.79	3.74	.53
TEMPERANCE	Self Regulation	.74	3.30	.59
	Caution	.78	3.58	.58
	Modesty	.79	3.87	.58
TRANSCEDENCE	Awe	.81	3.87	.63
	Gratitude	.83	4.04	.55
	Hope	.82	3.82	.58
	Spirituality	.86	3.89	.65
	Humor	.86	3.91	.59
	Mercy	.89	3.71	.70
	Prayer Content			
INTERNAL CONCERNS	Intercession: <i>Outward</i>	.75	2.51	1.20
	Suffering: <i>Outward</i>	.79	3.25	1.23
	Examine: <i>Inward</i>	.80	3.87	1.10
EMBRACING PARADOX	Rest: <i>Upward</i>	.68	4.13	1.18
	Sacrament: <i>Upward</i>	.73	3.41	1.12
	Tears: <i>Inward</i>	.67	3.13	1.01
BOLD ASSERTION	Petition: <i>Outward</i>	.77	3.49	1.25
	Radical: <i>Outward</i>	.79	2.44	1.11

properties. Based on a 1–5 Likert format, and averaging across items, larger numbers indicate greater presence of the quality.

*Measuring prayer intensity.* To ascertain the degree to which prayer was, in fact, a discipline for respondents, we utilized three separate single-item indices: prayer frequency, prayer duration, and years of prayer practice calculated by subtracting recollected starting age of prayer ( $M = 6.33$  years,  $SD = 6.15$ ) from current age. On a 1 (*never*) to 6 (*daily*) Likert scale, the frequency of prayer reported was 4.73 ( $SD = 1.44$ ). As noted above, analyses excluded those who reported a value of 1 (*never*) in terms of their frequency of prayer. Participants indicated an average prayer length of 6.27 minutes ( $SD = 4.85$ ) with a range from less than 1 minute to 20 minutes. The mean number of years people reported having engaged in prayer was 32.35 ( $SD = 14.58$ ; range = 1–68 years).

*Measuring prayer content.* Eight prayer scales shown to be reliable and valid across samples (29 items; Ladd & Spilka, 2002, 2006) provided measures of prayer's cognitive content. Inward approaches to prayer (scales: examination [5 items] and tears [3 items]) emphasize thoughts concerning one's personal spiritual condition. Outward aspects (scales: radical [4 items], suffering [3 items], intercession [3 items], and petition [4 items]) stress the desire to connect with others at different levels. Upward prayers (scales: sacramental [3 items] and rest [4 items]) seek to enhance connection with the divine. Table 1 details the properties of each scale. A 1–6 Likert format yielded scores (averaged across items) where higher numbers reflect more agreement with the content of each scale. Following Ladd and Spilka (2006), we combined these eight indices according to their empirically demonstrated second order factors: internal concerns, embracing paradox, and bold assertion.

*Demographics.* Sex of respondent was included given the widespread observation that women tend to score higher on indices of religiosity than do men.

## RESULTS

### *Prescreening*

Removal of three univariate outliers occurred. Transformations attempted notably worsened kurtosis more than they corrected for skewness, so the raw scores were retained for analysis in this case as well. Examination of residual scatterplots revealed that no additional noteworthy violations

of assumptions existed. Listwise deletion of missing data cases ensued resulting in 174 cases remaining available for examination. This was lower than the optimal 10 cases per variable ( $10 * 37 = 370$ ; Tabachnick & Fidell, 2001), so conservative strategies prevailed at each step of evaluation to compensate for the lessened power and possibility of Type II errors. Multicollinearity, as evaluated with tolerance indices, was not evident to a great extent in either the virtue or prayer measures (see Table 2, 3, and 4).

### *Analysis Strategy*

Given the number of variables and the exploratory nature of this study, it might seem reasonable to employ a factor analytic type procedure. The results of a Principal Axis factoring with oblimin rotation, however, simply yielded a “prayer” factor, a “character” factor, a “demographic” factor, and two additional unstable factors; this confirmed the independence of the constructs, but did not address our research question. In order to evaluate our central topic of concern, how dimensions of prayer and character are juxtaposed, we turned to the relatively infrequently utilized canonical correlation procedure. This approach provides a general overview of how groups of variables (e.g., character and prayer) relate to each other. It accomplishes this task by generating linear combinations within the character variable set and evaluating how these combinations correlate with various linear combinations of the prayer variable set. The primary value in this analytic strategy is that it provides descriptive information. In a study such as the present one, dedicated to a first foray into new theoretical territory, the canonical technique will function not unlike the early systematic explorers of the American West, Lewis and Clark. Their goal was to provide broadly informative data that would help refine the direction and scope of subsequent explorations. Similarly, our task is to offer some initial critical insight into the lay of the land as related to current state-of-the-art multidimensional indices of character (Peterson & Seligman, 2001, 2004) and prayer (Ladd & Spilka, 2002, 2006).

### *Canonical Analyses*

*Variate viability.* The initial four canonical correlations were .85, .70, .63, and .60, respectively. With all canonical correlations included,  $\chi^2(312) = 666.17, p < .001$ . With the first, second, and third canonical correlations removed, the results were as follows:  $\chi^2(276) = 469.38$ ,





Table 3. *Correlations Among Prayer Indices*

	INTERNAL CONCERNS			EMBRACING PARADOX			BOLD ASSERTION					
	INTERCESSION: O	SUFFERING: O	EXAMINE: I	REST: U	SACRAMENT: U	TEARS: I	PETITION: O	RADICAL: O	ATTEND	DURATION	FREQUENCY	PRACTICE
INTERCESSION	—											
SUFFERING	.65**	—										
EXAMINE	.52**	.49**	—									
REST	.32**	.41**	.54**	—								
SACRAMENT	.35**	.46**	.38**	.52**	—							
TEARS	.22**	.41**	.25**	.30**	.23**	—						
PETITION	.25**	.19*	.43**	.26**	.16	.23**	—					
RADICAL	.29**	.44**	.48**	.39**	.41**	.30**	.30**	—				
ATTEND	.28**	.24**	.45**	.20**	.12	-.09	.36**	.15*	—			
DURATION	.15	.13	.25**	.20**	.24**	-.01	.16*	.19*	.38**	—		
FREQUENCY	.40**	.29**	.38**	.20**	.08	.00	.38**	.07	.57**	.28**	—	
PRACTICE	.15	.18*	.04	.17*	.06	-.09	.01	-.16*	.28**	.09*	.25**	—
SEX	.32**	.23**	.12	.08	.18*	.12	.13	.01	.00	.09	.18*	-.02

N = 156. \*  $p < .05$ ; \*\*  $p < .01$  (2-tailed).

Table 4. Correlations Among Virtue and Prayer/Religion Indices

	Internal Concerns			Embracing Paradox			Bold Assertion			ATTEND	DURATION	FREQUENCY	PRACTICE	SEX
	SUFFERING: O	EXAMINE: I	REST: U	SACRAMENT: U	TEARS: I	PETITION: O	RADICAL: O							
CURIOUS	.22**	.14*	.23**	.25**	.26**	-.08	.10	.21**	.07	.17*	.10	.08	-.04	
LOVE to LRN	.17*	.16*	.28**	.27**	.36**	-.14	.06	.12	.06	.21**	.11	.11	.10	
OPEN MIND	.08	.11	.21**	.20**	.19*	-.10	-.02	.02	.09	.14	.14	.16*	-.01	
CREATIVE	.00	.05	.13	.22**	.17*	.00	-.04	.23**	-.12	.02	-.08	-.13	-.14	
SOCIAL IQ	.32**	.29**	.24**	.19*	.22**	.17*	.23**	.23**	.01	.01	.15	.07	.12	
WISDOM	.14	.09	.17*	.10	.12	-.14	-.01	.15	.00	.05	.02	.03	.00	
VALOR	.12	.20**	.20**	.17*	.13	.00	-.03	.28**	-.01	.08	.07	.03	-.08	
INDUSTRY	.14	.18*	.14	.13	.25	-.16*	-.04	.06	.01	.09	.04	.08	.03	
INTEGRITY	.25**	.21**	.18*	.15	.12	-.04	.06	.08	.02	.11	.18*	.17*	.15	
ZEST	.26**	.24**	.23**	.29**	.37**	-.12	.09	.23**	.22**	.13	.13	.16*	-.01	
INTIMACY	.40**	.27**	.30**	.27**	.23**	.08	.16*	.17*	.17*	.11	.20**	.04	.28**	
KINDNESS	.48**	.37**	.37**	.31**	.36**	.13	.18*	.21**	.03	.17*	.19*	.15*	.35**	
CITIZEN	.32**	.32**	.45**	.29**	.29**	.13	.18*	.21**	.23**	.18*	.27**	.04	.17*	
EQUITY	.31**	.28**	.35**	.31**	.24**	.12	.11	.14	.10	.07	.18*	.24**	.11	
LEADER	.40**	.37**	.43**	.33**	.40**	.06	.15	.26**	.17*	.21**	.23**	.15*	.21**	
SELF REGULTN	.01	.11	.18*	.18*	.20**	-.12	.07	.15	.03	.10	.09	.01	-.04	
CAUTION	.19*	.15	.20**	.14	.07	-.05	.14	-.07	.19*	.08	.28**	.28**	.12	
MODESTY	.13	.21**	.15	.11	.09	.03	.01	-.02	-.02	.04	.09	.27**	.11	
AWE	.20**	.20**	.25**	.37**	.37**	.02	.04	.27**	.00	.09	.09	.08	.22**	
GRATITUDE	.46**	.37**	.40**	.28**	.28**	.11	.15	.23**	.25**	.21**	.39**	.21**	.27**	
HOPE	.28**	.24**	.25**	.18*	.30**	-.07	.04	.23**	.09	.15	.14	.10	.07	
SPIRITUALITY	.53**	.43**	.53**	.34**	.23**	.02	.28**	.54**	.54**	.32**	.66**	.23**	.13	
HUMOR	.33**	.23**	.29**	.25**	.37**	.10	.11*	.22**	.05	.09	.02	-.02	.01	
MERCY	.27**	.28**	.41**	.29**	.18*	-.06	.12*	.18*	.16*	.15	.21**	.31**	.03	

N = 156. \*p < .05; \*\*p < .01 (2-tailed).

$p < .001$ ;  $\chi^2(242) = 364.19$ ,  $p < .001$ ;  $\chi^2(210) = 286.52$ ,  $p < .001$ . Additional  $\chi^2$  tests were nonsignificant with  $p$  values exceeding .01. The first four variate pairs were the most important in describing the relation between the variable sets.

Table 5 displays the relations of the individual variables (correlations [ $r_c$ ], and standardized coefficients, [coeff]) to these four variates. In the first pairing, the variance overlap (squared canonical correlation) was 72.25%. Interpreted in the same fashion as a typical Pearson correlation, this indicates a relatively strong relation between the two linear combinations of variable sets. The other three variate pairs demonstrated overlapping variances of 49%, 39.69%, and 36%, respectively, so all of the variate pairs provide a reasonable amount of explanatory power.

For each individual variate pairing, it is possible to discern how well the unique linear combination of character variables captures the variance associated with measuring character in toto and also how well the unique linear combination of the prayer variables captures the variance associated with measuring prayer in toto. Considering the first variate pairing, this particular combination of character variables extracts 12% of the total variance associated with character; 21% of the possible variance among prayer variables is accounted for by the combination of prayer variables. In other words, the character variate reveals notably less about character than the prayer variate reveals about the prayer. In the three remaining variate pairs, character and prayer variances are accounted for as follows: 5% and 11%; 13% and 10%; and 3% and 5%. In general, the first three variate pairings reveal more about the relation between character and prayer than does the fourth pairing. Since the variate pairings are orthogonal, summing across the variance of character accounted for by the character variates provides the information that a total of 33% of the variance of the character variable set is ultimately accounted for in this analysis. A total of 47% of the total variance associated with the prayer variable set is extracted, across all pairs. The totality of character variance is less well explained than is the totality of prayer variance.

The extent to which the first character variate accounts for variance in the associated first prayer variate (a measure known as redundancy) is 9%; the additional character variate redundancies are 2%, 5%, and 1%, respectively. Together, the character variates extract 17% of the prayer variate variance. The degrees to which the prayer variates account for variance in the character variates are 15%, 5%, 4%, and 2%, from first to fourth variate. In total, the prayer variates extract

Table 5. Evaluation of Variables in Relation to Their Corresponding Canonical Variates

	First Variate		Second Variate		Third Variate		Fourth Variate		
	$r_c$	Coeff	$r_c$	Coeff	$r_c$	Coeff	$r_c$	Coeff	
<b>VIRTUES</b>									
<i>Wisdom</i>	Curiosity	-.27	.05	.11					
	Love of Learning	<b>-.30</b>	-.10	-.15	<b>-.38</b>	.31	-.11	.10	
	Open Minded	-.26	-.05	-.48	<b>-.60</b>	-.61	-.14	.08	
	Creative	.04	.09	<b>-.32</b>	<b>-.42</b>	-.16	.01	-.15	
	Social Intelligence	-.06	.24	.19	<b>-.30</b>	.31	-.20	-.07	
Wisdom	-.16	-.03	-.16	-.11	-.27	.16	.10	.42	
								.13	
<i>Courage</i>	Valor	-.22	-.21	<b>-.30</b>	-.57	-.29	-.22	.07	.43
	Industry	-.28	-.11	-.16	-.22	<b>-.36</b>	.01	-.08	-.27
	Integrity	-.26	-.04	.14	.48	-.23	.22	.22	.21
	Zest	<b>-.30</b>	-.01	-.09	-.14	<b>-.40</b>	-.19	<b>-.30</b>	-.16
<i>Humility</i>	Intimacy	<b>-.38</b>	.24	<b>.41</b>	.49	-.14	.29	-.17	-.49
	Kindness	-.29	-.16	<b>.49</b>	.49	<b>-.46</b>	-.09	.09	.31
<i>Justice</i>	Citizenship	<b>-.40</b>	-.15	.23	-.10	-.26	.37	-.17	-.38
	Equity	-.28	.38	.23	.04	<b>-.35</b>	.19	.17	.20
	Leadership	<b>-.35</b>	-.01	.22	.21	<b>-.60</b>	-.77	-.23	-.22
<i>Temperance</i>	Self Regulation	-.19	.01	-.27	-.25	<b>-.32</b>	.04	-.15	-.46
	Caution	<b>-.39</b>	.05	.13	.30	-.15	.29	.23	.18
	Modesty	-.27	.02	.10	-.31	-.27	-.24	<b>.43</b>	.34
<i>Transcendence</i>	Awe	-.16	.21	.19	.32	<b>-.56</b>	-.21	-.12	-.52
	Gratitude	<b>-.61</b>	-.33	.26	-.35	-.28	-.24	.07	.45
	Hope	<b>-.33</b>	.18	-.07	.10	<b>-.39</b>	-.08	-.10	.35
	Spirituality	<b>-.91</b>	-.85	.12	.04	.02	.58	-.11	-.38
	Humor	-.08	.01	.26	-.02	<b>-.34</b>	-.14	<b>-.31</b>	-.48
	Mercy	<b>-.73</b>	-.26	.08	-.27	<b>-.33</b>	-.12	.27	.38
Percent of Variance	.12		.05		.13		.03	Total = .35	
Redundancy	.09		.02		.05		.01	Total = .18	

Table 5. (cont.)

	First Variate		Second Variate		Third Variate		Fourth Variate			
	$r_c$	Coeff	$r_c$	Coeff	$r_c$	Coeff	$r_c$	Coeff		
<b>PRAYER CONTENT</b>										
<i>Internal Concerns</i>	{	Intercession: O	<b>-.50</b>	-.02	.64	-.19	.15	.05	-.01	
		Suffering: O	<b>-.35</b>	-.20	-.26	<b>-.39</b>	-.17	.13	.27	
		Examine: I	<b>-.59</b>	-.34	-.27	<b>-.33</b>	-.51	-.09	.25	
<i>Embracing Paradox</i>	{	Rest: U	-.28	.04	.11	.03	.12	-.23	-.38	
		Sacrament: U	-.07	.07	.22	.07	<b>-.76</b>	-.68	<b>-.57</b>	
		Tears: I	.18	.16	<b>.33</b>	.24	.04	.37	.12	.11
<i>Bold Assertion</i>	{	Petition: O	-.18	.19	<b>.34</b>	.28	.16	.24	-.05	.07
		Radical: O	-.14	.01	-.05	-.15	<b>-.32</b>	-.05	-.11	.19
<b>PRAYER INTENSITY</b>										
Attendance		<b>-.73</b>	-.10	.09	.20	.25	.40	<b>-.34</b>	-.79	
Duration		<b>-.58</b>	-.23	-.13	-.21	-.09	-.12	-.09	.13	
Frequency		<b>-.88</b>	-.59	.12	-.22	.29	.26	-.03	.10	
Years of Practice		<b>-.36</b>	-.09	.02	.01	-.19	-.28	<b>.55</b>	.81	
<b>DEMOGRAPHIC</b>										
Sex (Higher = Female)		-.13	.04	<b>.78</b>	.65	-.16	-.15	.03	.05	
<b>PERCENT of VARIANCE</b>										
REDUNDANCY		.21	.11	.11	.10	.10	.05	.05	Total =.57	
		.15	.05	.05	.04	.04	.02	.02	Total =.29	
<b>CANONICAL CORRELATION</b>										
Significance of Correlation		.85	.70	.70	.63	.63	.60	.60		
		.001	.001	.001	.001	.001	.001	.001		

$r_c$  = correlation of item to variate; coeff = standardized canonical coefficient.  
 Bold indicates interpreted variable - variate correlation > .30.

26% of the character variate variance. The character indices do a less thorough job of explaining prayer measures than prayer measures do of accounting for character indices.

In sum, these results suggest that the first and third variates are the most stable and profitable for interpretation, primarily because they tap into a greater number of the individual character variables. The second and fourth variates, with considerably lower variance accounting statistics, present less certainty of interpretation. Yet they do offer interesting heuristic possibilities in keeping with the intent of this study. The fact that they present links between a more limited set of character and prayer variables suggests the utility of additional studies emphasizing discrete aspects of each variable set.

*Variate interpretations.* Although given the present sample size, a .23 correlation (5.29% variance explained) attains significance at  $p < .001$ ; we adopt here the more common .30 cutoff (Tabachnick & Fidell, 2001, p. 199), with its considerably larger 9% variance explained. Only variable-variate correlations meeting or exceeding that .30 level are interpreted below.

In the first variate pair the virtues of (in descending order of weight), increased personal qualities of spirituality, mercy, gratitude, citizenship, caution, intimacy, leadership, hope, zest, and love of learning related to elevated frequency of prayer, service attendance, self-examination prayer, prayer duration, intercession prayer, years of practice, and suffering prayer. These data suggest that qualities of transcendence and justice appear to be affirmed in the company of an increased intensity of prayer, and prayers related to internal concerns or the idea that an inward connection with the self aids in an outward connecting with others. Our hypothesized relation between humanity, justice, and internal concerns received partial support from this variate; 50% of the humanity and 66% of the justice variables attained significance, as did 100% of the internal concerns related prayer scales.

Heightened virtues of kindness, intimacy, creativity, and valor associated with being female, and engaging in more intercession, petition, and tears-oriented prayers in the second variate pair. Humanity-centered aspects of character are linked with prayer content seeking help for others and the self (both outward prayers) and being a woman.

The third variate pair linked high levels of love of learning, leadership, awe, kindness, open-mindedness, zest, hope, curiosity, wisdom, industry, equity, humor, mercy, self-regulation, and creativity with extended amounts of sacramental, suffering, rest, self-examination,

and radical prayers. In broad terms, wisdom and transcendence are linked to outward and upward prayers that seek to understand and alleviate suffering. We expected embracing paradox prayers to affiliate with wisdom and transcendence and this is largely affirmed. We gain the additional theoretically compatible information that the character virtues of justice and courage in conjunction with prayers seeking to ease the pain of others are also part of this equation.

Variate four paired a sense of modesty (low), humor (high), and zest (high) with fewer years of practicing prayer, more sacramental prayer, and more frequent service attendance. People with less prayer experience are likely to rely on more formalized types of prayer ostensibly encountered during regular services; these people tend to have elevated character virtues of humor and energy (zest) but low modesty. While this fits with our theoretical position, it was not one of the primary anticipated findings.

Our expectation that bold assertion prayers would inversely relate to temperance and link positively to courage received only weak support when some of the relevant variables attained significance in variate pairs two and three.

## DISCUSSION

The present data support our notions that the multidimensional constructs of both character virtues and prayer make contact at a variety of levels. In addition to providing support for some broad hypotheses, the data suggested that in the company of internal concerns prayer, the intensity of prayer (e.g., attendance, frequency, duration, and years of practice) tracks with the transcendent, justice, and humanity character virtues. Engaging in prayer frequently and deeply in a corporate context over a number of years is related to seeking the sacred and caring for others. The notion of social comparison (Diener & Fujita, 1997) lends credence to this finding; the inward focused observation that other people experience at least as many if not more challenges than does one's self may be critical as it stands in relation to the desire to connect with others.

In the second variate pair, the participant's sex aligned with various humanity-oriented virtues replete with emotional overtones. Consistent with Ozorak (2003b), women more readily than men endorsed forms of prayer content that highlighted affectively rich thoughts. It is important



to recognize that sex is a proxy in this case for an entire constellation of both biological and social forces to which we refer to as a form of context. It is clear that women and men receive differential reinforcement concerning the expression of affect from a young age (Grusec, 2002). Likewise we know that the early God concepts/images of girls and boys differ (Ladd, McIntosh, & Spilka, 1998). The current study may simply reflect those socialization patterns or it may reflect deeper core values (Ozorak, 2003a).

The third variate pair offers the insight that intense forms of prayer, especially those connecting practitioners to others, work in tandem with prayers accenting a relation to a greater reality. This combination speaks to facets of nearly every form of the character virtues. A person recognizing her or his own strengths and weaknesses (via inward prayers of examination) while at the same time comprehending the depth of the needs of others may seek additional coping resources. These resources may increase the odds of resilience by reducing the amount of cognitive activity that must transpire before hitting upon a satisfactory solution. Reduced mental pressure allows for extended efforts in other directions such as self-control, increasing the potential for virtuousness.

With practice in any realm comes an augmented knowledge of one's personal boundaries. This appears true in the arena of prayer, as the fourth variate pair notes. Those who, in their successful strivings, seek to undercut the accomplishments of others are not typically numbered among the virtuous. Instead, those who in the midst of victory display an honest humility are awarded accolades of virtuousness. These individuals living a humility borne of experience may shy away from engagement in formalized activities where their skills are likely to be the focus of praise. This preference for solitude may be mislabeled as a lack of good-natured enthusiasm. Additional work in this area will enable the teasing apart of these characteristics.

#### *Potential Applications*

*Prayer in therapy.* The results described in this paper provide a rough framework within which to think about the connections between personal character and approaches to prayer. One outcome of that consideration will inevitably be questions of application: Will prayer work as a therapeutic tool to create/modify character? Prayer is quite attractive as a tool because its employment is not limited by age, race, gender, or socioeconomic factors; there is no need to consider sliding

scale fees or third party reimbursement. Prayer is available to all people, at all times. It is tempting therefore to think of prayer as a therapeutic technique available for clients' use in cultivating self-discipline or other virtues as in Baumeister and Exline's (1999) moral muscle model. This seems to make sense, for instance, in a Christian context, where authors use the language of "spiritual exercises" (Ignatius of Loyola, 1521–48/1997) and similar biblical references to "running the race" (1 Corinthians 9:24; Galatians 2:2; 2 Timothy 4:7; Hebrews 12:1; New Revised Standard Version) and "fighting the fight" (1 Timothy 1:18, 6:12; 2 Timothy 4:7) abound depicting an ongoing spiritual development that bears the "fruit" of virtues such as patience and kindness (Galatians 5:22–23).

Yet prayer is not primarily a therapeutic tool and its portrayal as such frequently, though not always, fails to take seriously its inherent nature. Prayer is fundamentally a theologically-oriented tool, the stated intent of which is to provide practitioners with both an understanding of and intimate connection to a metaphysical reality (Ladd, Andreasen, Smith, & Baesler, 2006). On its own terms, the full measure of prayer is not present in its simplistic application as a crisis intervention technique, despite the host of studies that perpetuate that theologically naïve position. Rather, the effect of prayer is developed over the span of time.

We allow the moral muscle model (Baumeister & Exline, 1999) as a longitudinally oriented therapeutic tool, but we contest the longitudinal application of prayer as a form of therapy. Similarly, we allow that both character education type protocols and prayer experiences are *preparatory* as opposed to *preventative* disciplines in that neither an adherence to a moral code or to the regular practice of prayer absolutely guarantees high standards of personal conduct. We believe that both forms of experience provide an enlarged coping repertoire to help people when they experience moral missteps.

The difference between receiving training in character and prayer is, however, not terribly subtle although often overlooked. The two approaches have fundamentally distinct underpinnings upon which they rest. At its most abstract, morality is conceptualized from a rationalist perspective as obligations derived from innate (metaphysical) sources (cf. Leibniz, 1704/1973). Enacted morality, then, does not necessarily involve any level of interaction with the metaphysical other than following a set of guidelines. Enacted prayer, while also metaphysical in nature, is not concerned with formulaic adherence, but rather it emphasizes connectivity to and communication with the metaphysical (Baesler, 2003;

Ladd & Spilka, 2002, 2006; Ladd et al., 2006). In other words, a moral muscle therapeutic regimen has the goal of creating metaphysically *virtuous* people while a “prayer muscle,” theologically-oriented approach has the goal of creating a more metaphysically *connected* people. The former, as a result of its abstract, impersonal basis, well may run the risk of devolving into legalist rule following with concomitant efforts to bend those rules in personally favorable ways. The latter, however, is dominated by the more concretized language of interpersonal relationships, which may give it an advantage in the cultivation of virtue because deviations are viewed as violations of interpersonal standards. We are not aware of any study that has explicitly tested these ideas, but they are raised as possibilities by the present data.

A second important facet of the difference in orientation that therapists must keep in mind is that of the nature of the preparatory work that adds coping skills. The moral muscle model can portray these skills as personally derived and deployed; the power for change is purely internal. The prayer muscle model typically has less to do with increasing the individual’s ability to act independently and more to do with increasing the individual’s ability to allow actions by external forces (e.g., God) alone or, more likely, in collaboration with the person (Ladd & Spilka, 2006).

In sum, the use of prayer in a therapeutic context is an exceptionally complex proposition. To sort through its application and implications will require the active collaboration of psychologists and theologians, with the outcomes likely to be tradition-specific.

*Interdisciplinary work.* This research can also present a point of departure for a dynamic dialogue crossing traditional disciplinary lines. In particular, we envision this cross-disciplinary dialogue drawing more explicitly on the field of theology. The field of psychology approaches a topic such as prayer from a more objective vantage point: outside looking in. In contrast, theologians approach the objects of study from within their faith perspectives and as argued above it is within the various faith perspectives that prayers actually happen. We are not advocating a religiously *driven* psychology of religion, but rather a more religiously *aware* psychology of religion that is sensitive not just to the presence of various contexts, but deals critically with the contents of those contexts on their own terms, especially when addressing topics such as prayer.

For instance, within the field of theology, we anticipate active discussions examining both the theoretical and practical aspects of prayer

and character research. On the theoretical side, moral theology presents a stage for the exploration of the virtues, the vices, character, and other issues of moral behavior and ethics, including self-control and self-discipline. In the area of practical theology, liturgical and ritual studies can connect us with prayer and other related practices at both the individual and the communal levels. From these dialogues of theory and application, the fields of psychology and theology both potentially reap benefits.

### *Potential Challenges*

Perhaps the primary challenge facing the present study centers on the application of the canonical correlation technique. In the best case scenario, this approach delivers a sense of the breadth of associations; in this instance it delivers a wide angle portrayal of the relation between character virtues and multiple dimensions of prayer content and intensity. The key question is, of course, are the variates sufficiently reliable to provide the equivalent of a high resolution picture? The various indices presented in the results section suggest that the analyses have at least a moderate degree of stability. We regard this as appropriate for an initial study, especially considering the fact that the moderate stability is situated within a theoretical framework that renders the results interpretable.

### *Future Directions*

The present work suggests the utility of thinking about prayer as a mechanism of inward, outward, and upward connectivity. In particular, when these three approaches to prayer are allowed to co-mingle as they do in real life, theoretically meaningful relations appear between prayer scales and various character virtues. Next steps will include breaking down the qualities associated with the various virtues to see more clearly the nature of their links to prayer forms.

With proper refinement, this line of investigation may well yield a variety of practical applications. In situations where an individual desires to improve her or his prayer life or fundamental character, it may be possible to use the findings to help people discover both direct and indirect paths toward fulfilling those betterment goals in ways that honor various religious and ethical traditions. In other settings, it might be conceivable to recommend spiritual exercises centering on different ways of praying as a method of enhancing prayer muscle and moral

muscle. Likewise, concentrating on developing moral muscles may help a person experience spiritual growth in his or her prayer muscle.

### CONCLUSION

The evidence presented in this paper supports the notion that prayer, as a form of self-discipline, is linked to virtue in theoretically meaningful ways when both prayer and character are conceptualized as means of establishing connectivity with the self, others, and the divine. While, as does any initial investigation, the current study raises as many questions as it answers, these data do suggest a promising framework for additional work, expanding the idea of prayer as a form of control not limited to attributional aspects, but also including clear relations to processes of self-control and issues of personal character.

### REFERENCES

- Baesler, E. J. (2003). *Theoretical explorations and empirical investigations of communication and prayer*. Lewistown, NY: The Edwin Mellen Press.
- Baumeister, R., & Exline, J. L. (1999). Virtue, personality, and social relations: Self-control as the moral muscle. *Journal of Personality*, 67(6), 1165–1194.
- Diener, E., & Fujita, F. (1997). Social comparisons and subjective well-being. In B. P. Buunk & F. X. Gibbons (Eds.), *Health, coping, and well-being: Perspectives from social comparison theory* (pp. 329–357). Mahwah, NJ: Lawrence Erlbaum.
- Grusec, J. E. (2002). Parenting, socialization and children's acquisition of values. In M. H. Bornstein (Ed.), *Handbook of parenting: Vol. 5: Practical issues in parenting* (2nd ed.) (pp. 143–167). Mahwah, NJ: Lawrence Erlbaum.
- Heiler, F. (1932). *Prayer: History and psychology*. New York: Oxford.
- Ignatius of Loyola. (1997). *The spiritual exercises of Saint Ignatius*. (P. Wolff, Trans.). Liguori, MO: Triumph. (Original work published 1521–48)
- Ladd, K. L., Andreasen, N. C., Smith, B. W., & Baesler, E. J. (2006). Toward best practices linking prayer psychometrics and neuropsychological investigations of religion. Paper presented at the International Association for the Psychology of Religion, Leuven, Belgium.
- Ladd, K. L., McIntosh, D. N. (in press). Soziale Unterstützung in religiösen Gemeinschaften. In M. Tietjens (Hrsg.). *Facetten Sozialer Unterstützung*. Hogrefe: Göttingen.
- Ladd, K. L., McIntosh, D. N., & Spilka, B. (1998). The development of God schemata: The influence of denomination, age, and gender. *The International Journal for the Psychology of Religion*, 8(1), 49–56.
- Ladd, K. L., & Spilka, B. (2002). Inward, outward, upward: Cognitive aspects of prayer. *Journal for the Scientific Study of Religion*, 41(3), 475–484.
- Ladd, K. L., & Spilka, B. (2006). Inward, outward, upward prayer: Scale reliability and validation. *Journal for the Scientific Study of Religion* 45(2), 233–251.
- Leibniz, G. (1973). *New Essays on Human Understanding* (M. Morris & G. H. R. Parkinson, Trans.). In G. H. R. Parkinson (Ed.), *Leibniz: Philosophical Writings*. London: J. M. Dent & Sons. (Original work published 1704)

- Ozorak, E. W. (2003a). Culture, gender, faith: The social construction of the person-God relationship. *The International Journal for the Psychology of Religion, 13*(4), 249–257.
- Ozorak, E. W. (2003b). Love of God and neighbor: Religion and volunteer service among college students. *Review of Religious Research, 44*, 285–299.
- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues*. New York: Oxford.
- Peterson, C., & Seligman, M. E. P. (2001). VIA strengths inventory. Retrieved 10 December 2001 from <http://www.positivepsychology.org/viastrengthsinventory.htm>.
- Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics* (4th ed.). Needham Heights, MA: Allyn & Bacon.



## LIFE SATISFACTION AND SPIRITUALITY IN ADOLESCENTS

*Brien S. Kelley and Lisa Miller*

### ABSTRACT

The association between life satisfaction and dimensions of religiosity/spirituality was explored in an ethnically and denominationally diverse sample of 615 adolescents using the Satisfaction with Life Scale and the Brief Multidimensional Measure of Religiosity/Spirituality (BMMRS). Results indicate that most dimensions of religiosity and spirituality are associated with life satisfaction, but that Daily Spiritual Experiences accounts for the largest amount of variance in the models, and attenuates the relationship of other dimensions with life satisfaction when entered into simultaneous regressions. Dimensions of the BMMRS were more predictive than single-item measures of religious service attendance, frequency of prayer, or degree of religiousness/spirituality. Results are discussed in the context of previous adolescent research in the positive psychology of religiosity/spirituality.

*All we have to do is turn our minds to things spiritual, and the way to happiness is a rapid one. Erasmus, 1503 (cited in McMahon, 2006)*

Insofar as a religious or spiritual life is meant to imbue virtue, happiness, and health, the interface of the psychology of religion and spirituality with positive psychology is a fertile area for empirical research (McCullough & Snyder, 2000; Pargament & Mahoney, 2002; Peterson & Seligman, 2004). The preponderance of research concerning the relationship between religion/spirituality (R/S) and subjective well-being (SWB) indicates that there is a small to moderate positive association between dimensions of R/S and satisfaction with life (LS), happiness, positive affect, and other indicators of positive functioning (Argyle, 1999; Diener & Clifton, 2002; Diener, Suh, Lucas, & Smith, 1999; Ellison, 1991; Ferriss, 2002; Levin & Chatters, 1998; Myers, 2000). Various measures of religiosity and spirituality have been investigated with adults, including service attendance, prayer, religious certainty, religious social support, meaning making, a relationship to the divine, and other devotional practices and attitudes, but the results are equivocal surrounding which dimension, or pattern of dimensions, is most salient in predicting SWB (see Hill, 2005, for a description of the variety of R/S scales). The association is even less clear with younger samples, and while research into the positive psychology of R/S with adolescents



is growing, more attention is needed to elucidate the mechanisms and relationships that are unique to youth in order to best understand the relationship of R/S and mental health throughout the lifespan (Huebner, 2004; King & Benson, 2006; Lerner, Dowling, & Anderson, 2003; Miller & Kelley, 2005).

#### RELIGION/SPIRITUALITY AND LIFE SATISFACTION IN ADULTS

Diener and colleagues' (1985) Satisfaction with Life Scale (SWLS) is one of the oldest and widest used measures of positive functioning in empirical psychology, and is intended to capture the cognitive component of SWB, which for the SWLS is described as an individual's subjective, non-domain-specific appraisal of their lives, with the criteria left open to the individual's own standards and priorities (Pavot & Diener, 1993). Life satisfaction has been extensively studied with populations across the globe (see Diener & Suh, 2000; Park & Huebner, 2005), from adolescence onward (Huebner, 2004; Neto, 1993; Pavot & Diener, 1993), and with a large variety of potentially associated variables, including personality, psychosocial, and demographic predictors (see Diener et al., 1999, for a review). It is closely related to the emotional valences of positive and negative affect, but has distinct influences and cognitive appraisal processes, and strong temperamental and genetic components that are mediated by interpersonal skills and environmental conditions (Diener et al., 1999; Diener & Lucas, 2003; Stubbe, Posthuma, Boomsma, & De Geus, 2005).

Positive, but relatively small associations have been consistently found between measures of R/S and LS. Diener and Clifton (2002), in a probability sample of 1,034 adults in the United States, found a .07 correlation between LS and belief in a higher power and belief in a soul, and in a sample of 52,634 worldwide, found a .08 correlation between a single item measure of LS and the summation of four items reflecting religiosity: importance of G-d, participation in prayer or meditation, attendance at church, and frequency of prayer. Within this study, the elderly had the strongest demographic association, race and income were not significantly related, and having prayed in the last day was the strongest predictor of LS. However, the authors pointed out that while the associations were significant because of the large sample size, they were quite small (especially when compared to other demographic variables' correlations with LS, such as age,  $r = .14$ ; income,

$r = .22$ ; and education,  $r = .11$ ). Pollner (1989) found that a measure tapping relationship to the Divine (which included a sense of closeness to the Divine, frequency of prayer, and self-transcendence) was the most powerful predictor of LS ( $\beta = .16$ ), above and beyond religious attendance, and controlling for demographic variables. Ellison (1991), also in a study of adults, used more specific measures of religiosity in investigating its relationship with LS (which was a domain-specific measure, not the SWLS), including religious certainty (three items), service attendance, and private devotion (two items: closeness to God and prayer). He found that private devotion and service attendance exerted influence on LS indirectly, through enhancing religious belief systems and coherence, but that religious certainty contributed significantly and directly to LS. Again, the relationship was relatively small, with the religious variables together accounting for approximately 5–7% of the variance in LS.

#### ADOLESCENCE AND LIFE SATISFACTION

Diener and colleagues' (1999) review concludes that youth is not a predictor of happiness, that LS is stable across age ranges (Diener & Suh, 1998), and that it is moderately stable throughout the lifespan, though it is responsive on the short-term to life events (Eid & Diener, 2004). Empirical investigation of the LS of adolescents and young adults is sparse, but growing (e.g., Fogle, Huebner, & Laughlin, 2002; McCullough, Huebner, & Laughlin, 2000; see Huebner, 2004, for a review). Research has shown that among adolescents, LS does not differ significantly with demographic variables, such as gender, age, grade, and SES, but that LS is moderately associated with life events and personality/temperamental variables (Fogle et al., 2002; Huebner, 2004; Huebner, Drane, & Valois, 2000). McCullough and colleagues (2000) found that positive daily events contributed 12% of the variance in LS above and beyond global self-concept and major life events (8.6% of variance), indicating that while LS may be moderately stable across ages and test-retest intervals (Huebner, 2004), it is also dependent on day-to-day positive experiences. Rigby and Huebner (2005) extended this finding using a mediation model, and found that adaptive causal attributions of positive events mediated the relationship between personality characteristics (of which emotional stability was the strongest predictor, accounting for 8% of the variance in LS) and LS, with the

full model accounting for 19.2% of the variance in the model. This suggests that attributions for positive events may be more important than the frequency of such events in influencing the LS of adolescents, a relationship that is small and insignificant for attributions of negative events.

Interpersonal variables, especially global self-concept, show the strongest associations with LS (Huebner, 2004; McCullough et al., 2000; Neto, 1993). In two studies investigating self-concept, which is defined in one as a combination of social acceptance, self-efficacy, psychological maturity, and impulsivity-activity (Neto, 1993), and in the other as an "overall evaluation of one's personal characteristics and behavioral competence" (McCullough et al., 2000, p. 282), the construct was found to account for 26% and 21.9% of the variance in LS, respectively. Family and social variables are also highly associated, including social support and acceptance ( $r = .38$ , Neto, 1993), and positive daily events (e.g., talking openly with friends or family;  $r = .39$ , McCullough et al., 2000). Living with both parents has been found to be significantly associated with LS in Caucasians, but not with African Americans, within whom living with a single mother is associated with increased LS in girls (Zullig, Valois, Huebner, & Drane, 2005). In contrast, when social variables constitute chronic stressors, friends ( $r = -.36$ ) and family ( $r = -.33$ ) are the strongest negative correlates with LS (Ash & Huebner, 2001, as reported in Huebner, 2004), and living with adults other than one's parents (i.e., other relatives or guardians) is also associated with decreased LS (Zullig et al., 2005).

While research on the LS of youth is beginning to elucidate the influential correlates and mechanisms of SWB, "much variance in child and adolescent positive well-being reports remains to be explained" (McCullough et al., 2000, p. 282). From the thought of Augustine through William James, to the positive psychologists of today, R/S is considered to be one of the primary foundations of adult happiness and satisfaction with life, making its importance in adolescence likely and in need of further study (see McMahan, 2006, for a historical review of R/S and happiness; King & Benson, 2006; Levenson, Aldwin, & D'Mello, 2005; Myers, 1992, 2000).

## ADOLESCENT LIFE SATISFACTION &amp; RELIGION/SPIRITUALITY

Very few studies have investigated the association between R/S and LS in adolescence. Smith and Faris (2002) found that in a 12th grade, nationally representative sample, and with a single-item measure of LS, religion is associated with LS only for those who consider religion very important, who attend church weekly, or who have attended youth groups for six years or more (and only when compared to teens who do not attend church, have never been affiliated with a youth group, or who consider religion unimportant). Cohen and colleagues (2005) investigated intrinsic and extrinsic religiosity, belief in an afterlife, death anxiety, and LS in a sample of Catholic and Protestant adolescents and young adults (aged 13–25). They found that death anxiety was negatively correlated with LS, and belief in an afterlife was positively correlated with LS in individuals of both traditions (who did not significantly differ on LS), while the intrinsic/extrinsic discrimination was not significantly correlated to or predictive of LS in moderated regression analyses or path analyses. In a prior study, Cohen (2002) explored the relationship of R/S variables to LS in 163 Catholic and Protestant youth aged 17 to 23. For both groups, the spiritual self-ranking item was the highest or second highest correlate with LS, though the additional dimensions of coping, support, identity, doctrinal knowledge, practice/attendance, and belief all significantly correlated as well. In regression analyses, only spirituality was a significant predictor of LS for Protestants (though 32% of the variance in LS was accounted for by the religiosity items together), while for Catholic youth, religious identity and congregational support were more predictive than spirituality (those three were the only independently significant variables, though all R/S variables totaled accounted for 47% of the variance in LS). Taken together, Cohen's research with adolescents suggests that different dimensions of religiosity and spirituality have a substantial effect on teen life satisfaction, and operate in both separate and intricately additive ways.

## MULTIDIMENSIONAL STRATEGIES

Within the few studies examining adolescents, and within the larger scope of adult studies investigating R/S and LS, it appears that aspects of religiosity and spirituality function differentially in associating with life satisfaction. Cotton and colleagues (2006), building on a distinction

proffered by Pargament et al. (2001), review the extant research along a valence of the personal importance, phenomenology, and function of the R/S variable, in which “proximal,” or personally experienced dimensions are theorized as methodologically and functionally different than “distal,” or behavioral, frequency-based measures. Researchers have found proximal dimensions, including congregational support (Argyle, 1999; Ellison, Gay, & Glass, 1989), personal devotion-like spiritual experiencing, and religious coping (Pargament, 1997) most significant in associating with mental and physical health outcomes. However, the majority of studies have relied on few-item, distal measures of R/S, such as frequency of meditation or frequency of religious service attendance (e.g., Diener & Clifton, 2002), which show smaller relationships with those outcomes. An example of this bifurcation is prayer, which can be measured either distally, in terms of the frequency of the behavior, or proximally, in terms of its function and meaning to the individual (Ciarrocchi & Deneke, 2005; Kendler, Liu, Gardner, McCullough, Larson, & Prescott, 2003; Pollner, 1989). There is an increasing acknowledgment of the complexity and multidimensional nature of religious and spiritual beliefs, behaviors, and orientations in interacting with psychosocial outcomes, and for this reason, researchers are now recommended to use more in-depth and proximal scales that tap into the differing aspects of R/S (e.g., Cotton et al., 2006; Idler, Musick, Ellison, George, Krause et al., 2003; Hill, 2005; Hill & Hood, 1999; Tsang & McCullough, 2003).

#### PURPOSE AND HYPOTHESES

The purpose of this study is to investigate in a sample of adolescents the association between LS and a range of dimensions of R/S previously shown to have salutary effects, including personally experienced spirituality (Cohen, 2002; Miller & Gur, 2002a), forgiveness (Almabuk, Enright, & Cardin, 1995), religious social/congregational support (King & Furrow, 2004; Pearce, Little, & Perez, 2003; Smith, 2003), and religious coping (Pearce, Jones, Schwab-Stone, & Ruchkin, 2003; Vaughn & Roesch, 2003; Wills, Yaeger, & Sandy, 2003; as reviewed in Mahoney, Pendleton, & Ihrke, 2006). By way of comparison against previous findings, LS is also explored vis-à-vis four frequently studied single-item measures of R/S: self-rated degree of religiosity and degree of spirituality, and frequency of prayer and religious service attendance.

Based on previous research investigating the positive impact of religious and spiritual variables on adolescent psychological functioning, it is hypothesized that the R/S measures assessed in this study will be strongly and positively associated with life satisfaction. Specifically, the proximal measures of R/S are hypothesized to show a stronger relationship than the distal, single-item measures, and the most personally felt or immediate dimensions are expected to display the strongest associations (e.g., Daily Spiritual Experience, Forgiveness, and Degree of Religiousness and Spirituality).

## METHOD

### *Participants*

Participants were 615 adolescents representing seven religious denominations and nonreligious self-identifications: Catholic, Protestant, Jewish, Atheist, Agnostic, Buddhist, and other; and five ethnicities: Caucasian, AfricanAmerican, AsianAmerican, Latino, multiracial and other (see Table 1 for demographic information). The age of participants ranged from 11–23 ( $M = 15.73$ ,  $SD = 2.22$ ). The inclusion of the 60 participants aged 19–23 is justified by research suggesting that the characteristic issues and transitions of adolescents are extending into the early 20s, and to bridge research on adolescent R/S with the promising “emerging adulthood” literature (Arnett, 2000; Arnett & Tanner, 2006). The sample included 190 adolescents (31%) who completed the questionnaire online and 425 adolescents (69%) who completed a paper and pencil version.

### *Procedure*

Participants were ascertained from various religious and secular locales, including church groups, youth organizations, community events, and schools and camps, primarily in the New York City metropolitan area, New Jersey, Illinois, and California. The sample was purposefully targeted using a snowball method to include diversity in religious affiliation, ethnicity, age, and socioeconomic status, and therefore oversampled minority ethnic and religious groups (see Table 1). Youth leaders, principals, camp counselors, or other relevant administrative personnel were contacted via letter explaining the purpose and intent of the study. Parental consent was obtained for subjects ascertained through schools,

Table 1. *Demographic Characteristics of the Sample*

Characteristic	%	<i>N</i>
Gender		
Female	58.7	361
Male	41.0	252
Age		
11–12 yrs	12.4	76
13–14 yrs	21.8	134
15–16 yrs	31.2	192
17–18 yrs	24.9	153
19–23 yrs	9.8	60
Ethnicity		
White	42.6	262
African-American	14.6	90
Asian-American	17.7	109
Latino	14.6	90
Mixed	5.4	33
Other	3.4	21
Religious Affiliation		
Catholic	18.4	113
Protestant	27.8	171
Jewish	12.2	75
Atheist	2.4	15
Agnostic	8.5	52
Buddhist	10.2	63
Other (including Muslim)	17.4	107
Household Income (annual)		
Less than \$30,000	16.7	103
\$30,000–49,000	16.1	99
\$50,000–74,000	15.9	98
\$75,000 and above	18.9	116

*N* = 615 for the total sample.

organizations (such as the YMCA), and some church/religious groups. Prior to beginning the questionnaire, all participants gave informed consent and signed a participant's rights form, and participants were treated in accordance with APA ethics and IRB approval (American Psychological Association, 2002). The survey took approximately one hour to complete, and adolescents who volunteered for the study received compensation in the form of a \$10 bookstore gift certificate. Online participants were ascertained through the personal and profes-

sional networks of research assistants, as well as through advertisements posted locally, and on search engines and popular teen religion websites. Internet subjects were not remunerated.

### *Measures*

Religious and spiritual variables were measured using the Fetzer Brief Multidimensional Measure of Religiousness and Spirituality (BMMRS; Fetzer & National Institute on Aging Working Group, 1999; Idler et al., 2003), which includes four single-item variables commonly used in research on R/S: self-rated degree of religiosity and degree of spirituality, and frequency of prayer and religious service attendance. Life satisfaction was measured using the Satisfaction with Life Scale (Diener et al., 1985).

### *Fetzer BMMRS*

The BMMRS is a 38-item measure of spirituality and religiosity that was developed by the Fetzer Institute and the National Institute of Aging (1999) as a short, multidimensional assessment of spirituality and religiosity (Idler et al., 2003). The measure taps into several distinct, yet empirically supported dimensions of R/S and is intended to apply to both adherents of normative religious traditions as well as those of institutionally-free forms of spirituality. While some questions reflect a Judeo-Christian religious perspective (Idler et al., 2003; Traphagan, 2005), many items are independent of the principles of any particular religion, thus increasing the suitability of the measure for a religiously diverse population (Underwood, 2006). For the purposes of the current study the following subscales were included: Daily Spiritual Experiences, Forgiveness, Positive Religious Coping, Negative Religious Coping, Congregation Benefits, and Congregation Problems (see Ciarrocchi & Deneke, 2005; Kendler et al., 2003; Pearce et al., 2003, as examples of studies using only specific dimensions of the BMMRS). Alpha reliability coefficients for the BMMRS dimensions were comparable to the adult statistics reported in Idler et al. (2003, presented for comparison in parentheses for each subscale).

The Daily Spiritual Experiences (DSE) subscale is composed of 6 items that are ranked on a 6-point Likert scale ranging from *never or almost never* to *many times a day*. Items are designed to measure perceptions of emotional involvement and interaction with the transcendent in daily life (e.g., I feel G-d's presence; I desire to be closer to or in unison with



G-d; I am spiritually touched by the beauty of creation). This scale is the shortened version of a 16-item scale, for use in the BMMRS and the General Social Survey, and previous work with normative population data has found sufficient and comparable validity and reliability for the 6-item version (see Underwood & Teresi, 2002). Items were reversed scored, and the mean was used as an index of overall daily spiritual experiencing, as recommended by Underwood (2006). An  $\alpha$  of .88 ( $\alpha = .91$ ) was achieved in this study.

The Forgiveness subscale contains 3 items meant to assess the degree to which spiritual and religious beliefs impact self-forgiveness, forgiveness by G-d, and forgiveness of others, (e.g., Because of my religious or spiritual beliefs I have forgiven those who hurt me). Items are rated on a 4-point Likert scale ranging from *never* to *always or almost always*. Reliability was acceptably high in this study,  $\alpha = .75$  ( $\alpha = .66$ ).

The Positive Religious Coping subscale is designed to capture how individuals use religion or spirituality to deal with adverse circumstances, seek consolation, and ascribe sense of meaning to events (e.g., I think about how my life is part of a larger spiritual force). The Negative Religious Coping subscale assesses struggle and conflict in religious coping (e.g., I feel that G-d is punishing me for my sins or lack of spirituality). Both subscales included three 4-point Likert scale items ranging from *not at all* to *a great deal*. For Positive Religious Coping, an  $\alpha$  of .78 ( $\alpha = .81$ ) was found; for Negative Religious Coping, reliability was much lower,  $\alpha = .40$  ( $\alpha = .54$ ). Because of Negative Religious Coping's low reliability, it was not included in analyses.

The Congregation Benefits subscale is designed to measure social support as provided by a congregation or religious group (e.g., If you had a problem or were faced with a difficult situation, how much comfort would the people in your congregation be willing to give you?). The Congregation Problems subscale is composed of two items that evaluate the frequency of conflict and negative interpersonal interaction within congregations or other religious groups (e.g., How often are the people in your congregation critical of you and the things you do?). Both subscales are comprised of two items rated on a 4-point Likert scale, with responses ranging from *none* to *a great deal*. Acceptable reliability was achieved in this study for the two subscales:  $\alpha = .82$  for Congregational Benefits ( $\alpha = .86$ ), and  $\alpha = .70$  for Congregational Problems ( $\alpha = .64$ ).

Four single items were taken from the BMMRS that closely approximate the single-item measures of R/S most common across social sci-

ence research (e.g., Diener & Clifton, 2002; Ellison, 1991; see Cotton et al., 2006, and Hill, 2005, for reviews): To what extent do you consider yourself a religious person?, and, To what extent do you consider yourself a spiritual person? (both on a 4-point Likert scale ranging from *very religious[spiritual]* to *not religious[spiritual] at all*). Items gauging religious practice were: How often do you go to religious services? (on a 6-point Likert scale from *More than once a week* to *Never*), and How often do you pray privately in places other than at church, synagogue, or mosque? (on an 8-point Likert scale from *More than once a day* to *Never*).

*Satisfaction with Life Scale.* The Satisfaction With Life Scale (SWLS) measures a cognitive, global assessment of life satisfaction, and has been used with a wide variety of populations, age groups, and community and clinical samples (Diener et al., 1985; Pavot & Diener, 1993). It is a 5-item scale with a coefficient  $\alpha$  of .87, and good test-retest reliability. Its validity has been confirmed in large-sample studies, and with adolescents (e.g., Neto, 1993), and has been consistently found to negatively correlate with clinical measures of depression (see Pavot & Diener, 1993, for a review). While the Students' Life Satisfaction Scale, a non-domain-specific measure presented in language appropriate for grades 3–12, is the more commonly used measure of LS with adolescents, the SWLS was used because of the extended age range of the participants in this study, and to allow for comparisons with the adult literature on LS and R/S (Huebner, 1991, 2004). Convergent and discriminant validity is sufficiently comparable between the two measures (see Huebner, 2004; Pavot & Diener, 1993). In this study, an  $\alpha$  of .82 was found for the Satisfaction with Life Scale ( $\alpha = .87$  is the normative alpha reported in Diener et al., 1985, with a range of .79–.89 reported in Pavot & Diener, 1993).

#### *Data Analysis*

The scale scores were converted from means to z-scores for comparison across dimensions of R/S. Univariate regression analyses were used to predict Life Satisfaction by each of the dimensions of the BMMRS and the four single-item measures of R/S. To identify the unique association between each variable and LS, simultaneous regressions were then run using two models. In the first model, the five dimensions of the BMMRS were used to predict LS, to determine which dimension(s) of the BMMRS most explained the relationship between R/S and LS. After identifying the primary contributor to LS among the

Table 2a. *Mean Scores for Variables and Analyses of Variance by Gender, Ethnicity, and Religion*

Source Demographic	LS <i>M(SD)</i>	Religious <i>M(SD)</i>	Spiritual <i>M(SD)</i>	Pray <i>M(SD)</i>	Attend <i>M(SD)</i>
<b>Gender</b>					
Male	23.7(6.2)	2.6(.9)	2.5(1.0)	4.5(2.5)	3.5(1.7)
Female	24.3(6.3)	2.6(.9)	2.3(0.9)	5.4(2.4)	3.8(1.7)
T-Test (t)	-1.15	1.22	2.42**	-4.45***	-1.49
<b>Ethnicity</b>					
White	24.8(6.2)	2.5(1.0)	2.1(1.0)	4.9(2.6)	3.9(1.8)
Black	24.7(6.6)	2.7(0.9)	2.6(0.8)	5.6(2.2)	3.8(1.8)
Asian	22.2(6.0)	2.6(0.9)	2.5(0.8)	4.8(2.5)	3.3(1.5)
Latino	23.6(6.0)	2.7(0.8)	2.7(1.0)	4.9(2.4)	3.4(1.7)
Mixed	23.6(5.4)	2.6(0.9)	2.4(1.0)	4.9(2.7)	3.6(1.5)
Other	22.2(7.5)	2.7(0.8)	2.4(0.8)	5.1(2.3)	3.2(1.7)
ANOVA (F)	3.45**	1.42	6.46***	1.54	2.77*
<b>Religion</b>					
Catholic	23.9(6.0)	2.6(.8)	2.6(0.8)	4.9(2.4)	3.6(1.6)
Protestant	24.8(5.6)	2.1(.8)	1.9(0.9)	6.3(2.0)	4.8(1.3)
Jewish	24.9(6.4)	2.5(.9)	2.6(0.9)	4.1(2.2)	4.0(1.5)
Atheist	21.5(7.6)	3.7(.5)	2.9(1.0)	1.6(1.8)	1.4(0.7)
Agnostic	23.0(7.0)	3.7(.6)	2.8(1.0)	3.0(2.3)	1.7(1.1)
Buddhist	22.1(6.0)	2.9(.9)	2.5(0.9)	3.6(2.1)	2.9(1.3)
Other	24.1(6.2)	2.5(.8)	2.2(0.9)	5.8(2.3)	3.6(1.6)
ANOVA (F)	2.25*	32.18***	12.43***	32.81***	43.24***

*Note.* LS = Satisfaction with Life. Self-rated religiosity/spirituality items are reverse-coded; lower mean scores for “Religious” and “Spiritual” items indicate higher levels on those variables.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

dimensions of the BMMRS, that dimension was then used to predict LS in a simultaneous regression alongside the four established single-item variables. All regression analyses controlled for age, ethnicity, and religious denomination.

## RESULTS

Tables 2a and 2b present the mean scores and standard deviations for Life Satisfaction, the five dimensions of the Fetzer included in this study, and the four common, single-item indicators of religiosity and

Table 2b. Mean Scores for BMMRS Variables and Analyses of Variance by Gender, Ethnicity, and Religion

Source Demographic	DSE <i>M(SD)</i>	Forgive <i>M(SD)</i>	Pos cpe <i>M(SD)</i>	Cng ben <i>M(SD)</i>	Cng prb <i>M(SD)</i>
<b>Gender</b>					
Male	3.5(1.3)	2.8(.8)	2.3(.9)	3.0(0.9)	2.0(.8)
Female	3.9(1.3)	2.9(.8)	2.5(.8)	3.0(1.0)	2.0(.9)
T-Test (t)	-3.80***	-1.61	-2.74**	-.37	-.52
<b>Ethnicity</b>					
White	3.7(1.4)	2.8(.9)	2.3(.9)	3.1(1.0)	1.8(.7)
Black	3.9(1.2)	3.1(.7)	2.8(.8)	3.1(0.9)	2.2(.9)
Asian	3.5(1.3)	2.7(.7)	2.2(.8)	2.9(1.0)	2.1(.7)
Latino	3.7(1.2)	3.0(.7)	2.6(.8)	2.8(1.0)	2.0(.9)
Mixed	3.5(1.3)	2.9(.7)	2.4(.8)	3.1(0.9)	2.3(.8)
Other	3.8(1.2)	2.8(.8)	2.6(.8)	2.8(1.0)	2.6(.9)
ANOVA (F)	1.23	2.55*	8.58***	2.28*	8.16***
<b>Religion</b>					
Catholic	3.7(1.1)	3.0(.7)	2.7(.8)	2.7(0.9)	2.0(.8)
Protestant	4.5(1.0)	3.4(.5)	2.9(.7)	3.3(0.9)	2.0(.8)
Jewish	3.2(1.2)	2.4(.8)	1.9(.7)	3.2(0.9)	1.9(.7)
Atheist	1.8(0.6)	1.9(.5)	1.2(.3)	1.8(1.0)	1.9(.9)
Agnostic	2.4(1.0)	2.1(.9)	1.8(.8)	2.3(1.1)	1.6(.8)
Buddhist	3.0(1.1)	2.5(.8)	2.0(.7)	2.7(0.9)	2.1(.8)
Other	4.0(1.2)	3.0(.8)	2.5(.8)	3.6(0.8)	2.0(.8)
ANOVA (F)	41.56***	38.12***	30.21***	16.76***	2.16*

Note. DSE = Daily Spiritual Experiences; Forgive = Forgiveness; Pos cpe = Positive Coping; Cng ben = Congregational Benefits; Cng prb = Congregational Problems. \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

spirituality by gender, ethnicity, and religion. Age was not significantly associated with LS, DSE, Congregational Benefits or Problems, Frequency of Prayer, or Degree of Religiosity. Age was significantly correlated with Forgiveness,  $r = -.10$ ,  $p < .05$ ; Positive Coping,  $r = -.15$ ,  $p < .01$ ; Frequency of Attendance,  $r = -.11$ ,  $p < .01$ ; and Degree of Spirituality,  $r = -.12$ ,  $p < .01$ .

Gender was significantly associated with mean scores for Daily Spiritual Experience,  $t(580) = -3.80$ ,  $p < .001$ ; Positive Coping,  $t(574) = -2.74$ ,  $p < .01$ ; Degree of Spirituality,  $t(590) = 2.42$ ,  $p < .01$ ; and Frequency of Prayer,  $t(601) = -4.45$ ,  $p < .001$ , with girls reporting higher levels in each of those dimension than boys, but not with Life

Satisfaction, Degree of Religiosity, Frequency of Attendance, Forgiveness, or Congregational Benefits or Problems.

Ethnicity was significantly associated with mean scores for Life Satisfaction,  $F(5,569) = 3.45, p < .01$ ; Degree of Spirituality,  $F(5,580) = 6.46, p < .001$ ; Frequency of Attendance,  $F(5,582) = 2.77, p < .05$ ; Forgiveness,  $F(5,558) = 2.55, p < .05$ ; Positive Coping,  $F(5,565) = 8.58, p < .001$ ; Congregational Benefits,  $F(5,556) = 2.28, p < .05$ ; and Congregational Problems,  $F(5,549) = 8.16, p < .001$ . Ethnicity was not associated with DSE, Degree of Religiosity, or Frequency of Prayer.

Post-hoc Bonferroni mean comparisons detected multiple significant ( $p < .05$ ) differences, including: Frequency of Attendance, such that Caucasians attended significantly more than Asian Americans; Degree of Spirituality, such that Caucasians reported more spirituality than African Americans, Asian Americans, and Latinos; and Life Satisfaction, such that Caucasians reported greater satisfaction with life than did Asian Americans. With regards to the BMMRS scales, significant differences between ethnic means were found for Forgiveness, in which African Americans reported more forgiveness than Asian Americans; Positive Coping, in which African Americans reported more religious coping than Caucasians and Asian Americans; and Congregational Problems, in which Caucasians reported significantly fewer problems than every ethnic group but the Latino sample.

Religious denomination was significantly associated with mean scores for Life Satisfaction,  $F(6,559) = 2.25, p < .05$ ; Degree of Religiosity,  $F(6,575) = 32.18, p < .001$ ; Degree of Spirituality,  $F(6,570) = 12.43, p < .001$ ; Frequency of Prayer,  $F(6,582) = 32.81, p < .001$ ; Frequency of Attendance,  $F(6,573) = 43.24, p < .001$ ; Daily Spiritual Experience,  $F(6,564) = 41.56, p < .001$ ; Forgiveness,  $F(6,549) = 38.12, p < .001$ ; Positive Coping,  $F(6,556) = 30.21, p < .001$ ; Congregational Problems,  $F(6,538) = 2.16, p < .05$ ; and Congregational Benefits,  $F(6,545) = 16.76, p < .001$ .

Bonferroni mean comparisons uncovered significant ( $p < .05$ ) denominational differences as well, including: Protestants reported higher levels than all other religious denominations in Religious Service Attendance, Degree of Religiosity, Degree of Spirituality, Forgiveness, and Frequency of Prayer (only Other was not significantly different than the Protestant subsample in prayer frequency). Protestants reported higher levels of Positive Religious Coping than every subsample but Catholics, and Atheists reported significantly lower levels than every subsample but Agnostics. In terms of Congregational effects, Protestants reported

Table 3. *Intercorrelations Among Predictor and Dependent Variables*

Variable	1	2	3	4	5	6	7	8	9	10
LS	—									
DSE	.40**	—								
Forgive	.30**	.67**	—							
PosCpe	.27**	.75**	.60**	—						
CngBen	.21**	.36**	.27**	.30**	—					
CngPrb	-.11*	.12**	.05	.18**	.14**	—				
Religious	.21**	.63**	.52**	.53**	.35**	.08	—			
Spiritual	.20**	.54**	.35**	.42**	.25**	.00	.51**	—		
Prayer	.25**	.64**	.55**	.59**	.32**	.08	.54**	.37**	—	
Attend	.12**	.56**	.48**	.47**	.38**	.08	.60**	.37**	.55**	—

*Note:* 1. LS = Life Satisfaction; 2. DSE = Daily Spiritual Experiences; 3. Forgive = Forgiveness; 4. Pos Cpe = Positive Coping; 5. Cng Ben = Congregational Benefits; 6. Cng Prb = Congregational Problems; 7. Religious = Degree of Religiosity; 8. Spiritual = Degree of Spirituality; 9. Prayer = Frequency of Prayer; 10. Attend = Frequency of Religious Service Attendance.

\* $p < .05$ ; \*\* $p < .01$ .

higher levels of Benefits than all denominations except the Jewish and Other subsamples, and Atheists again reported significantly lower levels than every subsample but Agnostics. The only significant denominational difference in Congregational Problems was between Protestants and Agnostics, with Protestants reporting more problems.<sup>1</sup>

Table 3 displays the Pearson correlations between each dimension of the BMMRS, the four single-item measures of R/S, and the LS scale. The BMMRS dimensions were significantly correlated with each other ( $p < .01$ ), comparable to the large sample of adults reported by Idler et al. (2003), with the exception being that Congregational Benefits and Problems were significantly correlated ( $r = .14$ ). The four single-item measures of R/S were all significantly intercorrelated, and each significantly correlated with every dimension of the BMMRS other than Congregational Problems. Life Satisfaction was significantly positively correlated with each of the BMMRS dimensions and the four single-item measures (with positive  $r$ s ranging from Service Attendance,  $r = .12$ , to DSE,  $r = .40$ ), and negatively correlated with Congregational Problems ( $r = -.11$ ).

<sup>1</sup> An exhaustive list of significant ethnic and denominational differences, with levels of significance, can be acquired by email from the primary author.

Table 4. *Summary of Univariate Regression Analyses for Individual Fetzer BMMRS Variables Predicting Satisfaction with Life*

Variable	<i>n</i>	<i>B</i>	<i>SE B</i>	$\beta$
DSE	( <i>n</i> = 544)	3.85	.36	.49***
Forgiveness	( <i>n</i> = 524)	2.84	.38	.37***
Positive Coping	( <i>n</i> = 532)	2.21	.36	.30***
Cong. Benefits	( <i>n</i> = 519)	1.39	.31	.21***
Cong. Problems	( <i>n</i> = 515)	-.69	.33	-.09*

*Note.* Scale scores were converted to z scores, and ethnicity, age, and religion were controlled for in these analyses. DSE = Daily Spiritual Experiences.  
\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Table 5. *Summary of Simultaneous Regression Analysis for Fetzer BMMRS Dimensions Predicting Satisfaction with Life (N = 457)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
DSE	3.31	.55	.42***
Forgiveness	.58	.45	.08
Positive Coping	-.00	.50	-.00
Congregational Benefits	.71	.30	.11*
Congregational Problems	-.60	.32	-.08

*Note.* Scale scores were converted to z scores, and ethnicity, age, and religion were controlled for in this analysis. DSE = Daily Spiritual Experiences.  
\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

#### *Fetzer BMMRS and Life Satisfaction*

Confirming the first hypothesis, Table 4 reports the results of univariate regression analyses, with each of the BMMRS variables significantly predicting LS. Life Satisfaction was most robustly associated with the positive, proximal variables of Daily Spiritual Experience ( $R^2 = .21$ ), followed by Forgiveness ( $R^2 = .14$ ), Positive Religious Coping ( $R^2 = .11$ ), and Congregational Benefits ( $R^2 = .08$ ). Predictably, Life Satisfaction was inversely associated with the negative dimension, Congregational Problems ( $R^2 = .05$ ). Table 5 reports the regression coefficients of each dimension of the BMMRS when all five dimensions are simultaneously used to predict LS, in order to best gauge the relative magnitude of effect. Life Satisfaction remained strongly associated with Daily Spiritual Experience,  $\beta = .42$ ,  $p < .001$ , and mildly associated with Congregational Benefits,  $\beta = .11$ ,  $p < .05$ . However, with all dimensions entered together, DSE rendered the relationship between LS and Forgiveness,

Table 6. *Summary of Univariate Regression Analyses for Individual Variables Predicting Satisfaction with Life*

Variable	<i>n</i>	<i>B</i>	<i>SE B</i>	$\beta$
DSE	( <i>n</i> = 544)	3.85	.36	.49***
Religiosity	( <i>n</i> = 548)	1.33	.31	.21***
Spirituality	( <i>n</i> = 544)	1.20	.29	.19***
Freq. of Prayer	( <i>n</i> = 555)	1.69	.30	.27***
Freq. of Attend	( <i>n</i> = 546)	.57	.32	.09

*Note.* Scale scores were converted to z scores, and ethnicity, age, and religion were controlled for in these analyses. DSE = Daily Spiritual Experiences.  
\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Table 7. *Summary of Simultaneous Regression Analysis for Relative Strength of Variables Predicting Satisfaction with Life (N = 519)*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
DSE	4.15	.49	.53***
Religiosity	-.05	.38	-.01
Spirituality	-.29	.32	-.05
Frequency of Prayer	.57	.36	.09
Frequency of Attend	-.89	.35	-.14*

*Note.* Scale scores were converted to z scores, and ethnicity, age, and religion were controlled for in this analysis. DSE = Daily Spiritual Experiences.  
\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Positive Religious Coping, and Congregational Problems insignificant (the model had an overall  $R^2$  of .29).

#### *R/S Variables and Life Satisfaction*

Table 6 reports the results of univariate regression analyses, with each of the four single-item measures of R/S and DSE predicting LS. Life Satisfaction was highly significantly associated with Daily Spiritual Experience ( $R^2 = .21$ ), and, in support of the hypotheses, was more robustly associated than the distal items, Frequency of Prayer ( $R^2 = .10$ ), or Frequency of Religious Attendance, which was not significant ( $R^2 = .04$ ). In addition, Life Satisfaction was moderately associated with the proximal Degree of Religiosity and Spirituality items, both  $R^2 = .07$ .

Table 7 reports the regression coefficients of each single-item measure of R/S and DSE, when all five variables are simultaneously used to predict LS. Life Satisfaction was again strongly associated with Daily



Spiritual Experience,  $\beta(16,456) = .53, p < .001$ , and that relationship attenuated the significance of Frequency of Prayer and Degree of Religiosity and Spirituality in predicting LS. However, Frequency of Religious Service Attendance went from not significant in univariate analysis to significantly, inversely associated when entered together with DSE and the other single-item measures,  $\beta(16,456) = -.14, p < .05$  (the whole model had an  $R^2$  of .23).

#### *Gender Differences in Daily Spiritual Experience and Life Satisfaction*

Data were stratified by gender, and separate univariate regression analyses were run to examine potential gender differences in the relationship between Life Satisfaction and Daily Spiritual Experience, controlling for age, ethnicity, and religious denomination. The association between Life Satisfaction and Daily Spiritual Experience was of similar magnitude for boys, ( $F[11,211] = 5.63, p < .001, \beta = .51$ ) and girls, ( $F[11,308] = 8.08, p < .001, \beta = .47$ ).

## DISCUSSION

### *Religiosity/Spirituality and Life Satisfaction*

This study explores the association between life satisfaction and spirituality and religion in adolescence. Overall, the findings showed that spirituality and religion were far more robustly associated with life satisfaction in adolescents (predicting 23% and 29% of the variance in life satisfaction, depending on the model used) than in previous studies with adults, in which R/S variables have been found to most commonly account for 1–9% of the variance in life satisfaction (Ciarrocchi & Deneke, 2005; Diener & Clifton, 2002; Diener et al., 1999; Ellison, 1989, 1991). The findings from this study parallel those described in Cotton and colleagues' (2006) review of proximal R/S predictors' effects on mental health. Although they did not include studies with positive psychology outcomes, they found that the majority of studies report an inverse association between proximal R/S variables (such as personal devotion, spiritual meaning making, spiritual social support, etc.) and depressive and anxious symptoms, suicidality, and drug/alcohol use. Also corroborated were studies linking proximal measures of negative R/S (such as negative congregational interactions) with negative out-

comes, in this case lower life satisfaction (see Cotton et al., 2006, for a review). Pollner's (1989) and Ellison et al.'s (1989) findings of strength of personal devotional intensity predicting life satisfaction, beyond demographic variables, religious affiliation, and frequency of religious service attendance, were replicated in this adolescent sample, though with a more refined measure of spiritual experiencing/connectedness. Along with using the multidimensional survey recommended by Cotton and colleagues (2006) and Hill (2005), which investigates both proximal and distal aspects, the findings for life satisfaction in this study substantiate the salubrious effect of positive proximal variables and the detrimental effect of negative facets of R/S on adolescent life satisfaction.

#### *Compared to Secular Variables on Life Satisfaction*

Spiritual and religious variables in this study, both in full models incorporating the BMMRS dimensions and the four single-item proxies, and as captured by individual scales, showed similar associations with life satisfaction as many secular predictors in adolescence. In support of our final hypothesis, the correlations between DSE, Forgiveness, and Positive Religious Coping and Life Satisfaction were higher than any others found in the study, and are comparable to the correlations reported for interpersonal variables, including social support (i.e., social acceptance,  $r = .38$ ; Neto, 1993), positive daily experiences with parents ( $r = .39$ ; McCullough et al., 2000), and family life experiences ( $r = .33$ ; Ash & Huebner, 2001). They also approximate the magnitude of intrapersonal variables, such as self-efficacy ( $r = .37$ ; Neto, 1993) and physical attractiveness ( $r = .32$ ; Neto, 1993), and the impact of acute positive events ( $r = .30$ ; McCullough et al., 2000). In this sample, DSE's association with LS was similar to the effect of self-concept, which was found to account for 26% of the variance in LS in a Portuguese sample of adolescents ( $\beta = .51$ , compared to  $\beta = .49$  and 21% of the variance in LS for DSE in this study), and which is frequently reported as the most significant predictor of adolescent LS (Huebner, 2004; McCullough et al., 2000; Neto, 1993). The findings from this large sample of adolescents suggest that religious and spiritual variables have considerable impact on the life satisfaction of teenagers, and should be considered on a par with the secular variables commonly cited as most influential to SWB.

*The Center of the Association: Daily Spiritual Experiences and  
Life Satisfaction*

To our knowledge, the current study is the first to examine the relationship between R/S, as measured by dimensions of the Fetzer BMMRS (Daily Spiritual Experiences, Forgiveness, Positive Religious Coping, and Congregational Benefits and Problems) and Life Satisfaction in adolescents. Each of the five scales was significantly predictive of LS independently, and simultaneously they accounted for a relatively large proportion of the variance in LS. Daily Spiritual Experience was the most powerful independent predictor, and when together with the other aspects of R/S, absorbed much of the effect of the positive R/S dimensions (i.e., Forgiveness, Positive Religious Coping, and Congregational Benefits).

Daily Spiritual Experience captures subjective, feeling-based spiritual connectedness, and the findings indicate that DSE may be the central ingredient in the relationship between R/S aspects and LS in adolescents. The DSE items measure: feeling G-d's presence (transcendence), finding strength and comfort in religion (function), feeling deep peace or harmony (consequence), desiring unison with G-d (aspiration to transcendence), personally feeling G-d's love directly or through others (trans/interpersonal grace), and being spiritually touched by the beauty of creation (appreciation). The scale is meant to measure a person's unmediated spiritual perception of the transcendent, focusing on daily experience rather than beliefs or practices, or rare mystical experiences (Underwood, 2006; Underwood & Teresi, 2002). Previous research on its association with mental health shows DSE to be negatively associated with anxiety, depression, stress, and alcohol consumption, and positively correlated with quality of life, optimism, and perceived social support in adult women (reported in Underwood & Teresi, 2002; replicated in an internet sample including men, Kalkstein, 2006). Also in research with adults, DSE (unlike Congregational Benefits and Problems) significantly contributed to LS over and above the influence of personality, though it explained only 1% of the variance beyond demographic, personality, and religious support variables (Ciarrocchi & Deneke, 2005). For the first time in a large sample of adolescents, DSE was investigated with a positive outcome, and findings showed a much stronger correlation between those variables ( $r = .40$  compared to  $r = .21$ ), and beta weight in regressions ( $\beta = .49$  compared to  $\beta = .11$ ), though this study did not control for personality.

The strength of association found demonstrates a powerful relationship between the spiritual, “experiential and emotional details of daily life” (p. 5), with a global, cognitive assessment of one’s satisfaction with life in adolescence (Underwood, 2006). While a study with college students found DSE to be positively associated with positive affect and not related to negative affect, this study shows that DSE is also highly related to the cognitive and self-evaluative component of SWB in adolescents (Underwood & Teresi, 2002). When entered simultaneously with other dimensions of R/S found in the literature to correlate positively with SWB and negatively with psychiatric symptoms (e.g., religious social support, religious coping, prayer, and service attendance), DSE’s association was found to be several magnitudes larger than those other aspects, and to attenuate the significance of their relationships to LS. Furthermore, though girls report more daily spiritual experiences than boys, the positive relationship between DSE and LS exists irrespective of gender, a finding that stands in contrast to the differential effect of R/S variables on depressive symptomatology in several studies of adolescent boys and girls (e.g., Miller, Warner, Wickramaratne, & Weissman, 1997; Pearce et al., 2003; cf. Cotton, Larkin, Hoopes, Cromer, & Rosenthal, 2005, which found no significant gender effect). As Underwood has described, the scale arose from perceiving a gap in the measurement of R/S, and that the construction of the DSE scale was an attempt to pinpoint the critical ingredient in people’s day-to-day spiritual lives (Underwood & Teresi, 2002). The results from this adolescent sample suggest that DSE is capturing a fundamental aspect of spirituality in youth, one that is both robustly predictive of LS and intricately related to the other dimensions of R/S investigated (Underwood, 2006; Underwood & Teresi, 2002).

#### *Forgiveness and Positive Religious Coping*

The associations found between the other dimensions of the BMMRS and LS contribute to the sparse literature on adolescent R/S and positive psychological/social outcomes. This study found that Forgiveness is positively associated with LS in a diverse sample of adolescents, but that that relationship is weakened by the strength of DSE’s effect. Feeling forgiven by G-d, forgiving oneself, and forgiving others as a result of religious or spiritual beliefs may be thought of as the interpersonal (or transpersonal) manifestations of a spiritual orientation towards experience in daily life, which is further supported by the high correlation

found between the two scales in this study ( $r = .67$ , compared to .40 reported in Idler et al., 2003; see McCullough, Bono, & Root, 2005, for an extensive review of R/S forgiveness in adults). Similarly, the strong association between Positive Religious Coping and LS became insignificant in the presence of DSE, and the two constructs were also highly correlated ( $r = .75$ ). Finding religious or spiritual ideas at the core of why things happen and the best way of handling them may be a further extension of the everyday spiritual orientation captured by the DSE scale (see Mahoney, Pendleton, & Ihrke, 2006, for a discussion of Positive Religious Coping in youth). These mediating effects in simultaneous models, along with the strong intercorrelations, indicate that further methodological and empirical research needs to be conducted to disentangle the unique make-up and effects of these aspects of religiosity and spirituality, specifically in adolescence.

While causality is impossible to identify in cross-sectional research, the consistent pattern of independent significance reduced by DSE in predicting life satisfaction demonstrates that a range of R/S dimensions, including Forgiveness and Positive Religious Coping (along with Frequency of Prayer and Degree of Religiosity and Spirituality), may be secondary, vis-à-vis life satisfaction, to the process of finding spiritual connectedness and experiences in daily life. Underwood and Teresi (2002) describe this underlying and elemental quality, "The DSE construct represents those aspects of life that make up day-to-day spiritual experience for many people, a *more direct assessment* of some of the more common processes through which the larger concepts of religiousness and spirituality are involved in everyday life" (p. 23, italics added). Mirroring this finding with LS, a close personal connection to the transcendent (or G-d) has been shown to be among the most robust protective factors against psychopathology in adolescents (as reviewed in Miller and Kelley, 2005, 2006). This parallel suggests that future research, particularly around intervention, treatment, and youth development might focus on a personal, lived spiritual connection to the transcendent.

#### *The Independence of Congregational Effect*

The unique acceptance, social support, and shared existential orientation characteristic of religious congregations have been theorized as a primary mediator in the relationship between R/S and well-being (e.g., Argyle, 1999; Idler et al., 2003; Wallace & Williams, 1997). The posi-

tive and protective effects of religious congregations and social support have been well documented in adult samples (e.g., Cohen, Underwood, & Gottlieb, 2000; Koenig, McCullough, & Larson, 2001; Strawbridge, Shema, Cohen, & Kaplan, 2001; see Oman & Thoresen, 2005), and to a lesser extent in adolescent samples (e.g., Miller & Gur, 2002b; Smith, 2003; King & Furrow, 2004; Wallace & Williams, 1997). Pearce, Little, and Perez (2003) included the Congregational Benefits/Problems subscales from the BMMRS in a study of adolescent depression, and found that Congregational Problems significantly predicted depressive symptoms, while Congregational Benefits predicted fewer depressive symptoms, even after controlling for demographics, degree of Religiosity/Spirituality, and private religious practice.

Our findings buttress the argument that these social aspects of R/S are important to the mental health of adolescents, albeit with a positive rather than negative outcome measure, and support Pearce et al.'s (2003) finding that these aspects are stronger predictors of psychological functioning than frequency of religious service attendance (see also Fiala, Bjorck, & Gorsuch, 2002, who empirically disentangled religious from secular social support). Moreover, Congregational Benefits was the only positive dimension of the BMMRS to remain significant when DSE was in the model, while religious service attendance was found not to predict LS independently, and became negatively significant when DSE was included. This demonstrates that for adolescents, the support and comfort found within a religious congregation has more salience for their satisfaction with life than the mere frequency of their churchgoing, and that this effect is somewhat independent from the potency of DSE.

The significance of Congregational Problems' inverse relationship with LS adds to the growing literature on the potential for religious congregations to be perceived as judgmental and unsupportive (see Exline & Rose, 2005, for a review). While the inclusion of DSE weakened the associations between the positive BMMRS dimensions on LS, the effect of Congregational Problems was largely unaltered in the simultaneous models, indicating an opposing valence in the sequelae of R/S aspects founded on a positive, spiritual orientation to life from those marked by conflict, dogmatism, or criticism.

*Limitations and Conclusion*

Limitations of this study include its cross-sectional design, which does not allow for inferences about the causal relationship between R/S aspects and life satisfaction. It may be the case that higher life satisfaction results in more frequent daily spiritual experiences, or higher scores on the other dimensions of the BMMRS. The convenience sampling approach, while tapping into a much-needed diversity of religious denominations and ethnicities in the population, prevents generalizations about adolescents in the United States as a whole. The combination of internet and pencil-and-paper surveys holds the potential to increase error in the models, but no significant differences were found in the patterns of results in the two methods, and the benefits of internet research are generally thought to outweigh the limitations (e.g., Gosling, Vazire, Srivastava, & John, 2004; Kraut, Olsen, Banaji, Bruckman, Cohen, & Cooper, 2004). Additionally, this study did not incorporate personality variables, which have been shown in adult samples to significantly mediate the relationship between R/S and well-being (e.g., Ciarrocchi & Deneke, 2005). For example, extending research that suggests that the personality dimension most associated with spirituality, Openness to Experience, is malleable and at its height during adolescence, its inclusion into models of spiritual well-being would contribute to current knowledge of the interplay between trait and state characteristics with R/S and positive psychology outcomes (Kelley, Athan, & Miller, 2007; McCrae et al., 2002; Piedmont, 2005).

As described in the introduction, single or few item measures of R/S have been the typical assessment included in studies of adolescent mental health and illness, if they are included at all. While significantly associated individually with LS, Degree of Religiosity, Degree of Spirituality, and Frequency of Prayer each lost their predictive strength when DSE was also in the model, and the scales exploring unique aspects of R/S in depth displayed stronger relationships with LS than the single item proxies. These findings lend support to the consensus within the psychology of religion and spirituality to consider the multiple aspects/dimensions of the religious and spiritual life, and to use measures with the breadth and sophistication to match one of humankind's most multifaceted activities.

Scholars of LS have observed that individuals consider different components of their lives, and weigh these components differently, in

their global assessment of life satisfaction (Diener et al., 1985; Pavot & Diener, 1993). The results presented in this study indicate that daily spiritual experiences and orientations are strongly related to life satisfaction in adolescents, making it likely that religion and spirituality are considered components in the makeup of teens' assessments of their lives. This ability to find spiritual engagement in daily experiences may also be central to the interpersonal and resilience-related dimensions of forgiveness and positive religious coping in predicting life satisfaction, and, as a personal orientation, seems to be largely distinct from the positive or negative potential inherent in religious congregations. In the developmental passage of adolescence—marked by strong peer influences, achievement goals, and familial and community socialization factors—findings from this study suggest that life satisfaction appears most highly predicted by personal, direct experiences of spirituality. The profound contribution of daily spiritual experiences to adolescent life satisfaction merits further study, as well as integration into interventions that facilitate positive youth development.

#### REFERENCES

- Almabuk, R. H., Enright, R. D., & Cardis, P. A. (1995). Forgiveness education with parentally love-deprived late adolescents. *Journal of Moral Education, 24*, 427–444.
- American Psychological Association (2002). Ethical principles of psychologists and code of conduct. *American Psychologist, 57*, 1060–1073.
- Argyle, M. (1999). Causes and correlates of happiness. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 353–373). New York: Russell Sage Foundation.
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist, 55*(5), 469–480.
- Arnett, J. J., & Tanner, J. L. (Eds.). (2006). *Emerging adults in America: Coming of age in the 21st century*. Washington, DC: American Psychological Association.
- Ash, C., & Huebner, E. S. (2002). Environmental events and life satisfaction reports of adolescents: A test of cognitive mediation. *School Psychology International, 22*, 320–336.
- Ciarrocchi, J. W., & Deneke, E. (2005). Happiness and the varieties of religious experience: Religious support, practices, and spirituality as predictors of well-being. *Research in the Social Scientific Study of Religion, 15*, 209–233.
- Cohen, A. B. (2002). The importance of spirituality in the well-being of Jews and Christians. *Journal of Happiness Studies, 3*, 287–310.
- Cohen, A. B., Pierce, J. D., Jr., Chambers, J., Meade, R., Gorvine, B. J., & Koenig, H. G. (2005). Intrinsic and extrinsic religiosity, belief in the afterlife, death anxiety, and life satisfaction in young Catholics and Protestants. *Journal of Research in Personality, 39*, 307–324.
- Cohen, S., Underwood, L., & Gottlieb, B. (Eds.) (2000). *Social support measurement and intervention: A guide for health and social scientists*. New York: Oxford University Press.



- Cotton, S., Larkin, E., Hoopes, A., Cromer, B. A., & Rosenthal, S. L. (2005). The impact of adolescent spirituality on depressive symptoms and health risk behaviors. *Journal of Adolescent Health, 36*, 529–536.
- Cotton, S., Zebracki, K., Rosenthal, S. L., Tsevat, J., & Drotar, D. (2006). Religion/spirituality and adolescent health outcomes: A review. *Journal of Adolescent Health, 38*, 472–480.
- Diener, E., & Clifton, D. (2002). Life Satisfaction and religiosity in broad probability samples. *Psychological Inquiry, 13*, 206–209.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment, 49*, 71–75.
- Diener, E., & Lucas, R. E. (2003). Personality and subjective well-being. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of a hedonic psychology*. New York: Russell-Sage.
- Diener, E., & Suh, E. M. (Eds.). (2000). *Culture and subjective well-being*. Cambridge, MA: MIT Press.
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin, 125*, 276–302.
- Eid, M., & Diener, E. (2004). Global judgments of subjective well-being: Situational variability and long-term stability. *Social Indicators Research, 65*(3), 245–277.
- Ellison, C. G. (1991). Religious involvement and subjective well-being. *Journal of Health and Social Behavior, 32*, 80–99.
- Ellison, C. G., Gay, D. A., & Glass, T. A. (1989). Does religious commitment contribute to individual life satisfaction? *Social Forces, 68*(1), 100–123.
- Exline, J. J., & Rose, E. (2005). Religious and spiritual struggles. In R. F. Paloutzian & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pg. 315–330). New York: Guilford Press.
- Ferriss, A. L. (2002). Religion and the quality of life. *Journal of Happiness Studies, 3*, 199–215.
- Fetzer Institute & National Institute on Aging Working Group. (1999). *Multidimensional measurement of religiosity/spirituality for use in health research*. Kalamazoo, MI: Fetzer Institute.
- Fiala, W. E., Bjorck, J. P., & Gorsuch, R. (2002). The religious support scale: Construction, validation, and cross-validation. *American Journal of Community Psychology, 30*(6), 761–786.
- Fogle, L. M., Huebner, E. S., & Laughlin, J. E. (2002). The relationship between temperament and life satisfaction in early adolescence: Cognitive and behavioral mediation models. *Journal of Happiness Studies, 3*, 373–392.
- Gosling, S. D., Vazire, S., Srivastava, S., & John, O. P. (2004). Should we trust web-based studies? *American Psychologist, 59*(2), 93–104.
- Hill, P. C., & Hood, R. W. (1999). *Measures of religiosity*. Birmingham, Alabama: Religious Education Press.
- Hill, P. C. (2005). Measurement in the psychology of religion and spirituality: Current status and evaluation. In R. F. Paloutzian & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pg. 44–61). New York: Guilford Press.
- Huebner, E. S. (1991). Correlates of life satisfaction in children. *School Psychology Quarterly, 6*, 103–111.
- Huebner, E. S., Drane, W., & Valois, R. F. (2000). Levels and demographic correlates of adolescent life satisfaction reports. *School Psychology International, 21*, 281–292.
- Huebner, E. S. (2004). Research on assessment of life satisfaction of children and adolescents. *Social Indicators Research, 66*, 3–33.
- Idler, E. L., Musick, M. A., Ellison, C. G., George, L. K., Krause, N. et al. (2003). Measuring multiple dimensions of religion and spirituality for health research: Conceptual background and findings from the 1998 General Social Survey. *Research on Aging, 25*(4), 327–365.

- Kalkstein, S. (2006). *The Daily Spiritual Experiences Scale and psychological and physical well-being: Demographic comparisons, scale validation, and outcome measures*. Unpublished doctoral dissertation, Teachers College, Columbia University.
- Kelley, B. S., Athan, A. M., & Miller, L. F. (2006). Openness and spiritual development in adolescents. *Research in the Social Scientific Study of Religion*, 18, 3–33.
- Kendler, K. S., Liu, X., Gardner, C. O., McCullough, M. E., Larson, D., & Prescott, C. A. (2003). Dimensions of religiosity and their relationship to lifetime psychiatric and substance use disorders. *American Journal of Psychiatry*, 160(3), 496–503.
- King, P. E., & Furrow, J. L. (2004). Religion as a resource for positive youth development: Religion, social capital, and moral outcomes. *Developmental Psychology*, 40, 703–713.
- King, P. E., & Benson, P. L. (2006). Spiritual development and adolescent well-being and thriving. In E. Roehlkepartain, P. E. King, L. Wagener, & P. Benson (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 384–398). Thousand Oaks, CA: Sage Publications.
- Koenig, H. G., McCullough, M. E., & Larson, D. B. (2001). *Handbook of religion and health*. New York: Oxford University Press.
- Kraut, R., Olson, J., Banaji, M., Bruckman, A., Cohen, J., & Couper, M. (2004). Report of board of scientific affairs' advisory group on the conduct of research on the internet. *American Psychologist*, 59(2), 105–117.
- Lerner, R. M., Dowling, E. M., & Anderson, P. M. (2003). Positive youth development: Thriving as the basis of personhood and civil society. *Applied Developmental Sciences*, 7(3), 171–179.
- Levenson, M. R., Aldwin, C. M., & D'Mello, M. (2005). Religious development from adolescence to middle adulthood. In R. F. Paloutzian & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pp. 144–161). New York: Guilford Press.
- Levin, J. S., & Chatters, L. M. (1998). Research on religion and mental health: An overview of empirical findings and theoretical issues. In H. G. Koenig (Ed.), *Handbook of religion and mental health* (pp. 33–50). San Diego, CA: Academic Press.
- Mahoney, A., Pendleton, S., & Ihrke, H. (2006). Religious coping by children and adolescents: Unexplored territory in the realm of spiritual development. In E. Roehlkepartain, P. E. King, L. Wagener, & P. Benson (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 341–354). Thousand Oaks, CA: Sage Publications.
- McCrae, R. R., Costa, P. T., Terracciano, A., Parker, W. D., Mills, C. J., De Fruyt, F. et al. (2002). Personality trait development from age 12 to age 18: Longitudinal, cross-sectional, and cross-cultural analyses. *Journal of Personality and Social Psychology*, 83(6), 1456–1468.
- McCullough, G., Huebner, E. S., & Laughlin, J. E. (2000). Life events, self-concept, and adolescents' positive subjective well-being. *Psychology in the Schools*, 37, 281–290.
- McCullough, M. E., Bono, G., & Root, L. M. (2005). Religion and forgiveness. In R. F. Paloutzian & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pg. 394–411). New York: Guilford Press.
- McCullough, M. E., & Synder, C. R. (2000). Classical source[s] of human strength: Revisiting an old home and building a new one. *Journal of Social and Clinical Psychology*, 19, 1–10.
- McMahon, D. M. (2006). *Happiness: A history*. New York: Atlantic Monthly Press.
- Miller, L., & Gur, M. (2002a). Religiosity, depression, and physical maturation in adolescent girls. *Journal of the American Academy of Child and Adolescent Psychiatry*, 41(2), 206–214.
- Miller, L., & Gur, M. (2002b). Religiosity and sexual responsibility in adolescent girls. *Journal of Adolescent Health*, 31, 401–406.
- Miller, L., & Kelley, B. S. (2005). Relationships of religiosity and spirituality with mental health and psychopathology. In R. F. Paloutzian & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pp. 460–478). New York: Guilford Press.

- Miller, L., & Kelley, B. (2006). Spiritually oriented psychotherapy with youth: A child-centered approach. In E. Roehlkepartain, P. E. King, L. Wagener, & P. Benson (Eds.), *The handbook of spiritual development in childhood and adolescence* (pp. 421–434). Thousand Oaks, CA: Sage Publications.
- Miller, L., Warner, V., Wickramaratne, P., & Weissman, M. (1997). Religiosity and depression: Ten-year follow-up of depressed mothers and offspring. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36(10), 1416–1425.
- Myers, D. G. (1992). *The pursuit of happiness: Who is happy—and why*. New York: William Morrow and Co.
- Myers, D. G. (2000). The funds, friends, and faith of happy people. *American Psychologist*, 55(1), 56–67.
- Neto, F. (1993). The Satisfaction with Life Scale: Psychometrics properties in an adolescent sample. *Journal of Youth and Adolescence*, 22(2), 125–134.
- Oman, D., & Thoresen, C. E. (2005). Do religion and spirituality influence health? In R. F. Paloutzian & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pg. 435–459). New York: Guilford Press.
- Pargament, K. I. (1997). *The psychology of religion and coping: Theory, research, practice*. New York: Guilford Press.
- Pargament, K. I., & Mahoney, A. (2002). Spirituality: Discovering and conserving the sacred. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 646–659). New York: Oxford University Press.
- Pargament, K. I., Tarakeshwar, N., Ellison, C. G., & Wulff, K. M. (2001). Religious coping among the religious: The relationship between religious coping and well-being in a national sample of Presbyterian clergy, elders, and members. *Journal for the Scientific Study of Religion*, 40, 497–514.
- Park, N., & Huebner, E. S. (2005). A cross-cultural study of the levels and correlates of life satisfaction among adolescents. *Journal of Cross-Cultural Psychology*, 36(4), 444–456.
- Pavot, W., & Diener, E. (1993). Review of the Satisfaction With Life Scale. *Psychological Assessment*, 5, 164–172.
- Pearce, M. J., Jones, S. M., Schwab-Stone, M. E., & Ruchkin, V. (2003). The protective effects of religiousness and parent involvement on the development of conduct problems among youth exposed to violence. *Child Development*, 74, 1682–1696.
- Pearce, M. J., Little, T. D., & Perez, J. E. (2003). Religiousness and depressive symptoms among adolescents. *Journal of Clinical Child and Adolescent Psychology*, 32, 267–276.
- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. New York: Oxford University Press.
- Piedmont, R. L. (2005). The role of personality in understanding religious and spiritual constructs. In R. F. Paloutzian & C. L. Park (Eds.), *Handbook of the psychology of religion and spirituality* (pg. 253–273). New York: Guilford Press.
- Pollner, M. (1989). Divine relations, social relations, and well-being. *Journal of Health and Social Behavior*, 30(1), 92–104.
- Rigby, B. T., & Huebner, E. S. (2005). Do causal attributions mediate the relationship between personality characteristics and life satisfaction in adolescence? *Psychology in the Schools*, 42(1), 91–99.
- Smith, C. (2003). Theorizing religious effects among American adolescents. *Journal for the Scientific Study of Religion*, 42(1), 17–30.
- Smith, C., & Faris, R. (2002). *Religion and the life attitudes and self-images of American adolescents*. Chapel Hill, NC: National Study of Youth and Religion.
- Strawbridge, W. J., Shema, S. J., Cohen, R. D., & Kaplan, G. A. (2001). Religious attendance increases survival by improving good health practices, mental health, and stable marriages. *Annals of Behavioral Medicine*, 23, 68–74.
- Stubbe, J. H., Posthuma, D., Boomsma, D. I., & DeGeus, E. J. C. (2005). Heritability of life satisfaction in adults: A twin-family study. *Psychological Medicine*, 35, 1581–1588.

- Traphagan, J. W. (2005). Multidimensional measurement of religiousness/spirituality for use in health research in cross-cultural perspective. *Research on Aging, 27*(4), 387–419.
- Tsang, J., & McCullough, M. E. (2003). Measuring religious constructs: A hierarchical approach to construct organization and scale selection. In S. J. Lopez & C. R. Snyder (Eds.), *Positive psychological assessment: A handbook of models and measures* (pp. 345–360). Washington, DC: American Psychological Association.
- Underwood, L. G. (2006). Ordinary spiritual experience: Qualitative research, interpretive guidelines, and population distribution for the Daily Spiritual Experiences Scale. *Archive for the Psychology of Religion/Archiv für Religionspsychologie, 28*, 181–218.
- Underwood, L. G., & Teresi, J. A. (2002). The Daily Spiritual Experience Scale: Development, theoretical description, reliability, exploratory factor analysis, and preliminary construct validity using health-related data. *Annals of Behavioral Medicine, 24*(1), 22–33.
- Vaughn, A. A., & Roesch, S. C. (2003). Psychological and physical health correlates of coping in minority adolescents. *Journal of Health Psychology, 8*, 671–683.
- Wallace, J. M., Jr., & Williams, D. R. (1997). Religion and adolescent health-compromising behavior. In J. Schulenberg & J. L. Maggs (Eds.), *Health risks and developmental transitions during adolescence* (pp. 444–468). New York: Cambridge University Press.
- Wills, T. A., Yaeger, A. M., & Sandy, J. M. (2003). Buffering effect of religiosity for adolescent substance abuse. *Psychology of Addictive Behavior, 17*, 24–31.
- Zullig, K. J., Valois, R. F., Huebner, E. S., & Drane, J. W. (2005). Associations among family structure, demographics, and adolescent perceived life satisfaction. *Journal of Child and Family Studies, 14*(2), 195–206.



# THE RELATIONSHIP BETWEEN SPIRITUALITY, ASSESSED THROUGH SELF-TRANSCENDENT GOAL STRIVINGS, AND POSITIVE PSYCHOLOGICAL ATTRIBUTES

*Gary K. Leak, Kristina M. DeNeve, and Adam J. Greteman\**

## ABSTRACT

Emmons (1999) demonstrated that spiritual motivations can be assessed through personal goal strivings that are oriented toward the transcendent. This study used a nomothetic approach to the measurement of goal strivings and attempted to link spiritual strivings to many of the attributes (a) championed by the *positive psychology* movement (e.g., Seligman, 2002) and (b) consistent with classic theories of healthy personality development and functioning (e.g., Erikson, 1968; Maslow, 1971; Ryan & Deci, 2000, 2001; Schwartz, 1992). Using a sample of college students, we found that spiritual, self-transcendent strivings were related as predicted with positive emotions (e.g., vitality and zest, satisfaction with life), psychological health (achieved identity, self-actualization tendencies), sense of meaning and purpose (self-actualization), capacity for intimate and selfless interpersonal relationships (secure attachments, intimacy, and generativity), other-oriented vs. self-oriented values (benevolence and universalism vs. power and hedonism), and healthy, intrinsic vs. egocentric motivations (intimacy vs. power). With only a few exceptions this research demonstrated that (a) goal strivings can be successfully assessed through a nomothetic strategy and (b) spirituality, approached via self-transcendent goal strivings, is related to a variety of positive characteristics consistent with positive psychology theory.

## PSYCHOLOGY, RELIGION, AND WELL-BEING

Psychologists have theorized for over a century about the link between religiousness and personal well-being (James, 1902). It was not until the past few decades, however, that empirical advances have been made in this arena, illustrated, for example, by Batson and his colleagues' extensive work on religious dispositions and well-being (see Batson, Schoenrade, & Ventis, 1993, for a summary). Other researchers (e.g., Emmons, 1996; Koenig, 1998) have found that religiousness and spirituality, conceptualized in a variety of ways, have been positively associated

---

\* The authors wish to thank the Kripke Center for the Study of Religion and Society for a small grant that supported writing this manuscript. We wish to thank Laura Finken and an anonymous reviewer for several insightful comments. We also wish to thank pastor Don Shane, theologian Andy Alexander, S. J. and Sr. Margaret Hickey for their help with the goal strivings survey.

with physical health, subjective well-being, self-esteem, and negatively associated with depression, anxiety, and social maladjustment.

### THE EMERGING FIELD OF POSITIVE PSYCHOLOGY

The positive psychology movement (e.g., Seligman & Csikszentmihalyi, 2000; Snyder & Lopez, 2002) represents a striking contrast to the negative and often narcissistic view of human functioning prominent during the 20th Century. Positive psychology has generated a great deal of interest and even excitement among personality psychologists and clinicians in part because it sees human strengths as protective factors militating against pathology (Seligman, Steen, Park, & Peterson, 2005). This movement seeks to compensate for psychology's traditional and some would say distorted and unbalanced emphasis on the negative in human functioning, that is, psychology as the study of weakness, passivity, disease, and victimhood. Instead, positive psychology focuses on human strengths and virtues that serve as sources of personal growth as well as acting as buffers against mental illness (Seligman, 2002). Seligman presents positive psychology as the study of positive intrapersonal, interpersonal, and civic virtues, such as the capacity for courage, love, forgiveness, responsibility, positive subjective experiences, and transcendence. A good sense of what positive psychology focuses on can be gleaned by examining the table of contents of the *Handbook of Positive Psychology* (Snyder & Lopez, 2002) and *Positive Psychology: The Scientific and Practical Explorations of Human Strengths* (Snyder & Lopez, 2007).

### SPIRITUALITY AS SELF-TRANSCENDENCE

To a Christian theologian, the Holy Spirit is the source of love of God and others as well as for union with God and fellow humans. As Hauser has stated: "These goals...are not adequate expressions of Christian spirituality because they are primarily self-centered...All valid New Testament approaches to spirituality are other-centered" (1986, p. 8). A personality psychologist offers this similar view of spirituality: "[it] encompasses a search for meaning, for unity, for connectedness, for transcendence, and for the highest of human potential" (Emmons, 1999, p. 5). Lives imbued with spirituality place value on and orient themselves toward something that is beyond and larger than themselves. From this perspective, then, spirituality is in its essence self-transcendence. Spirit-

tuality facilitates the integration of the self with things beyond the self, such as one's community, humanity, or the divine. Emmons has provided persuasive empirical evidence that spirituality is fruitfully seen as a phenomenon grounded in transcendence of the self. This notion is also consistent with classic theorizing in personality. For example, Maslow's (1971) final statement of this theory (unknown to most psychologists and published posthumously) emphasized self-transcendence as the final level of health beyond even self-actualization (i.e., one's motivation to actualize the self has been replaced, transcended, by the motivation to serve others). The existential therapist Frankl (1973) believed that self-transcendence is the source of personal meaning in life (one will "find identity to the extent to which he commits himself to something beyond himself," Frankl, p. 20). Finally, Wong (1998) presented evidence from factor analysis that religion and self-transcendence are two of seven keys or "roads" to a meaningful life.

#### PERSONAL GOAL STRIVINGS, SPIRITUALITY, AND WELL-BEING

Emmons (1997), among others, has championed the study of personal goals as a way to understand the dynamics of one's motivations and personality. He believes that one's strivings for personally meaningful and self-chosen goals reflect fundamental characteristics of a person (i.e., the concrete manifestation and personalization of key needs and motivation). For example, Emmons claims, "Personal strivings... constitute an important source of meaning as people's lives are structured around what they are trying to accomplish" (1999, p. 29).

The character of an individual's spirituality has an influence on the daily choices one makes and the goals the person strives toward. It follows that personal spirituality, as a motivational force directing and energizing behavior, would impact the choice of goals people frequently pursue and avoid. Research has shown that the content of one's goal strivings has consequences for well-being. In particular, the pursuit of goals that are spiritual and reflect people's ultimate concerns have been associated with physical health and psychological well-being (Emmons, 1996, 1999). He has cited research indicating that certain goal strivings, such as intimacy and affiliation, predict personal well-being, while other strivings that focus excessively on the self (e.g., power), carry personal and relational costs. Emmons, Cheung, and Tehrani (1998) found that one's spiritual strivings were related to higher levels



of well-being, including a sense of purpose in life, marital satisfaction, and life satisfaction. Emmons (1999) speculates that spiritual goal strivings have beneficent consequences for psychological health because they generate less internal goal conflict, and also because of their impact on one's sense of empowerment and the stability and sense of meaning and coherence they import, all key notions within positive psychology. Emmons' primary thesis is this: "A life that is centered on authentic spiritual goal strivings ought to result in a life that is meaningful, valuable, and purposeful, and that is what the data on personal strivings appear to show" (1999, p. 109).

#### CONCEPTUAL OVERLAP OF SPIRITUALITY AND POSITIVE PSYCHOLOGY

Positive psychology emphasizes (a) the absence of self-absorption, egocentricity, and an over-identification with the self, and focuses instead on (b) the fulfillment of intrinsic human potentials for growth and maturity. The overlap of spirituality-as-self-transcendence with the new positive psychology as well as classic humanistic-existential personality psychology hinges on the notion that "...growth involves replacing the self as the source of ultimate concern with family, community, humanity, and divinity" (Emmons, 1999, p. 109), along with the belief that self-transcendent goal strivings should help to create a life blessed with value, purpose, and meaning (i.e., that self-transcendence is the apex of self-actualization; Maslow, 1971), and generativity as the ultimate in self-development (Erikson, 1963). In a more focused way, a spirituality-positive psychology integration can be found in various chapters of the two positive psychology books mentioned above. For example, Tangney's (2002) chapter on humility emphasized that true humility is a forgetting of the self, and it is the antithesis of narcissism and grandiosity. She links excessive focus on the self with a wide variety of psychological symptoms. Other chapters in the *Handbook* congruent with self-transcendence include love, relationship connection, empathy, and altruism. Seligman (2002), the founder of positive psychology, considers transcendence/spirituality as one of the six core characteristics or "virtues" upon which positive psychology rests. In summary, there is considerable overlap between self-transcendent spiritual strivings and fundamental aspects of positive psychology.

## PURPOSE OF THIS RESEARCH

Our study follows from Emmons' (1999) research linking spiritual strivings and positive personal outcomes. His conclusion, grounded in a respected program of research, justifies the further exploration of spirituality, conceptualized as self-transcendent strivings, and various positive personal attributes focused upon by positive psychology and classic theories in humanistic personality psychology.

Spirituality and religiousness are usually assessed through self-report instruments such as Batson et al.'s (1993) Quest scale or the Allport and Ross Intrinsic Religiosity scale (cited in Batson et al.). One of the potential advantages of our research is that we used personal goal strivings instead of these traditional instruments to assess spiritually-based motivations, and then used them to explore the link between spirituality and positive functioning. As stated before, our values, motives, and ideals are carried over into our choice of daily goals, and goal strivings have been profitably used to (a) infer internal dynamics of personality and spirituality and (b) predict healthy and unhealthy personal characteristics. In sum, this research extends earlier spirituality-positive functioning work in two ways. First, it utilized a relatively new approach to the measurement of two self-transcendent goal strivings—theistic and spiritual-based—using a nomothetic strategy (vs. Emmons' ideographic approach), and second, it examined the connections between these strivings and several traditional (e.g., subjective well-being; self-actualization; Emmons, 1999) as well as previously unexplored outcome variables within the positive psychology field (e.g., measures of healthy personality development from an Eriksonian framework and mature values using Schwartz's [1992] value system).

Emmons (1999) has claimed, "When people orient their lives around the attainment of spiritual ends, they tend to experience their lives as worthwhile, unified, and meaningful" (p. 104). Our predictions follow from that statement: self-transcendence, reflected in personal, daily theistic and spiritual strivings (i.e., self-transcendence), should be positively related to key aspects of healthy functioning across a variety of domains, including values, traits, and motives. (The specific hypotheses can be found in the Method section, as well as an elaboration of the distinction between spiritual and theistic strivings.)

## METHOD

### *Participants*

The participants were 134 undergraduate students at Creighton University (67% women;  $M_{\text{age}} = 19.7$ ,  $S = 2.2$ , range = 17 to 38) who received either course credit (Introductory) or extra credit (other courses) for their participation. The subjects signed-up for a project on “Religiousness and Personality” and were run in groups of 10–15.

### *Materials*

*Goal strivings.* Leak (2005) constructed a 66-item self-report survey of typical, daily goal strivings. The majority of the themes or goals were taken directly from those reported by Emmons (1999) from his list of ideographically-generated goal strivings, while the remaining were developed by Leak directly from the definition of a particular striving (e.g., *self-oriented*, *competitive strivings* were represented with, for example, “Argue my point forcefully; to win in arguments” and “Win at all competitive events”). The goal strivings were classified as *theistic* (13 items with an explicit mention of God; see Emmons, p. 127 for numerous examples), *spiritual* (21 items; no mention of God but containing self-transcendent themes; Emmons, p. 102), and 24 *self-oriented* goals.<sup>1</sup> Examples of spiritual and theistic goals are: “Eliminate my self-centered actions,” “Help others in time of need”; and “Discern and follow God’s will for my life,” “Strive to have a closer relationship with God,” respectively). The self-oriented, (and by definition nontranscendent) strivings were composed of both positive and negative strivings (e.g., “Use my time productively”

---

<sup>1</sup> We created two categories of self-transcendent goal striving: theistic and spiritual (explicit reference to God, and transcendent strivings without reference to God, respectively). This was based on Emmons’ (1999) finding that theistic and nontheistic spiritual strivings correlated about .45 in his research, which we believed justified separating the two categories as well as calculating a sum for analysis, labeled *transcendent* goal strivings. The strivings came from Emmons’ (1999) strivings categories (p. 37), and include such personal goals as striving for achievement, intimacy, personal growth, and self-presentation. Specific theistic and spiritual strivings were taken from specific examples found in his research (e.g., p. 127 and p. 102, respectively) as well as author-generated. We believe content validity is acceptable for initial research purposes based on their source, directly or indirectly, in Emmons’ work. In addition, several theologians and ministers evaluated the initial pool of strivings for their relevance to theistic and spiritual goal strivings, and the final item pool reflected those evaluations. The final versions of the three scales have acceptable alpha coefficients (.97, .86, and .84 for theistic, spiritual, and self-oriented strivings, respectively).

and “Showing that I am better than others,” respectively). Responses were given on a 6-point scale from *never* to *several times a day*.

*Maslow’s hierarchy of need satisfaction.* The Maslowian Assessment Survey (MAS; Williams and Page, 1989) assesses three levels of Maslow’s hierarchy of needs: safety and security, belongingness and affiliation, and the esteem levels, and thus assesses progress toward maturity and psychological health. For each of these levels, four different subscales exist: (a) need gratification, (b) need importance, (c) need salience, and (d) self-concept. In this research we used two of those four: the need-gratification and self-concept scales, and did so at each level of the hierarchy of motives. Subjects responded to these items using a 6-point Likert scale. Items are scored such that the higher the score on the need subscale, the more gratified or satisfied individuals feel that need is for them. The higher a self-concept score, the more a person is similar to a prototypical person of the same level, or, to put in another way, the more he or she is being motivated by concerns at that level. Thus the need scales reflect what motives one has moved beyond, while the self-concept scales indicate where one currently is in the hierarchy.

Seligman (2002) stated that one aspect of the *good life* is being able to use one’s strengths to obtain satisfaction of key needs. Thus we predicted that spiritual goal striving, but not self-oriented strivings, would be positively associated with the gratification of each of the three lower-level needs (security, belonging, and esteem). Further, spiritual strivings were predicted to correlate positively with esteem self-concept; that is, those with relatively high spiritual strivings would have the motives and self-concept of someone who is at least at the esteem level of Maslow’s hierarchy.

*Self-actualizing tendencies.* An important perspective on psychological health and maturity, related to both of Seligman’s (2002) ideas about the good life and the *meaningful life*, is contained in Maslow’s (1971) concept of self-actualization (e.g., gratification of basic needs and positive emotions). Self-actualization tendencies were measured with the Personal Orientation Inventory-Revised (POI-R; Jones & Crandall, 1986), a 15-item scale with acceptable psychometric properties. Spiritual strivings, but not self-oriented strivings, should be positively associated with tendencies toward full use of one’s talents and potentials (i.e., self-actualization).

*Vitality.* Based on self-determination theory (see Ryan & Deci, 2000, 2001, for a recent statement of the theory), Ryan and Frederick (1997) developed a 7-item scale to measure vitality, which they considered to

reflect “positive energy,” purposefulness, and a sense of aliveness, energy, and zest. Those authors found that vitality was strongly associated with personality integration and well-being, and positive psychology lists this attribute as one of the strengths within the virtue of transcendence (Seligman, 2002). Thus it was predicted that spiritual but not self-oriented strivings should be associated with vitality.

*Satisfaction with life.* The cognitive dimension of subjective well-being was measured with Diener, Emmons, Larson, and Griffin’s (1985) respected 5-item Satisfaction with Life Scale. A great deal of evidence exists to support its reliability and validity (Diener, Suh, Lucas, & Smith, 1999), and it was used as an indicator of positive emotions in the present (Seligman, 2002).

*Achieved identity, intimacy, and generativity.* Ochse and Plug (1986) developed a 76-item measure of seven Eriksonian stages of psychosocial development. Despite only modest reliabilities for the subscales (.65 to .83), their results strongly supported the validity of three scales in particular: Identity, Intimacy, and Generativity. We selected for inclusion those three stages that are highly congruent with character virtues involving personal maturity, ability to love and be loved, and selfless concern for others in society, respectively.

*Attachment styles.* Attachment styles have been a dominant theme in relationship research for 20 years. The Relationship Questionnaire (Griffin & Bartholomew, 1994) assesses four continuous dimensions of attachment: *secure*, *dismissive-avoidant* (self-confident but low on interpersonal warmth, nurturance, and closeness in relationships), *fearful-avoidant* (socially avoidant and fearful of intimacy, submissive, and low in self-esteem), and *preoccupied-with-relationships* (dependent in relationships with an excessive fear of abandonment). The secure, fearful, and preoccupied attachment styles correspond with Hazan and Shaver’s (1987) secure, avoidant, and anxious attachment styles. In this research we used Griffin and Bartholomew’s continuous measures of attachment security instead of Hazan and Shaver’s typology. This was done because of the inherent advantages of continuous measures over categorization (e.g., greater power in small samples; Bartholomew & Shaver, 1998).

For brevity, an overall *attachment security* index was formed by subtracting the sum of the scores on the three measures of insecure attachment from the scores on the secure attachment style scale (LaGuadia, Ryan, Couchman, & Deci, 2001). We expected those individuals with other-oriented strivings would evidence healthy interpersonal attachments indexed through the attachment security measure (Seligman, 2002).

*Intrinsic and extrinsic values orientation.* Oishi and Diener (1999) developed the 32-item Satisfying Activities Survey (SAS), which assesses value types similar to those established by Schwartz (1992). Subjects rate the degree to which they experience satisfaction and happiness from various activities (e.g., *showing that you care about others* reflects the Benevolence and Conformity value dimension; *buying expensive clothes* reflects Power). The 32 items form 5 subscales: *Benevolence and conformity*, *Achievement*, *Universalism*, *Hedonism*, and *Power*. For brevity, two superordinate scales were computed from scores on these scales. Positive values were the sum of Benevolence and conformity and Universalism scales, and they reflect concern with the welfare of others and represent an “intrinsic value orientation” (Sheldon & McGregor, 2000). Negative values were the sum of Power and Hedonism scales and reflect an “external value orientation” and self-enhancement. It was predicted that spiritual strivings would be positively associated with the positive value dimensions and negatively correlated with the negative values orientation. (No predictions were made for achievement.)

*Intrinsic and extrinsic motives.* Borrowing from Emmons’ work (e.g., 1999, p. 37), Leak (2004) constructed a scale that contained 12 forced-choice pairs of items. Within each counterbalanced pair, the participants chose as *typically more important* between a motive reflecting intrinsic motivation (either relatedness-intimacy, personal growth, generativity, or search for the sacred) or a motive representing extrinsic motivation (success-achievement, power, and self-presentation concerns). As an example, participants chose between these two statements: (a) *Being concerned with expressing a desire to influence others and to have an impact on them. To get people to notice you and have a reaction to you* (power), or (b) *Being concerned with improving my mental health and psychological well-being. Improving myself as a person and getting to know myself better* (personal growth). The items within each pair were coded with higher scores reflecting greater intrinsic motivation, and the scores for all items were summed to create an ipsative scale reflecting one’s level of intrinsic motivation (motives congruent with positive psychology and labeled *Overall Intrinsic Motives* in Table 1). The prediction was straightforward: spiritual strivings would correlate positively with the index of healthy, intrinsic, authentic motives.

A second part of the survey presented the above statements separately with a 5-point response format (*does not matter to me at all* to *matters a great deal to me*) along with one additional statement reflecting the need for approval (*Being concerned with getting acceptance from others and having them approve of you and what you do. Doing things to avoid loneliness or feeling unloved*

Table 1. *Correlations Among Goal Strivings and Indicators of Positive Psychological Functioning*

Measure	Theistic Goal Strivings	Spiritual Goal Strivings	Transcendent Goal Strivings	Self- oriented Goal Strivings	Overall Index of Healthy Strivings
MAS: security need gratification	-.02	.10	.04	-.21*	.14
MAS: security self-concept	-.04	-.21*	-.12	.14	-.18
MAS: belonging need gratification	.06	.26**	.16	-.06	.18
MAS: belonging self-concept	-.16	-.23*	-.20*	.45***	-.42***
MAS: esteem need gratification	.04	.14	.09	-.22*	.19
MAS: esteem self-concept	.03	.23*	.13	-.07	.15
POI-R: self-actualization	.12	.28**	.20*	-.29**	.33***
Vitality	.18*	.35***	.27**	.06	.24**
Satisfaction with Life	.28**	.29**	.30***	.02	.26**
Achieved Identity	.18	.31***	.25**	-.19*	.34***
Intimacy	.17	.29**	.24**	-.23*	.33***
Generativity	.44***	.45***	.47***	.04	.44***
Healthy attachment	.19*	.22*	.22*	-.06	.22*
Positive Values	.40***	.46***	.45***	.19*	.35***
Negative Values	.02	-.09	-.15	.21*	-.24**
Overall Intrinsic Motives	.43***	.42***	.46***	-.13	.51***
Intrinsic Motives	.43***	.45***	.47***	.04	.44***
Extrinsic Motives	-.31***	-.19*	-.28**	.40***	-.47***

*Note:* Transcendent goal strivings is a composite sum of theistic and spiritual goals strivings. Overall index of healthy striving = (transcendent strivings - self oriented strivings).

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

*or unliked*). Intrinsic motives were those items dealing with (a) obtaining close relationships, (b) working for greater personal growth, (c) doing things to help people and (d) making a lasting contribution; and extrinsic motives were those items dealing with (e) power and impact, (f) success and accomplishment, (g) desire to make a good impression, and (h) need for approval and acceptance. The items reflecting intrinsic motives and

extrinsic motives were summed to create two normative scales (labeled *Intrinsic Motives* and *Extrinsic Motives*, respectively). The predictions were again straightforward: spiritual strivings and healthy strivings would correlate positively with the Intrinsic Motives index and negatively with the Extrinsic Motives index of psychologically negative motives.

## RESULTS

This research was guided by the expectation that self-transcendent goal strivings would be positively correlated with indices of healthy functioning, especially those considered important by the positive psychology movement and that reflect the good life.<sup>2</sup> The section headings below reflect positive psychology virtues listed by Seligman (2002).

### *Positive Emotions*

Table 1 reveals support for the transcendent strivings-positive functioning hypotheses in several domains, and, in particular, the positive emotions. This research did not include measures of transient moods or happiness. Nevertheless, positive psychology acknowledges several trait-like aspects of the global concept of positive emotions that were included. An index of positive emotions in the present is captured by the Satisfaction with Life scale (e.g., pride, satisfaction). The two main measures of healthy, transcendent strivings were related with this outcome variable ( $r = .30$  and  $.26$  for transcendent strivings and the composite index of healthy strivings, respectively).

Consistent with earlier work in this field (Emmons, 1999), self-transcendent goal strivings were positively associated with movement toward self-actualization or ideal functioning ( $r = .20$  and  $.33$  between the POI-R and transcendent strivings and the index of healthy striving). Self-actualization reflects several facets of what Seligman (2002) has

---

<sup>2</sup> In our analysis, the primary focus will be on two striving measures: transcendent strivings and the overall index of healthy functioning. The reason for the former is that the theistic and spiritual strivings correlated to such an extent that they appeared almost redundant ( $r = .75$ ), and a composite of the two would simplify analysis. (Note: a factor analysis was not done given the sample size required for those procedures.) The reason for focusing on the overall index of healthy strivings is that it reflects transcendent strivings while factoring out self-oriented strivings and thus giving, perhaps, a purer measure of *self-transcendent* strivings.



called the good life, such as obtaining gratifications in the important areas of one's life and achievement of higher pleasures. As expected, positive strivings were also related with the attainment of a mature identity based on Erikson's theory ( $r = .25$  and  $.34$  between achieved identity with transcendent strivings and the index of healthy striving, respectively).

### *Maslow's Hierarchy of Motives*

We anticipated that healthy strivings would be associated with the gratification of all the basic needs hypothesized by Maslow (1971) to lead to maturity. These hypotheses were founded on the idea that self-transcendent (other-oriented) strivings are only possible once the basic, self-oriented needs have been met. Contrary to expectations, however, only two significant associations were found with the Maslowian Assessment Survey. First, those with transcendent and healthy goal strivings tended to be low on the belonging self-concept scale ( $r = -.20$  and  $-.42$ , respectively,  $p < .05$ ). Put another way, these correlations indicate that those characterized as being at Maslow's motivational level of belongingness and love (i.e., being presently motivated by those needs; needs not yet being gratified) were relatively low in healthy goals strivings. Note, also from Table 1, that self-centered goal strivings were positively correlated with this stage of personality development.<sup>3</sup>

---

<sup>3</sup> An anonymous reviewer suggested we comment on the divergence between the theistic strivings and spiritual strivings in their associations with the MAS and POI-R (there were few discrepancies outside these measures based on Maslow's theory). Of the six MAS variables, four were significant and in the expected direction with spiritual strivings, while none were significant with the theistic strivings. Positive functioning and psychological health, as measured by the MAS and POI-R, seem to depend on the interpersonal, "horizontal," in-the-world type of transcendent strivings captured by the spiritual strivings scale, but not the "vertically" oriented, God-focused theistic strivings. One other notion is that with this late adolescent age group, one may engage in theistic strivings for mature (i.e., self-chosen) or immature (inherited) reasons. On the other hand, nontheistic, spiritual strivings are more likely to reflect a genuine choice for others and thus more likely to fulfill basic needs and generate greater psychological health (Sheldon & Kasser, 1995). Finally, Emmons, Cheung, and Tehrani (1998) reported lower levels of conflict among spiritual goals compared with other goals, including theistic goals. This suggests that the MAS and POI-R correlations with spiritual strivings may be traced to the greater level of personality integration that results from lower level of goal conflicts.

*Positive and Negative Motives*

Leak's (2004) Intrinsic and Extrinsic Motives scales, derived from Emmons's (1999) work on positive and negative strivings, were designed to measure healthy (intrinsic) and unhealthy (extrinsic) motives. Positive motives reflect such concerns as personal growth and intimacy, while negative motives reflect such things as power and self-enhancement. As expected, the two main measures of healthy goals strivings (self-transcendent and the overall index) were positively associated with the ipsative index of healthy motives ( $r_s = .46$  and  $.51$ ) and the normative measures of intrinsic motives ( $r_s = .47$  and  $.44$ ). Those strivings indices were negatively associated with self-oriented, extrinsic motives ( $r_s = -.28$  and  $-.47$ ).

*Humanity and Love*

This category of virtues was operationalized by several, diverse approaches to this interpersonal aspect of positive psychology. First, the measure of Erikson's stage of intimacy was significantly correlated with both transcendent goal strivings and the overall index of healthy striving (Table 1). In addition, both indices of positive strivings were associated, as predicted, with the index of healthy, secure attachment style. The global index of values reflecting a concern for others (positive values of universalism and benevolence) was correlated as expected with both indices of healthy striving ( $r_s = .45$  and  $.35$ ). Contrary to expectation, the negative values index (power and hedonism) was only related to the overall index of healthy strivings ( $r = -.24$ ).

*Transcendence*

Seligman (2002) described transcendence as "...emotional strengths that reach outside and beyond you to connect you to something larger and more permanent: to other people, to the future, to evolution, to the divine, or to the universe" (p. 154). The transcendent strivings and overall striving index were significantly correlated with two aspects of transcendence: Eriksonian generativity ( $r_s = .47$  and  $.44$ ; a selfless concern for future generations) and a feeling of zest, passion, and enthusiasm assessed with the Vitality scale ( $r_s = .27$  and  $.24$ ). (Note: zest and vitality are also an aspect of positive emotions and self-actualization.)

## DISCUSSION

Our hypotheses were derived from basic postulates of positive psychology (e.g., Seligman, 2002). These hypotheses had one common, overarching theme: a healthy spirituality goes hand-in-hand with positive functioning, personal growth, and psychological health. We operationalized healthy spirituality in a rarely used but reasonable way: self-transcendent goal strivings. While this approach is not the modal approach in religious research generally and in the assessment of spirituality in particular, we hope we have provided adequate justification for considering transcendent strivings as an accurate indication of healthy spirituality (Emmons, 1999). And what did we find through this approach? We found that those with many of the attributes important within positive psychology are also likely to devote daily time and energy to the pursuit of spiritual, transcendent goals. Spirituality, conceptualized as self-transcendence, is healthy.

To our knowledge, this is the first research program that has investigated strivings with a normative and nomothetic (vs. idiographic) measurement approach. This research is also unusual because the strivings were related to such a wide variety of outcome measures (i.e., need gratification, positive emotions, interpersonal orientation, and positive motives and values) from a diverse array of theoretical and empirical traditions (e.g., Maslow, Erikson, self-determination theory and research on goals and well-being [e.g., Deci & Ryan, 2002; Sheldon & Elliot, 1999], and Emmons' [1999] work on goal striving outcomes). The vast majority of our hypotheses were confirmed. Consequently, we believe that our results indicate that, consistent with predictions generated by scholars in positive psychology (e.g., Seligman), as well as the theoretical and empirical work of Emmons (1999), self-transcendent and spiritual goal strivings (i.e., spirituality) are related to many facets of positive interpersonal and intrapersonal functioning. As a final point, the many confirmed predictions reported here suggest that a nomothetic approach to goal striving assessment is a fruitful way to assess spirituality in future religiousness research.

There are several limitations to this study. First, the usual caveats about limited sampling of participants apply. We also used a novel approach to the assessment of goal strivings that was nomothetic in nature. To put our best foot forward, however, our strivings list was generated primarily from prior idiographic research, and the confirmation of many predictions suggests to us that it is a valid way to assess

goal strivings. The greatest limitation to our study is in the failure of the predictions involving the MAS need gratification scales with the transcendent goal strivings. Healthy (i.e., transcendent) strivings should be related to healthy need gratification; that is, those who have self-transcendent strivings should have successfully achieved the satisfaction of their basic, self-oriented needs. It is important to note that this failure can be traced to the influence of the theistic strivings and not to the spiritual strivings (transcendent strivings are a composite of theistic and spiritual strivings; see Table 1 and Footnote 3) With the exception of the MAS and the measure of negative values, all other outcome variables were significantly associated with both of the strivings measures (self-transcendence and the overall strivings index).

A final concern is whether the findings with goal strivings add anything beyond what we already know about the relationship between personality generally and positive functioning. In other words, can spirituality be reduced to personality, or is it a distinct individual difference construct? This issue has been addressed by Piedmont (2005) who has summarized a variety of relationships among personality variables and a variety of spiritual dimensions (e.g., intrinsic religiousness goes with agreeableness and conscientiousness). In another study (Leak, 2006), only agreeableness and openness predicted spiritual strivings and only to a modest degree ( $R^2 = .26, p < .001$ ), with a large amount of reliable variance unexplained by the Big Five. Theistic goals showed even greater independence from personality ( $R^2 = .19, p < .001$ ). Our results are consistent with Piedmont who stated "... although religious constructs share something in common with the FFM, these numinous variables are not redundant with the model" (p. 263). Spirituality may indeed be a sixth dimension of personality.

## REFERENCES

- Allport, G. W., & Ross, M. M. (1967). Personal religious orientation and prejudice. *Journal of Personality and Social Psychology, 5*, 432-443.
- Bartholomew, K., & Shaver, P. R. (1998). Methods of assessing adult attachment: Do they converge? In J. A. & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 25-45). New York: Guilford.
- Batson, C. D., Schoenrade, P. A., & Ventis, W. L. (1993). *Religion and the individual*. New York: Oxford University Press.
- Deci, E. L., & Ryan, R. M. (Eds.) (2002). *Handbook of self-determination research*. Rochester, NY: University of Rochester Press.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment, 49*, 71-75.

- Diener, E., Suh, E. M., Lucas, R. M., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, *125*, 276–302.
- Emmons, R. A. (1996). Striving and feeling: Personal goals and subjective well-being. In P. M. Gollwitzer & J. A. Bargh (Eds.), *The psychology of action* (pp. 313–337). New York: Guilford.
- Emmons, R. A. (1997). Motives and life goals. In R. Hogan, J. Johnson, & S. Briggs (Eds.), *Handbook of personality psychology* (pp. 485–512). San Diego: Academic Press.
- Emmons, R. A. (1999). *The psychology of ultimate concerns: Motivation and spirituality in personality*. New York: Guilford.
- Emmons, R. A., Cheung, C., & Tehrani, K. (1998). Assessing spirituality through personal goals: Implications for research on religion and subjective well-being. *Social Indicators Research*, *45*, 391–422.
- Erikson, E. H. (1963). *Childhood and society*. New York: Norton.
- Erikson, E. H. (1968). *Identity youth and crisis*. New York: Norton.
- Frankl, V. (1978). *The unheard cry for meaning*. New York: Pocket Books.
- Griffin, D., & Bartholomew, K. (1994). Models of self and other: Fundamental dimensions underlying measures of adult attachment. *Journal of Personality and Social Psychology*, *67*, 430–445.
- Hauser, R. J. (1986). *Moving in the spirit*. New York: Paulist Press.
- Hazan, C., & Shaver, P. R. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, *52*, 511–524.
- James, W. (1902). *The varieties of religious experience*. New York: McKay. (Cited from Penguin Books, 1982.)
- Jones, A., & Crandall, R. (1986). Validation of a short index of self-actualization. *Personality and Social Psychology Bulletin*, *12*, 63–73.
- Koenig, H. G. (Ed.). (1998). *Handbook of religion and mental health*. San Diego: Academic Press.
- LaGuardia, J. G., Ryan, R. M., Couchman, C. E., & Deci, E. L. (2000). Within-person variation in security of attachment: A self-determination theory perspective on attachment, need fulfillment, and well-being. *Journal of Personality and Social Psychology*, *79*, 367–384.
- Leak, G. K. (2004). *Measures of intrinsic and extrinsic motives*. Unpublished manuscript.
- Leak, G. K. (2005). *Development of a nomothetic measure of personal goal strivings*. Manuscript submitted for publication.
- Leak, G. K. (2006). *Prediction of religious and self-transcendent strivings from the Big Five factors of personality*. Unpublished manuscript.
- Maslow, A. (1971). *Farther reaches of human nature*. New York: Penguin Books.
- Ochse, R., & Plug, C. (1986). Cross-cultural investigation of the validity of Erikson's theory of personality development. *Journal of Personality and Social Psychology*, *50*, 1240–1252.
- Oishi, S., Diener, E., Suh, E., & Lucas, R. E. (1999). Value as a moderator in subjective well-being. *Journal of Personality*, *67*, 157–184.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*, 168–178.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. In S. T. Fiske, D. L. Schacter, & C. Zahn-Waxler (Eds.), *Annual review of psychology* (pp. 141–166). Palo Alto, CA: Annual Review.
- Ryan, R. M., & Frederick, C. (1997). On energy, personality and health: Subjective vitality as a dynamic reflection of well-being. *Journal of Personality*, *65*, 529–565.
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 1–65). Orlando, FL: Academic Press.

- Seligman, M. E. P. (2002). *Authentic happiness*. New York: Free Press.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, *55*, 5–14.
- Seligman, M. E. P., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist*, *60*, 410–421.
- Sheldon, K. M., & Elliot, A. J. (1999). Goal striving, need-satisfaction, and longitudinal well-being: The self-concordance model. *Journal of Personality and Social Psychology*, *76*, 482–497.
- Sheldon, K. M., & Kasser, T. (1995). Coherence and congruence: Two aspects of personality integration. *Journal of Personality and Social Psychology*, *68*, 531–543.
- Sheldon, K. M., & McGregor, H. A. (2000). Extrinsic value orientation and “the tragedy of the commons.” *Journal of Personality*, *68*, 383–411.
- Snyder, C. R., & Lopez, S. J. (Eds.). (2002). *Handbook of positive psychology*. New York: Oxford University Press.
- Snyder, C. R., & Lopez, S. J. (2007). *Positive psychology: The scientific and practical explorations of human strengths*. Thousand Oaks, CA: Sage.
- Tangney, J. P. (2002). Humility. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 411–422). New York: Oxford University Press.
- Williams, D. E., & Page, M. M. (1989). A multi-dimensional measure of Maslow’s hierarchy of needs. *Journal of Research in Personality*, *23*, 192–213.
- Wong, P. T. P. (1998). Implicit theories of meaningful life and the development of the Personal Meaning Profile. In P. T. P. Wong & P. S. Fry (Eds.), *The human quest for meaning: A handbook of psychological research and clinical applications* (pp. 111–140). Mahwah, NJ: Erlbaum.



## AUTHORS' BIOGRAPHIES

PETER ASHBAUGH, DANIELLE TRNKA, JULIE HARNER, KATE ST. PIERRE, AND TED SWANSON all now hold the B.A. degree from Indiana University, South Bend. Each of them worked on this project as part of the SPRL. Peter, Danielle, Julie, and Ted all majored in psychology; Kate majored in nursing.

AURÉLIE M. ATHAN is a third year doctoral student in the Clinical Psychology Program at Teachers College, Columbia University. Her research interests include qualitative methods and spiritual development in women and youth.

JOSEPH W. CIARROCCI is a clinical psychologist whose treatment and research interests are in the area of compulsive behaviors, anxiety disorders, and the integration of psychology and spirituality. He has served as Director of Addictions at Taylor Manor Hospital and Director of Outpatient Services for the Saint Luke Institute. He has written five books in the areas of mental health, addictions, and integration of psychology and spirituality: *Counseling Problem Gamblers: A Self-Regulation Manual for Individual and Family Therapy*, Academic Press; *Psychotherapy with Priests, Ministers, and Vowed Religious*, Psychosocial Press; *Help for Scrupulosity and Religious Compulsions*, Paulist Press; *A Minister's Handbook of Mental Disorders*, Paulist Press; and *Why are You Worrying?*, Paulist Press. Dr. Ciarrocchi has published empirical research on pathological gambling, personality profiles of addicted persons, and gender images in relation to images of God.

KRISTINA M. DENÈVE is Director of the Cardoner Program and Adjunct Assistant Professor in Psychology at Creighton University. Her research interests focus on subjective well-being and psychology of religion. As Director of Cardoner, Professor DeNeve offers programs for Creighton students, faculty, staff, and alumni that cultivate a deliberate exploration of life purpose, vocation-as-calling, and well-being.

DIANE E. DREHER is Professor of English and a research associate in the Spirituality and Health Institute at Santa Clara University. She earned her Ph.D. from UCLA, with a dissertation on spiritual development in the Renaissance. She is the author of *The Tao of Inner Peace*, *The Tao of Personal Leadership*, *The Tao of Womanhood*, *Inner Gardening*, and books on Shakespeare, Milton, and the metaphysical poets, as well as articles on Renaissance literature, psychology, and spirituality. Her current research relates Renaissance concepts of vocation to contemporary research in positive psychology. Dr. Dreher serves as Santa Clara's curriculum director for vocation, teaches courses on vocation to undergraduates and adults over fifty through Santa Clara's Osher Lifelong Learning Institute, and is writing a new book on vocation.

ROBERT A. EMMONS is Professor of Psychology at the University of California, Davis. He received his Ph.D. in Personality and Social Ecology from the University of Illinois at Urbana-Champaign. He is the author of nearly 100 original publications in peer-reviewed journals or chapters in edited volumes, including the books *The Psychology of Ultimate Concerns: Motivation and Spirituality in Personality*, *The Psychology of Gratitude*, and *Words of Gratitude for Mind, Body, and Soul*. He is Past-President of APA's Division 36, The Psychology of Religion. Dr. Emmons currently serves as Editor-in-Chief for *The Journal of Positive Psychology*. In 1999 he co-edited a special



issue of the *Journal of Personality* on religion and personality and he is co-author of a 2003 *Annual Review of Psychology* chapter on the psychology of religion. His research focuses on personal goals, spirituality, the psychology of gratitude and thankfulness, and subjective well-being.

MICHAEL GALEA received his Ph.D. in Pastoral Counseling from Loyola College in Maryland focusing his dissertation on the psycho-spiritual effects of childhood abuse on Maltese college students. He has worked as a visiting psychologist at the following places: Corradino Correction Facility (Malta), Sedqa National Addiction Unit (Malta), Malta Cana Marriage & Family Therapy Unit, and is presently a visiting lecturer at the Psychology Department, University of Malta. Besides being a high school teacher and a private practitioner, he writes frequently on psychology issues in Maltese local journals and has just published his first book on grief, *The Courage to Grow*.

KEVIN GILLESPIE, S.J. received his Ph.D. from Boston University and his M.Div. from the Jesuit School of Theology at Berkeley. He is Assistant Professor of Pastoral Counseling at Loyola College in Maryland and Director of the M.A. program in Spiritual and Pastoral Care. He also serves as Associate Chair of International Studies and has traveled to more than 20 countries. His areas of research and writing generally involve the integration of psychology and spirituality viewed through a historical hermeneutic. His book, *Psychology and American Catholicism: From Confession to Therapy*, illustrates this historical approach. He has presented a series of pastoral workshops on the life of Fr. Henri Nouwen. Other recent psycho-spiritual research concerns have been issues of sexual abuse and trauma.

ADAM J. GRETEMAN is a doctoral student in Educational Psychology and Educational Technology at Michigan State University. His interests are in Queer, Feminist, and Critical Pedagogy along with Student Identity Development with emphasis on the intersection of gender, sexuality, race, and culture.

DEBORAH G. HASKINS is Affiliate Professor and Director of Master's Field Education in Psychology at Loyola College in Maryland. She received a Ph.D. in Pastoral Counseling from Loyola College. She is a Licensed Clinical Professional Counselor in Maryland and a National Certified Gambling Counselor and Supervisor. She has published research on sexual abuse attitudes among African Americans, psychotherapy with African Americans, and cultural diversity in mental health delivery ("Psychotherapy with African Americans," a book chapter co-authored in *Practicing Multiculturalism: Affirming Diversity in Counseling and Psychology*). She serves on the Maryland Board of Professional Counselors and Therapists and chairs the Credentials Committee. She also serves as Vice President on the Maryland Council of Problem Gambling.

CATHERINE J. HASSINGER is a doctoral student in Pastoral Counseling at Loyola College in Maryland. She received her M.Ed. in 1998 from Marymount University and her M.S. in Pastoral Counseling in 2006 from Loyola College in Maryland. She has presented at the Eastern Psychological Association Conference and presented a poster at the American Psychological Association Conference. She is the editorial assistant for *Research in the Social Scientific Study of Religion* (RSSSR). Her research interests include feminist issues and the role of religion and spirituality in the lives of survivors of domestic violence.

PETER C. HILL is Professor of Psychology at the Rosemead School of Psychology (Biola University, La Mirada, CA). He earned his Ph.D. in Social Psychology from the University of Houston. Dr. Hill has authored and edited several books (*Measures of Religiosity*, Religious Education Press; *The Psychology of Fundamentalism*, Guilford

Press). His research has appeared in the *Journal of Personality*, *American Psychologist*, *Personality and Social Psychology Review*, and *Mental Health, Religion, and Culture*. In 2000–2001 he served as president of Division 36 (Psychology of Religion) of the American Psychological Association.

KATHERINE A. HOLLOWAY received her Master's degree in criminal justice from Bowling Green State University in 2005. She is currently working with the police department in Arlington, Virginia.

BRIEN S. KELLEY is a doctoral candidate in the Clinical Psychology Program at Teachers College, Columbia University. His research interests include positive psychology, adolescent well-being, and religiosity/spirituality.

LISA F. MILLER is a tenured associate professor in the Clinical Psychology Program, Teachers College, Columbia University. Her program of research on spirituality in adolescence was funded by the William T. Grant Foundation Faculty Scholars Award.

KEVIN L. LADD earned his M.Div. at Princeton Theological Seminary and his M.A. and Ph.D. from the University of Denver. He is Assistant Professor of Psychology at Indiana University, South Bend. There, he leads the Social Psychology of Religion Lab (SPRL), an interdisciplinary team of researchers focused on operationalizing cognitive, affective, and behavioral aspects of prayer.

MELEAH L. LADD completed her M.A. at the University of Notre Dame. She has additional doctoral coursework in the Medieval Institute at Notre Dame and currently is studying theology at the same institution. Her interest centers on liturgy, integrating prayer and music, and spiritual development.

GARY K. LEAK is Professor and Chair of the Psychology Department at Creighton University. He graduated in 1975 from the University of Nebraska-Lincoln Social-Personality Program. His teaching interests include social psychology, personality psychology, psychological measurement, and psychology of religion. His research interests are in the areas of positive psychology (especially Adlerian and Maslowian theory) and spiritual growth.

DUDLEY MENDONCA, S.J., holds a Ph.D. in Pastoral Counseling from Loyola College in Maryland. He currently is the Director of the Sadhana Institute in India. His address is Old Khandala R., Pune DT; Maharashtra Lonavia, India 410401. His email address is dudleymjsj@yahoo.com.

RUTH K. NAM is a graduate student in the Clinical Psychology program at Baylor University in Waco, Texas. Her research interests include forgiveness, character and moral development, gratitude, and attachment.

K. ELIZABETH OAKES is Assistant Professor of Pastoral Counseling at Loyola College in Maryland. She holds graduate degrees in clinical psychology, business administration, and pastoral counseling, respectively from Pennsylvania State University, Stanford University, and Loyola College in Maryland where she also earned her Ph.D. She has recently published in *Counseling and Values* and *Alcoholism Treatment Quarterly* and contributed on the topic of cultural diversity and pastoral care-giving to the book, *Building Bridges Over Troubled Waters*. Her research interests and current scholarship center on spirituality in addictions treatment, along with multiculturalism and social advocacy in counseling. Dr. Oakes is currently Chair of the Ethics Committee for the

Maryland State Board of Professional Counselors and Therapists. She is a member of the American Counseling Association, the Association for Multicultural Counseling and Development, the Association for Spiritual, Ethical, and Religious Values in Counseling, the International Association of Addictions and Offender Counselors, and the Association for Pastoral Theology.

CHRISTIE A. POWERS is a first-year graduate student in the School Psychology program at Baylor University. Her research interests involve children with autism. Upon completion of the graduate program in 2009, she plans to pursue licensure in counseling.

RALPH L. PIEDMONT received his Ph.D. in Personality Psychology from Boston University and completed a postdoctoral fellowship at the National Institute of Aging. His current research interests focus on the measurement of Spiritual Transcendence. Dr. Piedmont is extensively published in the scientific literature and is on the editorial boards for *Measurement and Evaluation in Counseling and Development*, *Journal of Personality and Social Psychology*, and *Counseling and Values*. He is currently editor of *Research in the Social Scientific Study of Religion* and is a member of the American Counseling Association, the American Psychological Association, and the American Association of Pastoral Counselors. In addition, Dr. Piedmont serves as the President of the American Psychological Association's Division 36 (Psychology of Religion) and is the director of the Loyola College Pastoral Counseling and APA co-sponsored Mid-Year Research Conference on Religion and Spirituality.

JANELLE RHORER is a graduate student pursuing a Master's degree in Pastoral Counseling at Loyola College in Maryland. She received her Master's degree in Statistics in 1997 from Iowa State University.

WADE C. ROWATT is Associate Professor of Psychology at Baylor University in Waco, Texas. He received his Ph.D. in Experimental Social Psychology in 1997 from the University of Louisville. He currently serves on the editorial board of the *Journal for the Scientific Study of Religion*. His recent research on the benefits of humility was published in the *Journal of Positive Psychology*. He has also published research in the *Journal for the Scientific Study of Religion*, *The International Journal for the Psychology of Religion*, *Personality and Individual Differences*, *Journal of Social and Personal Relationships*, and *Personality and Social Psychology Bulletin*. His current research interests include the positive psychology of humility, implicit measurement of personality/self-concept, and associations between measures of religiousness and interpersonal processes (e.g., prejudice, helping, and forgiveness).

SARAH A. SCHNITKER is a graduate student at the University of California, Davis. She received her M.A. in Personality and Social Psychology from the University of California, Davis, and she is currently working towards her Ph.D. in Personality and Social Psychology under Dr. Robert A. Emmons. She currently serves as Editorial Assistant for *The Journal of Positive Psychology*. She is a student affiliate in the American Psychological Association and APA Division 36. She has presented posters at the APA Division 36 Conference on Religion and Spirituality as well as the Gallup International Positive Psychology Summit. Her main interests lie in the areas of positive psychology and psychology of religion.

ERIN SCHOENFELDER is in the Ph.D. program in clinical psychology at Arizona State University. Her current research involves preventative intervention programs for parentally bereaved children, with a special interest in attachment and gender issues.

MARTIN F. SHERMAN, Professor of Psychology, received his Ph.D. in Experimental-Social Psychology from the University of Maine in 1976. He has been a professor at Loyola College since 1975 where he teaches social psychology, research methods, statistics, and SPSS. He is currently the Director of Masters Education: Research Track at Loyola College. In 1991 he completed a postdoctoral fellowship at the Behavioral Pharmacology Research Unit of the Johns Hopkins University School of Medicine. He is a member of the newly formed editorial board of the *International Journal of Emergency Mental Health* and has served as a manuscript reviewer for the journals of *Addictive Behaviors*, *Social Behavior and Personality*, *Creativity Research Journal*, *Journal of Educational Psychology*, and the *Journal of Applied Social Psychology* (where he serves as a consulting editor). His current research interests include the investigation of the emotion of disgust and the study of silencing the self as a cognitive schema employed in intimate relationships. He is a member of the American Psychological Association, the American Psychological Society, the Eastern Psychological Association, and the Society for Personality and Social Psychology. He also serves as a statistical consultant for the Center for Social and Community Research.

NANCY C. SHERMAN, Professor of Psychology, earned her Ph.D. in Experimental-Social Psychology from the University of Maine in 1976. She has been a professor at Villa Julie College, Stevenson, Maryland since 1983 where she teaches introductory psychology, social psychology, and theories of personality. Her current research interests include the investigation of the relation between experiential permeability (a personality disorder) and psychological dysfunction. She is a member of the Eastern Psychological Association and the Society for Personality and Social Psychology.

WILLIAM J. SNECK, S.J. received his Ph.D. in clinical psychology in 1977 from the University of Michigan, Ann Arbor. He was Assistant Professor in psychology at Georgetown University from 1976–1980 and is presently an affiliate faculty member in the Pastoral Counseling Department of Loyola College in Maryland. He is a licensed psychologist in Maryland. Since 2000, he has served on the staff of the Jesuit Center for Spiritual Growth, Wernersville, PA. He developed a weekend workshop on the “hard” emotions of hurt, anger, guilt, shame, fear, depression, grief, and forgiveness that he has presented at the Jesuit Center in Wernersville and abroad in Germany and New Zealand. His main research passion has centered on the theory and practice of Jungian Analytical Psychology about which he has written many articles.

JAMES M. WALSH is a Pastoral Counselor in private practice in Newark, Delaware. He is also Assistant Professor and Assistant Program Coordinator for the master's program in Community Counseling at Wilmington College where he teaches and provides clinical supervision. He is a Psycho-Forensic Evaluator Consultant for the Office of the Public Defender in Delaware and has provided training workshops for several years for the State of Delaware's Division of Substance Abuse and Mental Health on a variety of topics, mostly incorporating spirituality in a therapeutic milieu. He received his Ph.D. in Pastoral Counseling from Loyola College in Maryland and has had extensive training at the University of Massachusetts Medical School's Center for Mindfulness in Mindfulness Based Stress Reduction.

ROBERT J. WICKS received his doctorate in psychology from Hahnemann Medical College. He is a Professor at Loyola College in Maryland. He has taught in universities and professional schools of psychology, medicine, social work, nursing, and theology and presented at Princeton Theological Seminary, Johns Hopkins School

of Medicine, University of Maryland School of Medicine, and the FBI Academy. In his clinical practice, Dr. Wicks focuses on working with psychotherapists, ministry personnel, and those involved in the helping professions. In 1993 and again in 2001, he worked in Cambodia helping locals to rebuild their nation following years of terror. In 1994, he contributed in the psychological debriefing of relief workers evacuated from Rwanda's genocide trauma. Dr. Wicks has served as General Editor of three series of books and published over 40 books for both professionals and the general public.

JOSEPH E. G. WILLIAMS is Associate Professor of Psychology in the College of Sciences at Eastern Illinois University. Dr. Williams received his Ph.D. from Boston University and postdoctoral training at the University of Chicago, Abbot Laboratories, and the University of London, England. He is a member of the American Psychological Association, the Society for Neurosciences, and the Society for the Stimulus Properties of Drugs. His research interests involve the study of issues related to addiction and the influence of religiosity on personal factors and motivation.

## MANUSCRIPT REVIEWERS

In addition to the preceding authors, many scholars and scientists have made significant contributions to the publication of this volume. They have anonymously screened the initial versions of these and other submitted manuscripts for methodological rigor and scientific significance. They also have provided the authors with invaluable suggestions for improving their papers prior to the authors making their final revisions. Both myself and the authors appreciate their expert services. Not only have they improved the quality of the research reported here, they also have contributed to the quality of the field of the social scientific study of religion.

Mark M. Leach, Ph.D.  
Janelle Rhorer, M.S.  
Martin F. Sherman, Ph.D.  
Chris J. Boyatzis, Ph.D.  
John J. Cecero, S.J., Ph.D.  
Joseph W. Ciarrocchi, Ph.D.  
Gabriel S. Dy-Liacco, Ph.D.  
Beverly E. Eanes, Ph.D.

Bonny J. Forrest, Ph.D.  
Aaron B. Murray-Swank, Ph.D.  
Patricia Murphy, Ph.D.  
Lee J. Richmond, Ph.D.  
Thomas E. Rodgeron, Ph.D.  
Loreen J. Rugle, Ph.D.  
Joseph A. Stewart-Sicking, Ed.D.  
Gina M. Yanni-Brelsford, Ph.D.



## INDEX OF NAMES

- Adams, W., 24, 30  
 Adkins, B. J., 155, 175  
 Aldwin, C. M., 3, 32, 236, 259  
 Allik, J., 121, 126, 139  
 Allport, G. W., 150, 153, 159, 172, 267, 277  
 Almabuk, R. H., 238, 257  
 Amabile, T. M., 100, 104, 115  
 Ammerman, Y., 174  
 Andersen, P., 100, 115  
 Anderson, P. M., 234, 259  
 Andreasen, N. C., 227, 230  
 Annas, J., 202, 204  
 Antoni, M. H., 71  
 Aoki, W. T., 25, 33  
 Archer, S. L., 101, 118, 120  
 Argyle, M., 233, 238, 254, 257  
 Arnett, J., 28, 30, 239, 257  
 Arthur, M. B., 116  
 Ash, C., 236, 251, 257  
 Ashbaugh, P., 209, 281  
 Ashton, M. C., 138  
 Astin, A. W., 114, 119  
 Astin, H. S., 100, 104, 106, 115  
 Athan, A. M., 3, 256, 259, 281  
 Atkinson, R., 11, 30  
 Augustine, 177, 179, 204, 236
- Baesler, E. J., 227, 230  
 Baetz, M., 56, 71  
 Baez, G., 156, 172  
 Bagiella, E., 134, 140, 143, 154, 168, 174  
 Bair, D., 51  
 Banaji, M., 92, 256, 259  
 Bao, W. N., 25, 30  
 Bartholomew, K., 270, 277–78  
 Batson, C. D., 24, 30, 263, 267, 277  
 Battles, F. L., 116  
 Baumeister, R., 92, 136–37, 143, 153, 187, 206, 212–13, 227, 230  
 Begaz, T., 156, 172  
 Belhekar, V., 139  
 Bell, N. E., 100–101, 120  
 Bell, N. J., 8, 30  
 Bellah, R. N., 103, 115  
 Benjamin, L. S., 61, 72
- Benson, P. L., 3, 6–8, 28, 30–31, 33, 73, 127, 137, 161, 172, 234, 236, 259–60  
 Berg, G., 141, 153  
 Bernstein, D. P., 144, 153  
 Berry, J. W., 76, 80, 82, 91, 93  
 Beyers, W., 9, 32  
 Bjorck, J. P., 255, 258  
 Blaszczynski, A., 156, 172–73  
 Bloch, D. P., 99–100, 102–103, 115–20  
 Blood, M. R., 100–101, 116  
 Bluemke, M., 80, 92  
 Blume, S., 160, 173  
 Bobrick, B., 102, 116  
 Boccaccini, M., 113, 119  
 Bohl, J., 174  
 Boisvert, J. M., 156, 174  
 Bono, G., 78, 93, 254, 259  
 Boomsma, D. I., 234, 260  
 Boone, A. L., 187, 206  
 Bowen, R., 56, 71  
 Boyatzis, C. J., 3, 6, 30–31, 287  
 Boyatzis, R. E., 13, 30  
 Boyd, N. J., 187, 206  
 Bradburn, N. M., 145, 153, 162, 172  
 Bratslavsky, E., 136–137  
 Brennan, K. A., 188, 204  
 Briggs Myers, I., 51  
 Britton, P. J., 55, 72  
 Brose, L. A., 76, 91  
 Brown, D., 117  
 Brown, K. W., 187, 197, 204  
 Brown, R., 80, 82, 92, 155, 172  
 Brown, W., 93  
 Browne, B. R., 155, 172  
 Bruckman, A., 256, 259  
 Buechner, F., 101, 116  
 Bukowski, W. M., 25, 33  
 Burke, E., 201, 204  
 Burke, J., 119  
 Bushman, B. J., 92  
 Buss, D. M., 122, 137  
 Byrne, B. M., 189, 205
- Caddell, D. P., 99–101, 103–104, 106, 111–13, 115–16  
 Calhoun, L. G., 154  
 Calvin, J., 101, 116, 179, 205



- Camp, C. C., 102, 116  
 Campbell, A., 113, 116  
 Campbell, W. K., 92, 142, 153  
 Capps, D., 153  
 Cardin, P. A., 238, 257  
 Carrico, A. W., 57, 71  
 Cashwell, C. S., 141-42, 154  
 Chambers, J., 257  
 Chartrand, J. M., 102, 116  
 Chatters, L. M., 233, 259  
 Cheston, S. E., 35, 51, 142, 153-54  
 Cheung, C., 265, 274 n. 3, 278  
 Chiu, L., 56, 73  
 Ciarrocchi, J. W., vii, xi, 27, 30, 97,  
     121-22, 127, 134-35, 137-39,  
     141-43, 150, 152-54, 158-59,  
     167-68, 172-74, 238, 241, 250, 252,  
     256-57, 281  
 Clancy, S. M., 9, 30  
 Clark, A. T., 76, 92  
 Clark, C. L., 188, 204  
 Clark, L. A., 60, 71, 126, 140, 182, 186,  
     205-206  
 Clausen, J. A., 100-101, 120  
 Clifton, D., 233-34, 238, 243, 250, 258  
 Cloninger, C. R., 126, 138  
 Coccaro, E. F., 200, 205  
 Cochran, L., 99-102, 104, 106, 116  
 Cohen, A. B., 237, 258  
 Cohen, J., 256, 259  
 Cohen, R. D., 255, 260  
 Cohen, S., 255, 257  
 Collins, J., 91-92  
 Colvin, C., 113, 118, 205  
 Colvin, R., 139, 182  
 Comer, J., 93  
 Compton, M. T., 57, 71  
 Concepcion, F., 156, 172  
 Conger, R. D., 25, 30  
 Connors, G. J., 159, 175  
 Conte, J. M., 184, 205  
 Converse, P. E., 113, 116  
 Cooper, C. R., 26, 31  
 Cooper, H., 122, 138, 143, 153  
 Cooper, M., 25, 30  
 Costa, P. T., Jr., 8-9, 30, 32, 60, 72,  
     145, 154, 160-61, 172, 259  
 Cotton, S., 4, 30, 237-38, 243, 250-51,  
     253, 258  
 Couchman, C. E., 99, 117, 270, 278  
 Couper, M., 259  
 Crandall, R., 161, 173, 269, 278  
 Cresswell, J. W., 12-13, 30  
 Crites, J. O., 100, 116, 120  
 Cromer, B. A., 253, 258  
 Cronbach, L. J., 83, 83 n. 1, 108-109,  
     116, 190  
 Crumbaugh, J., 113, 116, 161, 172  
 Csikszentmihalyi, M., 99-101, 104, 106,  
     114, 116, 119, 158, 174, 197-98,  
     205, 264, 279  
 Cunningham, P. A., 78, 93  
 D'Mello, M., 3, 32, 236, 259  
 D'Onofrio, B. M., 6, 30  
 D'Souza, R., 69, 72  
 Darwin, C., 181, 188, 205  
 Davidson, J. C., 99-101, 103-104, 106,  
     111-13, 115-16  
 Davies, R., 46, 51  
 Davis, M. A., 205  
 Davis, R. C., 153  
 Day-Lower, D. C., 100, 119  
 De Fruyt, F., 32, 259  
 DeCaria, C. M., 156, 172-73  
 Deci, E. L., 263, 269-70, 276-78  
 DeConciliis, A. J., 172  
 DeGeus, E. J. C., 234, 260  
 Dekovic, M., 26, 32  
 Dell, M. L., 7, 30  
 Deneke, E., 27, 30, 122, 127, 134, 137,  
     139, 142-43, 150, 152-53, 158, 167,  
     172, 238, 241, 250, 252, 256-57  
 DeNeve, K., 122, 138, 143, 153, 263,  
     281  
 Denton, M. L., 4-7, 14, 28, 33  
 Deo, S., 139  
 Derogatis, L. R., 169, 172  
 DiClemente, C. C., 169, 174  
 Diener, E., 99, 113-14, 116, 118, 122,  
     126, 129, 136, 138-39, 145, 153-54,  
     159, 161-62, 172-74, 186, 205, 225,  
     230, 233-35, 238, 241, 243, 250,  
     257-58, 260, 270-71, 277-78  
 Diener, M., 122, 136, 138  
 Doersch, A., 174  
 Dollahite, D. C., 3, 30  
 Dollinger, S. J., 9, 30  
 Donahue, E. M., 187, 205  
 Donahue, M. J., 137, 161, 172  
 Donne, J., 102, 116  
 Dougan, S., 27, 31  
 Dowling, E. M., 234, 259  
 Draiger, D. C., 102, 117  
 Drane, W., 235-36, 258, 261  
 Drebing, C., 141, 153

- Dreher, D. E., 99, 281  
 Drotar, D., 4, 30, 258  
 Dubin, L. F., 54, 73  
 Dunham, R. M., 26, 31  
 Duran, R. E., 71  
 Duriez, B., 10, 30  
 Dutt, R. C., 181, 205  
 Dy-Liacco, G. S., 70–72  
  
 Eaves, L. J., 6, 30  
 Eber, H. W., 138  
 Eccles, J. S., 7, 28, 33  
 Echeburua Odriozola, E., 156, 172  
 Eckel, M. D., 205  
 Egloff, B., 83 n. 1, 92  
 Elliot, A. J., 276, 279  
 Ellison, C. G., 141–42, 153, 233, 235,  
 238, 243, 250–51, 258, 260  
 Emmons, R. A., 10, 31, 76, 92, 113,  
 116, 126, 129, 138, 145, 153, 159,  
 172, 177, 185–86, 205, 258, 263–68,  
 268 n. 1, 270–71, 273, 274 n. 3,  
 275–78, 281, 284  
 Enright, R. D., 238, 257  
 Erickson, J. A., 6, 137, 161, 172  
 Erikson, E. H., 7–8, 24, 30, 101, 116,  
 263, 266, 274–76, 278  
 Even, B., 112, 117  
 Exline, J. J., 76–79, 92, 255, 258  
 Exline, J. L., 212–13, 227, 230  
  
 Faris, R., 237, 260  
 Farnham, S. D., 82, 90, 92  
 Fava, M., 205  
 Ferriss, A. L., 233, 258  
 Fiala, W. E., 255, 258  
 Fidell, L. S., 217, 224, 231  
 Fiedler, L., 80, 88, 92  
 Fincham, F., 91, 93  
 Fink, A., 173  
 Fink, L., 144, 153  
 Finkel, E. J., 92  
 Finkenauer, C., 136–37  
 First, M. B., 61, 72  
 Fitchett, G., 154  
 Flexner, E., 156, 173  
 Flint, J., 11, 30  
 Fogle, L. M., 235, 258  
 Foote, J., 153  
 Fordham, F., 59  
 Forthun, L. F., 8, 26, 30  
 Fowler, J. W., 6–7, 30, 100, 113, 116  
 Fox, M., 100, 116  
 Fraley, R. C., 9, 33  
  
 Francis, L. J., 122, 138, 150, 153  
 Frankl, V., 265, 278  
 Franklin, K., 25, 33  
 Frankova, A., 156, 172–73  
 Frederick, C., 269, 278  
 Freud, S., 37–39, 44, 48, 50, 157, 173  
 Frie, R., 25, 31  
 Fritsch, M., 3, 33  
 Fujita, F., 225, 230  
 Furman, A. C., 57, 71  
 Furrow, J. L., 25, 31, 238, 255, 259  
  
 Galea, M., 122, 138, 141, 159, 173, 282  
 Gallos, J. V., 100, 116  
 Gardner, C. O., 6, 31, 238, 259  
 Gassin, E. A., 77, 92–93  
 Gay, D. A., 238, 258  
 Gay, H., 174  
 Geary, B., 122, 138, 150, 152–53, 159,  
 168, 173  
 George, L. K., 153, 238, 258  
 Geyer, A. L., 84, 92  
 Gibbon, M., 61, 72  
 Gillespie, K., 121, 282  
 Glass, T. A., 238, 258  
 Glickson, J., 197, 205  
 Goldberg, L. R., 10, 31, 126, 138  
 Golden, J., 122, 138, 159, 173  
 Goodman, J. M., 55, 72  
 Goossens, L., 9, 32  
 Gore, P. A., 113, 117  
 Gorsuch, R., 78, 92, 158–59, 173, 255,  
 258  
 Gorvine, B. J., 257  
 Gosling, S. D., 256, 258  
 Gottfredson, L. S., 100, 117  
 Gottlieb, B., 255, 257  
 Grant, K., 27, 31  
 Gray, E. K., 9, 31  
 Greenwald, A. G., 82–83, 92  
 Greer, J., 142, 153  
 Greteman, A., 263  
 Grevengoed, N., 174  
 Griffin, D., 278  
 Griffin, R., 56, 71  
 Griffin, S., 113, 116, 126, 138, 145, 153,  
 159, 172, 186, 205, 258, 270, 277  
 Grogan-Henderson, K., 159, 173  
 Gross, J. J., 183, 205  
 Grossman, R., 173  
 Grotevant, H. D., 26, 31  
 Gruenberg, E., 119  
 Grusec, J. E., 226, 230  
 Guertin, M., 113, 119

- Gur, M., 238, 255, 259  
 Gyatso, T., 180, 205  
  
 Hackman, J. R., 100, 104, 106, 117  
 Haig, J., 9, 31  
 Hall, D. T., 116  
 Hall, T. A., 141, 153  
 Haller, R., 156, 173  
 Handelsman, L., 153  
 Hao, J. Y., 78, 92  
 Hardy, L., 99–102, 117  
 Harner, J., 209, 281  
 Harned, D. B., 178–79, 182, 205  
 Harrington, S., 136, 138  
 Harris, P. L., 6, 33  
 Hart, T., 24, 31  
 Harvey, J. H., 77, 92  
 Haskins, D., 155, 282  
 Hassinger, C. J., xi, 53, 282  
 Hathaway, W., 57–58, 70, 72, 174  
 Hauser, R. J., 272, 278  
 Hawley, P., 112, 117  
 Hazan, C., 270, 278  
 Heath, D. H., 101, 104, 106, 117  
 Heatherton, T. F., 30  
 Heiler, F., 210, 230  
 Helmreich, R. L., 182, 206  
 Helzer, J., 119  
 Hennessey, B., 100, 115  
 Herbert, G., 102, 117  
 Hight, T. L., 93  
 Hill, J. S., 101, 117  
 Hill, K. G., 100, 115  
 Hill, P. C., 7, 31, 54, 56, 72, 75, 77,  
     80–81, 89, 92, 233, 238, 243, 251,  
     258, 282  
 Hinterhuber, H., 156, 164, 173  
 Hogan, R., 138  
 Hoge, D. R., 25, 31  
 Holland, D., 57, 72  
 Holland, J. L., 100, 102, 117  
 Hollander, E., 156, 172–73  
 Holloway, K. A., 99, 283  
 Hood, R. W., 7, 31, 56, 72, 159, 173,  
     238, 258  
 Hooper, J., 102, 117  
 Hoopes, A., 253, 258  
 Hopcke, R. H., 46, 51  
 Hopson, R. E., 171, 173  
 House, M., 27, 31  
 Hoyt, D. R., 25, 30  
 Hoyt, W. T., 78, 93  
 Huebner, E. S., 234–236, 243, 251,  
     257–261  
  
 Hunsberger, B., 159, 173  
 Hunt, H., 27, 31  
 Huntley, H. L., 100, 117  
 Hutchinson, F. E., 117  
  
 Idler, E. L., 238, 241, 247, 254, 258  
 Ignatius of Loyola, 48, 227, 230  
 Ihrke, H., 238, 254, 259  
 Ingersoll, R. E., 153  
 Ironson, G., 71  
  
 Jackson, E. P., 26, 31, 158  
 Jaeger, S., 205  
 James, W., 38, 156, 171, 173, 202, 205,  
     236, 263, 278  
 Jencius, M. J., 55, 72  
 Jensen, L., 28, 30  
 Jin, R., 205  
 John, O. P., 187, 205, 256, 258  
 Johnson, C. N., 6, 33  
 Johnson, J. A., 138, 278  
 Joiner, T., 92, 122, 138  
 Jones, A., 161, 173, 269, 278  
 Jones, G. B., 118  
 Jones, S. M., 238, 260  
 Jones, W., 174  
 Joseph, S., 136, 138  
 Josselson, R., 100, 117  
 Jung, C. G., viii, 35–51  
  
 Kachorek, L.V., 92  
 Kadden, R., 174  
 Kahneman, D., 138–39, 257–58  
 Kalkstein, S., 252, 259  
 Kane, D., 142, 153  
 Kang, T., 107, 119  
 Kanner, A., 114, 117  
 Kaplan, G. A., 255, 260  
 Kasser, T., 99, 114, 117, 274 n. 3, 279  
 Katz, Y. J., 122, 138, 150, 153  
 Keks, N., 69, 72  
 Kelley, B., 3, 32, 233–34, 254, 256,  
     259–60, 283  
 Kendler, K. S., 6, 31, 238, 241, 259  
 Kennedy, J. E., 153  
 Kennedy, M. C., 70, 72  
 Kennedy, S., 93  
 Kennell, J., 174  
 Kentle, R. L., 187, 205  
 Kessler, R. C., 200, 205  
 Khalsa, G. S., 72  
 Khalsa, M. K., 69–70, 72  
 Kidwell, J. S., 26, 31  
 Kierkegaard, S., 179, 205

- Kijares, S. G., 72  
 Killian, J. K., 72  
 Killon, N., 56, 73  
 Kim, B. S. K., 90, 92  
 Kim, D. Y., 80, 92  
 King, P. E., 3-4, 6-8, 25, 30-31, 33, 73,  
 234, 236, 238, 255, 259-60  
 Kirkpatrick, L. A., 124, 138  
 Kneezel, T. T., 10, 31  
 Koening, H. G., 56, 71, 139, 255, 257,  
 259, 263, 278  
 Kolarz, C. M., 131, 139  
 Kolts, R. L., 185, 206  
 Koole, R., 25, 33  
 Korn, W. S., 114, 119  
 Krapp, R. M., 102, 117  
 Krause, N., 238, 258  
 Kraut, R., 256, 259  
 Krueger, J., 92  
 Krumboltz, J. D., 100, 113, 117-18  
 Krupski, T. L., 158, 173  
 Ksiazak, T. M., 158, 174  
 Kumar, M., 71  
 Kunz, G., 181, 199, 205  
 Kwan, L., 173  
  
 LaBouff, J., 93  
 Ladd, K. L., 209-10, 216-17, 226-28,  
 230, 283  
 Ladd, M. L., 209, 283  
 Ladouceur, R., 155-57, 174-75  
 LaGuardia, J. G., 101, 115, 118, 278  
 Landy, F. J., 182, 184, 199, 205  
 Langer, E. J., 198, 205  
 Larkin, E., 253, 258  
 Larsen, B., 56, 73  
 Larsen, R. E., 186, 205  
 Larsen, R. J., 126, 138, 145, 153, 186,  
 258, 277  
 Larson, D. B., 7, 24, 31, 72, 113, 116,  
 153, 159, 172, 238, 255, 259, 270  
 Latham, G. P., 101, 118  
 Laughlin, J. E., 235, 258-59  
 Lavin, L. P., 57, 69, 70, 72  
 Lawrence, B. S., 116  
 Lawrence, R. T., 127, 138  
 Lawson, R., 141-42, 153  
 Leach, M. M., 54-55, 73, 76, 78, 81,  
 93, 137-39, 287  
 Leak, G. K., 263, 268, 271, 275,  
 277-78, 283  
 Lechner, S. C., 71  
 Lehman, D. R., 206  
 Leinbiz, G., 230  
  
 Lent, R. W., 117  
 Lepper, H. S., 114, 118  
 Lerner, R. M., 3, 31, 234, 259  
 Lesieur, H. R., 160, 173  
 Leuwerke, W. C., 113, 117  
 Levenson, M. R., 3, 25, 32, 236, 259  
 Levin, J. S., 233, 259  
 Levinson, D., 100, 118  
 Lewis, C. S., 79, 93, 217  
 Li, L. C., 90, 92  
 Lindholm, J. A., 114, 119  
 Linley, P. A., 136, 138  
 Little, T. D., 238, 255, 260  
 Litwin, M. S., 173  
 Liu, X., 238, 259  
 Locke, E. A., 101, 118  
 Lodhi, P. H., 139  
 Lopez, S. J., 93, 260-61, 264, 279  
 Loscocco, K. A., 100, 118  
 Lovejoy, M., 153  
 Lucas, R., 161, 172-73, 233-34, 258,  
 270, 278  
 Ludlow, D. H., 92  
 Luther, M., 101, 118  
 Lutz-Zois, C., 91  
 Luyckx, K., 9, 32  
 Lynn, S. J., 27, 32  
 Lyubomirsky, S., 114, 118, 206  
  
 Ma, J., 202, 206  
 MacDonald, D. A., 72  
 MacIntyre, A., 111, 118  
 Madsen, R., 103, 115  
 Maes, H. H., 6, 30  
 Maholick, L. T., 113, 116  
 Mahoney, A., 26, 32, 238, 254, 259-60  
 Mahoney, K. M., 114, 119  
 Maliski, S., 173  
 Malony, H., 58, 73  
 Mapa, A. T., 55, 73  
 Marcia, J. E., 7-8, 24, 32, 101, 118, 120  
 Marcoux, E., 71  
 Mari, E., 173  
 Marks, L. D., 4, 30  
 Markstrom, C. A., 8, 32  
 Marrone, R., 141-42, 153  
 Martens, W. H. J., 69, 72  
 Maslow, A., 100, 118, 263, 266, 274,  
 276, 278  
 Matheis, E., 158, 173  
 Matheis, R. J., 158, 173  
 Mathieu, J. E., 184, 205  
 McCauley, C., 99, 120  
 McConaghy, N., 156, 172-73

- McCormick, R. A., 155, 174–75  
 McCrae, R. R., 4, 8–9, 23, 30, 32, 60,  
 72, 121, 126, 139, 145, 154, 160–61,  
 172, 256, 259  
 McCullough, M. E., 3, 7, 31–32, 72, 76,  
 78, 92–93, 185, 205, 233, 235–36,  
 238, 251, 254–55, 259, 261  
 McGregor, H. A., 271, 279  
 McIntosh, D. N., 213, 226, 230  
 McMahan, D. M., 233, 236, 259  
 McNeill, J. T., 116  
 Meade, R., 257  
 Meeus, W., 26, 32  
 Mehrabian, A., 181, 206  
 Mendonca, D., 121, 283  
 Metz, G. J., 159, 174  
 Miller, L. F., 3, 10, 32, 233–34, 238,  
 253–56, 259–60, 283  
 Miller, W. R., 54, 72, 154, 169, 173,  
 175  
 Miller-Tiedeman, A., 100, 118  
 Mills, C. J., 32, 259  
 Milton, J., 102, 118, 281  
 Mitchell, A. M., 118  
 Moldoveanu, M., 205  
 Molina, C., 174  
 Monteiro, D., 138  
 Monterosso, J., 206  
 Montgomery, M. J., 8, 30  
 Morse, N. C., 104, 115, 118  
 Moskowitz, J. A., 156, 173  
 Mosovich, S., 173  
 Mroczek, D. K., 131, 139  
 Murphy, P. E., 143, 154, 287  
 Murray, J. B., 155, 174  
 Murray-Swank, N., 70, 72, 287  
 Murrelle, L., 6, 30  
 Musick, M. A., 238, 258  
 Myers, D. G., 99, 102, 113–14, 118,  
 158, 174, 233, 236, 260  
 Nam, R. K., 75, 283  
 Nelson, R., 127, 139  
 Nesselroade, K. P., 78, 93  
 Neto, F., 234, 236, 243, 251, 260  
 Nevill, D. D., 112, 115, 118  
 Newman, J., 174  
 Ng, G. F., 90, 92  
 Nolen-Hoeksema, S., 131, 139  
 Noll, E., 145, 153  
 Nosek, B. A., 92  
 O'Connor, L. E., 91  
 Oakes, K. E., 121, 283  
 Ochse, R., 270, 278  
 Oishi, S., 271, 278  
 Oldham, G. R., 100, 104, 117  
 Olson, J., 99, 259  
 Oman, D., 20, 32, 113, 118, 255, 260  
 Organ, D. W., 100, 118  
 Orvaschel, H., 119  
 Ottenbreit, A., 78, 93  
 Ozorak, E. W., 6, 25, 32, 211, 225–26,  
 231  
 Page, A. C., 69, 73  
 Page, M. M., 269, 279  
 Pajares, F., 118  
 Paleari, F. G., 91, 93  
 Palmer, P., 100, 118  
 Paloutzian, R., 32–33, 73, 76, 92–93,  
 258–60  
 Pargament, K. I., 7, 31, 54, 72–73,  
 92–93, 123–24, 127, 135, 139, 141–42,  
 151, 154, 159, 174, 233, 238, 260  
 Park, C., 32–33, 73, 93, 154, 234,  
 258–60, 264, 279  
 Parker, D. J., 70, 72  
 Parker, W. D., 32, 259  
 Parrott, L., 91  
 Pattison, E. M., 169, 174  
 Paulhus, D., 82, 93, 189  
 Pauwels, B. G., 77, 92  
 Pavot, W., 113, 118, 139, 154, 161–62,  
 174, 234, 243, 257, 260  
 Pearce, L. D., 25, 32  
 Pearce, M. J., 238, 241, 253, 255, 260  
 Pelikan, J., 118  
 Pendleton, S., 238, 254, 259  
 Penk, W., 141, 153  
 Perez, J. E., 238, 255, 260  
 Perez, M., 122, 138  
 Perkins, W., 101, 118  
 Perosa, L. M., 26, 32  
 Perosa, S. L., 26, 32  
 Perrone, K. M., 158, 174  
 Peterson, C., 3, 32, 77, 92–93, 99–100,  
 113–14, 119, 136, 139, 152, 154,  
 159, 182–83, 185, 190, 192, 199–200,  
 206, 212, 214, 217, 231, 233, 260,  
 264, 279  
 Petrillo, G. H., 25, 31  
 Petry, N. M., 155–57, 174  
 Peyrot, M., 154  
 Phillips, A., 80, 82, 92  
 Piedmont, R. L., xii–xiv, 4, 8–10,  
 32–33, 53, 54–56, 58–62, 69–70,  
 72–73, 76, 81, 93, 122, 127, 137–39,

- 141-42, 144-45, 153-55, 159-62,  
 168, 173-74, 206, 256, 260, 277  
 Pierce, J. D., 257  
 Pinquart, M., 25, 33  
 Plante, T. G., 99, 113, 119, 140, 154,  
 174  
 Plug, C., 270, 278  
 Plymer, R., 139  
 Pollner, M., 139, 235, 238, 251, 260  
 Porter, J., 139  
 Posthuma, D., 234, 260  
 Powell, L. H., 56, 73  
 Powell, T., 134, 140, 143, 154, 168, 174  
 Power, P. O., 117  
 Powers, C., 75, 93, 284  
 Pred, R. S., 206  
 Prescott, C. A., 6, 31, 238, 259  
 Prochaska J. O., 169, 174  
 Puhl, L. J., 102, 119  
 Pulakos, E. D., 100, 119  
  
 Quinn, R. E., 100-101, 119  
  
 Rachal, K. C., 76, 93  
 Radloff, L. S., 186  
 Rahner, K., 139  
 Rahula, W., 180, 206  
 Raines, J. C., 100, 119  
 Ramirez, L. F., 155, 174-75  
 Rastegary, H., 182, 205  
 Ratner, P. A., 56, 73  
 Rayburn, C. A., 100, 119  
 Reave, L., 91, 93  
 Regalia, C., 91, 93  
 Regnerus, M., 3-4, 8, 26, 33  
 Reid, D., 82, 93  
 Rew, L., 3, 33  
 Rhi, B.-Y., 58, 73  
 Rhorer, J., 53, 284, 287  
 Rhue, J. W., 27, 32  
 Richardson, M. S., 101, 103-104, 106,  
 119  
 Richmond, L. J., 99-100, 102, 115-20,  
 287  
 Rickey, M. E., 102  
 Rigby, B. T., 235, 260  
 Rinpoche, K. K., 180, 206  
 Rizzuto, A. M., 127, 135, 139-40, 152,  
 154  
 Robbins, R. W., 33  
 Roberts, B. W., 9, 33  
 Robins, L., 9, 114, 119  
 Rodgers, W. L., 113, 116  
  
 Rodgeron, T., 122, 138, 159, 173, 287  
 Rodriguez-Lopez, A., 91, 94  
 Roehlkepartain, E., 6, 28, 30-31, 33,  
 259-60  
 Roesch, S. C., 238, 261  
 Rollnick, S., 169, 173  
 Roof, W. C., 28, 33  
 Root, L. M., 78, 93, 254, 259  
 Rorty, A., 202, 206  
 Roschelle, A. R., 100, 118  
 Rosengren, K. S., 6, 33  
 Rosenthal, S. L., 4, 30, 253, 258  
 Ross, J., 102, 172  
 Ross, M. M., 159, 267  
 Ross, S. R., 91  
 Rossetti, S. J., 141, 154  
 Rothbaum, F., 202, 206  
 Rowatt, W. C., 75, 76, 78-80, 82, 84,  
 91, 93, 284  
 Rozin, P., 99, 120  
 Ruchkin, V., 238, 260  
 Russo, A. M., 155, 174-75  
 Rusting, C. L., 131, 139  
 Ryan, R. M., 99, 101, 115, 117-18,  
 187, 197, 204, 263, 269-70, 276-78  
 Rye, M. S., 91  
  
 Saenz, V. B., 119  
 Salgado, J., 202, 206  
 Sanchez, J. I., 202, 206  
 Sandage, S. J., 76, 93  
 Sandvik, E., 113, 118, 139  
 Sandy, J. M., 238, 261  
 Saroglou, V., 4, 10, 33  
 Saulsman, L. M., 69, 73  
 Savickas, M. L., 100, 102, 119  
 Sawatzky, R., 56, 73  
 Sax, L. J., 114, 119  
 Scheers, N. J., 138, 153, 159, 168, 173  
 Schimmel, S., 77, 93  
 Schmitt, N., 119  
 Schmukle, S. C., 92  
 Schneider, B., 99, 101, 104, 106, 114,  
 116  
 Schmitker, S. A., 177, 284  
 Schoenfelder, E., 99, 284  
 Schoenrade, P., 24, 30, 263, 277  
 Schwab-Stone, M. E., 238, 260  
 Schwartz, B., 99, 101, 119-20, 188,  
 206  
 Schwartz, K. D., 25  
 Schwartz, S. H., 267, 271  
 Schwarz, N., 138-39, 257-58

- Schwerdtfeger, A., 92  
 Scott, A. B., 54, 73, 142  
 Sedikides, C., 153  
 Seeman, M., 73  
 Seeman, T. E., 54, 56, 73  
 Seligman, M. E. P., 3, 32, 77, 92–93, 99–102, 106, 113–14, 119, 136, 139, 152, 154, 158, 174, 182–83, 185, 190, 192, 199–200, 206, 212, 214, 217, 231, 233, 260, 263–64, 266, 269–70, 273, 275–76, 279  
 Seybold, K. S., 77, 80, 92  
 Shahabi, L., 73  
 Shama-Davis, D., 55, 72  
 Sharf, R. S., 100, 120  
 Shaver, P. R., 188, 204, 270, 277–78  
 Shcherbakova, J., 141, 154  
 Sheldon, K. M., 99, 117, 271, 274, 276, 279  
 Shema, S. J., 255, 260  
 Sheppard, G. T., 116  
 Sherman, A. C., 113, 119, 140, 154  
 Sherman, M. F., 53, 61, 73, 285, 287  
 Sherman, N. C., 53, 61, 73, 285  
 Silbereisen, R. K., 25, 33  
 Silberman, I., 20, 23, 33  
 Silove, D., 156, 172  
 Siu, O. L., 202, 206  
 Sloan, R. P., 134, 140, 143, 154, 168, 174  
 Smith, B., 4, 33, 227, 230  
 Smith, C., 3, 14, 28, 33, 237–38, 255, 260  
 Smith, E. I., 25, 31  
 Smith, H. L., 161, 172, 233, 258, 270, 278  
 Smith, W. L., 78–79, 93  
 Sneck, W. J., 35, 51, 121, 285  
 Snyder, C. R., 2, 32, 93, 233, 260–61, 264, 279  
 Snyder, S. S., 202, 206  
 Sobell, L. C., 169, 174  
 Sobell, M. B., 169, 174  
 Soenens, B., 9–10, 30, 32  
 Sonn, G. A., 173  
 Spalding, A. D., 159, 174  
 Spector, P. E., 202, 206  
 Spence, J. T., 182, 206  
 Spilka, B., 6, 30, 137, 159, 173, 210, 216–17, 226, 228, 230  
 Spitzer, R. L., 61, 72  
 Srivastava, S., 256, 258  
 St. Pierre, K., 209, 281  
 Stark, R., 150, 154  
 Staw, B. M., 100–102, 120  
 Steen, T. A., 264, 279  
 Steinberg, K., 174  
 Stone, T., 185, 206  
 Strawbridge, W. J., 255, 260  
 Stroup, T. B., 102, 119  
 Stubbe, J. H., 234, 260  
 Suh, E., 122, 138, 161, 172–73, 233–35, 258, 270, 278  
 Sullivan, W. M., 103, 115, 142, 154  
 Super, D. E., 100–102, 112, 115, 118, 120  
 Sverko, B., 101, 120  
 Swanson, T., 209, 281  
 Sweeney, T. J., 102, 118, 120  
 Swidler, A., 103, 115  
 Swyers, J. P., 7, 31, 72  
 Sylvain, C., 156, 174  
 Synder, C. R., 3, 32, 93, 202, 206, 233, 259, 261, 264, 279  
 Tabachnick, B. G., 217, 224, 231  
 Taber, J. I., 155, 174–75  
 Tam, H. P., 26, 32  
 Tangney, J., 76, 79, 93, 187, 206, 266, 279  
 Tanner, J. L., 239, 257  
 Tarakeshwar, N., 26, 32, 260  
 Targhetta, V., 93  
 Taylor, B. G., 153  
 Taylor, C., 101, 120  
 Tedeschi, R. G., 142, 154  
 Tehrani, K., 265, 274 n. 3, 278  
 Tellegen, A., 126, 140, 186, 206  
 Templeton, J. L., 7, 28, 33  
 Teresi, J. A., 242, 252–54, 261  
 Terracciano, A., 32, 259  
 Thayer, J., 182, 205  
 Thoresen, C. E., 20, 32, 54, 56, 72–73, 92–93, 113, 118, 154, 255, 260  
 Tiedeman, D. V., 100, 118, 120  
 Tighe, E. M., 100, 115  
 Tipton, S. M., 103, 115  
 Toneatto, T., 155, 157, 175  
 Tonigan, J. S., 159, 175  
 Tosco, R. T., 159, 175  
 Traphagan, J. W., 241, 261  
 Trnka, D., 209, 281  
 Trull, T. J., 71, 73  
 Trzesniewski, K. H., 9, 33  
 Tsang, J., 78, 93, 185, 205, 238, 261  
 Tsevat, J., 4, 30, 258

- Tulskey, D. S., 158, 173  
 Turner, V., 24–25, 33  
  
 Underwood, L., 241–42, 252–55, 257, 261  
 Urdan, T., 118  
 Uribelarrea, L. L., 160, 175  
 Ursua, M. P., 160, 175  
  
 Vaidya, J., 9, 31  
 Vaillant, G. E., 113, 119  
 Valois, R., 235–36, 258, 261  
 Van Brummelen, H., 25, 33  
 Van Wicklin, J. F., 140, 160, 175  
 Vance, J. Z., 174  
 Vandehey, M., 100, 115  
 VanDeusen, K. M., 168, 175  
 Vansteenkiste, M., 9, 32  
 Vaughn, A. A., 238, 261  
 Vazire, S., 256, 258  
 Ventis, W. L., 24, 30, 263, 277  
 Vera, D., 91, 94  
 Verkuil, P., 99, 119  
 Vincelletta, A., 153  
 Virgil, 177, 206  
 Vohs, K. D., 136–37  
  
 Wade, N. G., 91  
 Wagener, L., 3, 6, 30–31, 33, 58, 73, 259–60  
 Walker, R. L., 122, 138  
 Wallace, J. M., 254–55, 261  
 Walsh, J. M., 122, 140, 152, 154–55, 285  
 Walters, E., 205  
 Ward, A., 206  
 Warner, V., 253, 260  
 Warnke, F. J., 116  
 Waterman, A. S., 100–101, 118, 120  
 Waterman, K. K., 26, 33  
 Watkins, P. C., 185, 206  
 Watson, D., 9, 31, 126, 129, 131, 140  
 Way, I., 168, 175  
  
 Webb, L. K., 158, 174  
 Weber, M., 102, 120  
 Wehr, G., 51  
 Weinberger, J. L., 30  
 Weiss, R. S., 104, 106, 115, 118  
 Weissman, M., 119, 253, 260  
 Weisz, J. R., 202, 206  
 Welton, G. L., 77, 80, 92  
 Wenzelf, K., 153  
 Whilte, K., 206  
 Whitbeck, L. B., 25, 30  
 Wickramaratne, P., 253, 260  
 Wicks, R. J., 35, 51, 141, 153, 285–86  
 Wiens, T. W., 76, 93  
 Willemsen, E. W., 26, 33  
 Williams, D. E., 269, 279  
 Williams, D. R., 254–55, 261  
 Williams, J. B. W., 61, 72  
 Williams, J. E. G., 53, 55, 73, 127, 135, 138–39, 153, 286  
 Wills, T. A., 238, 261  
 Wink, P., 56–57, 73, 143, 154  
 Witmer, J. M., 102, 118, 120  
 Wong, C. M., 173  
 Wong, P. T. P., 265, 279  
 Wong, Y., 3, 33  
 Wood, A. M., 136, 138  
 Woodward, K., 185, 206  
 Worthington, E. L., 76–78, 89, 91, 93–94  
 Wright, S. L., 158, 174  
 Wrzesniewski, A., 99, 101, 103–105, 107, 111–13, 120  
 Wulff, K. M., 260  
  
 Yaeger, A. M., 238, 261  
 Yancey, S., 113, 119  
 Young, J. S., 141–42, 154  
  
 Zebracki, K., 4, 30, 258  
 Zimbardo, P. G., 187, 206  
 Zinnbauer, B. J., 54, 73, 142  
 Zullig, K. J., 236, 261





## INDEX OF SUBJECTS

- adult identity, 100–101  
Affect Balance Scale, 145, 162  
agreeableness, 57, 60, 62, 76, 126, 128,  
131, 145–50, 148, 150, 160–64, 166,  
187, 192–94, 196–97, 277  
Alcoholics Anonymous, 36, 156–58,  
167, 171–74  
anima/animus, 40, 46, 48  
archetypes, 39–40, 46–47  
ASPIRES. *See* Assessment of Spirituality  
and Religious Sentiments  
Assessment of Spirituality and  
Religious Sentiments, 54, 59, 73  
Attitude Toward Forgiveness scale, 80,  
82  
Axis II pathology, 53, 58, 66, 69  
  
Balanced Inventory of Desirable  
Responding, 82, 189  
Big Five. *See* Five Factor Model  
Big Five Inventory, 187  
Bipolar Adjective Rating Scale, 60  
Brief Adjective Rating Scale, 141, 145  
Brief Multidimensional Measure of  
Religiousness/Spirituality, 73, 233,  
241  
Brief Symptom Inventory, 169, 172  
  
career choice, 100, 115, 117  
CES-D, 186, 206  
character strengths, 32, 77, 93, 97, 114,  
119, 136–37, 139, 152, 154, 182–83,  
185, 191–92, 195, 199–201, 206,  
213–14, 231, 260  
child abuse, 138, 141–44, 148, 150–54,  
173  
Childhood Trauma Questionnaire, 141,  
144, 153  
Congregation Benefits subscale, 242  
Congregation Problems subscale, 242  
connectedness. *See* Assessment of  
Spirituality and Religious Sentiments  
conscientiousness, 60, 62, 126, 128, 131,  
145–47, 149–50, 160, 162–66, 171,  
187, 193–94, 196–97, 277  
  
Daily Spiritual Experiences, 233, 241,  
245, 247–49, 252–53, 256–57, 259,  
261  
delay of gratification, 181, 183, 203  
  
Experiences in Close Relationships  
Inventory, 188  
extraversion, 8, 48, 60, 62, 126,  
128, 131, 145–47, 148, 160,  
163–66, 171–72, 187, 193–94,  
197  
  
faith development theory, 7, 31  
Faith Maturity Scale, 127, 137, 139,  
161, 172  
FFM. *See* Five Factor Model  
Five Factor Model, 4, 8, 21, 32, 55, 60,  
72–73, 93, 121, 124, 139, 145, 152,  
154–55, 161, 174, 206  
forgiveness, iii, 3, 44, 75–82, 84, 86–87,  
89–94, 190, 201, 238–39, 241–42,  
245–48, 251–54, 257, 259, 264,  
283–85  
Forgiveness Short-Form, 80, 82  
free association, 36, 44  
  
Gamblers Anonymous, 155, 157, 160,  
172–73, 175  
goal strivings, 263, 265–68, 268 n. 1,  
272–78  
God concept, 127, 226  
God image, 49–50, 121, 127, 129–32,  
134–35, 137–38  
God Image Scale, 127, 138  
Gratitude Questionnaire, 185  
Gratitude Resentment and Appreciation  
Test, 185  
  
Health Problems Questionnaire, 186  
humility, viii, 75–83, 83 n. 1, 84, 86–94,  
179, 181, 201, 204–205, 226, 266,  
279, 284  
Humility Scale, 80–81, 86–87  
Humility Semantic Differentials Scale,  
81

- identity development, 4, 6–7, 10, 24, 26, 28, 32, 117, 282
- impression management, 80, 82, 84, 88–91, 189, 196
- International Personality Item Pool, 126, 138
- Interpersonal Reactivity Index, 188
- Intrinsic and Extrinsic Motives scales, 275
- Intrinsic/Extrinsic (I/E) Scale, 159
- job satisfaction, 100, 116, 119
- life satisfaction, 3, 56, 113, 126, 138, 145, 158, 160, 163, 165, 167, 171, 174, 186, 194, 196, 198, 199, 233–34, 237, 239, 241, 243–44, 246–52, 254, 256–58, 260–61, 266
- Lifestyle Questionnaire, 187
- Maslowian Assessment Survey, 269, 274
- Maximization Scale, 188
- MBTI. *See* Myers-Briggs Type Indicator
- Mindful Attention Awareness Scale, 187
- Moralistic Therapeutic Deism, 6
- Myers-Briggs Type Indicator, 41
- mystical experiences, 252
- Negative Religious Coping, 124, 241–42
- neuroticism, 57, 60, 126, 131, 145, 148, 152, 160, 162, 165, 169–70, 172, 187, 193, 197
- numinous, vii–viii, 53, 56–59, 66–71, 277
- openness, viii, 3–10, 13–21, 23–29, 32, 60, 78–79, 126, 131, 145, 160, 187, 193, 197, 256, 259, 277
- Openness to Experience. *See* Five Factor Model
- pastoral counseling, 35, 40, 153, 282
- pastoral counselor, viii, 35, 37–47, 49–50, 284–85
- pathological gambling, viii, 140, 154–58, 167, 170, 172–75, 281
- patience, 42, 97, 177–85, 189–205, 207, 227
- Patience Scale, 177, 190, 192–95, 197–201, 203, 207
- personal fulfillment, 100–101, 103, 111
- Personal Orientation Inventory-Revised, 269
- Positive and Negative Affect Schedule, 126, 186
- positive psychology, vii–viii, xi, 92, 97, 99, 102, 114, 119, 123, 127, 136–38, 141–42, 151–52, 158, 167, 174, 182, 197, 212, 233, 250, 256, 260, 263–67, 270–71, 273, 275–76, 279, 281, 283–84
- Positive Religious Coping, 124, 241–42, 246, 248–49, 251–54, 257
- prayer, 10, 22, 43, 45, 60, 62–63, 65, 76, 81–82, 84–86, 113, 140–42, 144–45, 154, 161–63, 165, 167–68, 171, 174, 185–86, 190, 198–99, 209–13, 215–17, 219–21, 224–30, 233–35, 238, 241, 245–47, 253, 283
- connecting, 115, 210, 224, 226
- inward, 210, 213, 216, 224–26, 229–30
- outward, 209–10, 213, 216, 224–25, 229–30
- upward, 210, 216, 225, 229–30
- prayer fulfillment. *See* Assessment of Spirituality and Religious Sentiments
- prayer-fulfillment subscale. *See* Assessment of Spirituality and Religious Sentiments
- prosocial behavior, 127, 135, 138, 153, 161, 172
- psychopathology, 3, 31–32, 53, 57–58, 64, 66–67, 69, 254, 259
- Quality of Life, 56, 73, 171, 173–74, 252, 258
- Relationship, 10, 25–26, 28, 42–47, 53–55, 58, 69–71, 73, 89, 91–93, 109–10, 113–14, 122–24, 129–31, 134–36, 141–43, 148, 150, 152–54, 158–60, 163, 165, 167–68, 171, 174, 184, 186, 188, 190, 192, 196–98, 201–204, 206, 228, 231, 233–39, 243, 248, 250, 252–56, 258–60, 263, 266, 268, 270, 272, 277, 285
- Relationship Questionnaire, 270
- regression in service of the ego, 37
- religiosity, viii, 3, 6, 22, 27, 30, 32–33, 54–56, 59–60, 62, 72–73, 121–24, 135, 138, 141–42, 146, 148, 153, 159, 216, 233–35, 237–38, 241, 244, 254, 257–61, 283, 286
- Religiosity Index, 59–60, 62

- religious coping, 124, 139, 159, 238,  
241–42, 246, 253, 257, 259–60
- Religious Crisis, 53, 55–56, 59–60,  
62–66, 69
- Revised NEO Personality Inventory,  
160, 172, 174
- R-UCLA Loneliness Scale, 188
- Salient Beliefs Review, 103, 115
- Satisfaction with Life Scale, 116, 118,  
126, 138–39, 141, 145, 153–54, 159,  
161, 172, 174, 186, 205, 233–34,  
241, 243, 258, 260, 270, 273, 277
- Satisfying Activities Survey, 271
- Schedule for Nonadaptive and  
Adaptive Personality, 53, 60, 71
- Self-Control Scale, 187
- signature strengths, 100–101, 114
- Snowballing, 10–11, 26
- spiritual attachment, 124, 134
- spiritual development, viii, 3, 6–8,  
13–14, 20, 24, 26, 28–31, 33, 73,  
210, 227, 259–60, 281, 283
- spiritual meaning making, 250
- spiritual modeling, 20, 32, 113, 118
- spiritual openness, 10, 13–15, 20
- spiritual strivings, 97, 263, 265–68,  
268 n. 1, 269, 271, 273, 273 n. 2,  
274 n. 3, 277
- spiritual transcendence, 10, 24, 32,  
60–61, 72–73, 75–76, 78–80, 85–88,  
93, 121, 139, 150–51, 154–55, 160,  
163, 165, 167–68, 171, 174, 177,  
185, 190, 206, 284
- Spiritual Transcendence Scale.  
*See* Assessment of Spirituality and  
Religious Sentiments
- spirituality, vii–ix, xii, 3–4, 6, 10–12, 14,  
16–24, 27–33, 36, 43, 49–50, 53–58,  
61–62, 64–65, 68–73, 75–76, 78,  
80–81, 86, 90, 92–93, 97, 99–100,  
103, 121–23, 125, 129, 132, 134–44,  
146, 148, 150–56, 158–59, 161,  
167–68, 170–75, 177, 184–85, 198,  
201–202, 204, 206, 224, 233, 237–39,  
241–42, 244–46, 249–50, 253–61,  
263–67, 276–78, 281–85
- Structural Equation Modeling, 53, 58,  
205
- Structured Clinical Interview for  
DSM-IV Disorders Questionnaire,  
53
- Tendency to Forgive Scale, 80, 82, 92
- Transgression Narrative Test of  
Forgiveness, 80, 82, 88, 91
- Trinity, 38
- unconscious, 37, 39–44, 47–50
- universality. *See* Assessment of  
Spirituality and Religious Sentiments
- Values in Action Classification of  
Strengths questionnaire, 214
- Values in Action Inventory, 185
- Vitality, vii, 263, 269–70, 275, 278
- vocation, 99–104, 106, 110–16, 118–19,  
281
- Vocation Identity Questionnaire, 99,  
104, 107
- well-being, vii, 3, 10, 27, 29–31, 56–57,  
72, 78, 114, 116, 112, 121–24, 126,  
129–32, 134–39, 142–43, 145, 148,  
150–53, 155, 158–63, 165, 167–68,  
170, 172–74, 184, 201–204, 206, 230,  
233, 236, 254, 256–60, 263, 265–67,  
270–71, 276, 278–79, 281–83
- Wellness Evaluation of Lifestyle, 102
- Work-Life Questionnaire, 99, 103–104,  
107, 115
- Zimbardo Time Perspective Inventory,  
187