

## Institute for Research on Unlimited Love 2007 Report – Funded Science Studies & Related Publications

**Date:** April 2007

**From:** Stephen G. Post

**Re:** Report on Institute Research Projects with Pubs/Presentations

With a generous grant from the John Templeton Foundation, the Institute for Research on Unlimited Love ([www.unlimitedloveinstitute.com](http://www.unlimitedloveinstitute.com)) has to date funded a significant number of carefully selected scientific research projects focused on unselfish love. The President of the Institute is Stephen G. Post, Ph.D., a Professor of Bioethics in the Department of Bioethics, School of Medicine, Case Western Reserve University, Cleveland, Ohio 44106-4976 (tel. 216-368-6205; email [sgp2@po.cwru.edu](mailto:sgp2@po.cwru.edu)).

The Institute offers the following definition of love: *The essence of love is to affectively affirm as well as to unselfishly delight in the well-being of others, and to engage in acts of care and service on their behalf; unlimited love extends this love to all others without exception, in an enduring and constant way. Widely considered the highest form of virtue, unlimited love is often deemed a Creative Presence underlying and integral to all of reality: participation in unlimited love constitutes the fullest experience of spirituality.*

It is precisely in a time when hatred, injustice, and violence might lead us to doubt our capacities for goodness that we must rededicate ourselves to progress in unselfish love and its manifestation in the world. We can be heartened by the many everyday people who act with compassionate resilience, and by those remarkable people who manifest through action a visionary sense of a shared humanity. How can we raise children whose lives will be characterized by creative altruism and care? Does life lived more for others than for self contribute to a person's happiness, health and even longevity? Is love of others the ground of human nature? How can spiritual and religious visions of the love of neighbor fully translate into actions on behalf of all humanity, rather than on behalf of some fragment of humanity that demonizes outsiders? How can we effectively educate youth for goodness as well as for knowledge?

The Fetzer Institute, after the collaborative JTF/Fetzer conference *Altruism, Empathy and Agape: Perspectives on Love in Science and Religion* (Oct. 1999), co-chaired by Stephen G. Post and Lynn G. Underwood (Fetzer), funded 16 studies independently through a Request for Proposals that was disseminated in 2000. IRUL and Fetzer were able to reach a matching agreement enabling the funding of **8** additional studies in the summer of 2001, with each entity responsible for funding 4 of these. In 2004 IRUL and Fetzer developed another matching arrangement, allowing **5** studies on *agape* love and child rearing, with IRUL funding 2 and Fetzer 3 of these. IRUL, based on a Request for Proposals disseminated in 2002, funded **21** studies. Thus, to January 2005, funding included **8** initial IRUL-Fetzer match studies, **21** IRUL studies, **5** IRUL-Fetzer studies = **34 funded studies**. In the winter and spring of 2005, under the rubric of the Judith B. Watson Research Initiative, **6** IRUL projects were funded in the area of adolescent mental health in relation to perceptions and activities centered on the love of neighbor and spiritual commitments. In 2006 IRUL **5** additional studies, and **2** in 2007. Thus, to date, IRUL

has funded **47 scientific research projects on unselfish love**, along with **2** major integrative research projects collaborative with Emory University, and **5** pilot studies by junior researchers, for a total of **54** projects. If the 16 original Fetzer research studies are included, IRUL plus Fetzer have funded **70 research projects**.

It is impossible at this time to accurately state the number of publications emerging from these studies, but in late 2007 Dr. Post will ask all funded researchers for a final list of published work or work in press. At this time, it is fair to suggest that there will be a **total of 400 peer-review articles**, and a solid number of edited books, book chapters, and single-author books.

This report does not include projects based at Emory University (*Best Love of the Child* and *Agape and the Pursuit of Happiness*) because these are integrative projects of a different character than the RFP projects.

### **I. RFP “SCIENCE OF COMPASSIONATE LOVE” INITIAL SET OF GRANTS AWARDED SUMMER 2001 (N = 4 PLUS FETZER 4 = 8)**

In 2001, the Institute for Research on Unlimited Love partnered with the Fetzer Institute initiative on the *Science of Compassionate Love RFP* to fund four initial studies that are currently being completed. (This enabled the Fetzer Institute, in a matching arrangement, to fund four other related studies.) The four Institute studies are as follows:

#### **1. *Benevolent Love and Marriage***

This study examines “benevolent love” (described in classical terms as the love of true friendship and in contemporary terms as unconditional love) within long-term marriage based on 112 interviews and a variety of questionnaires. Benevolent love exhibits virtues of temperance, fortitude, justice, prudence, and charity. The study will focus on the relationship of benevolent love to attractive love, marital quality and stability, and partners’ religiousness.

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#### *Publications*

#### *Peer-Review Articles*

V. Jeffries, “The Integral Social Science of Pitirim Sorokin,” *Journal de Biblioteca Javier Coy de Estudios Norteamericanos* (in press). .

V. Jeffries, "Virtue-Attraction Validation Replication: Comparing Offspring and Spousal Love," (in submission).

V. Jeffries, "Integralism as a Social Movement," *Catholic Social Science Review*, Vol. 9 (in press).

V. Jeffries, "Family and Civilization Revisited: An Empirical Exploration of Zimmerman's Religion-Family Thesis," *Journal of Marriage and Family* (in press).

V. Jeffries, "The Nature of Integralism," *Catholic Social Science Review*, Vol. 8, 2003, pp. 9-25.

V. Jeffries, "The Structure and Dynamics of Love: Towards a Theory of Marital Quality and Stability." *Humboldt Journal of Social Relations*, Vol. 27, 2002, pp. 42-72.

### *Books*

Vincent Jeffries, *Virtue and Long Lasting Marriages* (in preparation).

### *Book Chapters*

V. Jeffries, "Integralism," in *Catholic Social Thought, Social Science, and Social Policy*, edited by Stephen M. Krason and Richard S. Myers. Lanham, MD: Scarecrow Press, 2006 (in press).

V. Jeffries, "Pitirim Sorokin," in *Encyclopedia of Social Theory*, edited by George Ritzer. Thousand Oaks, CA: Sage Publications, 2005, pp. 777-781.

V. Jeffries, "Integralism: The Promising Legacy of Pitirim A. Sorokin," in *Lost Sociologists Rediscovered*, edited by Mary Ann Romano. Lewistown, NY: Edwin Mellon Press, 2002, pp. 99-135.

### *Presentations*

V. Jeffries, "Family and Civilization Revisited: An Empirical Exploration of Zimmerman's Religion-Family Thesis" (American Sociological Association Meetings) San Francisco, 14 August 2004; also presented at the Compassionate Love Research Conference, Washington, D.C., 22 May 2004.

V. Jeffries, "Religion, the Construction of Reality, and Long Lasting Marriages" (Pacific Sociological Association Meetings) San Francisco, 15 April, 2004.

V. Jeffries, "Using Classical Interactionist Theory to Understand Long Lasting Marriages" (Pacific Sociological Association Meetings) Pasadena, CA, 31 May, 2003.

V. Jeffries, "Long Lasting Marriages" (Works of Love Conference) Villanova University, Villanova, PA., 3 June 2003.

## ***2. Volunteerism, Community, and Compassionate Acts among Older Adults***

This study examines the role of service, spirituality, religion, and older persons' personal identity in individuals at a religiously-oriented retirement community and a comparison community. The interviews and self-reports will focus on the personal meanings of service, religion, altruistic love, and the role of each, and will examine whether the religiously oriented have a more highly integrated sense of concepts.

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### *Publications*

#### *Book Chapters*

A.M. Omoto & C.D. Aldrich, "Retirement Community Life: Issues, Challenges, and Opportunities," In *Charting a New Life Stage*, edited by J. James & P. Wink (in press).

A.M. Omoto, & A.M. Malsch, "Community Service: Motivations and Consequences," in *Encyclopedia of Youth Activism*, edited by L. R. Sherrod, R. Kassimir, & C. Flanagan. Westport, CT: Greenwood Press (in press).

A.M. Omoto & A.M. Malsch, "Psychological Sense of Community: Conceptual Issues and Connections to Volunteerism-related Activism," in *Processes of Community Change and Social Action*, edited by A.M. Omoto. Mahwah, NJ: Erlbaum (in press).

A.M. Omoto & M.M. Schlehofer, "The Impact of Volunteerism, Religiousness, and Spirituality on the Health and Well-being of Older Adults," in *The Science of Altruism and Health: Is it Good to be Good?* Edited by S.G. Post. New York: Oxford University Press (in press).

### *Presentations*

A.M. Malsch & A.M. Omoto, (1) "Prosocial Behavior Beyond Borders: Understanding a Psychological Sense of Global Community" (Society for Personality and Social Psychology Annual Meeting) New Orleans, LA, January 2005.

A.M. Omoto & A.M. Malsch, "Psychological Sense of Community, Civic Participation, and Health Among Older Adults" (Society for Personality and Social Psychology Annual Meeting) New Orleans, LA, January 2005.

M.M. Schlehofer & A.M. Omoto, "The Impact of Religiousness and Spirituality on the Health and Well-being of Older Adults" (Society for Personality and Social Psychology Annual Meeting) New Orleans, LA, January 2005.

M.M. Schlehofer-Sutton & A.M. Omoto, "Definitions of Religion and Spirituality Among Older Adults" (American Psychological Association Annual Meetings) Honolulu, 18 July 2004.

A.D. Aldrich & A.M. Omoto, "Aging-related Stressors and Communal Coping among Retirement Community Residents (Society for the Psychological Study of Social Issues Biennial Meeting) Washington, DC, 12 June 2004.

A.M. Omoto, C.D. Aldrich, A.M. Malsch, M.M. Schlehofer, "Elder Voices Project: Summary Report for Second Phase" ( Institute for Research on Social Issues) Claremont Graduate Schools, June 2004.

A.M. Omoto, "Volunteerism, Community, and Compassionate Acts Among Older Adults" (Compassionate Love Research Conference) Washington, DC, 22 May 2004.

M. Omoto, Plenary, "Love, Help, and Caring in Action" (Works of Love: Scientific and Religious Perspectives on Altruism) Villanova University, PA, June 2003.

A.M. Omoto, "Understanding Everyday Compassion and Volunteerism: Social and Psychological Considerations" (Works of Love: Scientific and Religious Perspectives on Altruism) Villanova University, PA, June 2003.

#### *Other*

Data from this project are currently being utilized in two different dissertations (A. Boling and A. M. Malsch) and two MA theses (J. Adelman and J. Barraza).

### ***3. The Development, Antecedents, and Psychosocial Implications of Altruism in Late Adulthood***

This project studies altruistic love in terms of Erik Erikson's concept of generativity, the concern for, and commitment to, guiding the next generation. The data are from a longitudinal sample of Americans born in California in the 1920s (140 participants interviewed 4 times over the years, with the latest in 1997/2000). It examines the vocabulary and the reasoning people use as they refer to generative/altruistic acts and the relationship of these acts to social background, personality characteristics, religion, health, and attitudes.

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### *Summary of Key Findings*

This research used data from the Berkeley Guidance and Oakland Growth longitudinal studies to investigate the relations between religiousness, spirituality, and generativity (caring for the welfare of future generations) in late adulthood. Religiousness was defined in terms of the importance of institutionalized or tradition-centered religious beliefs and practices in the life of the individual. Spirituality was defined in terms of the importance of noninstitutionalized religion or non-tradition-centered beliefs and practices in the life of the individual. Main findings were:

- 1) In late adulthood, religiousness and spirituality demonstrated a clear and robust pattern of relations with measures of key domains of psychosocial functioning. Religiousness was positively related to well-being from warm relations with others, and involvement in social and community activities. Spirituality was positively related to well-being from personal growth and involvement in creative and knowledge-building activities (Wink & Dillon, 2003).
- 2) Both religiousness and spirituality were related to generativity in late adulthood. However, whereas religiousness was significantly related to the communal facets of generativity, spirituality was related to its self-expanding aspects (e.g., giving behavior perceived as having impact on others) (Dillon & Wink, 2003; Dillon, Wink, & Fay, 2003).
- 3) The respective relations among religiousness, spirituality, and generativity and other measures of psychosocial functioning in late adulthood were also observed using religiousness scored in early, and spirituality scored in late-middle adulthood (Dillon, Wink, & Fay, 2003; Wink & Dillon, 2003).
- 4) The positive relation between spirituality and generativity was interpreted as challenging the thesis that the newly emergent "personal religion" or seeker-oriented spirituality poses a threat to social involvement and concern for others in contemporary America (Dillon & Wink, 2004).

### *Publications*

### *Peer Review Articles*

M. Dillon, M., P. Wink, P., & K. Fay, "Is Spirituality Detrimental to Generativity?" *Journal for the Scientific Study of Religion*, Vol. 42, 2003, pp. 427-442.

P. Wink, P., & M. Dillon, "Religiousness, Spirituality, and Psychosocial Functioning in Late Adulthood: Findings from a Longitudinal Study." *Psychology and Aging*, Vol. 18, 2003, pp. 916-924.

P. Wink, "Dwelling and Seeking in Late Adulthood: The Psychological Implications of Two Types of Religious Orientation," *Journal of Religious Gerontology*, Vol. 14, No. 2/3, 2003, pp. 101-117.

### *Books*

A major trade book is in preparation.

### *Edited Books*

J. James & P. Wink, editors, *Charting a New Life Stage*. (Cambridge, Ma: Harvard University Press (in preparation))

M. Dillon, editor. *Handbook of the Sociology of Religion*. Cambridge, UK: Cambridge University Press, 2003.

### *Book Chapters*

M. Dillon, & P. Wink, P., "Religiousness and Spirituality: Trajectories and Vital Involvement in Late Adulthood," in *Handbook of the Sociology of Religion*, edited by M. Dillon. New York: Cambridge University Press, 2003, pp. 179-189.

M. Dillon, & P. Wink, P., "American Religion, Generativity, and the Therapeutic Culture," in *The Generative Society: Caring for Future Generations*, edited by E. de St. Aubin, D. P. McAdams, & T. Kim. Washington, DC: American Psychological Association, 2004, pp. 153-174.

## ***4. The Impacts of Religious, Intellectual, and Civic Engagement on Altruistic Love and Compassionate Love as Expressed Through Charitable Behaviors***

This study supports analysis from the 2000 Social Capital Community Benchmark Survey, which is intended to measure a US representative sample of people's "social capital" – i.e., the wealth of connections among people thought to lead to pro-social behaviors and attitudes. This data analysis will examine connections between people's acts of giving and volunteering and their religious, intellectual, social, and civic development.

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### *Publications*

#### *Peer-Review Articles*

E. Brown & J. Ferris, "Social Capital and Philanthropy" (in preparation).

#### *Book Chapters*

E. Brown, "College, Social Capital, and Charitable Giving," in Arthur Brooks, ed., *Gifts of Time and Money: The Role of Charity in America's Communities*, Rowman & Littlefield, forthcoming.

#### *Presentations*

E. Brown & J. Ferris, "Social Capital and Philanthropy" (International Society for Third-Sector Research biennial conference) Toronto, July 11-14, 2004.

E. Brown & J. Ferris, "The Impacts of Human Capital, Social Capital, and Religious Attendance on Charitable Giving and Volunteering" (Association for Research on Nonprofit Organizations and Voluntary Action) Denver November 19-23, 2003.

## **II. RFP "UNLIMITED LOVE" SECOND SET OF GRANTS AWARDED DECEMBER 2002 (N = 21)**

These 21 projects were selected from a group of 85 full applications, which had been invited from the more than 320 Letters of Intent received in March 2002 in response to a nationally-disseminated Request for Proposals. After a painstaking review of each proposal by two national experts and the Institute's research area consultants, \$1,660,000 was awarded in November 2002. These awards represent dramatic and steady progress for the not-for-profit Institute, begun in 2001 with an initial endowment of up to \$8 million from the John Templeton Foundation. The Institute is located at the School of Medicine at Case Western Reserve University in Cleveland, and has established itself as a center for scientific research on unselfish love for all humanity.

### **AREA ONE: HUMAN DEVELOPMENT**

Four research studies have been funded in the area of other-regarding love and human development. These include: a psychological study of autism aimed at illuminating the process of affiliation as a precursor to love; a psychological study of the mother-child relationship and its

effects on the human development of empathy, with special attention to the variable of maternal spirituality; a sociological study of adolescents investigating relational and environmental contexts (including the effects of spiritual resources) and their impact on the development of other-regarding love in this age group; a psychological study examining the potential benefits of spiritual attachments and altruistic behaviors in the general adult population traumatized by the violent tragedy of 9/11/01. Together, these studies will contribute to a better understanding of the development of unselfish love and its relationship to psychological well-being.

#### *Research Area Consultant*

Gregory Fricchione, MD, IRUL's research area consultant for Human Development, is a psychiatrist specializing in medical and neuropsychiatry. He is Associate Professor of Psychiatry at Harvard Medical School and Associate Chief of Psychiatry at Massachusetts General Hospital in Boston. He is also Director of the Division of Psychiatry and Medicine at Massachusetts General Hospital. His basic research interests have centered on immune cell behavior and nitric oxide effects. His clinical research has focused on the catatonic syndrome and on the interface of psychiatry and medicine in cardiac and other diseases, where attachment behavior in the doctor-patient relationship is of key importance. In the last several years, he has been working on a project that examines the connection between brain evolution and the human spiritual imperative. Before returning to Boston in 2002, he spent 2 years as Director of the Carter Center Mental Health Program in Atlanta, working on domestic and international public mental health projects

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#### **1. *Love, Emotion and Empathy: Infancy to Early Childhood***

Alan Fogel will examine how the quality of the mother-child relationship at 1,2,3 and 5 years is related to empathy development at age 5. The capacity to be attuned to others' emotions begins in relationships marked by secure attachment and co-regulation of feelings. The empathic capacity presupposes the ability to become part of a larger whole. It may be encouraged in families in which spirituality and religion play a larger role. Fogel hypothesizes that empathy at age 5 will correlate with a high stable or a rising pattern of co-regulation and secure attachment between ages 1 and 5. Spiritual and religious well-being and engagement will be entered into the analysis to check for moderating effects. This project will provide much-needed insight into the development of empathy in children, as well as the importance of mother-child attunement and maternal spirituality.

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Duration: January 2004 – February 2007

## ***2. Cultivating Adolescents' Other-Regarding Virtues: The Developmental Pathways to Unlimited Love***

This study by Peter Benson seeks to understand the linkages among the ecologies of youth that promote, discourage, or remain silent on altruistic love, other-regarding virtues, and actions that are designed to enhance the welfare of others. The bioecological systems model of Bronfenbrenner forms its theoretical base. Two existing data sets will be used: a cross-sectional data set of 229,000 adolescents, and a longitudinal set of almost 400 adolescents assessed at 3 points in time. Both data sets contain responses to the Profile of Student Life: Attitudes and Behaviors (PSL-AB), which was designed by the Search Institute to assess developmental assets. This study examines the developmental ecologies of families, religious institutions, schools, neighborhoods, local communities, and non-parental adults with regard to other-regarding dispositions and helping behaviors. Spiritual and religious assets are important variables to study.

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Duration: January 2003 – June 2005

### *Publications*

### *Edited Books*

P. Benson, editor, *Cultivating Adolescent's Other-Regarding Virtues*. Plenum/Kluwar, 2005 (in preparation).

### ***3. What Love Has To Do With It: Altruism, Generativity and Spirituality in the Aftermath of 9/11/01***

The principal investigators of this study will study altruism, generativity, and spirituality in a sample of 3000 respondents to a web-based questionnaire. Quantitative measures include: the 9/11 specific coping questionnaire; Brief COPE; Posttraumatic Growth Inventory; Multidimensional Measure of Religiousness and Spirituality; Scale of Psychological Well-Being; Social Well Being Scale; Brief Symptom Inventory; PTSD Checklist; demographics; exposure extent. Qualitative data for 100 subjects will be gathered for linguistic analysis. The researchers hypothesize that those with higher altruism and generativity, and those who draw upon more spiritual resources at the outset, will have less post-traumatic stress disorder (PTSD) and less general symptom distress at baseline and at follow-up. This study will be a part of a Stanford University 9/11 project being led by David Spiegel MD. Spirituality will be assessed in terms of global religiousness/spirituality, religious coping, and spiritual change. This project hypothesizes a connection between aspects of other-regarding love and human resilience in the face of trauma and tragedy.

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Duration: December 2002 – December 2006

#### *Summary of Key Findings*

The 9/11 attacks traumatized millions of Americans, but also gave rise to an outpouring of sympathy and kindness. How common were altruistic responses to 9/11, and did these help people cope with trauma? Nearly 7,000 people worldwide – nearly all with indirect exposure to the attacks via television – completed the researchers' Web-based survey, of which a random sample of 137 was deeply analyzed. More than 40% of these respondents had clear altruistic responses, such as donating blood or checking in on elderly neighbors. Altruism was directed

toward strangers about as frequently as toward family members. Political orientation was unrelated to levels of altruism.

### *Publications*

#### *Peer-Review Articles*

G. Alpers, L.D. Butler, J. Azarow, M. Manley, N. Rice, D. Spiegel, & C. Koopman, C., "Altruism in Relation to Spirituality, Distress and Well-being Following the September 11, 2001 Terrorist Attacks," (in preparation).

J. Azarow, M.J. Manley, C. Koopman, A. Platt-Ross, L.D. Butler & D. Spiegel, "American Expressions of Altruism and Generativity in the Aftermath of the September 11, 2001 Terrorist Attacks," [Special Issue: "The U.S.A. after 9/11/01]. *Psicologia Politica*, Vol. 27, 2003, pp. 34-41.

#### *Presentations*

J. Azarow, C. Koopman, M.J. Manley, L.D. Butler, "What's Love Got to do With it: Altruism, Generativity, and Spirituality in the Aftermath of 9/11" (Compassionate Love Research Conference. The Institute for Unlimited Love and The Fetzer Institute) Washington, DC, 21 May 2004.

L.D. Butler, C. Koopman, J. Azarow, S. DiMiceli, & D. Spiegel, "Predictors of Long-Term Resiliency Following the terrorist attacks: Preliminary results." Paper presented in the "*Terror and Trauma: Contemporary Research*" paper session, C. A. Porter, Chair (American Psychological Association Annual Meeting) Toronto, August 2003.

C. Koopman, L. Butler, J. Azarow, & D. Spiegel, "Factors Associated with Resilience after Terrorist Attacks of 9/11" (International Society of Political Psychology Annual Meeting) Boston, MA, July 2003.

L.D. Butler, J. Azarow, J.C. Desjardins, C. Koopman, S. DiMiceli, & D. Spiegel, D., "Psychosocial Predictors of Resiliency in Coping with the Tragedy of September 11, 2001," Paper presented in the "*The Psychological Impact of 9/11/01: Results from Five Major Studies*" symposium, L. D. Butler, Chair (American Psychiatric Association (APA) Annual Meeting) San Francisco, CA., May 2003.

## **AREA TWO: PUBLIC HEALTH AND MEDICINE**

Three research studies have been funded in the Public Health and Medicine section. These include a clinical intervention study in breast cancer patients and their partners, an epidemiologic case-control study of military veterans experiencing PTSD, and a sociological study of how broken lives are healed and empowered among participants in a charismatic church ministry program. Together, these investigations will document how love impacts on physical and

psychological well-being across the natural history of disease in both clinical and community settings. This work promises to start a new field of medical research concerned with the health effects of love.

*Research Area Consultant*

Jeff Levin, Ph.D., M.P.H., an epidemiologist and former medical school professor, is IRUL's research area consultant for Public Health and Medicine. Beginning in the 1980s, his research helped create the field of religion, spirituality, and health. He is the author of over 130 scholarly publications, as well as the popular book God, Faith, and Health. Dr. Levin is currently researching historical and theological perspectives on what it means to love and be loved by God, as well as the physical and mental health effects of such a loving relationship.

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***1. Effects of Compassionate/Loving Intention as a Therapeutic Intervention by Partners of Breast Cancer Patients: A Randomized Controlled Trial***

Ellen G. Levine, Ph.D., M.P.H., medical psychologist at California Pacific Medical Center, is principal investigator of this research project. This study will investigate the effects of compassionate loving intention by partners of breast cancer patients on a variety of health and health-care outcomes; it will also examine quality-of-life indicators in both patients and partners. The study will include measures of functional health, medical services utilization, psychological and spiritual well-being, marital satisfaction, physiological response to stress, and several psychological tests.

Stage I or II breast cancer patients and their partners will be recruited from the San Francisco Bay Area and randomized into experimental and control groups. Experimental-group partners will be given a training workshop structured to enhance their ability to provide loving compassion. Supported by daily home practice for three months, the training will consist of guided instruction in several meditative and mental focusing approaches, including a Tibetan Buddhist breath-based technique for eliciting compassion and LeShan type I healer training.

This project will provide an excellent opportunity to examine whether an intervention designed to strengthen the sense of self-efficacy in partners of breast cancer patients can enhance their success as caregivers. If systematic training in techniques of loving compassion is shown to be effective, it may offer a means of improving the care of people suffering from a wide range of chronic illnesses.

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Duration: January 2003 – December 2005

### *Presentations*

J. Stone, “How to Prepare for Surgery: Mind-Body Techniques for Dealing with Cancer” (Fifth Annual Cancer Connections Conference) Portland, Maine, 19 November 2004.

E.G. Levine and J. Stone, “The Effects of Compassionate-Loving Intention on Breast Cancer Patients and Their Partners” at the Compassionate Love Research Conference (Fetzer Institute & The Institute for Research on Unlimited Love-Compassion, Altruism, Service) Washington, D.C., 22, May 2004.

J. Stone, “Emerging Research in Mind/Body Medicine” (York Community College) York, Maine, 12 February 2004.

J. Stone, “Bringing Compassion into Making the Diagnosis of Prostate Cancer” (Oncology Tumor Board, Virginia Mason Medical Center) Seattle, Washington, 11 January 2004.

### *Media*

“Loving Thoughts to Cancer Patients Help?” KRON television, San Francisco, 20 February 2004 (<http://kron.com/Global/story.asp?s=1657262>)

## ***2. Care for the Soul: The Role of Divine Love and Human Love in Adjustment to Military Trauma***

Robert Hierholzer, M.D., psychiatrist with the Veterans Affairs Central California Health Care System, is principal investigator of this project, which is a longitudinal epidemiologic investigation of the protective effects of divine and human love on adjustment to military trauma among U.S. veterans. Study subjects will be recruited from outpatient veterans at VA clinics in the Fresno area. A total of 100 case subjects who meet DSM-IV criteria for military-related post-traumatic stress disorder (PTSD) and 100 control subjects who do not meet these criteria, will be sampled from this population. Participants will be given a battery of health-related tests – i.e., assessments related to PTSD, psychopathology, and symptomatology, as well as numerous psychosocial scales. These will include a set of validated measures assessing the presence of loving relationships with God and other people. Using a case-control design and epidemiologic methods of analysis, investigators will explore the relationships among different types of loving

attachments, level of combat exposure, and development of current military-related PTSD in veterans.

This project promises to make exciting contributions to clinical care for sick veterans and to the validation of theoretical work in psychology that proposes salutary effects for secure attachments to significant others. Additionally, results should advance our understanding of the etiology and prognosis of PTSD.

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Duration: March 2003 – February 2006

### *Publications*

#### *Peer Reviewed Articles*

Ghafoori, B., Boardman, A., & Hierholzer, R.W. (under review). The effects of combat trauma: Investigation of course, comorbidity, and characteristics.

Ghafoori, B., & Hierholzer, R.W. (in press). Protective factors for PTSD: association of adult attachment style and PTSD in combat veterans.

Ghafoori, B., & Howsepian, B. (under review). Spirituality and the Remission of PTSD Symptoms: A Case Study. *Alternative Therapies in Health and Medicine*.

Ghafoori, B. & Hierholzer, R.W. (in preparation). Altruistic Intent, adult attachments, and PTSD in survivors of war trauma.

### *Book Chapters*

Ghafoori, B. & Hierholzer, R.W. (in press) The Role of Altruism, Love, and Attachment in the Development and Maintenance of Posttraumatic Stress Disorder. In S.G. Post (Ed), *The Science of Altruism and Health: Is it Good to do Good?* New York: Oxford University Press.

Khouzam, H.R., Ghafoori, B., & Hierholzer, R.W. (2005) Progress in Identification, Treatment, and Diagnosis of Posttraumatic Stress Disorder. In Corales, T.A. (Ed.), *Trends in Posttraumatic Stress Disorder Research* (pp. 1-25). New Jersey: Nova Science.

### *Presentations*

Ghafoori, B. & Hierholzer, R.W. (2005, November). “**Altruistic intent, adult attachment and PTSD in war trauma survivors.**” Poster presentation at the 21<sup>st</sup> annual meeting of the International Society for Traumatic Stress Studies Conference, Toronto, Canada.

Hierholzer, R.W. & Ghafoori, B. (2005, November). “**Emotional health in the face of trauma.**” Poster presentation at the Institute for Psychiatric Services meeting, San Diego, California.

Ghafoori, B. & Hierholzer, R.W. (2004, November). “**The effects of combat trauma: preliminary investigation of comorbidity, course, and characteristics.**” Presented at the Association for Advancement in Behavior Therapy’s 38<sup>th</sup> Annual Convention, New Orleans, LA.

Hierholzer, R.W., Ghafoori, B., Howsepian, B., Howsepian, A.A., & Boardman, A. (2004, November). “**Association of attachment styles and PTSD in combat veterans**”. Poster presented at the 20<sup>th</sup> annual meeting of the International Society for Traumatic Stress Studies, New Orleans, LA.

Hierholzer, R.W., & Ghafoori, B. (April, 2004). “**What love has to do with it: The role of love in mental illness**” Issue workshop presentation at the 2004 American Psychiatric Association Convention, New York.

### *Media*

Drs. Hierholzer and Ghafoori were interviewed by David Wolman of Science & Theology News, and his article entitled “Veterans who loved country healed by love of others”, cites details of their IRUL funded study.

### ***3. Charismatic Empowerment and Unlimited Love: A Social Psychological Assessment***

Margaret M. Poloma, Ph.D., emeritus professor of sociology at the University of Akron, is principal investigator of the project, which entails a multifaceted investigation of dimensions of love, religious experience, and mysticism within a charismatic Christian church community serving Atlanta's poor.

Using a variety of qualitative and quantitative methodological approaches, Dr. Poloma will conduct a longitudinal evaluation of the church's training program, which seeks to rebuild and heal broken lives by empowering people with spiritual gifts. A centerpiece of this study will be the psychometric development and validation of a new multidimensional scale of love that is based on the work of sociologist Pitirim Sorokin and others. A battery of questions will be given to at least 200 respondents; the resulting scale will be used in subsequent analyses.

Results of this study will make an important contribution to research in the sociology and psychology of religion, as well as to ministries seeking to reach out to disadvantaged individuals through religiously grounded loving compassion.

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(with Ralph Hood, Co-PI)  
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Duration: February 2004 – January 2006

#### *Publications*

##### *Book*

M. Polomoa & R. Hood, Jr., *Charisma, Helping and the Poor. Exploring Sorokin's Theory of Love in a Faith-Based Program.*

##### *Book Chapters*

M. Poloma, "Glossolalia, Liminality, and Empowered Kingdom Building," in *Speaking in Tongues: Multi-Disciplinary Perspectives*, edited by Mark J. Cartledge. Pater Noster Press.

##### *Presentations*

M. Poloma, "Aspects of Love: An Empirical Investigation of Sorokin's Model" (Society for the Scientific Study of Religion Meetings) October 2004.

M. Poloma, “Love That Does Justice: An Exercise in Reflexive Sociology” (Love That Does Justice Conference) Case Western Reserve University. October 2004.

M. Poloma, “Sociology as a Christian Vocation” (Scriptures and the Disciplines Conference) Wheaton College, Il., May, 2004.

M. Poloma, Plenary Address, “The Body and Pentacostalism: Main Street Mystics” (included IRUL project findings) (Society for Pentecostal Studies Annual Meeting) Milwaukee, WI, March 2004.

M. Poloma, “Compassionate Empowerment and Unlimited Love” (Compassionate Love Research Conference. Sponsored by the Institute for Research and Unlimited Love and the Fetzer Institute) Washington, D.C. 22 May 2004.

M. Poloma, “Glossolalia, Liminality, and Empowered ‘Kingdom Building’” (Annual Meeting of the Society for the Scientific Study of Religion) Norfolk. October, 2003

M. Poloma, “Fire in Atlanta: Love, Empowerment and Transformation” (Annual Meeting of the Association for the Sociology of Religion) Atlanta, August, 2003.

### **AREA THREE: MECHANISMS BY WHICH ALTRUISTIC LOVE AFFECTS HEALTH**

The chain of events leading from negative emotional responses to external events to impact on disease has been well investigated. There has been less research into applying the same model to studying the effects of positive emotional responses on health. The same approaches and standards that have been used in the stress literature can be applied to the study of the chain of events leading from altruistic love to beneficial effects on health. It is possible that the mechanism by which altruistic love affects health occurs through blocking or attenuating the stress response, or through activating positive neurotransmitter pathways in the brain.

#### *Research Area Consultant*

Esther M. Sternberg, M.D. is our IRUL research area consultant in this area. She was trained at McGill University and practiced medicine in Montreal. She then returned to a research career and teaching at the Washington University School of Medicine in St. Louis. Her recent book, *The Balance Within: The Science Connecting Health and Emotions* (2000, paperback), has been universally well-received as one of the best books on emotions and health.

Esther M. Sternberg, M.D.  
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## **1. *The Origins of Empathy: Body States, Brain States, and Behavior***

Stephenie D. Preston's highly original and exciting project studies empathy from a perception-action perspective. That is, it postulates that empathy is a biological process that involves a set of specialized nerve cells in the brain that allow one to mimic motor actions, emotions, and social behaviors. These nerve cells, called mirror neurons, have been well studied in the context of perception-motor response –i.e., the phenomenon that allows a person to watch and mimic the actions of others, much as in the child's game "Simon Says." This study proposes that a similar process, utilizing the same sorts of neurons, may underlie the biological process of empathy. The grant proposes to use a story-telling situation, combined with neuro-imaging, psychological instruments, and objective physiological measures, to compare subjects selected from different professions with high empathic components (firemen, ministers, and doctors) with others, and with a group of brain-damaged patients.

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Duration: January 2003 – January 2007  
Status: Nearly Complete

### *Publications*

#### *Peer-Review Articles*

S.D. Preston, "Functional Imaging of Empathic Responses to Patients with Chronic and Terminal Illness (in preparation).

S.D. Preston, "The Substrates of Empathy: Behavioral and Psychological Responses to Patients with Chronic and Terminal Illness" (in preparation).

S.D. Preston, A. Bechara, H. Damasio, A.R. Damasio, "The Substrates of Empathy: Behavioral and Psychophysiological Responses to Emotional Social Interactions," *Journal of Cognitive Neuroscience*, Vol. \_\_, April 2003 Supplement, pp. .

S.D. Preston, A. Bechara, T.J. Grabowski, H. Damasio, A.R. Damasio, "Functional Anatomy of Emotional Imagery: Positron Emission Tomography of Personal and Hypothetical Experiences," *Journal of Cognitive Neuroscience*, Vol. \_\_, April 2002 Supplement, pp. .

S.D. Preston & F.B.M. de Waal, "Empathy: Its Ultimate and Proximate Bases," *Behavioral and Brain Sciences*, Vol. 25(1), 2002, pp. 1-71.

### *Book Chapters*

S.D. Preston, S. D., “Empathy,” in *Encyclopedia of Animal Behavior*, edited by M. Bekoff. Westport, CT, Greenwood Publishing Group, 2004 (in press).

S.D. Preston, “The Perception-Action Model (PAM), in *Empathy in Mental Illness and Health*, edited by \_\_. Cambridge, UK, Cambridge University Press (in press).

S.D. Preston & F.B.M. de Waal, “The Communication of Emotions and the Possibility of Empathy in Animals,” in . In Altruism and Altruistic Love : Science, Philosophy, and Religion in Dialogue, edited by S. Post, L. G. Underwood, J. P. Schloss, & W. B. Hurlburt. Oxford: Oxford University Press, pp. 284-308.

### *Presentations*

S.D. Preston, “The Physiology of Love: Empathic Responding to Emotional Reactions” (Compassionate Love Research Conference) Washington, D.C., 22 May 2004.

## ***2. Towards an Understanding of the Neurobiology of Parental Love***

This project, conducted by James F. Leckman, M.D., proposes to compare some aspects of the neurobiology of parental love with the processes involved in obsessive behaviors. It uses a very powerful naturalistic situation to study these interactions – i.e., an infant’s cry and the visual stimulus of seeing the infant. This project addresses parental love behaviors and their neural and neuroendocrine underpinnings and postulates that these may be biologically set to focus and perpetuate a connection between the parent and child. The study will use neuro-imaging (fMRI), psychological instruments, and physiological hormone measures (oxytocin and cortisol) known to be activated in association with such behaviors. The project is likely to yield important information regarding the neurobiology of pathways of love, and those elements of love that resemble the more extreme behaviors that can be seen in obsessive compulsive disorder (OCD). The theory that extreme behaviors seen in OCD may in part stem from dysregulated biological pathways that evolutionarily evolved to cement parent-infant relationships is novel and exciting; if validated, it will serve to change our thinking about both the state of love and OCD. It could in fact contribute to a paradigm shift in the field by relating some aspects of parental love and empathy with some obsessive behaviors. When parental love and empathy are appropriately applied in the measured amounts and contexts, they are necessary and adaptive for both parent and offspring; when inappropriate or excessive, they may constitute disease.

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Duration: January 2003 – January 2006

### *Publications*

#### *Peer-Review Articles*

J.E. Swain, J.F. Leckman, L.C. Mayes, R. Feldman, R.S. Schultz, “Mothers and Fathers Activate Different Brain Regions in Response to Babycry: An fMRI Study (in preparation).

J.E. Swain, L.F. Leckman, L.C. Mayes, R. Feldman, R.S. Schultz, “Amygdala Activation of First Time Mothers with Baby Cry Correlates with Interview Measures of Anxiety: An fMRI Study (in preparation).

J.E. Swain, J.F. Leckman, L.C. Mayes, R. Feldman, R.S. Shultz R., “Mothers Activation Pattern to Baby Cry Changes Over the First Three Months Postpartum: An fMRI Study (in preparation).

Swain JE, Leckman JF, Mayes LC, Feldman R, Schultz RS: First time mothers activate brain regions different from veteran mothers. An fMRI study. [in preparation]

J.E. Swain, J.F. Leckman, L.C. Mayes, R. Feldman, R.S. Schultz, “Parents’ Brain Activations to Baby Pictures Correlate with Measures of Parental Caring: An fMRI Study of First Time Mothers (in preparation).

J.E. Swain, L.C. Mayes, J.F. Leckman, “Endogenous and Exogenous Opiates Modulate the Development of Parent-Infant Attachment,” *Behavioral and Brain Sciences* (in press)

J.E. Swain, J.F. Leckman, “The Wolf-Boy: A Case of Reactive Attachment Disorder and discussion of Psychobiological Underpinnings,” *Psychiatry Research* (in press).

L.C. Mayes, J.E. Swain, J.F. Leckman, "Parental Attachment Systems Neural Circuits, Genes, and Experiential Contributions to Parental Engagement," *Clinical Neuroscience Research* (in press).

J.E. Swain, L.C. Mayes, J.F. Leckman, "The Development of Parent-Infant Attachment through Dynamic and Interactive Signalling Loops of Care and Cry," *Behavioral and Brain Sciences* (in press).

L.F. Leckman, R. Feldman, J.E. Swain, V. Eicher, N. Thompson, L.C. Mayes, "Primary Parental Preoccupation: Circuits, Genes, and the Crucial Role of the Environment," *Journal of Neural Transmission* (in press).

J.E. Swain, L.C. Mayes, J.F. Leckman, "The Development of Parent-Infant Attachment Through Dynamic and Interactive Signalling Loops of Care and Cry," *Behavioral and Brain Sciences* (in press).

J.F. Leckman, R. Feldman, J.E. Swain, V. Eicher, N. Thompson, L.C. Mayes, "Primary Parental Preoccupation: Circuits, Genes, and the Crucial Role of the Environment," *Journal of Neural Transmission*, Vol. 111, 2002, pp. 753-771

L.F. Leckman, "Commentary on: "Current Evolutionary Perspectives on Adolescent Romantic Relationships and Sexuality" by G.E. Weisfeld & L.J. Woodward," *Journal of the American Academy of Child and Adolescent Psychiatry*, Vol. 43(1), 2004, pp. 20-23.

J.E. Swain, J.F. Leckman, L.C. Mayes, R. Feldman, R.T. Constable, R. Schultz. "The Neural Substrates of Human Parent-Infant Attachment in the Postpartum," *Biological Psychiatry*, Vol. 55(8), 2004, p. 153S

J.E. Swain, L.F. Leckman, L.C. Mayes, R. Feldman, R.T. Constable, R. Schultz, "Brain Circuitry of Human Parent-Infant Attachment in the Postpartum," *Neuroimage*, Vol. 22(Supplement 1), 2004, p. S27.

#### *Book Chapters*

J.F. Leckman, C.S. Carter, M.B. Hennessy, S.B. Hrdy, E.B. Kervene, G. Klann-Delius, C. Schradin, D. Todt, D. von Holst, "Biobehavioral Processes in Attachment and Bonding," in *Attachment and Bonding a New Synthesis*, edited by C. Sue Carter and L. Ahnert L. Cambridge, MA: MIT Press (in press).

L.C. Mayes, J.E. Swain, J.F. Leckman, "Biobehavioral Processes in Attachment," in *Developmental Science and Psychoanalysis: Integration and Innovation*, edited by L.C. Mayes, P. Fonagy, M. Target. London: Karnac Books (in press).

D.W. Evans, J.F. Leckman, "Origins of Obsessive-compulsive Disorder: Developmental and Evolutionary Perspectives," in *Developmental Psychopathology, 2<sup>nd</sup> edition*. Edited by D. Cicchetti, D.J. Cohen. New York: John Wiley and Sons (in press).

*Presentations (Representative of 35)*

J.E. Swain, "Parents Response to Baby Stimuli: Brain Circuits and Correlated Psychology of Parent-Infant Bonding, and Implications for Long-term Health" (Child Study center Grand Rounds) Yale University, 11 February 2005.

J.F. Leckman – Main Lecture, "Primary Parental Preoccupation Revisited (International Association for Child and Adolescent Psychiatry and Allied Professions 16th World Congress) Berlin, Germany, 23 August 2004.

J.F. Leckman, "Primary Parental Preoccupation: Circuits, Genes, and the Crucial Role of the Environment" (Grand Rounds) Duke University, July 2004.

J.E. Swain, R.T. Leckman, "Toward an Understanding of the Neurobiology of Parental Love" (Compassionate Love Research Conference, Institute for Unlimited Love and Fetzer Institute) Washington DC, May 2004.

J.E. Swain, J.F. Leckman, "Parental Brain Activity in Response to Infant Stimuli," (Child Study Center Neuropsychiatry Research Day) Yale University, 13 May 2004.

J.E. Swain, J.F. Leckman, L.C. Mayes, R. Feldman, R.T. Constable, R.T., "Neural Substrates of Human Parent-Infant Attachment in the Postpartum" (Society for Biological Psychiatry 59th Annual Meeting) New York, 1 May 2004.

J.F. Leckman, "Primary Parental Preoccupation" (Bridging Symposium – Anna Freud Centre and the Yale Child Study Center) London, UK, 15 January 2004.

J.E. Swain, "Understanding the Neurobiology of Love" (Child Study Center) Yale University, 29 January 29 & 5 February 2003.

J.E. Swain, J.T. Leckman, "Effects of Infant Stimuli on Parent Brain Activity" (Mother & Infant: Perinatal Influences on Health) Montreal, 16 June 2003.

J.E. Swain, J.F. Leckman, L.C. Mayes, R. Feldman, V. Eicher, N.C. Thompson, R.T. Schultz, R.T. Constable, "Effects of Infant Pictures and Cries on Parent Brain Activity" (American Academy of Child and Adolescent Psychiatry 50th Annual Meeting) Miami, 15 October 2003.

J.E. Swain, J.F. Leckman, L.C. Mayes, R. Feldman, R.T. Constable, R.T. Schultz, "The Neural Circuitry of Human Parent-Infant Attachment in the Early Postpartum" (American College of Neuropsychopharmacology 42<sup>nd</sup> Annual Meeting) San Juan, Puerto Rico, 10 December 2003.

## *Media*

J.E. Swain has been quoted in several recent local Yale University and New Haven newspaper articles as well as the Globe and Mail (Canada).

### ***3. Is There a Neurobiology of Love?***

This project, proposed by Dr. Sue Carter, Psychiatric Institute, Chicago, is an extremely well designed animal study in a model that has shown that the hormones oxytocin and vasopressin play an important role in affiliative behavior and development of social bonds between parent and offspring. While it is difficult to devise ways to study empathy and love in animals, this project provides an extremely well controlled approach to understanding the precise relationships between different brain hormones and social bonding. This model will definitely shed light on the role of oxytocin in these behaviors. Most importantly, the project will examine the health benefits of loving interactions, which have been observed in epidemiological studies in humans, but are difficult to address in a systematic way in human studies. Preliminary data indicate that female animals exposed to pups show a lower level of the stress hormone cortisol. Oxytocin, one of the other hormones that will be studied, oxytocin, may mediate these anti-stress effects. The experimental approach is novel in that it measures a mother's hormonal and behavioral responses to a naturalistic setting – i.e., exposure to a pup, to determine the health effects on the mother. This project also considers the extent to which generalized love for humanity has a hormonal basis.

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Duration: January 2003 – July 2005

## *Publications*

### *Peer-Review Articles*

K.L. Bales, A.J. Kim, A.D. Lewis-Reese, and C.S. Carter, “Both Oxytocin and Vasopressin May Influence Alloparental Care in Male Prairie Voles,” *Hormones and Behavior*, Vol. 45, 2004, pp. 354-361.

### *Edited Books*

C. Sue Carter and L. Ahnert L., editors, *Attachment and Bonding: A New Synthesis*. Cambridge MA: MIT Press, 2005 (in press)

### *Book Chapters*

C.S. Carter, “Biological Perspectives on Social Attachment and Bonding,” in *Attachment and Bonding: A New Synthesis*, edited by C. Sue Carter and L. Ahnert L. Cambridge, MA: MIT Press, 2005 (in press)

C.S. Carter, “Oxytocin and the Prairie Vole: A Love Story,” in *Essays in Social Neuroscience*, edited J. Cacioppo and G. Bernston. Cambridge, MA: MIT Press, 2004 (in press).

### *Presentations*

K.L. Bales Invited Address, “Primates, Prairie Voles, and the Physiology of Love and Fear” (American Society of Primatologists Annual Meeting), Madison, WI, June 2004.

C. Sue Carter, “Biological Perspectives on Social Attachment and Bonding” (Dahlem Workshop on Attachment and Bonding) Berlin, 28 September – 3 October 2003.

## **AREA FOUR: OTHER-REGARDING VIRTUES**

Recent advances in the social sciences point to character traits or dispositions that equip people for success in the interpersonal world. These traits, which some philosophers have called “virtues,” include trust, generosity, faith, empathy, kindness, gratitude, forgiveness, and honesty, among others. Such traits are presumed to help people live lives in which they are useful to other people, seek just solutions to social dilemmas, and care for the welfare of others. These other-regarding virtues may also foster physical health or psychological and relational well-being. Collectively, funded projects in the “Other-Regarding Virtues” area shed light on how such virtues can be facilitated in laboratory and applied settings, and how they influence physical health, psychological well-being, and interpersonal relations. The projects are distinct from much of the “mainstream” social-scientific work on these topics in that they explore distinctively religious or spiritual contours of other-regarding virtues under investigation.

### *Research Area Consultant*

Michael E. McCullough, PhD is the IRUL research consultant in this area. He is an associate professor of Psychology, with a secondary appointment in the Department of Religious Studies, at the University of Miami, Coral Gables, FL. He has authored over sixty scientific articles and book chapters on religion, spirituality, and the virtues, including work on the relationships of such variables to physical health, psychological well-being, and interpersonal relations. He has also written and edited several books on these subjects.

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### ***1. Other-Regarding Love for Individuals Outside One's Social Group***

Stephen Wright and Arthur Aron will conduct a study at the University of California, Santa Cruz, and at the State University of New York at Stony Brook that examines love for people outside one's own social group, the absence of which is one of the world's most grievous and seemingly intractable moral and spiritual problems. Hope for addressing this problem in novel and effective ways comes from a psychological model of close relationships that was originally inspired by the Upanishads and has recently been applied to intergroup relations. The central idea of the model is that close others and those in one's social groups function in a sense as part of oneself; the regard and caring that one usually experiences for oneself is thereby extended to close others. Further, the social identities of close others become to some extent one's own. As a result, one becomes more inclined to extend caring and love to the friend's ethnic group. This project will explore this phenomenon by examining (a) variables such as caring, empathy, and trust toward outgroup members; (b) the specific role of inclusion of other in the self as the mechanism underlying the effects of cross-group friendship on prejudice toward members of that outgroup; (c) the possible moderating role of religiousness/spirituality; (d) the practical potential for applying these concepts in the real world. Three studies will be conducted: a laboratory study that creates interpersonal closeness between people of different ethnic groups; a survey of students' friendships with people from different ethnic groups; an applied study designed to increase students' other-regarding love for members of other ethnic groups by using established laboratory procedures for fostering inclusion of the others in the self.

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(Co-PI with Wright)

Duration: January 2003 – December 2006

### *Publications*

#### *Peer Review Articles*

A. Aron, T. McLaughlin-Volpe, D. Mashek, G. Lewandowski, S.C. Wright, E.N. Aron,  
“Including Close Others in the Self,” *European Review of Social Psychology* (in press).

#### *Book Chapters*

S.C. Wright, S.A. Brody, & A. Aron, A., “Intergroup Contact: Still Our Best Hope for Reducing Prejudice?” in *The Social Psychology of Prejudice: Historical and Contemporary Perspectives*, edited by C. Crandall and M. Schaller. Seattle, WA: Lewinian Press, 2004 (in press). .

#### *Presentations*

S.M. Brody & S.C. Wright, “Expanding the Self-expansion Model: Can we Include Outgroups in the Self? (Group and Intergroup Processes Pre-conference, Society for Personality and Social Psychology) Austin, TX, Jan. 2004.

S.C. Wright, Keynote Address, “Contact Across Groups: Still Our Best Bet for Reducing Prejudice, But...” (Annual Convention of the Canadian Psychological Association) St. John’s, Newfoundland, Canada, June 2004.

S.C. Wright, A. Aron, T. McLaughlin-Volpe, S. Brody & K. Davies, “Other-regarding Love for Individuals Outside One’s Social Group” (Compassionate Love Research Conference) Washington, DC, 22 May 2004.

A. Aron, Discussant in S. Sinclair & J. Huntsinger (Co-chairs), “You are Who you Know: New Perspectives on the Social Basis of the Self” (Symposium Presented at the Annual Meeting of the Society of Personality and Social Psychology) Austin, January, 2004.

A. Aron, "Interpersonal Closeness as Including Others in the Self: Implications for Understanding Love and Prejudice" (Behavioral and Brain Sciences Colloquium) University of Texas, November 2003.

A. Aron, D. Mashek, & P. Meyer, "Modifications of the Inclusion of Other in the Self (IOS) Scale Beyond the Close Relationship Domain" (Annual Meeting of the Society of Personality and Social Psychology), Los Angeles, February 2003.

A. Aron, T. McLaughlin-Volpe, S. Wright, "Other-regarding Love for Individuals Outside One's Social Group" (Compassionate Love Conference) Normal, IL, June 2003.

### *Media*

Article in Science and Theology News (July/August, 2004), extensive interviews with Bill Kramer, CFX Newsline PM, "Digging out the Roots of Discrimination" – Victoria, Canada

### *Extension*

Based, in part, on the preliminary success of the IRUL project we have become involved in a number of new extensions of our work on the role of including others in the self in improving intergroup relations.

1. A program to increase compassion and mutual respect between police and the communities (particularly the minority communities) they serve. The first pilot testing is scheduled for early January, 2005, in coordination with the Palo Alto California police department; full scale implementation in that community is planned for summer, 2005.
2. An experimental program to examine the potential to increase compassion and mutual respect between advocates of differing Palestinian and Israeli interests in the Middle East. This project is scheduled to be conducted at Stanford University.
3. New Research Grant S.C. Wright, A.Aron, "The Extended Contact Effect: How Knowledge of Cross-Group Friendships can Improve Intergroup Attitudes," The Social Sciences and Humanities Research Council of Canada (SSHRC) (Canada)\$126,000

## ***2. The Gift of One's Self: Expressions of Unlimited Love and Gratitude in Organ Donors and Recipients***

Robert A. Emmons will study organ donation, often referred to as the "gift of life." The overall goal of this project is to examine expressions of unlimited love in the form of organ donation and the role that the virtue of gratitude plays in motivating donation and recipient behavior. The specific aims of the project are to: (a) investigate the degree to which self-transcendent strivings (spirituality, intimacy, and generativity) predict intentions to donate organs and actual organ donation; (b) test the "moral motive" hypothesis of gratitude: Does the virtue of gratitude for life predict intention or willingness to donate part of one's self?; (c) examine whether an intervention

designed to increase gratitude increases actual intention to become an organ donor; (d) examine whether the expression of gratitude by transplant recipients increases their likelihood of thriving post-transplant. The project is strengthened by the diversity of its methods. The investigators will incorporate correlational, prospective longitudinal, qualitative, and experimental methods.

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Duration: July 2003 – July 2006

### *Publications*

#### *Books*

R.A. Emmons, *The Memory of the Heart: The New Science of Gratitude* [Under contract with Houghton-Mifflin. To be published in 2006]. The research funded by this project will be showcased and highlighted throughout this book, which is being written for a general trade audience.

#### *Edited Books*

R.A. Emmons & M.E. McCullough, editors, *The Psychology of Gratitude*. New York: Oxford University Press, 2004. Many of the chapters contain material that is relevant to understanding linkages between the “other-regarding virtue” of gratitude and unlimited love.

#### *Media*

R.A. Emmons, “Cultivating Gratitude” (Interview conducted by editor Trudy Boyle, appearing in *Thirty Thousand Days*, a journal of purposeful living, published by the ToDo Institute). Available at <http://www.todoinstitute.org>.

#### *Presentations*

R.A. Emmons, “Gratitude and Subjective Health in Organ Transplant Recipients” (Annual Meeting of the Society for Behavioral Medicine), Boston MA, April 2005.

R.A. Emmons, “The Healing Power of Gratitude” (UCDAVIS Center for Healthy Aging, Coming of Age Lecture Series) Sacramento, CA, 7 December 2004.

R.A. Emmons, "Gratitude as a Spiritual Need" (Pastoral Care Week Symposium, "Imagining Peace", sponsored by the Network on Ministry in Specialized Settings) Sacramento, CA, 13 October 2004.

R.A. Emmons, "Gratitude and Our Spiritual Health" (Renewing Spirituality and Healing Conference, 5<sup>th</sup> Annual Parish Nurse Conference and Retreat) Tuolumne, CA, 17 October, 2004.

R.A. Emmons, "Gratitude is the Best Approach to Life" (Symposium entitled "Quest for the Good Life: Problems/Promises of Positive Psychology" at the Annual Convention of the American Psychological Association) Honolulu, HI, 28 July, 2004.

R.A. Emmons, Presidential Address, "Sacred Purposes: What They are and Why They Matter" (Division 36, American Psychological Association) Honolulu, HI, 29 July, 2004.

R.A. Emmons & S. Gray-Greiner, "Spirituality, Self-transcendent Virtues, and Organ Donation as Unlimited Love" (Annual Convention of the American Psychological Association) Honolulu, 28 July 2004.

R.A. Emmons, "Gratitude and the Giving of Oneself: Organ Donation as Unlimited Love" (Compassionate Love Research Conference) Washington, DC 24 May, 2004.

### *Media*

R.A. Emmons has been quoted in numerous print media sources including the New York Daily News, the Washington Post, the Salt Lake Tribune, The San Diego Union Tribune, the Davis, CA Enterprise, the Redding, CA Record Searchlight, the South Jersey CourierPost, in dozens of smaller newspapers and popular magazines (e.g. Redbook, Family Circle, Shape, Spirituality and Health) and on several prominent websites (Beliefnet.com, WebMD.com.). He has also been interviewed on Maine public radio.

### **3. *The Self as a Conduit of Love***

Julie Juola Exline will examine the ways in which receiving love from others enhances one's ability to love. Love is a common thread that underlies many virtuous actions, including helping behavior, emphasis on positive qualities in others, and forgiveness and apology in the wake of offenses. This project will test a conduit model of altruistic love. The model predicts that we are most able to love if we have first received love, either from other people or from God. The proposed research also addresses the role of grace, or undeserved favor, in the transmission of love. Studies will be primarily experimental, beginning with laboratory-based designs and culminating in an intervention study. Laboratory-based studies will address whether feeling loved—especially when the love is seen as undeserved—motivates people to return love to the source. A second set of studies will address whether people who receive love, and are reminded to pass it on, will become more loving to third parties. Finally, an intervention will be developed to give participants the tools to love in situations in which doing so would be difficult. Religious

themes will be emphasized, including participants' relationships with God. One major aim of the proposed project is to provide a bridge between scientific and theological literatures on the topics of altruistic love, forgiveness, justice, and grace. By focusing on the dual roles of giving and receiving love, the long-term aim of the project is to give people practical tools that will enhance their well-being, their perceived relationships with God, and their ability to love others.

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Duration: July 2003 – July 2007

### *Publications*

#### *Peer Review Articles*

P. Hill & J.J. Exline, "Humility as a Predictor of Altruistic Giving" (in preparation).

J.J. Exline & M. Fisher, "Sentimental Journeys and Balanced Accounts: Emotion, Social Exchange, and Decisions to "Pass On" Acts of Kindness" (in preparation).

A.C. Martin & J.J. Exline, J. J., "Receiving Forgiveness: The Roles of Self-forgiveness and Feeling Forgiven" (in preparation).

J.J. Exline, E.L. Worthington, P. Hill, & M.E. McCullough, "Forgiveness and Justice: A Research Agenda for Social and Personality Psychology," *Personality and Social Psychology Review*, Vol. 7, 2003, pp. 337-348.

### *Presentations*

J.J. Exline & M. Fisher, "Sentimental journeys and balanced accounts: Emotion, social exchange, and decisions to "pass on" acts of kindness" (Society for Personality and Social Psychology Annual Meeting) New Orleans, LA, January 2005.

J.J. Exline, "Repentance and Forgiveness: How can They Promote 'The Love that Does Justice'?" (The Love that Does Justice: A Scientific Research Program) Cleveland, OH, 17 October 2004.

J.J. Exline & M. Fisher, M., "The Self as a Conduit of Love: Oh-So-Preliminary Findings"

(Compassionate Love Research Conference) Washington, D.C., 22 May 2004.

J.J. Exline, "Anger toward God: A Brief Overview of Existing Research," Margaret Gorman Early Career Award Address for Division 36 of the American Psychological Association - Psychology of Religion (American Psychological Association Annual Convention), Toronto, April 2003.

### *Media*

J.J. Exline featured in "Passing Love on to Others: Tests of a Conduit Model of Love," *Science & Theology News*, 2004.

## **AREA FIVE: EVOLUTIONARY PERSPECTIVES ON OTHER-REGARD**

Evolutionary biology has a unique relationship to the issue of unlimited love for two reasons. First, from Darwin on, sacrificial behavior has been recognized as a crucial question for evolutionary theory. Many contemporary accounts have tended to dismiss altruism as an end, or even a possibility, of human existence, because this has been understood to be a core entailment of evolutionary theory. Second, over the last generation, evolutionary theory has dramatically influenced other academic disciplines, and has been turned to by popular media for authoritative exegesis of the human condition. Thus, evolutionary biology is crucially important to popular and scholarly discussions of love. Recent promising approaches to the evolutionary elucidation of altruism include multilevel selection theory, econometric and evolutionary game theory, comparative anthropology, and behavioral studies of non-human primates. IRUL is funding seminal work in each of these four areas.

### *Research Area Consultant*

Jeffrey P. Schloss, Ph.D., serves as IRUL research consultant in this area. He received his Ph.D. in Ecology & Evolutionary Biology from Washington University, and has taught at the University of Michigan, Wheaton College, Jaguar Creek Tropical Research Center, and is now Professor and Chair of Biology at Westmont College in Santa Barbara. He has been awarded a Danforth Fellow, a AAAS Fellow in Science Communication, and serves on the editorial and advisory boards of numerous journals and organizations relating science and religion. He is interested in evolutionary theories of human nature. His most recent projects include a collaborative volume just released from Oxford University Press, *Altruism and Altruistic Love: Science, Philosophy, and Religion in Dialogue*, and coediting a two-volume *Journal of Psychology & Theology*, focusing on biological and theological perspectives on human nature.

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## ***1. Altruistic Love, Evolution, and Individual Experience***

Evolutionary theory tends to be theory rich, but data poor: in comparison, the human behavioral sciences are data abundant, but lack a unifying theoretical foundation. David Sloan Wilson will apply the theoretical perspective of multilevel selection to the interpretation of data of life experience in one of the most voluminous databases available – the experience sampling method (ESM) of Mihaly Csikszentmihalyi. ESM is to psychological life experience what integrated cross-cultural databases are to anthropological assessment. Wilson's group selectionist model posits that human groups are significant functional units that facilitate the emergence of capacities for both genuine sacrifice and defection. This allows a variety of testable predictions about the relationship among altruism, religion, life stress, and other variables. Wilson's proposal is the first attempt to test these predictions on a large scale with highly regarded data. This study is likely to be landmark in its use of data that poll life experience and establish its relationship to altruism.

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Duration: January 2003 – January 2007

### *Publications*

#### *Books*

D.S. Wilson & Mihaly Csikszentmihalyi, *The Ecology of Good and Evil* (in preparation).

#### *Peer Review Articles*

D.S. Wilson, D.S., "Prosociality, Evolution, and Everyday Experience."

R. O'Gorman, D. S. Wilson, "Altruistic punishment and helping differ in their sensitivity to genetic relatedness and future interactions." *Evolution and Human Behavior*, 2004 (in press).

D.S. Wilson, "Human Groups as Adaptive Units: Toward a Permanent Consensus." *Ludus Vitalis* (special issue dedicated to Ernst Mayr on his 100th birthday), 2004 (in press).

#### *Edited Books*

D.S. Wilson, D. S., editor, *The New Fable of the Bees*. Advances in Austrian Economics (in

press).

### *Book Chapters*

D.S. Wilson, "Health and the Ecology of Altruism," in Altruism and Health, edited by Stephen G. Post. New York: Oxford University Press, 2007 (in press).

Wilson, D. S., "Evolutionary Biology, Religion, and the Stewardship of Nature," in Encyclopedia of Religion and Nature, edited by B. Taylo. New York: Continuum International Publishing, 2004 (in press).

### *Media*

Wilson, D. S., "Evolutionary social constructivism: narrowing but not yet bridging the gap." Metanexus Digest 4(3), 2004  
[http://www.metanexus.net/metanexus\\_online/show\\_article.asp?9167](http://www.metanexus.net/metanexus_online/show_article.asp?9167).

## ***2. Unlimited Love in the Laboratory: Evaluating the Effect of Religion on Sharing and Cooperative Behavior***

Peter Richerson proposes to test the relationship among religious experiences, beliefs, and involvements in cooperative sacrifice by unifying two well-developed and never before integrated approaches of research: game theory experiments and psychometric religious assessment. In two different phases involving student subjects and members of religious and non-religious communities, subjects will be given a variety of standardized measures of religious experience, belief, and involvement, and subjected to two classic game theoretic experiments: the Ultimatum Game (which measures cooperative fairness and altruistic punishment), and the Commons Game (which assesses commitment or detraction from the common good). These tools will be used to examine how sacrificial behavioral patterns relate to self-reported varieties of religious experience, religious belief, and religious involvements. Group selection theory suggests that increased intra-group commitment will result in more in-group sacrifice and out-group rejection. This theory will be tested with an experimental design intended to illuminate the relationship between group loyalty and expansive sympathy.

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Duration: January 2003 – January 2005

## *Publications*

### *Peer Review Articles*

“Evaluating How Much Religious Variables Influence Altruistic Behavior,” *Evolution and Human Behavior* (in preparation).

“The Influence of Religion in a Public Goods Game,” *Journal for the Scientific Study of Religion* (in preparation).

“The Evolution of Moral Communication and Sanctions in a Public Goods Game” (in preparation).

“Religion and Prosocial Behavior: Evaluating Prosocial Orientations and the Proclivity to Reward and Punish Noncooperators” (in preparation).

### *Media*

Richerson’s project has been highlighted in the University of California, Davis alumni magazine. In addition, Richerson and his post-doctorate (Brian Paciotti) have been interviewed by Heather Smith. She is writing a summary of their project for *Science & Theology News*.

### **3. Cross Cultural Survey of Altruistic Behavior**

Christopher Boehm proposes to compile, tabulate, and assess a landmark cross-cultural database of cooperative behaviors in Paleolithic-representative hunter-gatherer societies. Out of 339 available h-g cultures, he has chosen 154 that are credible as representatives of Paleolithic ancestry due to lack of contact with agricultural or industrial influences. He will scan and code ethnographies for a wide variety of kin, reciprocal, non-reciprocal in-group/out-group cooperation, plus variables relating to religion and moral social controls. This work is important because the empirical basis for sociobiological theories of human nepotism and strict reciprocity is largely untested or relies on a limited selection of available ethnographies. Boehm will assemble an exhaustive database, with extensive coding for altruism and related parameters, in order to test competing theories of the origin, nature, and maintenance of altruism. This work may provide empirical basis for an understanding of human love.

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Duration: July 2003 – August 2007

### *Publications*

#### *Peer Review Articles*

C. Boehm, “What Makes Humans So Economically Distinctive” A Three Species Evolutionary Comparison,” Journal of Bioeconomics (in press).

C. Boehm, “Variance Reduction and the Evolution of Social Control,” *Current Anthropology* (in press).

#### *Books*

Trade book in preparation.

#### *Presentations*

C. Boehm, “Violent Altruism? An Investigation of Darwinian Hypotheses about Individual Participation in Feuding, Raiding, and Warfare” (International Society for Research on Aggression) Santorini, Greece, 2004.

C. Boehm, “Evolution of Hierarchy in Human and Nonhuman Primate Societies” (Invited Presentation to Founding Workshop: New Directions in Behavioral Sciences, Santa Fe Institute), Santa Fe, NM, 2003.

C. Boehm, Presidential Symposium on Warfare, “The Natural History of Conflict Resolution” (American Anthropological Association Meetings) Chicago 2003.

#### ***4. An Evolutionary Perspective on the Emotional Prerequisites for Love***

Love and compassion are unlikely to have appeared in our species alone. They build upon human psychology, which was shaped by human evolutionary history, which was shaped by a much older, pre-human history of mammalian social behavior. To study other animals is therefore crucial to know where love and compassion come from. Love requires that one has an eye for and understands the situation of the other, his or her needs, and his or her emotional state. Empathy may not be sufficient, but it is an essential building block. Empathy allows us to connect with the emotions, needs, and desires of others. Our closest relative, the chimpanzee is special in this respect, showing similarities with us not shown by many other animals. Chimpanzees, for example, console victims of attack. If another chimpanzee has been hurt in a fight, they will approach, put an arm around them or kiss them. They also show targeted help in which they provide others with assistance they need, such as saving them from drowning or supporting an injured companion. Several investigators have considered it unlikely that empathy

arose in recent evolutionary history. Indeed, there is experimental evidence for emotional contagion in other animals, such as rats and monkeys. Studies on our closest relatives, the anthropoid apes, are particularly rich, suggesting more intelligent forms of empathy than in monkeys.

The proposed study is entirely behavioral, with both an observational and experimental component. Observations of spontaneous behavior will be made on chimpanzees in two social groups at the Yerkes Primate Center so as to measure social responses to hurt or distressed individuals, such as individuals who have lost a fight. In chimpanzees, there exists evidence for “consolation,” which has been defined as a bystander providing reassuring contact to a distressed individual. Since behavioral predictions for responses based on mere emotional contagion differ from those for sympathetic concern, these two kinds of empathic responses will be distinguished. The investigator has a long history of doing detailed ethological research on chimpanzees, and the Yerkes primate Center has the best possible facilities for such work.

The experimental component of the project seeks to test responses to social sequences on video, particularly the preferred outcome of sequences, which outcomes may range from escalation of aggression to reassurance provided by others to a victim of attack. This work will take advantage of six well-trained chimpanzees who have been used in the past in computerized (joystick mediated) tasks. They will select images on a computer screen, and we will measure what kind of emotional contents or outcomes they prefer. The objective is to see if they care about what happens to others or not.

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Duration: January 2003 – January 2006

### *Books*

Trade book in preparation.

## **AREA SIX: THE SOCIOLOGICAL STUDY OF FAITH-BASED COMMUNITIES AND THEIR ACTIVITIES IN RELATION TO THE SPIRITUAL IDEAL OF UNLIMITED LOVE**

This topic area examines the significance of concepts of “love for all humanity” in a sociological context, giving attention to the ways in which this spiritual ideal is implemented within faith

traditions through volunteerism and service to the neediest. While religious communities can and do fall short of the ideal of “unlimited love,” and sometimes even descend into in-group insularity, love for all humanity is nevertheless a key precept that often translates into personal and organizational altruistic behavior.

### *Research Area Consultant*

Byron R. Johnson, Ph.D. (social scientific study of love and altruism with an emphasis on the impact, if any, of religious commitment and spirituality on a wide number of social outcomes including social capital and civic engagement. The role of faith-based communities and their activities in relation to the spiritual ideal of Unlimited Love is also of particular interest) is Director of the Center for Research on Religion and Urban Civil Society, and distinguished senior fellow in the Robert A. Fox Leadership Program, both at the University of Pennsylvania. He is a senior fellow in the Center for Civic Innovation at the Manhattan Institute. Before coming to the University of Pennsylvania, Johnson directed the Center for Crime and Justice Policy at Vanderbilt University, and remains a senior scholar in the Vanderbilt Institute for Public Policy Studies.

Professor Johnson’s research focuses on quantifying the effectiveness of faith-based organizations to confront various social problems. His research also examines the dynamics of domestic violence with a view to developing coordinated community responses that will reduce this form of violent behavior. Recent publications include two monographs on domestic violence published by the National Council of Juvenile and Family Court Judges, and two studies published by the Manhattan Institute on the efficacy of the “faith factor” in reducing crime and drug use among at-risk youth in urban communities. Along with other research intermediaries, Johnson and CRRUCS colleagues are launching a ground-breaking study of faith-based mentoring to Philadelphia’s most disadvantaged and at-risk population – the children of prisoners.

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### ***1. A National Study of Altruistic and Unlimited Love***

The project will allow key variables on aspects of unlimited love to be added as a new module to the General Social Survey (GSS), one of the most utilized and highly respected social science surveys in the world, located at the University of Chicago. Led by Dr. Tom Smith, Director of the General Social Survey, the project will include the introduction of a pilot module in 2003, that will be based on the best data from previous research on the subject. Based on the pilot, the new module on unlimited love questions will officially be added to the GSS in 2004. Housed within the National Opinion Research Center (NORC), the GSS will bring much needed social

science attention and credibility to the topic of unlimited love as NORC holds substantial capital within the academic community and well beyond. The GSS is a very large, random, representative survey that allows social scientists to analyze national level trends and patterns. This new module will provide unprecedented opportunities for junior and senior scholars to explore the relationship between unlimited love and other socially important factors, including the roles of religion, religious practices and beliefs. Because the GSS is so accessible, it will provide researchers with quick access to some of the best social survey data available. This project has the potential to be super catalytic by providing future researchers with nationally representative data on unlimited love, as well as hundreds of other relevant and important social science variables. Such data will make it possible to “fast-forward” the research and scholarship in the area of altruism and unlimited love – which is perhaps the main overall objective of the Institute.

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Duration: March 2003 – March 2006

### *Presentations*

T.W. Smith, "Measuring Altruism Across Social Groups and Countries" (Society for Cross-Cultural Research) Santa Fe, Feb. 2005.

T.W. Smith & J. Kim, "Empathy, Altruism, and Religion" (American Sociological Association) San Francisco, August 2004.

J. Kim & T.W. Smith, "Age Differences in Altruistic Behavior" (Gerontological Society of America) San Diego, Nov. 2003.

T.W. Smith & j. Kim, "Trends in Confidence in People and Institutions, 1972-2002" (Midwest Association for Public Opinion Research) Chicago, November 2003.

T.W. Smith, "Altruism in Contemporary America" (Midwest Association for Public Opinion Research) Chicago, November 2003.

## ***2. Faith-Based Service Organizations, Altruistic Caregiving, and Understandings of Love***

Led by the sociologist Robert Wuthnow, this study is part of a larger community study of the social agencies and churches in the Lehigh Valley of Pennsylvania. The proposed study will

focus on persons volunteering for caregiving for the poor, needy, or elderly. Wuthnow hypothesizes that among people working in nonprofit agencies, caring leads to trust, and trust in turn engenders effectiveness. Wuthnow goes on to postulate that faith-based organizations (FBOs) are more likely than non-faith-based organizations to exhibit the caring and loving attitudes that lead to trust and effectiveness. The proposed research is extremely important because it is perhaps the first to provide a strong theoretical foundation for the assumption that faith-based organizations are more effective than their secular counterparts. Wuthnow plans on conducting 120 in-depth interviews with volunteers that will yield rich data on motivations, understandings of unlimited love, beliefs about God's love, and much more. Interviews will be conducted with representatives from both faith-based and non-faith-based organizations. Importantly, Wuthnow plans to relate the attitudes and behavior of the volunteers to their own religious beliefs and practices. This is an important step in helping to understand the linkages between volunteer motivation and religious commitment, as well as the linkage between religiosity and community agencies, including churches. The sophisticated nature of the study methodology and its tight theoretical underpinnings lead us to believe that Wuthnow's study will eventually become a sociological classic. In summary, this study will shed important empirical light on the relationship among faith, spirituality, and motivations toward volunteering, trust, and the efficacy of caregiving.

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Duration: January 2003 – August 2006

### *Publications*

#### *Per Review Articles*

R. Wuthnow, C. Hackett, B.Y. Hsu, "The Effectiveness and Trustworthiness of Faith-Based and Other Service Organizations: A Study of Recipients' Perceptions," *Journal for the Scientific Study of Religion*, Vol. 43, No. 1, March 2004, pp. 1-17.

#### *Books*

R. Wuthnow, *Saving America? Faith-Based Services and the Future of Civil Society*. Princeton, New Jersey: Princeton University Press, 2004.

A second book is in preparation.

### ***3.. Antecedents and Correlates of Civic Engagement for African American Adolescents and Their Parents***

Unlimited love can be studied in terms of individuals' acts of involvement, care, and service on behalf of others. The present project focuses on civic engagement, which can be seen as one way of caring and helping others. Previous research has found that youth who are more involved in their communities, through service and participation in community groups, develop greater social responsibility, moral commitment, tolerance, and compassion for others.

This project examines some of the different factors that influence middle class African American youth to become more involved in their religious and civic communities, as indicated by their reports of involvement in activities like voting, volunteering, engaging in political activities, and joining civic and religious organizations. We will examine whether adolescents who express greater compassion (love, trust, and warmth) in their families are more likely to become involved in their communities. We will also examine how African American parents' teaching about race and parents' own participation in their communities influence youth civic engagement. That is, we propose that youth whose parents are more involved in the community and whose teachings about race focus more on justice, tolerance, and fair treatment (and less on perceived racial discrimination) are more likely to become engaged in their communities. Finally, we will determine whether African American teenagers who are more religious, both in terms of their spirituality and their formal involvement in churches, are more involved in their communities.

These issues will be examined using recently collected longitudinal data from the University of Rochester Youth and Family Project. This is a psychological research study of adolescent-parent relationships and adolescent development in 95 middle income African American families with adolescents. African American families with young teenagers (ranging in age from 11 to 14 but averaging 13 years of age) were initially recruited from Black churches and Black social and professional organizations in Rochester, New York. During visits to their homes, they participated in the study by completing questionnaires, responding to interviews, and participating in a structured family interaction task, which was videotaped. These families were re-interviewed two years later, when the teens were approximately 15 years of age. Teenagers and their families completed extensive questionnaires five years after the initial visit, when the youth were, on average, 18 years old. Youth and their parents reported on their present and future civic involvement at that time. For this project, we will code the videotapes of family interactions for compassion, warmth, trust, and prosocial behavior. We will also code interviews with parents about how they talk about race with their children for themes of tolerance and social justice. Finally, we will conduct statistical analyses of the project data to test the predictions outlined above.

This study should advance our understanding of how spirituality, religiosity, compassionate love, and concepts of social justice in the family help promote African American youths' involvement and service on behalf of the well-being of others. This is important if we wish to construct environments and social conditions that will help

ethnic minority adolescents to become healthy and productive citizens of our society. The knowledge gained from this project will be disseminated through publications to other researchers interested in child development and positive youth development.

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Duration: January 2003 – June 2005

### *Publications*

#### *Peer Reviewed Articles*

J.G. Smetana & A. Metzger, A., “Family and Religious Antecedents of Civic Involvement in Middle Class African American Adolescents,” *Journal of Research on Adolescence*. [Special Issue on Adolescent Moral Development] (in press).

### *Presentations*

J.G. Smetana, “Antecedents and Correlates of Civic Engagement For African American Adolescents and Their Parents” (Compassionate Love Research Conference) Washington D.C., 21 May 2004.

A. Metzger, “Disaggregating Civic and Community Involvement in African American Adolescents” (Biennial Meetings of the Society for Research in Child Development) Tampa, FL, April 2003.

#### ***4. Self-Forgetfulness in Seeking the Lost: A Sociological Study of Relentless Love and Compassionate Service at Ground Zero***

In the aftermath of September 11, 2001, the country will long remember the thousands of construction workers, firemen, police, and chaplains who poured into Lower Manhattan to conduct the rescue, recovery, and clean-up operation. They worked around the clock for days in the early weeks, then in grueling 12-hour shifts looking for survivors and the dead. At St. Paul’s Episcopal Chapel on Lower Broadway in New York, located on the precipice of Ground Zero, some 5,000 volunteers fed these workers, gave them sleeping quarters, comforted them, clothed them, and built a spiritual community of mutual gratitude. What motivated these particular individuals to volunteer for this work? What human attributes were displayed in greatest

abundance? With all the array of resources at ground zero, why did these persons make the Chapel their home? What was it about the experience of life in the Chapel that sustained the massive work? This study will provide scientifically-based explanations for questions surrounding such notable and sustained altruistic behavior. Led by Dr. Courtney Cowart, a theologian in the St. Paul's ministry at ground zero, and Adjunct Professor at the General Theological Seminary in New York City, this important study will document the role that religious perceptions may have played in motivating and sustaining this remarkable human response to the tragedy of September 11.

One of the important opportunities this study provides is also to probe for data that will indicate how the experience at ground zero translates into ongoing behavior. Does altruistic behavior sustain itself among these populations? Does it translate into everyday acts of concrete kindness, empathy and sympathy at work and/or in domestic life? Dr. Cowart and the community which gathered at the Chapel are now involved in the establishment of a human hub, the Nine-Twelve Community, located at the site to link numerous altruistic offshoots which grew out of the recovery experience in 2001-2002. The Nine-Twelve Community's hub will be the locus of extended interviews to probe for data on this sustaining of altruistic behavior within the recovery community into the future. Subjects will be drawn from a database comprised of 15,000 names of those involved in the recovery of the World Trade Center site who originally anchored themselves at St. Paul's.

The goals of the study are to understand from the perspective of participants (volunteers, workers, members of the community originally centered around St. Paul's Chapel and later as Nine-Twelve) the meaning of their experience, to themselves and others, both at the time and after the recovery work/ministry were completed, through the second anniversary on September 11, 2003. Through a series of interviews, the investigator will document and analyze the attitudes and stances speakers provide. The investigator will probe the participants' beliefs, feelings, and opinions about what they did, and, finally, probe behavior, what the participants did and continued to do. Once the milestone of the second anniversary of 9-11 has occurred, Dr. Cowart will conclude her analysis of the data, and author a book which will present significant sections of the narratives obtained from the interviews along with analysis.

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## *Publications*

### *Books*

C.V. Cowart, *Love at Ground Zero* (in preparation).

### **5. *Unlimited Love, Compassion, and Forgiveness: Acts of Moral Exemplars***

In this research we use a sample of Catholic Priests and Nuns, Protestant Minister, Rabbis, a group of individuals that we title Moral Exemplars (individuals who have done something to help in their community on a regular basis and are recognized as moral exemplars), college students, and general public (who we define as being neither clergy, moral exemplars, nor students). The specific purpose of the research is to try to find out why some individuals not only help others in need, but also are predisposed to apologize to those that they have harmed and forgive those who have harmed them. We have found, along with other social scientists that among the motivating factors to help, apologize, and forgive are religiosity/spirituality, empathy, social responsibility, and other factors that we have reported in a larger study. Using a structured interview schedule, as well as altruism, forgiveness, and several other scales, we were able to elicit information about motivation to help, apologize and to forgive those who have harmed them. We asked respondents whether they had been hurt in some serious way and whether the offender had asked them for forgiveness. We also asked whether the respondent has ever hurt someone else in some way and whether they asked for forgiveness. Of the total sample of 435 respondents, 91% reported that someone had hurt or offended them and 97.9% said that they had hurt or offended someone. Eighty-three percent had asked for forgiveness and 91% said that they had forgiven someone. We compared clergy and the moral exemplars on nine variables and found that they scored highest on religiosity/spirituality, social responsibility, moral identity, as well as forgiveness.

A second part of our research focused on intergroup apology and forgiveness. We interviewed a group of clergy in Humboldt County, Northern California who apologized to Native peoples for the Indian Island massacre of 1860. We have also interviewed a group of Nuns from three communities around Louisville, Kentucky, the Sisters of Charity of Nazareth, the Sisters of Loretto, and the Dominicans of Saint Catherine who apologized to descendents of African Americans for slavery. A high percentage of them explained that they were motivated by religion to apologize. We also asked a sample of Native Americans in Humboldt County and a sample of African Americans around the Louisville area how they perceived the apology and what were the consequences of such an apology. We were interested in whether relations between Native Americans and Anglo-Americans in Humboldt County, and African Americans and Anglo-Americans in Kentucky have improved in any way. Sixty-five percent of Native Americans in our sample have recognized and accepted the apology, and they are beginning to see some improved intergroup relations. Sixty percent of African Americans in our sample have said that they appreciated the apologies because someone finally recognized their historical pain. Some of the African Americans in Kentucky stated that relations have not improved much. Additionally, we asked a sample of clergy, especially Catholic Priests, about the importance of

the Pope's dramatic apology in various venues to groups of oppressed peoples. Ninety-three percent of respondents said that they knew about this apology, and 94% thought that the Pope's apology was a very positive act on behalf of the Catholic Church. The Rabbis were asked how they perceived the Pope's apology to the Jewish communities. Approximately 75% of Rabbis have stated that Catholic/Jewish relations have improved as a result of the Pope's apology.

I believe that apology/forgiveness, as well as altruism have moral moorings, which means concern with seeking the good, and seek it in relation to others. To be moral implies a focus on relationships and other people with good intentions towards them. There are very few people in this world who do not feel that they have been hurt in some meaningful way and acts of compassion and caring towards them, which includes forgiveness, could lead to reconciliation. This research is still in progress in the sense that it is now broadening its approach by including examination of apology and forgiveness internationally, mainly Poland.

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### *Publications*

#### *Edited Journal*

Samuel P. Oliner, ed., *Altruism, Intergroup Apology and Forgiveness: An Antidote for a Divided World: SPECIAL ISSUE – Humboldt Journal of Social Relations*, Vol. 29, No. 2, 2005. 7 articles on this topic as organized by Dr. Oliner, including his own “Altruism, Forgiveness, Empathy, and Intergroup Apology,” pp. 6-41.

#### *Books*

S. Oliner & O. Zylich, *Unlimited Love, Compassion, and Forgiveness: Acts of Moral Exemplars* (in preparation).

### **III. RFP “SPIRITUALITY AND RAISING A CARING CHILD” THIRD SET OF GRANTS FUNDED IN OCTOBER 2004 (N = 2 plus Fetzer 3 = 5)**

(These are being administered via the Fetzer Institute and are for the most part complete)

Again in a matching arrangements with the Fetzer Institute, the Institute for Research on Unlimited Love was able to fund two carefully selected studies on spirituality and the raising of caring children. This enable the Fetzer Institute to fund two additional studies. The two IRUL-funded studies are:

#### ***1. Indonesian Adolescents’ Caring and Caring Relationships***

The goal of this short-term longitudinal study is to examine aspects of adolescents’ functioning and background relevant to compassionate love/unlimited love (e.g., prosocial behavior, sympathy, caring friendships) and to identify variables (e.g., youths’ religion & spirituality, values, perspective taking, sympathy, and their parents’ values and parenting behavior) that predict the quality and duration of youths’ caring peer relationships and whether they extend their caring *to out-group as well as in-group members*. Young Indonesian adolescents will be studied for nearly a year using a multi-reporter (self-report, parent and teacher reports) method, including diaries of the quality of their interactions with friends. A subgroup of 200 youth who have close peer relationships with individuals from other ethnic or religious groups will be compared with youth who do not on a range of variables expected to foster inclusive caring (e.g., those listed above, group identity, sympathy with out-group members) . Indonesia is currently being fractured by ethnic (e.g., Javanese and Chinese), *religious* (Muslim and Christian), and regional (Ach, Ambon, Irian Jaya) conflicts. The existence of widespead violence has puzzled both Indonesians and outside observers because it coexists with a cultural emphasis on interpersonal harmony and caring (Friend, 2003). The goal of this study is to identify aspects of adolescents’ functioning and background relevant to compassionate love/unlimited love (e.g., prosocial behavior, religion, spirituality, sympathy, caring friendships), and to identify variables that predict *whether children extend their caring to out-group as well as in-group members*.

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Duration: January 2005 – January 2007

#### ***2. Selfishness and Selflessness in Adolescent-Parent Relationships***

The aim of this proposed study is to examine selfishness and selfless love in adolescent-parent relationships. Compassionate love is defined here as a positive, caring, emotional connection to the other that entails a desire to promote the well-being of others and to be other-regarding

Although compassionate love can be studied in various contexts, the family may be the earliest and most enduring context for the development of compassionate love. Yet the nature of close relationships also may pose barriers to its expression.

Although the capacity for compassionate love may arise in early childhood through parents' sensitive and responsive caretaking, the developmental changes of early adolescence may lead to significant advances in adolescents' capacity for and understanding of compassionate love. The aim of this proposed multi-method, multi-informant project is to examine the developmental prerequisites and contextual conditions that lead adolescents (and their parents) to prioritize selflessness over selfishness in adolescent-parent relationships. Participants in this research will be 120 adolescents, evenly divided between males and females in early (7<sup>th</sup> grade) and middle (10<sup>th</sup> grade) adolescence and their parents, who will be administered questionnaires and semi-structured interviews assessing their judgments and justifications for situations that entail conflicting (parents' versus adolescents') needs. We will apply a well-established methodology (semi-structured interviews) from the moral judgment field to the study of compassionate love. The influence of parenting (including acceptance and control), *adolescent spirituality*, beliefs about family obligations, adolescent autonomy, and adolescent-parent relationships (including intimacy, positive support, and conflict) on judgments also will be examined. This research should further our understanding of the development of the ability to look beyond the duties and obligations inherent in close relationships to consider the well-being of those we love. Thus, the aim of the proposed research is to examine the developmental prerequisites and contextual conditions – highlighting religion - that lead both adolescents and parents to prioritize selflessness and other-regard over selfishness in their relationships. *It is hypothesized that adolescents' greater spirituality*, less conflict, more closeness, greater family obligation, and more autonomy all will be associated with adolescents' greater selflessness.

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#### **IV. PILOT STUDIES IN SUPPORT OF YOUNGER RESEARCHERS (N = 5)**

The pilot studies below are in the amount of \$5,000 each. These were reviewed externally. Number 4 and 5 were developed on a matching basis with Fetzer and the University of California, San Francisco, leading to two additional funded studies.

## ***1. The Effects of Gratitude on Well-Being in Relatives of Individuals with Alzheimer's Disease***

Caring for a spouse or parent with Alzheimer's disease can be thought of as one of the ultimate acts of love and sacrifice. Family caregivers often have other responsibilities in addition to caring for a relative with Alzheimer's—such as childcare or a career, but these individuals willingly add to their responsibilities out of love for their ailing family member. Underscoring the altruistic nature of the caregiver's sacrifice, the relative with Alzheimer's may eventually forget even the identity of the caregiver and of other loved ones.

Therefore, it comes as no surprise that caregivers of individuals with Alzheimer's disease experience a large amount of stress (Pearlin, Mullan, Semple, & Skaff, 1990). Caregivers may become overwhelmed with their responsibilities, and may eventually feel unable to provide for the needs of their relative. Even if the caregiver decides to hand over care of their relative to a medical facility, the physical and psychological stress of watching his or her relative's health decline may continue to take a toll.

The current study will investigate the potential for daily gratitude journals to positively influence the physical and psychological well-being of relatives of individuals with Alzheimer's disease. Existing research looking at college students and individuals with neuromuscular disorders suggests that longitudinal gratitude interventions may have positive effects on well-being. Emmons and McCullough (2003) found that college students who completed daily gratitude journals for two weeks rated their lives more favorably, had more positive affect, and reported fewer physical symptoms compared to control groups who wrote about daily hassles or meaningful events. They also found that individuals with neuromuscular disorder experienced increased positive and decreased negative affect and increased life satisfaction and optimism after completing daily gratitude journals for three weeks.

The present study will also investigate the role of religion and spirituality on the effects of daily gratitude journals on well-being. The importance of gratitude is particularly emphasized within religious contexts (e.g., Roberts, 2004; Schimmel, 2004). Therefore, it is possible that individuals who consider themselves highly religious or spiritual may receive more benefit from a daily focus on gratitude.

It is predicted that participants who complete daily gratitude journals for two weeks will experience greater positive affect, increased life satisfaction and optimism, as well as decreased negative affect and decreased physical symptoms compared to a control group. It is also hypothesized that individuals who complete gratitude journals will report better coping in relation to their loved-one's illness. Lastly, participants who report greater religiosity and spirituality, and those who consider themselves more intrinsically religious should receive a greater benefit from the gratitude intervention.

If religiousness and a daily focus on gratitude results in an increase in psychological and/or physical well-being, it may provide an important intervention to prevent burnout in vulnerable populations such as caregivers, thus encouraging caregivers' continued expression of love.

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## ***2. Participating in Medical Research for the benefit of Science, Medicine and Society: A Proposal to Analyze the Nature and Role of Altruistic Discourse in the Clinical Oncology Research Setting***

Contemporary medicine, with its many core discourses on beneficence, charity, and “other-oriented” practices and values, has developed into a living archive for philosophers and empiricists seeking material to refine their definitions and understanding of altruism and altruistic behavior. Diversity in the health and demographics of patient populations has made this resource all the richer. It offers the opportunity to explore, in the highly controlled environment of medicine, the possible effects of diagnosis, prognosis, risk thresholds, ethnicity, gender, culture, socioeconomic status, and other factors on altruistic attitudes and behaviors. Researching and testing for these and other effects is vital, as leading scholars have maintained, to the promotion of a more nuanced understanding of altruism and such kindred concepts as beneficence, social compassion, empathy, spirituality, volunteerism, generosity, and others.

This study takes advantage of the richness and diversity of the contemporary clinical care setting to explore how altruism is invoked as a motivation and justification for participating in medical research, including religion variables. Using data already at our disposal, we propose to:

1. Determine the content and range of altruistic/other-oriented discussion in a sample of 134 informed consent consultations (ICCs) involving the offer of a cancer clinical trial;
2. Determine the factors that potentially influence this other-oriented content, including:
  - 2.1. Clinician ethnicity, years of professional experience, type of clinician (e.g., nurse, attending, fellow; pediatrician or adult care), and strength of clinician recommendation;
  - 2.2. Patient diagnosis and prognosis, ethnicity, gender, and socioeconomic status.
3. Determine if other-oriented discussion affects the decision to participate in clinical research, as a means of understanding the implications of altruistic discourse in the oncology research setting.

Together, these three interlocking aims will help us better understand the variability and substance of altruistic discourse in medical research settings. The study will set the stage for a future exploration of the dynamics of altruistic or other-oriented considerations among patients and families confronted with the decision of whether or not to participate in medical research

Contemporary medicine, with its many discourses of beneficence, charity, and “other-oriented” practices and values, is ripe for the study of altruism, religion, and “unlimited love.” This study takes advantage of the richness and diversity of the clinical care setting to explore how altruism is invoked as a motivation and justification for participating in medical research. The study, based on a sample of 134 informed consent consultations involving the offer of a cancer clinical trial, will set the stage for future exploration of the dynamics of altruistic and other-regarding orientations among patients and families.

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### *Publications*

C. Simon & M. Eder "Altruistic Discourse and Informed Consent in Clinical Oncology" (in preparation)

### ***3. The Drive for Donation: The Study of Understanding and Drivers License Designation***

This pilot study is designed to understand the decision making of individuals considering organ donor designation on their driver’s license. The factors involved in choosing to be an organ donor, such as moral or religious motivations, comprehension of informed consent, implications of total body donation, and the sources of information upon which people base their decision, are undocumented. We intend to gather information by conducting surveys of people who go to the Departments of Motor Vehicles to obtain or renew their license in Pennsylvania and Delaware. We hope to discover links between altruism, personal experience, religious preferences and social and demographic groups.

The purpose of this study is to begin to understand decision-making at the point of donor designation on a driver’s license. It is our intention to ask individuals entering or exiting the Department of Motor Vehicles about their motivations for donation, their understanding of organ donation, their personal experience with donation, the understanding and preference regarding donation and if they are indeed designated donors.

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Status: Complete

### *Final Report*

In April 2003 the Center for Bioethics of the University of Pennsylvania received a generous grant from the Institute for Research on Unlimited Love in order to partially fund the study: “The Drive for Donation: A Study of Understanding and Driver’s License Designation”. The study was designed to understand the decision making of individuals considering organ donation designation on their driver’s license. In order to fulfill this goal, we gathered information by surveying people at the Department of Motor Vehicles (DMV) to obtain or renew their license in Delaware. The survey included questions about knowledge, opinions, and experience with organ donation and transplantation, as well as demographic information.

Once obtaining approval from the University of Pennsylvania Institutional Review Board, a team of researchers from the Center for Bioethics, under the supervision of Sheldon Zink PhD, Director of Transplant Policy and Ethics, piloted the survey at the DMV sites in Delaware for two months in the summer of 2003. After the appropriate changes were made to the survey, the data collection was carried out during the months of June and July of 2004. The researchers visited all four of the DMV offices in Delaware at least twice. At the end of the collection stage, 2027 DMV customers had been approached and there were 1504 surveys suitable for analysis. These surveys were later compiled into a database and analyzed using the appropriate statistical software.

The results drawn from the surveys allowed us to prepare three articles that we intend to publish in major academic journals. The first paper, currently in review, is titled: “Examining the Potential Effects of Offering Financial Incentives for Cadaveric Organ Donation.” The second paper, “Donor Registries and First Person Consent” is in preparation and should be in review shortly. Based on survey results this paper concludes that offering financial incentives will not result in a significant increase of the donor pool. The other two articles are still being drafted at The University of Pennsylvania, Center for Bioethics. The first examines the issue of First Person Consent to Organ Donation. The second article will present the overall description of the study and the major findings related to the actual process of organ designation at the DMV offices.

In addition to the already outlined results from the statistical analysis, the study achieved remarkable results in other areas. One of the most important objectives of The University of

Pennsylvania, Center for Bioethics is to educate students, not only in theoretical ethical principles, but also in the methodology of bioethical research. In this regard, the study “The Drive for Donation...” fulfilled the Center’s mission by training 6 undergraduate students and 1 graduate student in the specifics of qualitative and quantitative research, such as conceptualizing a study, designing surveys, carrying out statistical analysis, and writing articles for peer-reviewed journals. Another achievement of the study was the establishment of a good relationship with the DMV offices in Delaware. We are confident that we can count on their support in any further studies we wish to undertake in the future. Finally, as a by-product of this study, we feel that we contributed to the awareness of the importance of organ designation in the general population. People being surveyed were often grateful for the opportunity to reflect on their designation decision and were sometimes curious about finding out more information on the issues surrounding organ donation.

#### ***4. A Measure of Compassion***

Despite the fact that compassion is a central focus of Christianity, Buddhism, and other widely practiced religion, it has remained a relatively understudied topic in psychology. In part, this may be due to the absence of reliable and valid measures of compassion. Thus, the central aim of this study is to develop such a measure. Compassion is comprised of affective, cognitive, motivational, and behavioral components. To tap into these different aspects of compassion, we have developed and piloted an easy-to-administer web-based measure of compassion. Specifically, individuals read a letter from a prisoner who has committed an atrocious crime. After reading the letter, individuals rate how they feel about the prisoner as well as how much they identify with the prisoner. Finally, individuals are asked to write a letter to the prisoner. Individuals who are compassionate or who are behaving in compassionate ways should report high empathic concern for the prisoner (affective), should report that they will identify, sympathize with, and forgive the prisoner (cognitive), should report that they want to reduce the suffering of the prisoner (motivational), and should agree to write a letter to the prisoner (behavioral). Moreover, among people who write letters, the more compassionate should write longer letters than the less compassionate.

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#### *Publications*

J. Tsang, ”The Effects of Helper Intention on Gratitude and Indebtedness” (in submission).

M.E. McCullough, J. Tsang, & R.A. Emmons, "Gratitude in 'Intermediate Affective Terrain': Grateful Moods and Their Links to Personality and Daily Life Events," *Journal of Personality and Social Psychology*, Vol. 86, 2004, pp. 295-309.

### *Presentations*

J. Tsang, "Gratitude and Prosocial Reciprocation: A Behavioral Assessment of Gratitude" (American Psychological Society) Chicago, May 2004.

### **5. Facial and Physiological Correlations of Compassion**

This study measures empathy by coding facial expressions, especially in children, using film images. Heart rate, skin conductance, respiration, cardiac vagal tone, and observed facial response will be assessed. Religious affiliations and religiousness questionnaires will be utilized. Data will provide important information regarding whether our current measures of sympathy and personal distress can be extended to compassion.

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### **V. RFP FOR "THE JUDITH B. WATSON INITIATIVE": Six Projects on Youth, Adolescents, Helping Behavior, Spirituality and Mental Health (N = 6)**

In 2005, five projects were added to the Institute research endeavor developed around the question of adolescents and mental health in relation to unselfish love, spirituality and helping behaviors. This brief statement is intended to summarize these projects. Many friends of the Institute had commented that this is a topic area of special significance for our time, and one where quite literally nothing has been done. These projects are related presented here in association with David Sloan Wilson's newly evolved project, *Health and the Ecology of Altruism*.

#### **Watson Project 1**

##### **Principal Investigator:**

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Duration: July 2004 – July 2006

**Project Title: Health and the Ecology of Altruism**

Other-regarding behavioral strategies have coexisted with more self-regarding strategies throughout human history. Clearly, both must be advantageous in some situations and disadvantageous in others to be maintained over such long periods of time. Altruism should have beneficial health consequences primarily when it thrives as a behavioral strategy. Otherwise it should become stressful, which is why it is abandoned. The same goes for self-regarding behaviors.

Altruism can be highly gratifying (and therefore healthful) *in some situations*, especially when it involves working with others who reciprocate or express gratitude. Altruism practiced in face-to-face interactions might be especially healthful because the psychological mechanisms that make altruism personally rewarding evolved in the context of face-to-face interactions. On the other hand, altruism can be stressful *in other situations*, especially when it is unreciprocated, unappreciated, or fails to trigger appropriate proximate mechanisms.

Testing ecologically informed predictions such as these requires a database that provides information about behavioral differences and their consequences in everyday life. One such database is the Sloan study of youth and social development, conducted by a team of scientists headed by psychologist Mihaly Csikszentmihalyi and sociologist Barbara Schneider to examine how adolescents make the transition from school to the work force. Twelve geographical locations in the United States were chosen to represent rural, urban, and suburban environments, different racial and ethnic compositions, labor force characteristics, and economic stability. Within each geographical location, a number of middle schools and high schools participated, resulting in 33 schools for the entire study. Over 1000 students were followed for a period of five years. Information gathered at bi-yearly intervals included a battery of questionnaires totaling over 400 items and a week of the experience sampling method (*ESM*), which involves being signaled eight times a day and recording basic information about external circumstances (Where you are, what you are doing, and who you are with) along with 33 variables measuring psychological experience (e.g., anger, happiness, cooperation, concentration) on numerical scales. In addition to these “focal” students, a subset of information was gathered on over 3,000 classmates of the focal students (termed “cohort” students).

The information gathered by the Sloan study can be used for many purposes in addition to its original focus. In collaboration with Csikszentmihalyi and Schneider, I used 17 questionnaire items to construct a scale that measures individual differences in prosociality (a term that includes all forms of other-oriented behavior). Items on the PRO scale include questions such as “*For the job you expect to have in the future, how important is helping people?*” and “*How often do you spend time volunteering or performing community service outside of school?*” that clearly relate to other-oriented attitudes and behavior.

To date, the Wilson study has shown that on average, low-PRO individuals suffer from low self-esteem, are pessimistic about the future, and believe that luck is more important than hard work. They score significantly higher on the items “I usually feel stressed”, “I usually feel sick”, and “I usually feel tired” (ANOVA’s, N=1653, 1648, 1651; df=4; F=2.9, 4.69, 4.92 ; p=.020, .0009, .0006 respectively). So far, analysis has been based on questionnaire items that were answered on a one-time basis, but the most important part of the Sloan study database is the experience sampling method, which involves recording thoughts and feelings as they are being experienced at roughly two-hour intervals for a week. Table 5 shows that individual differences measured by the PRO scale were amply reflected in everyday experience. On average, High-PROs were able to concentrate, felt that they were living up to the expectations of others, and enjoyed themselves more than low-PROs. They felt more happy, active, sociable, involved, and excited. They felt more challenged and engaged by their activities, which were perceived as more important with respect to future goals. As with the regression analysis presented in

The Sloan study and especially its use of the experience sampling method provides a superb source of naturalistic information, acting as an invisible observer perched on the shoulders of people as they go about their daily round of life. **It is gratifying that the benefits of altruism can be demonstrated at such an intimate and noninvasive level for a representative sample of American youth.**

The study also indicates that psychological benefits of altruism can be maximized by providing the kind of social environment that enables altruism to flourish in behavioral terms. It should also be important to provide the cues that reliably indicate such environments, especially in the context of small face-to-face groups. To be known, liked, respected, needed, and in the company of others are powerful psychological motivators because they consistently led to prosocial groupings in our evolutionary past. As proximate mechanisms, they are satisfying (and healthful) in their own right even when they don’t lead to material benefits.

## **Watson Project 2**

### **Principal Investigator:**

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Duration: July 2005 – June 2006

Status: Complete

### **Project Title: Investigating Helping Behavior and Depression Among Middle Childhood and Early Adolescent Youth**

The Center for Health Achievement Neighborhood Growth and Ethnic Studies (CHANGES) is pleased to *submit the following proposal for analysis of data to investigate the relationship between helping behavior and depression among middle childhood and early adolescent youth*. Proposed activities also include analysis of risk and protective factors, coping behaviors and identity processes associated with helping behavior and depression among a sample of racially- and ethnically-diverse early adolescent youth (i.e., students in grades 4–8).

#### ***Theoretical Approach***

There are a variety of conditions and experiences that can lead to or are associated with depression. Symptoms of depression can be mitigated by medical, cognitive and behavioral interventions. Each type of intervention suggests different causes of and pathways to depression. While focusing on the relationship between helping behavior and depression in adolescents, we also propose to investigate other possible direct and indirect pathways that explain depression. We do this for two reasons. One, we seek to rule out other possible explanations for the presence or absence of depression among early adolescents. Two, we seek to explore possible pathways by which *helping behavior* works in conjunction with other factors to reduce depression.

Our proposed analyses are guided by a systems-oriented conceptual framework—Spencer’s (1995) Phenomenological Variant of Ecological Systems Theory (PVEST)—to gain understanding of the complex relationships that contribute to (or help prevent) depression among youth. PVEST emphasizes individual perceptions. In doing so, it allows us to analyze youths’ meaning making processes (Spencer, 1995; Spencer et al 1997; Spencer, 1999). This is an important distinction with respect to the study of depression in that depression is influenced in part by individual perception—the meaning and significance an individual gives to his or her experiences. Individual perceptions of life experiences influence subsequent coping responses—both reactive and stable. For instance, depressive factors are associated with decreased physical activity, increased agitated feelings or behaviors, increased anxiety or fearful feelings, increased physical discomfort (gastrointestinal problems, etc.), and increase (or decreases) in weight. The PVEST framework will be used to examine how risk, perceived support, coping and identity processes interact to impact youths’ mental (e.g., emotional discomfort) and physical health outcomes among 4<sup>th</sup> through 8<sup>th</sup> grade youth who live in urban, low-resource neighborhoods.

The PVEST model consists of five basic components that form a dynamic theoretical system. The model illustrates direct, indirect and reciprocal relationships among factors that are important to and/or represent different aspects of development. The model also provides a guide for data based on the constructs we have used to represent and operationally define helping behavior, depression and their correlates. The first component considers youths’ level of risk or vulnerability by focusing on how pre-existing risk factors (i.e., race/ethnicity, gender, age), offset by protective factors (i.e., helping behavior, future aspirations, resilience, achievement), introduce challenge or provide protection to youth as they navigate their ways through different developmental periods. Traditional models link risk and protective factors directly to outcomes (see Figure 1).

The second component, net stress engagement, takes into account the relationship between perceived challenges (i.e., fear of neighborhood calamity, parental or peer criticism, little or no parent involvement) and available supports (i.e., family involvement, parental or peer encouragement, parental monitoring) (See Figure 2). For example, youth who feel supported by family and peers may feel better equipped to handle the normative developmental challenges associated with the onset of adolescence (e.g., increased introspection, concerns with body image and appearance, expanding social networks, etc.). As such, they may become more likely than their less-supported counterparts to take advantage of opportunities in their family, school and neighborhood environments, such as participation in extra-curricular activities. Reactive coping strategies are responses that can be either adaptive (i.e., cognitive appraisal) or maladaptive (i.e., passive avoidance, risky avoidance) and emerge in response to the net level of perceived stress and support (See Figure 3). Coping strategies that persist over time and space often yield stable emergent identities. They are characterized as emergent identities when coping strategies are no longer reactive to specific situations, but stable and employed consistently regardless of context or circumstances (i.e., resilient, angry, socially competent, valued by others, etc) (See Figure 4). That is, the coping strategies are consistent and become identified with the individual and not situations. In turn, the stable character of these identities guide behavior and may influence developmental stage-specific outcomes, which may be either productive (e.g., being physically and emotionally healthy) or adverse life-stage outcomes, like depression and suicide ideation.

### *Project Background*

The study was conducted in an urban public school district located in the Mid-Atlantic region of the United States. The city was selected as a site for our research efforts because of its diverse population of elementary and middle school students who reside in urban, low-resource neighborhoods. The city is diverse in race and ethnicity with a population of 85,000, which is approximately 52% African American, 33% White, 11% Hispanic or Latino, and 3% bi- or multiracial (U.S. Census, 2000). Research assistants who administered questionnaires participated in training sessions at the University of Pennsylvania. Surveys were administered to the participants during the school day, in either large groups in classrooms or small groups in multi-purpose rooms in the schools.

Hypotheses and Statistical Analysis. The main goal of this study is to investigate the relationship between helping behavior and depression among middle childhood and early adolescent youth.

### **Watson Project 3**

#### **Principal Investigator:**

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Duration: July 2005 – July 2007

Status: In Process

**Project Title: Altruism/Agape Love and the Pathways Project**

*Background of Pathways Project*

This study, “Pathways Linking Education and Health in Middle Adulthood” is a four year project, initiated in 2003, and funded through the National Institutes of Health/National Institute on Aging. It is designed to evaluate the association between measures of education and subsequent physical health, mental health, and biological precursors of disease, independent of social, familial, and individual background factors. This project will also evaluate hypothesized pathways linking education and health including literacy, health behaviors, and a number of psychological constructs.

Study participants are part of the National Collaborative Perinatal Project (NCPP). The NCPP was initiated 40 years ago to investigate prospectively the prenatal and familial antecedents of pediatric, neurological and psychological disorders of childhood. Twelve university-affiliated medical centers participated in this national study, two in New England (Harvard Medical School and Brown University). The Project enrolled over 50,000 pregnancies, approximately 18,000 in New England, between 1959-1965, and followed offspring on eight occasions through age 7 years. Extensive data were collected about the mother’s pregnancy and delivery, as well as socio-demographic information about the child’s parents, the household in which the child was raised, and the social and physical development of the child at several points in time.

In 1999, when study participants were ages 37-43, approximately 2,000 individuals in the New England cohort were recontacted and enrolled in a follow-up study. For our current study, approximately 800 of these 2,000 individuals will be asked to complete another interview and undergo a brief clinical assessment which includes anthropometric measurements, measures of blood pressure and lung function, and a blood draw. The blood will be analyzed for both well-established and relatively novel biological precursors of disease including cholesterol, fibrinogen, and triglycerides. The interview contains questions on socioeconomic status (SES), with an emphasis on education, and a detailed health questionnaire including measures of self-rated health, physical illness, mental health, screening behaviors, and components of the SF-36. In addition, it contains questions related to hypothesized pathways linking education and health including literacy, health behaviors, and numerous psychological pathways including social support and stress.

We are currently in the field finishing the pilot phase of this project. We anticipate interviewing approximately 600 individuals over the next 2 to 3 years. While we plan to assess individuals across the range of educational attainment, we will oversample those at the tails of the distribution, such as those with less than a high school diploma or a college degree or higher. Approximately half of our sample are female and about 15% are racial/ethnic minorities.

### *Time Line*

We plan to be interviewing subjects for this project over the next 2-3 years, at approximately 7 interviews per week. Once data collection is complete, in the beginning of 2007, the blood samples will be analyzed in batch to obtain data on the biomarkers. We anticipate beginning data analysis on these data in the latter part of 2007, the last year of our grant period.

### *Publication Outcomes*

While the currently proposed budget is dedicated to data collection, it is our hope that this proposed collaboration will extend into data analysis and dissemination of study findings related to altruism/agape love. Although specific paper topics will be developed in collaboration with Dr. McCullough, there are several potential broad areas of research related to the measure of altruism/agape love that can be addressed using data from this current study.

1. What social, familial, and individual background factors predict altruism/agape love in adulthood?
2. What is the association between altruism/agape love and measures of both physical and mental health in adulthood? This group of papers tests the hypothesis that individuals who score higher on a measure of altruism/agape love would have better health. A significant strength of these papers would be to build upon the findings of #1 and control for social, familial, and individual background factors that may influence both altruism and subsequent health status.
3. What is the association between altruism/agape love and biological precursors of disease such as cholesterol, fibrinogen, triglycerides, and blood pressure?
4. Does altruism/agape love mediate the association between measures of socioeconomic position and health?
5. What is the association between altruism/agape love and other aspects of an individual's life including socioeconomic position, health behaviors, and psychological factors like stress/role strain and social relationships?

### *Conclusion*

We look forward to the potential collaboration with Dr. McCullough and are excited about the opportunity to include a measure of altruism/agape love in the interview. The prospective nature of our project will enable us to evaluate this novel construct in relation to health while accounting for social, familial and individual background factors across the life course, which are not readily available in other studies.

## **Watson Project 4**

### **Principal Investigator:**

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Duration: July 2005 to March 2006

### **Project Title: Evaluating the Health Benefits of Altruism in Adolescents: A Cross-sectional Survey**

Although the benefits of providing support have long been acknowledged among spiritual and religious texts as a key to living well, the predominant focus in psychological research on social support has been on the benefits one enjoys when one receives social support. There is, however, emerging evidence that giving support to others provides as much or perhaps more reward to the giver than to the recipient. Previous work done by our group has suggested that altruistic social interest behaviors are associated with better mental health among adults (1), and that this association is independent of other possible confounders such as demographic characteristics, stress, prayer activities, and prayerful coping. This intriguing line of work leads one to wonder whether such putatively salutogenic effects might also be present in other age groups.

One age cohort that is of great concern at present is adolescents. This cohort has demonstrated an increasing trend over the past several decades for progressively earlier engagement in health-risk behaviours (e.g., “recreational” drugs, sexual activity). Additionally, obesity has become an epidemic condition not only among adults, but also among children and adolescents. It is an unfortunate fact that the likelihood of reversing these behaviours and/or serious health problems is inversely related to the age of onset, so children and adolescents who develop obesity are highly unlikely to revert to a healthy weight set point. We posit that engaging in altruistic and/or community-oriented behaviours is protective against health-risk behaviours, and that these behaviours may even facilitate adherence to lifestyle-change programs for weight reduction.

The mechanism that would facilitate such adherence is distraction and replacement. The solipsism that is characteristic of adolescence may make it increasingly difficult to intervene with adolescent obesity, no matter how sound the education provided about good nutritional habits. One wonders whether it would be possible to affect greater change in the critical obesity-generating behaviours by assisting at-risk adolescents (i.e., overweight but not yet obese) to transcend their solipsism and focus on others. If one were to supplement such an education with more active, outreaching activities to replace current sedentary, introverted or passive activities, it is possible that the problematic lifestyle habits would change more readily. As a first step in assessing the viability of this hypothesis, we would like to implement a cross-sectional survey to

determine whether mental or physical health and health habits are associated with altruistic behaviours among adolescents.

### *Design*

This cross-sectional survey will be a representative sample of recent confirmands (estimated n=750) of the Presbyterian Church (U.S.A.) [PC(U.S.A.)]. Eligible participants will be age 12-18 who are members of the PC(U.S.A.).

### *Procedure*

*Phase 1:* To obtain names and addresses of PC(U.S.A.) youth, a mailing will be sent by the Research Services office of the PC(U.S.A.) to a sample of 300 congregations asking for the names and addresses of their most recent class of confirmands. They will provide a form for use in providing this information in hard copy. They will also offer to send an electronic copy of the form for any congregation that prefers using a word processor to type information into the form. Two reminders will be used: (1) a postcard reminder sent to non-responding congregations about 2 weeks after the original mailing (estimated to be sent to about 80% of sampled congregations) and (2) a second reminder sent to non-responding congregations about two weeks after the postcard reminder (to include a cover letter and a second copy of the form; estimated to be sent to about 70% of sampled congregations). The overall response rate for this part of the study is estimated at about 60% of congregations, providing contact information for a total of 1,500 confirmands. A database will be prepared with names and addresses supplied by congregations.

*Phase 2:* Confirmands will be contacted directly by mail by PC(U.S.A.) and invited to participate in the project online. The survey will be available for Web completion only. Three reminders will be used: (1) a postcard reminder sent to non-responding confirmands about two weeks after the original mailing (estimated to be sent to about 80% of confirmands); (2) a second reminder letter sent to non-respondents about two weeks after the postcard reminder (estimated to be sent to about 70% of sampled congregations); and (3) a second postcard reminder sent to non-respondents about two weeks after the second reminder (estimated to be sent to about 60% of confirmands). Invitations returned by the post office with a new address will be remailed. The overall response rate for this part of the study is estimated at about 50%. Since all responses will be made online, there are no data entry or coding/clean-up fees.

### *Protection of Human Subjects*

Although PC(U.S.A.) does not normally require that studies implemented by them be reviewed by an Institutional Review Board (IRB) for the protection of human subjects, we are aware that such review and approval is often required for publication in peer-reviewed professional journals. We intend to submit the study protocol to the IRB associated with the Massachusetts General Hospital Institute for Health Professions (via Co-Investigator Janice Meisenhelder, RN, Ph.D.) to ensure that the project can be published in a peer-reviewed journal.

### *Measures*

In this initial study, we would like to assess engagement in altruistic social interest behaviors as well as lifestyle and personal characteristics that are hypothesized to be associated (positively or negatively) with altruism. We will thus include measures of:

- Altruism
- social support
- lifestyle (eating habits, exercise habits, television/computer activities)
- health-related quality of life (HRQOL)
- participation in church and other activities
- body mass index
- demographics
- spirituality (prayer, Bible reading)

We are currently evaluating a variety of tools to assess the core constructs. As an initial set of tools, we anticipate combining items from earlier surveys implemented by the Presbyterian Panel (an ongoing survey of Presbyterians conducted by Research Services) and subscales from published tools. We anticipate that altruism, social support, and participation in church activities will be assessed using the same questions related to giving social support as in the original Presbyterian Panel data analyzed in the Schwartz (2003) paper (1). Lifestyle will be evaluated by single-items from published epidemiologic studies that evaluate nutritional, exercise, and television watching or computer activities. HRQOL will likely be evaluated by the Peds-QL™ (2), a generic measure of child health status with established psychometric qualities developed by researchers at Texas A&M University. The Peds-QL™ is a 15-item survey with subscales for health and activities, feelings, getting along with others, and school problems. Body mass index and demographics will be assessed by asking participants to report their weight, height, age, gender, grade level, race, and ethnicity.

### *Statistical Analysis*

The planned analyses will follow the template created by the Schwartz (1) study. We will conduct a series of multivariate regression analyses to examine the effects of giving versus receiving help on physical and mental health, after adjusting for possible confounding variables. We will examine predictors of altruism to ascertain whether lifestyle, participation in church or other activities, psychosocial subdomains of HRQOL, body mass index, or demographic characteristics are related to engaging in altruistic behaviours.

### *Timeline*

We anticipate that the project will begin immediately, with Dr. Marcum beginning the Phase 1 recruitment efforts, which are estimated to take approximately two months. In parallel, Dr. Schwartz will identify questions and tools that relate to the other core constructs we wish to measure, and will contact the developer of the Peds-QL™ for permission to use his tool, and will prepare the IRB protocol for submission and review. In late April, Dr. Keyl returns from a trip abroad, at which time a telephone conference call will be scheduled among Drs. Keyl, Meisenhelder, Marcum, and Schwartz to discuss the choice of measurement tools. Dr. Keyl will also communicate with staff at PC(U.S.A.) to collaborate on the design of the web-based data base to ensure smooth implementation of analyses once data are collected. By mid-May, we expect that the choice of tools will be finalized, and the PC(U.S.A.) staff will be able to create

the web-based survey. In early June, we expect to implement the web-based data collection, which will take about 6 weeks to complete (assuming two rounds of reminders to potential participants to increase the response rate). By mid-July the data base will likely be sent to Drs. Schwartz and Keyl, and data analysis will begin. We will aim for completing a manuscript reporting results for submission by the end of August to a peer-reviewed journal. This manuscript will serve as the final report to the Institute for Research on Unlimited Love, unless some other format is requested.

### *Future Directions*

The end result of these analyses will be a comprehensive snapshot of altruism in adolescents that will pave the way for more in-depth observational research. In our initial discussions with PC(U.S.A.), we have discussed a one-year follow-up of survey participants so that we can evaluate longitudinal relationships. They are amenable to this follow-up. We expect that a small bolus of additional funding will be necessary to cover expenses associated with completing this follow-up.

In addition to continuing investigations into the associations between altruism and health, we would like to evaluate the potential for testing an altruism-based intervention as a viable way to change health status or health outcomes. If a relationship between altruism and lower risk of obesity is documented, this will serve as preliminary data for a grant proposal to NIH and selected private foundations for intervention research aimed at reducing obesity in adolescents by engaging them in altruistic behaviours. We are aware that some prominent foundations (e.g., Robert Wood Johnson) are currently focusing research dollars on childhood obesity and might be interested in an intervention study if our preliminary data support a robust association.

## **Watson Project 5**

### **Principal Investigator**

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Duration: July 2005 – January 2006

Status: Complete

**Project Title: Other-regarding Dispositions and Mental Health**

Dr. Arturo Sesma and Dr. Benson propose to engage in a series of analyses to explore the connections of other-regarding dispositions and connectedness to a range of outcomes including depression and suicide.

Using Search Institute's *Attitudes & Behaviors* (A&B) survey, we propose to conduct an empirical analysis of two sets of constructs hypothesized to be related to a host of mental health outcomes: a) other-regarding dispositions, attitudes, and behaviors; and b) connectedness to people and community. Initial analyses will be conducted using the 1999 – 2000 dataset (N=229,000). We intend to use the following analytic strategy:

1. Identify items from the *Attitudes & Behavior* (A&B) survey that reference *other-regarding* dispositions, behaviors, and attitudes (e.g., “How important is it in your life to help other people?” “During an average week, how many hours do you spend helping other people without getting paid (such as helping out at a hospital, daycare center, food shelf, youth program, community service agency, or doing other things) to make your city a better place for people to live?”) and items that reference *connectedness* to people and places (e.g., “How many adults do you know that give you lots of encouragement when you see them?” “During an average week, how many hours do you spend in clubs or organizations at school?”).
2. Subject these items to factor analyses to identify possible dimensions of *other-regardingness* and *connectedness*. For example, one hypothesis is that a “disposition/attitudinal” dimension will emerge, as well as a “behavioral/action” dimension.
3. Explore the relations of these dimensions of *regard for others* and *connectedness* with mental health outcomes such as depression, suicidality, and self-esteem/anxiety. Additionally, and unique to this project, we will also factor analytically explore the dimensions of risk behaviors, with hypothesized externalizing (e.g., anti-social behavior, delinquency), internalizing (depression, anxiety), and substance use (e.g., alcohol, marijuana, other drugs) factors.
4. Examine the moderating role of gender, age, and race/ethnicity on the relations described in point 3 above.
5. Test these relations using a completely different dataset comprised entirely of New York City high school youth.
6. Finally, examine the longitudinal relations of these constructs using data collected in 1997, 1998, and 2001 (N=370).

We will describe the results in a white paper we can get to you by June 15, 2005.

## **Watson Project 6**

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Duration: July 2005 – January 2007

Status: Near Completion

**Project Title: Naturalistic Conceptions of Moral Commitment: Pathways for Resiliency in Adolescent Personality**

(Dissemination Target: *Journal of Personality and Social Psychology* (APA, 1<sup>st</sup> tier).)

*Pilot Research Synopsis*

The strength of Augusto Blasi's theory of moral identity is its integrative vision of the self, affirming subjective and agentic dimensions of moral motivation (Blasi, 1980, 1984). The field of moral psychology continues to respond to Blasi's work, notably in recent efforts to outline a holistic framework for moral functioning through personality, including naturalistic conceptions of ethical maturity, emotion, school engagement, and social cognition (Atkins, Hart, & Donnelly, 2004; Gibbs, 2003; Lapsley & Narvaez, 2004; Reimer & Wade-Stein, 2004; Walker, 2004; Walker & Hennig, 2004). A persistent problem with these efforts remains the dynamical nature of moral behavior in context, with ambiguous moral self-attributions observed in the development of exemplars (Nucci, 2004). The promiscuity of Martin Luther King and the fidelity of Josef Stalin to his own rule suggest that self-consistency may not always be required for great moral acts, or conversely, may be used to justify terribly immoral ends. This situational aspect of moral behavior requires sensitivity to the developing self-in-context, underlined in Walker and Hennig's (2004) recent argument for different types of moral exemplarity (e.g., just, brave, and caring).

In order to fully apprehend how moral identity anticipates prosocial behavior and overall flourishing, we should consider the mechanisms by which moral reasoning and self-understanding grow together through childhood and adolescence (Reimer, in press). We know that objective elements of self are developmentally augmented to include subjective traits, goals, and ideological commitments foundational to moral identity. The contours of these life-span transitions, however, remain elusive. One approach emphasizes the naturalistic conceptions of morality found in the thinking of everyday individuals (Walker & Pitts, 1998). It turns out that naturalistic prototype descriptors that describe moral commitment underline important dimensions of self and other in positive behavior (Reimer, Furrow, Baumeister-Peters, & Roth, 2001). It is possible that moral prototypes represent domains of self-identification that are mediated through reasoning, moral affect (e.g., guilt, shame, pride, hubris), and attachment

toward adolescent moral commitment. We might expect that moral commitment as considered through adolescent volunteerism will function as a resiliency factor against depression, anxiety, and suicide.

The primary goal for the present research is to outline a deeper, more comprehensive account of moral functioning and flourishing in adolescent personality. The three studies anticipated by this pilot project consider how naturalistic prototypes of morality, along with moral reasoning, affect, attachment, self-understanding, and personal goals are implicated in adolescent volunteer commitment. Study 1 models adolescent moral functioning where naturalistic prototype descriptors are used as self-attributed traits in a diverse, urban sample. Study 2 considers how naturalistic prototype descriptors may provide a reference point for moral self-understanding through narratives of exemplar and comparison adolescents from an urban region in California. Study 3 explores naturalistic conceptions of personal goals in exemplar and comparison individuals given to a voluntary caregiving vocation. Thus, the studies model moral commitment understood through adolescent volunteerism with naturalistic prototypes of morality as principal domains of self-identification.

### *Pilot Research Objective & Timeline*

Much of the proposed pilot project is complete. Data are collected for Studies 2 and 3, with analysis pending for Study 2. This proposal is focused on Study 1 with its large adolescent sample. The overall objective for this pilot project is to explore naturalistic prototypes for morality as a subcomponent of a larger agenda to combine moral personality and cognitive neuroscience for the Templeton Advanced Research Program (TARP). The TARP letter of intent will emphasize the developmental neurobiology of religious and moral commitment in adolescents, with parallel studies investigating personality variables similar to the ones proposed here. The TARP project would involve fMRI research conducted at the California Institute of Technology.

This pilot work is intended for publication in the *Journal of Personality and Social Psychology* (JPSP). The main research question for the pilot project emerges from seminal theory and research on moral prototypicality by Lawrence J. Walker at the University of British Columbia. Pilot findings will extend prior publications by Walker at an APA 1<sup>st</sup> tier level. If funded, data collection for Study 1 will commence in Fall, 2005 with analysis completed by Christmas. Preliminary findings from Study 1 data will likely become available by late fall, 2005.

### *Overview of Studies*

*Study 1.* For this study, we hypothesize that moral self-attributions through naturalistic conceptions of moral maturity predict volunteer commitment along paths emphasizing moral affect (e.g., shame, guilt, pride, shame), Big-5 personality traits, and attachment along with neo-Kohlbergian moral reasoning. We additionally expect that increased volunteer commitment will buffer against depression, anxiety, and suicide in urban youth. We will test this hypothesis as a path model using data gathered in a cross-sectional survey of 450 youth from urban public high schools in greater Los Angeles. Self-attributions are measured on Likert-item scales derived from naturalistic conceptions of moral maturity (Walker & Pitts, 1998). Shame and other moral affect categories will be assessed with the test of self-conscious affect for adolescents (TOSCA-

A; Tangney, Wagner & Gramzow, 1992). Big-5 personality traits will be measured using the interpersonal adjectives scales revised-Big 5 (IASR-B5; Wiggins, 1995). Attachment will be assessed using the Experience of Close Relationships-Revised (ECR-R; Fraley, Waller & Brennan, 2000). Moral reasoning will be assessed with the Defining Issues Test (DIT; Rest, 1984). Negative affect will be considered using standardized assessment scales including the Beck Depression Inventory (version 2) and Beck Anxiety Inventory (BDI-II, BAI; Beck, Steer, & Ball, 1996; Beck, Epstein, & Brown, 1988). Data will be analyzed using the Analysis of Moment Structures (AMOS) structural equation program, resulting in a test for causality between latent constructs.

*Study 2.* For this study, we hypothesized that temporal and affective dimensions of self-understanding are tightly integrated in exemplar adolescents relative to comparisons. We considered this hypothesis by comparing naturalistic conceptions of moral maturity with adolescent narratives from a semi-structured clinical interview using the latent semantic analysis knowledge representation model (LSA; Landauer, Foltz, & Laham, 1998; Reimer & Wade-Stein, 2004). The sample includes 15 nominated adolescent care exemplars from urban Los Angeles, matched to 15 comparison adolescents from the same neighborhoods.  
Status: Data collected, analysis nearing completion.

*Study 3.* For this study, we hypothesized that exemplar goals can be characterized on the basis of prototypical domains of moral significance relative to comparisons. We explored this hypothesis by comparing naturalistic conceptions of moral maturity to reported goals of 40 emerging adults that care for the developmentally disabled using LSA. Cluster analysis was then used to classify latent associations of goals on the basis of their prototypical content. The same analysis was conducted on a matched comparison sample of 40 public school teachers.  
Status: Data collected, analysis completed.

## **VI. RESEARCH FUNDED IN 2006 & 2007**

### **1. Promoting the Best Love of the Child**

**PIs Margaret F. Bring (Notre Dame University School of Law) &  
Steven L. Nock (University of Virginia)**

### **2. The Religious Tolerance Project**

**PI Jacob Neusener (Bard College)**

### **3. The Golden Rule Project**

**PI Jacob Neusner (Bard College)**

### **4. Helping and Long-Term Outcomes in Alcoholism**

**PI Maria Pagano (University Hospitals of Cleveland)**

**5. Does Mindfulness Meditation Increase Compassion?**

**PI Jeanne L. Tsai (Stanford University)**

**6. Binghamton Neighborhood Project on Altruism**

**PI David Sloan Wilson (SUNY Binghamton)**

**7. Do Generative Adolescents Become Healthy Adults? Further Studies**

**PIs Paul Wink (Wellesley College) & Michelle Dillon (University of New Hampshire)**

**(Integrative Projects)**

**8. The Best Love of the Child**

**PIs Timothy Jackson & John Witte (Emory University)**

**9. The Pursuit of Happiness**

**PIs John Witte & Stephen Post (Emory University)**