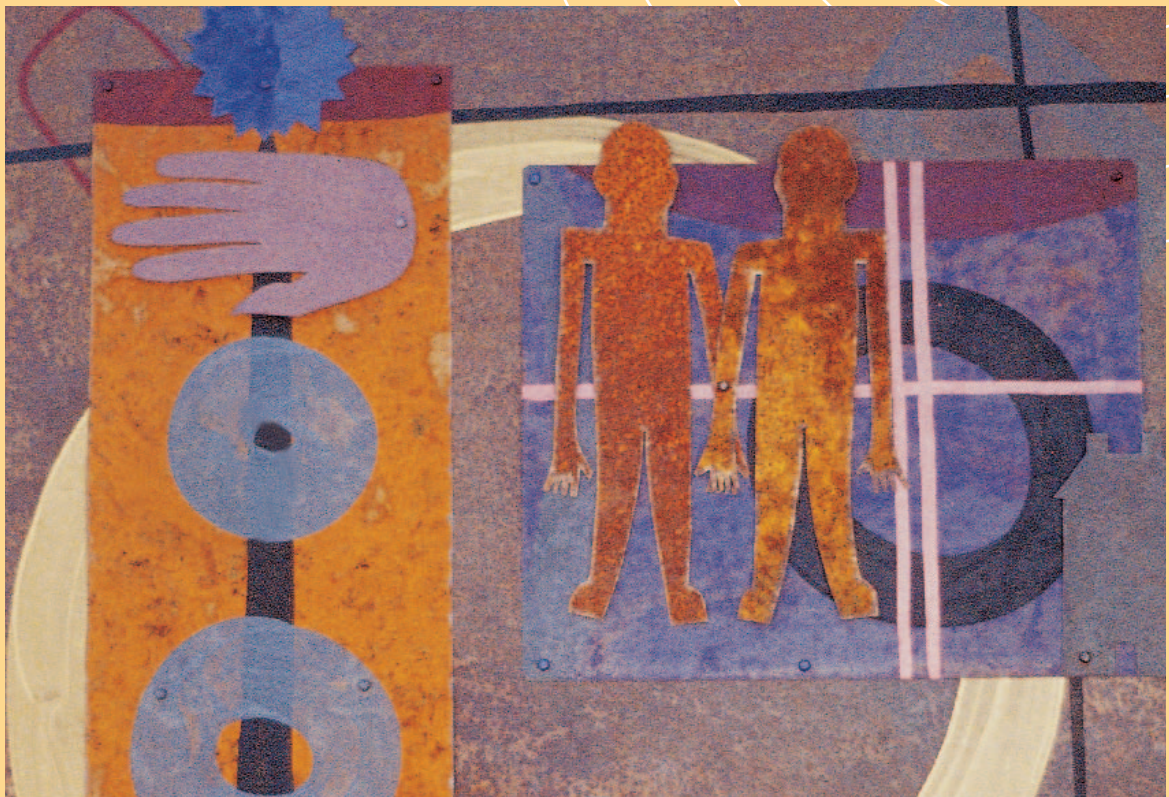


The Spiritual Transformation

Scientific Research Program



OF THE METANEXUS INSTITUTE ON RELIGION AND SCIENCE



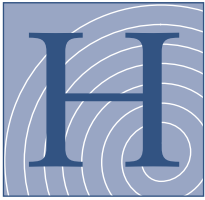
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Front cover (detail) and back cover (full image):
Joss and I: The Lost Years by Ivan Barnett.
Polychrome steel assemblage.
From the exhibition "Outside The Vision," 2003.
Courtesy of Patina Gallery, Santa Fe, NM.

Initial funding provided by the John Templeton Foundation
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www.metanexus.net/spiritual_transformation

A Meeting Place for Change



Have you ever met a person whose life was transformed? Maybe you know someone who experienced a spiritual drama, and felt deeply changed into a whole new state. Such transformations do happen...and we often wonder how. We also wonder what happens to that person and what the consequences are to others.

The **Spiritual Transformation Scientific Research Program (STP)** of the Metanexus Institute on Religion and Science seeks to understand the phenomena of transformation and how they occur – through both religious and secular experiences. The first project of its kind, this multi-disciplinary, multi-million dollar research program was launched in the spring of 2002 with the generous support of the John Templeton Foundation.

A truly innovative project, STP provides a fresh model for scholars who are asking questions and seeking answers to explain phenomena that are as old as antiquity and as new as tomorrow. Through these studies, we have an opportunity to examine diverse spiritual phenomena together, with scientific rigor, and to create a field of inquiry freed from the prejudices of the past.

Through this publication, we are pleased to bring you our first report on the **Spiritual Transformation Scientific Research Program** – the story of our beginnings, recognition of dedicated colleagues, news of projects in process, and our hopes for the future.

It is an exciting and remarkable program, with potential for many new insights and practical applications. We hope you will enjoy learning about the Spiritual Transformation Scientific Research Program, and join us in our exploration as it unfolds.

Solomon H. Katz, Ph.D.
President, Metanexus Institute on Religion and Science
Principal Investigator, Spiritual Transformation
Scientific Research Program (STP)



Principal Investigator

Solomon H. Katz, President of the Metanexus Institute, Director of the Krogman Center for Research in Child Growth and Development, and Professor of Physical Anthropology at the University of Pennsylvania. His work in science and religion spans over 30 years, including leadership in the Institute for Religion in an Age of Science (IRAS), where he served as president, 1977 to 1979 and 1981 to 1984. He has served as co-chair and associate editor of the Zygon Publication Board and Journal since 1979. Dr. Katz was president of the Center for the Advanced Study of Religion and Science from 1989-2002 and served on the advisory board of the Dialogue on Science, Ethics, and Religion of the AAAS. Dr. Katz has edited numerous books and series on the anthropology of food and nutrition and most recently served as editor-in-chief of the award winning international 3-volume *Encyclopedia of Food and Culture*, published by Scribners in 2003.

Co-Investigator

David Hufford, Director of the Doctors Kienle Center for Humanistic Medicine, Interim Chair and Professor of Medical Humanities, and Professor of Family and Community Medicine at Penn State College of Medicine. At the University of Pennsylvania he is Adjunct Professor of Religious Studies and a faculty member of the Master in Bioethics Program.

Co-Investigator

Byron Johnson, Director of the Center for Religious Inquiry Across the Disciplines (CRIAD) and Professor of Sociology at Baylor University. He is the former Director and Distinguished Senior Fellow at the Center for Research on Religion and Urban Civil Society at the University of Pennsylvania.

Advisory Board Members and Consultants

Edward Foulks, Professor of Psychiatry and Neurology and Associate Dean of Graduate Medical Education, Tulane University School of Medicine.

Philip Hefner, Professor Emeritus of Systematic Theology, Lutheran School of Theology, and former Director, Zygon Center for Religion and Science.

Joan Koss-Chioino, Professor of Anthropology, concentration in medical anthropology, public health, and women's studies, Arizona State University and Research Professor, George Washington University.

Kenneth Pargament, Professor of Clinical Psychology, Bowling Green State University, and Adjunct Professor in Counseling Psychology and Religion Program, Boston University.

Lawrence Sullivan, Professor of the History of Religions and former Director, Center for the Study of World Religions, Harvard University.

Robert Wuthnow, Professor of Sociology and Director, Center for the Study of Religion, Princeton University.

The Spiritual Transformation Scientific Research Program brings premier 21st century multidisciplinary scientific investigations to the phenomena of spiritual transformation.

What is the Spiritual Transformation Scientific Research Program?



William James taught us that religious experiences should be “judged by their fruits, not by their roots.”

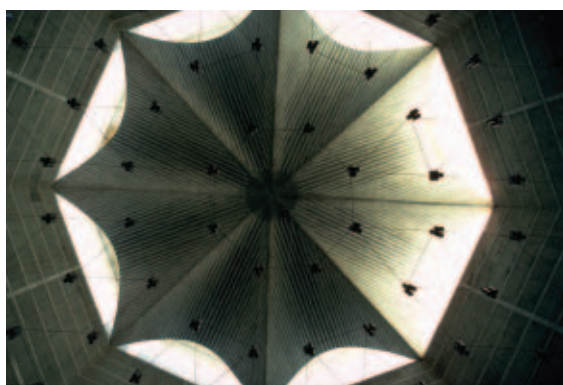
What *are* the “fruits of the spirit” as witnessed in numerous and remarkable accounts of spiritual transformation? How might we better understand these perennial and deep transformations in human thought and behavior?

In launching STP, the 100th anniversary of James’ classic work, *Varieties of Religious Experience*, provided us with an historic opportunity to reconsider the scientific study of religious and spiritual phenomena, in light of the many new

interdisciplinary advances offered by a variety of fields, including: anthropology, sociology, psychology, psychiatry, pharmacology, neurology, biology, neuroscience, and religious studies.

STP seeks rigorous investigation into the nature of the biological, psychosocial, and cultural conditions and factors that underlie spiritual transformations of individuals and groups. Today’s cutting edge methodologies and sophisticated experimental designs have the potential to provide fresh insight into these phenomena under investigation. STP research conferences and projects are already helping to create an innovative interdisciplinary field in the human sciences for the study of spiritual transformation.

The Spiritual Transformation Scientific Research Program is made possible by special funding from the John Templeton Foundation and the support of other foundations, government agencies and individuals. ●



Ceiling of the amphitheater in the National Assembly Building in Dhaka, Bangladesh, designed by architect Louis I. Kahn. Courtesy of Aga Khan Trust for Culture/Abu H. Imamuddin.

The Initial Queries

What is spiritual transformation?

Is there more than one kind of spiritual transformation?

Are the processes of spiritual transformation the same as those, for example, in political transformation, but simply involving different content?

Are there universal elements to the processes of spiritual transformation?

How can contemporary psychosocial and biosocial models, theories and methods of study be enlarged to account for the various aspects of spiritual transformation?

What are the pathways (processes, antecedents, and outcomes) of various forms of spiritual transformation (both incremental and rapid)?

What individual and group characteristics facilitate/inhibit spiritual transformations?

What biological characteristics predispose individuals to different pathways of spiritual transformation?

What is the role of significant personal experiences and life events in the processes of spiritual transformation?

What factors influence the stability of various spiritual transformation outcomes?

Are there spiritually transforming events and processes that are distinctly religious?

Are specific techniques, such as fasting, use of pharmacological substances, solitude, singing/music, confession, celebrations in religious and non-religious practices, pathways to spiritual transformation?

What roles do prayer/meditation, worship, pilgrimage, readings of scriptures and/or other sacred texts and stories, “telling one’s story,” artistic endeavor, relationship toward nature, acts of service, and various other religious and non-religious rituals play in the process of spiritual transformation?

What are the outcomes for individuals who undergo a spiritual transformation experience and for the groups with whom these individuals interact?

What factors underlie spontaneous experiences of spiritual transformation?

What are the benefits and/or costs of these spiritual transformation experiences for the individuals and groups?

“Science and religion tend to be viewed as opposite ends of the spectrum, with a great deal of emotional overlay. As a result, scholars have often avoided studying ‘spirituality’ and ‘transforming experiences’ the way they study other phenomena. The fact that researchers are now applying contemporary scientific methodologies to understanding beliefs and behaviors is itself a marvelous transformation.”

—Dr. Solomon Katz

The Challenge



Although there is wide acknowledgement that spiritual transformations occur and that they can have profound effect on the life of a person, group or society, there have been few integrated scientific studies conducted that account for the nature of the various biological, psychosocial, and cultural conditions and factors that underlie spiritual transformations.

What is spiritual transformation?

As a starting point for STP, a working definition was developed by the program’s advisors, with the understanding that this definition may be further developed as findings emerge.

Spiritual transformation is defined here as: dramatic changes in world and self views, purposes, religious beliefs, attitudes, and behavior. These changes are often linked to discrete experiences that can occur gradually or over relatively short periods of time.

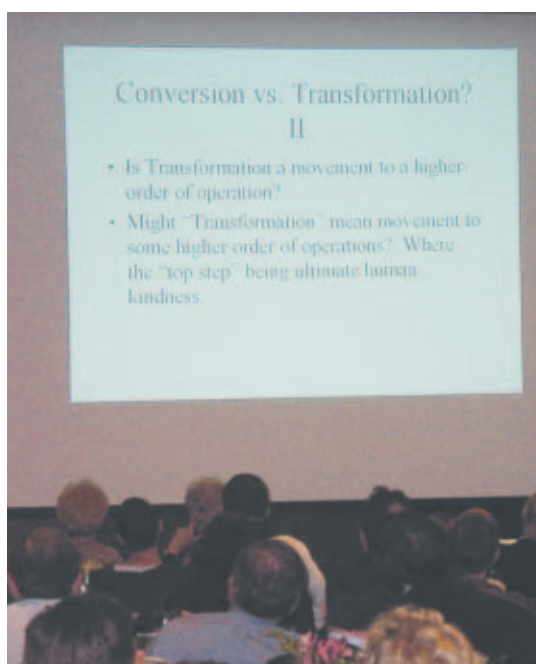
This type of change usually occurs in three contexts: 1) as an intensified devotion within the same religious structure; or 2) a shift from no spiritual commitment to a devout spiritual life; or 3) a change from one faith tradition to another. These changes are sometimes precipitated by stress and anguish, induced through rigorous practices, but can also occur spontaneously without apparent corollaries.

A number of studies and theoretical perspectives are suggestive of the kind of research areas involved in the phenomena of spiritual transformation:

Insights can be derived from the cognitive sciences, coping theory, flow theory, neuropsychology, attachment theory, and relationship dynamics.

Practices may be important, such as pilgrimage, meditation, prayer, confession, conversion, healing, readings of sacred texts, “telling one’s story,” and acts of service to others.

These insights and practices raise many questions concerning the various pathways, contexts, outcomes, and techniques involved in spiritual transformation. A goal of this research program is to develop new, better integrated studies that address these emerging questions. ●



How could STP attract the best possible proposals from distinguished investigators from many disciplines at leading research universities in the United States and abroad? How could STP engage these researchers to work in teams on multidisciplinary projects?

An Innovative Model

ATTRACTING EXCELLENCE TO AN EMERGING FIELD



The Spiritual Transformation Scientific Research Program began its grant program with a unique and thoughtfully-conceived selection process.

From the beginning, the Advisory Board acknowledged not only the existence of different kinds of spiritual transformation, but also sought proposals that would reflect diverse methodologies. Both standard qualitative and quantitative approaches were deemed necessary. At the same time, experimental and quasi-experimental designs, as well as a full range of other innovative methodologies (e.g., multilevel modeling, accelerated longitudinal, etc.) were strongly encouraged. The advisors also developed a series of key research questions as a guide for investigation into spiritual transformation.

A call-for-proposals resulted in a very gratifying response of 470 qualified letters-of-intent from scholars in 22 nations, representing many of the top research institutions in the world. From these 470 applicants, 60 prospective investigators were invited to attend a unique three-day research conference held in Philadelphia in October 2002 in order to refine their proposals.

The invitation-only conference was designed to help prospective investigators address issues pertaining to literature review, methodology, research design, peer review processes, budgeting, and ethics. While it is not uncommon for a research grant program to convene a compulsory conference, it is most unusual to hold such an in-depth research conference before applicants submit their full proposals.



The conference also provided an opportunity to define models for designing and integrating rigorous interdisciplinary research in order to build common methodologies for the projects.

“Our job is to help strengthen and form the foundations of this field. We want every building block to be reexamined and put back into place and help each of you create a proposal that is second to none,” said Dr. Solomon Katz, in his introductory remarks at the beginning of the conference.

The conference was structured around definitions of spiritual transformation, reliability and validity in research design, historical and contemporary perspectives on methodologies, ethical issues arising out of research on spiritual transformation, and the significance of current work on spirituality and health and religion and society. Plenary talks*, panel discussions, and breakout groups enabled participants to develop ideas for strengthening their proposals and to form the basis for developing new kinds of interdisciplinary linkages among investigators.

Pictured Above: Hava Tirosch-Samuelson speaking, with panelists Robert Thurman and Bernard McGinn.

* Several of these talks are available on the STP Web site at http://www.metanexus.net/spiritual_transformation/conference/research_conf_2002/audio.html

In planning how scientific research can be done on spiritual transformation, it was made clear that conceptual and methodological issues were all at stake. Moreover, ethical issues had to be carefully considered. Informed consent and disclosure were critical: the nature of the research and the biases of the investigators needed to be adequately conveyed.

Many speakers and panelists spoke of the need for quantitative and qualitative measures that respect the cultural contexts and religious differences of spiritual transformation experiences. There was much discussion of the difficult-to-define line between what is considered religious experience and what is considered pathological, which can often vary among societies.

It was agreed that the rich histories of religious traditions provide researchers with a wealth of texts that attest to the transformative experiences of many individuals and groups. The implications of spiritual transformation experiences in contemporary religious contexts were also significant.

For each of the first two days of the conference, the 60 teams were divided into six breakout sessions. On day one, participants were separated at random to discuss the definitions and phenomenology of spiritual transformation. On day two, they divided into groups by thematic and disciplinary expertise for more informal discussions of methodological problems and issues for research projects. Representatives from the various groups presented summaries of their discussions through PowerPoint presentations at that evening's gathering of all the conference attendees.

A festive closing banquet at the University of Pennsylvania Museum of Archaeology and Anthropology featured a panel discussion on spiritual transformation led by psychologist Dr. Dan Gottlieb, host of Philadelphia's popular WHYY-FM radio program "Voices in the Family." Panelists included George Gallup, Byron Johnson, Zoharah Simmons, Robert Thurman, and Hava Tirosh-Samuelson.*



Ken Pergament speaking to the group of prospective investigators.

*The panel was taped for broadcast on National Public Radio on November 11, 2002 and is available as an audiostream at http://www.metanexus.net/spiritual_transformation/conference/research_conf_2002/audio.html

Definitions and Phenomenology of Spiritual Transformation

Ken Pargament, professor of Clinical Psychology at Bowling Green State University, opened the conference with a consideration of definitions of spiritual transformation. Pargament expanded on the initial working definition by arguing that spirituality is a process oriented toward something the individual holds as sacred. This could be a god, some object or other aspect of human existence. He offered a new, provisional definition inclusive of the sacred: "Spiritual transformation refers primarily to a fundamental change in the place of the sacred or the character of the sacred as an object of significance in the life of the individual, and secondarily to a fundamental change in the pathways the individual takes to the sacred."

David Hufford, director of the Doctors Kienle Center for Humanistic Medicine at the Penn State College of Medicine, spoke about distinguishing spiritual experiences from other forms of experience...trying to "use language to get behind language."

Don Browning, professor emeritus of Ethics and the Social Sciences at the University of Chicago Divinity School, speaking as a practical theologian, also emphasized the difficulty of using language for subjective experiences and opened the door for the usefulness of more mathematical measures. "More objective perspectives that come from the quantitative disciplines can help with the diagnosis of the depth of experience that language may not fully capture."

Ralph Hood, professor of Psychology at the University of Tennessee at Chattanooga, argued for the use of quantitative scales for measuring spiritual transformation, while also reminding the audience of its contextual nature, noting "answers come from within the language game, not from outside it."

Methodologies and Ethics

Michael Green, a physician and bioethicist at Penn State College of Medicine, reminded participants that "disclosure does not assure understanding," and emphasized the need for clear explanation to the individuals whose experiences are being studied.

Karl Peters, professor emeritus of Philosophy and Religion at Rollins College, affirmed the need to "do no harm" and to respect the beliefs of those under study: "Seeking to understand the conditions and consequences of spiritual transformation naturalistically may call into question believers' understandings of the value and efficacy of sacred realities."

Andrew Newberg, director of Clinical Nuclear Medicine and Assistant Professor in the Department of Radiology at the Hospital of the University of Pennsylvania, affirmed the goal: "to preserve the rigorousness of science while keeping the religiousness of these experiences."

Wayne Jonas, director of the Samueli Institute for Information Biology, called spirituality a "bridging area" for health research because it connects activities that affect health and that have long been misunderstood or maligned in scientific research.

Harold Koenig, associate professor of Psychiatry and assistant professor of Medicine at Duke University Medical Center, spoke about the role of spiritual transformation experiences in the elderly, a little understood phenomenon.

Edward Foulks, the Sellars-Polchow Professor of Psychiatry and Neurology and associate dean of Graduate Medical Education at Tulane University School of Medicine, opined that there might be a relationship between spiritual transformation and mental illness — not necessarily negative. Foulks said that spiritual transformation experiences might positively affect mentally ill patients and may hold "great potential for their reintegration into institutions that provide hope and meaning."

Religious Traditions...

Don Browning also thought that scientists would be wise to delve into religious texts so they do not make historically erroneous or “unnuanced” statements about the religious contexts of the individuals or groups under study.

Bernard McGinn, the Naomi Shenstone Donnelley Professor at the Divinity School of the University of Chicago and a well-known expert on Christian mysticism, reminded attendees of the ongoing conversation on spirituality by philosophers, historians, and theologians for many centuries, both within the academic world and within the Christian tradition. McGinn advised that researchers should not be taken in by the “presentism” of their academic specialty if they want to conduct adequately contextual work on spiritual transformation.

Robert Thurman, the Jey Tsong Khapa Chair in Indo-Tibetan Buddhist Studies at Columbia University, told conference participants that there has been scientific research into spirituality within the Buddhist tradition for thousands of years and that Western science should better recognize its relationship to religion: “Science has always had a religious dimension and religion has always had a scientific dimension.”

Hava Tirosh-Samuelson, associate professor of History at Arizona State University, offered a short history of spiritual transformation in Judaism, emphasizing that it is a gradual process made manifest through a change in activity rather than a change of belief or rationality. She said it is important in studying spiritually transformative experiences to have “empathy toward the texts and the ontological presuppositions of those people [under study].”

Zoharah Simmons, assistant professor of Religion at the University of Florida, described Sufi traditions within Islam as affecting both the mind and body of individuals, and facilitated both by ritualistic practices and by having a guide from within the tradition.

...and Applications

Wesley Peach, who pastors a French Evangelical Protestant church near Montreal, Canada, and teaches pastoral theology at Acadia University, spoke about his congregation of mostly young families who have experienced spiritual transformation as part of their personal journeys. He has conducted research utilizing the theory of “mazeway resynthesis,” from anthropologist Anthony F. C. Wallace, to study the experiences of his congregants.

John Castellani, president of Teen Challenge International, USA, spoke about his organization’s Christian, faith-based approach to substance abuse, which emphasizes a conversion model for individuals and families.

John DiIulio, the Frederic Fox Leadership Professor of Politics, Religion, and Civil Society at the University of Pennsylvania, spoke about faith-based social service organizations in general. He emphasized that it is important not to present research on spiritual transformation as a “referendum for anybody’s beliefs” – that the results of research are not an argument for or against the beliefs of the individuals or organizations being studied. ●



Co-investigators, sister and brother Gail and Dale Ironson, with Sol Katz.

REFLECTIONS ABOUT THE CONFERENCE

Networking was the most universal benefit of the conference, according to an evaluation questionnaire, with as many as 20 new collaborations resulting from contacts and references made at the conference – some for this grant program and several outside of it.

Meeting new colleagues was another valued outcome of the conference. The mingling of experienced researchers and those just starting their careers gave a vitality to conversations. Both younger and older scholars were encouraged by the “open, accepting environment” to ask questions and share their thoughts. All ideas were welcome. Participants found the discussions lively and probing.

A number of researchers discovered new methods and tools, a better awareness

of definitional challenges and the scope of the field. Many were interested in the different perspectives and concepts of spiritual transformation. Numerous investigators said they had become “sensitized” and “inspired.”

There was an excitement about being in on the ground level of the formation of a whole new field of study. The attendees left “enthusiastic, humbled and encouraged” by the opportunities that this grant program and the conference offered to the emerging field of scientific research into spiritual transformation, and to their own particular areas of investigation.

We are equally excited and inspired by their responses, and value the conference experience as a prototype from which we can develop future programs.

“It was very helpful to meet some of the more experienced researchers, whose papers I have been reading for decades, to get their personal historical perspectives on the scientific study of spirituality. But it was also encouraging to meet the host of young researchers just starting in their careers, enthusiastic about including spirituality in their investigations.”

“It was fascinating to put together researchers from different fields and have the opportunity to find something in common in their work. It was helpful to express our differences and confusions about what spiritual transformation is, and about the interconnectedness of what is religious and what is scientific.”

Recipients of the First Grants



Following the planning conference, the finalists were invited to make full proposals to STP. These were subjected to a rigorous and thorough NIH (National Institutes of Health)-style “study section” review process. Proposals were judged for scientific and research design, overall significance of the topic, adherence to the directions of the STP research program, the expertise of the investigators, feasibility, budgetary issues, and the environment in which the proposed projects would take place. Primary and secondary anonymous reviewers from the committee, as well as outside experts, assisted in making careful and prudent decisions about each proposal.

From the 60 finalists, 23 projects were selected to be funded in amounts ranging from \$70,000 to \$150,000. Eleven projects were chosen to be fully funded for two years. Because of the high quality of so many of the applications, the Templeton Foundation augmented its initial funding plan to include an additional 12 projects under a matching grant program. These grants, more than \$2 million in total, have enabled the first group of STP research projects to begin with substantive support.

Working in their various disciplines at leading research institutions all over the world, *these investigators will be conducting the first multidisciplinary scientific studies of this kind.* Their topics are fascinating and important, and likely to yield new insights about spiritual transformation. ●

Fully-Funded Projects

Mario D. Beauregard, Université de Montréal (Canada):
“The Neurobiology of the Mystical Experience”

Brenda L. Cole, University of Pittsburgh (PA) Cancer Institute:
“A Spiritual Transformation Scale for Cancer Patients”

Harold D. Delaney, University of New Mexico (Albuquerque):
“Antecedents of Transformation: Spiritual Formation”

Alvin C. Dueck, Fuller Theological Seminary, School of Psychology (Pasadena, CA): “Spirituality, Language and Behavioral Transformation”

Peggy C. Giordano, Bowling Green (Ohio) State University:
“Spiritual Transformations and Desistance from Crime”

Gail Ironson, University of Miami (FL):
“Spiritual Transformation in the Face of Illness: AIDS”

Dacher Keltner, University of California (Berkeley):
“A Prospective Study of Awe and Spiritual Transformation”

Michael E. McCullough, University of Miami (FL):
“Spiritual Transformations Across the Life Span”

Mark D. Regnerus, University of Texas (Austin):
“The Context and Consequences of Spiritual Transformation”

Roberta G. Sands, University of Pennsylvania (Philadelphia):
“*Baalei Teshuvah's* Spiritual Transformational Soul Work”

Thomas W. Smith, National Opinion Research Center at the University of Chicago (IL): “National Study of Spiritual Transformations”

Matching Grant Projects

Leonard M. Hummel, Vanderbilt University Divinity School (Nashville, TN): “Cancer & Spiritual Transformation: A Practical Theology”

Sung Joon Jang, Louisiana State University (Baton Rouge):
“Spiritual Rebirth and Maturation Among College Students”

Jerome Kagan, Harvard University (Cambridge, MA):
“Contribution of Temperament to a Spiritual Outlook”

Robert F. Kraus, Juneau Recovery Hospital (Alaska) and University of Kentucky (Lexington): “Spirituality in an Alaska Native Alcohol Treatment Program”

Jean L. Kristeller, Indiana State University (Terre Haute):
“Living with Cancer: Spiritual Shifts and Transformation”

Sandra D. Lane, SUNY Upstate Medical University (Syracuse, NY): “Childbirth as a Pathway to Spiritual Transformation”

Donald E. Miller, University of Southern California (Los Angeles): “Varieties of Spiritual and Social Transformation”

Carol J. Nemeroff, Arizona State University (Tempe):
“Psychological Maturity and Religious Conversion”

Douglas W. Oman, Public Health Institute/University of California (Berkeley): “Learning by Spiritual Examples: Measures and Intervention”

Elizabeth A. R. Robinson, University of Michigan (Ann Arbor): “Spiritual Transformation in Recovery from Alcoholism”

Jeffrey Samuels, Western Kentucky University (Bowling Green): “Children in Robes: Aesthetics, Ritual, and Language”

W. Bradford Wilcox, University of Virginia (Charlottesville):
“Spiritual Transformation and Marriage in Urban America”

The Neurobiology of the Mystical Experience

Mario D. Beauregard is Associate Professor in the Departments of Radiology and Psychology, Université de Montréal (Canada). He obtained a Ph.D. in Neuroscience from Université de Montréal. Beauregard has held postdoctoral positions at the University of Texas Medical School and McGill University. Beauregard's research concerns the neural substrate underlying self-consciousness, volition, and emotion regulation with the use of functional magnetic resonance imaging (fMRI), positron emission tomography (PET), and multi-channel EEG. Other major research interests involve the mind-brain question and the neurobiology of spiritual transformation.

Vincent Paquette, Research Assistant (Université de Montréal)

Principal Investigator:

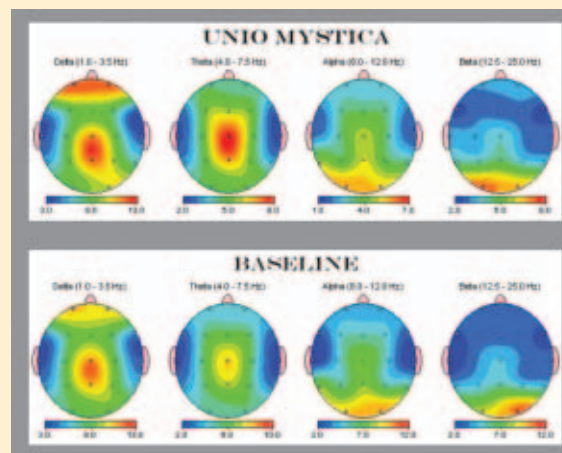
MARIO D. BEAUREGARD,
UNIVERSITÉ DE MONTRÉAL (CANADA)

Dr. Beauregard's study intends to use, for the first time, the combination of three powerful functional neuroimaging technologies (functional magnetic resonance imaging or fMRI, positron emission tomography or PET, and multichannel EEG) to identify underlying circuitry and neuroelectrical and neurochemical correlates of the "mystical union with God" as achieved within the spiritual practices of Carmelite nuns.



These functional neuroimaging technologies will be used while a group of Carmelite nuns (from the Montreal area) are either in a contemplative state (*Unio Mystica* — activation task) or a “self state” (reference task). “In our view, the capacity to experience mystical union with God represents a reliable index of spiritual transformation.”

This research program should provide important information regarding the various neurobiological correlates (neuroelectrical, neurochemical, and functional neuroanatomical) of *Unio Mystica*. “Once we have identified these correlates, it is conceivable that, in the near future, we will have enough neurobiological knowledge to be able to assist spiritual transformation of individuals, by combining the use of metacognition (a form of higher-order self-awareness) and internal/external (audio-visual) stimulation of the brain.” ●



Quantitative EEG maps showing brain neuroelectrical changes recorded from a Carmelite nun. Courtesy of Mario Beauregard.

A Spiritual Transformation Scale for Cancer Patients

Brenda L. Cole is a licensed Clinical Psychologist and Assistant Professor at the University of Pittsburgh Cancer Institute (UPCI). She has conducted research on the role of spirituality and existential issues in the adjustment to chronic illnesses, including cancer and heart disease. She has also written on related topics: defining the concepts of spirituality and religion, spiritual surrender as a paradoxical means to control, forgiveness, and the design of spiritually-integrative interventions. She has developed and tested two scales to assess two distinct aspects of spirituality within the process of coping with illness, and is developing a study on the effects of a spiritually-focused meditation program for people coping with metastatic melanoma. Cole received her Ph.D from Bowling Green State University.

Clare Hopkins, Co-Investigator
(Carlow College)

Andrew Baum, Consultant
(University of Pittsburgh)

John Tisak, Consultant
(Bowling Green State University)

Principal Investigator:

BRENDA L. COLE,
UNIVERSITY OF PITTSBURGH
CANCER INSTITUTE

"My clients have often told me about important spiritual changes they have experienced because of their diagnosis of cancer. In my work as a clinical psychologist, I have wondered how often these changes occur, and what effect they might have on the person's health and well-being. Now with this grant support, I can begin creating a scale and learning more about the spiritual changes that accompany a life threatening illness like cancer." Dr. Cole's study seeks to develop and test the Spiritual Transformation Scale for people coping with cancer.



here is considerable evidence that a diagnosis of cancer disrupts one's world view and sense of well-being, at least initially. Additional studies suggest that while negative effects are prevalent, positive effects also occur and may even occur more frequently. Empirical data and anecdotal reports indicate that spiritual resources often play a role in the adjustment process for people facing medical illness, and cancer in particular. Moreover, profound spiritual changes or transformations are evident in the narratives of cancer survivors. However, little is known about the nature of these transformations or their effects on adjustment.

One of the reasons for this lack of knowledge is the unavailability of an instrument to assess spiritual transformations for people coping with cancer. This study will respond to this need by developing and testing the Spiritual Transformation Scale for people coping with cancer. The construct validity (correlations between the Scale and intrinsic religiousness, religious coping, and post-traumatic growth), predictive validity (correlations between the Scale and measures of spiritual and psychological adjustment), and incremental validity (the ability of the Scale to predict adjustment while controlling for related constructs like religious coping) of the Spiritual Transformation Scale will be assessed. ●



Pin by Namu Cho. Damascene - 24k and 18k gold and steel.
From the exhibition "Artists at the Forge," 2003. Patina Gallery, Santa Fe, NM.

Antecedents of Transformation: Spiritual Formation

Harold D. Delaney is Professor of Psychology at the University of New Mexico. He is an expert in research methodology and applied statistics and co-author of the graduate textbook *Designing Experiments and Analyzing Data*. He has collaborated on more than ten federally funded research projects, most having to do with the treatment of substance abuse. With William Miller, he is coordinating the national psychology panel for a multi-disciplinary project on the nature of the human person funded by the Pew Charitable Trusts. He is also co-editing a book on *Human Nature, Motivation and Change: Judeo-Christian Perspectives on Psychology*. He received his Ph.D. from the University of North Carolina.

Todd Hall, Co-Principal Investigator, Associate Professor of Psychology and Director of the Institute for Research on Psychology and Spirituality (Biola University)

Peter Hill, Co-Principal Investigator, Professor of Psychology (Biola University)

William R. Miller, Co-Principal Investigator, Distinguished Professor of Psychology and Psychiatry (University of New Mexico)

John Coe, Supervisor (Biola University)

Keith Edwards, Methodologist (Biola University)

Principal Investigator:

HAROLD D. DELANEY,
UNIVERSITY OF NEW MEXICO

Dr. Delaney's project will be the first prospective study of dramatic, lasting spiritual transformations or "quantum changes" in individuals' lives, as well as an investigation of gradual spiritual change. Focus is on "the oft-neglected topic of spiritual well-being." Antecedents of spiritual transformation will be investigated during the college years—a critical formative period during which faith is often shaken or solidified, and lifetime patterns of character and spiritual disciplines are set. "We argue that spiritual transformation may be conceptualized as a maturing of spiritual character in terms of faith, hope and agape."



Using methodologies developed by William Miller, the current research will investigate the dramatic, lasting "quantum changes" that occur in the lives of a sample of young adults. A state-of-the-art randomized, controlled clinical trial will be combined with traditional spiritual direction in an attempt to foster spiritual development and growth in a population of undergraduate students.

The project will investigate two kinds of spiritual transformation: Type I (gradual spiritual change) and Type II (quantum change) with a prospective longitudinal design. This study will ascertain which religious and spiritual practices predict changes in spirituality and character, and will evaluate the extent to which systematic spiritual mentoring enhances or protects against the decline of spirituality and character.

The intervention is designed to promote spiritual health. It will utilize a version of Miller's widely validated non-confrontational therapy method of "motivational interviewing," in which mentors will encourage students in the practice of contemplative spiritual disciplines endorsed by several religious traditions. A variety of quantitative methodologies will be used to characterize the change over time in students' behavior and spiritual lives.

"The funding provided by STP will enable a unique scientific investigation of spiritual well-being, a subject at the intersection of not only science and religion but also at the intersection of various subdisciplines of psychology, including the psychology of religion, health psychology, and positive psychology." ●

Spirituality, Language and Behavioral Transformation

Alvin C. Dueck is Chair for Integrative Dialogue between Theology and Psychology at Fuller Theological Seminary's School of Psychology in Pasadena, CA. He is also active in the Travis Research Institute at Fuller. Dueck received his Ph.D. from Stanford University. He studied theology at Associated Mennonite Biblical Seminary, University of Notre Dame, Yale University and Cambridge University Divinity School. His research interests include religious transformation in psychotherapy and computational analysis of meaning. He is the author of *Between Jerusalem and Athens: Ethical Perspectives on Culture, Religion and Psychotherapy* (1995), and a review editor for the *Journal of Psychology and Theology* and the *Journal of Psychology and Christianity*.

Richard Gorsuch, Co-Investigator
(Travis Research Institute)

Kevin Reimer, Co-Investigator
(Travis Research Institute)

Newton Maloney, Consultant
(Fuller School of Psychology)

James Pennebaker, Consultant
(University of Texas, Austin)

Randall Sorensen, Consultant
(Rosemead School of Psychology)

David Wade-Stein, Consultant
(University of Colorado, Boulder)

Principal Investigator:

ALVIN C. DUECK,
FULLER THEOLOGICAL SEMINARY,
SCHOOL OF PSYCHOLOGY

Dr. Dueck's study will use state-of-the-art computer linguistic programs to analyze individuals' reports of spiritual experiences. "We wonder whether there is something unique about the way individuals speak about their spiritual experience when their lives are changed by it. Are there differences in the ways Christian, Jewish and Islamic persons describe their spiritually transformative experiences?" Computer techniques and ongoing analyses of original transcripts will enable the investigators to ask new questions and—potentially—to develop more reliable ways of measuring spiritual experiences linguistically.



History is replete with examples of persons whose lives were profoundly changed by an overwhelming spiritual experience: the Buddha, Moses, Mohammed, St. Paul and many others. Over the past 100 years, since William James' *Varieties of Religious Experience*, scholars have described conversion experiences, the factors that led to change, health benefits of participating in religious denominations and spiritual coping strategies. What has been neglected is the very medium which makes these communications possible in the first place, namely, language.

In this study the working definition of spiritual transformation is that experience which (1) a person labels as transforming, (2) is framed linguistically as spiritual in nature, and (3) has resulted in lasting behavioral change. This study proposes to examine the text of self-reports with state-of-the-art computational linguistics programs: Linguistic Inquiry and Word Count, and Latent Semantic Analysis. These techniques and our ongoing research will enable us to ask new questions of narrative reports of transforming experiences, to test whether linguistic style differs in religious versus non-religious discourse. We will examine the self-reports in terms of the linguistic styles.

This research holds potential for developing reliable ways of measuring spiritual experiences linguistically. ●

Spiritual Transformations and Desistance from Crime

Peggy C. Giordano is Distinguished Research Professor of Sociology at Bowling Green State University. Her research focuses on causal processes associated with delinquency involvement during the adolescent period. She has conducted a series of long-term follow-ups of normative and delinquent youth as they have matured. These focus on variations in adult criminal involvement and factors associated with more successful outcomes, including the role of religion in effective life changes. Her research has been published in journals such as the *American Journal of Sociology*, *Criminology*, *Journal of Research in Crime and Delinquency*, and *Journal of Health and Social Behavior*. She received her Ph.D in Sociology from the University of Minnesota.

Monica Longmore, Investigator (Bowling Green State University)

Christopher G. Ellison, Consultant (University of Texas, Austin)

Wendy Manning, Consultant (Bowling Green State University)

Principal Investigator:

PEGGY C. GIORDANO,
BOWLING GREEN STATE UNIVERSITY

“How do some people with a serious criminal history make a break from a life of crime, while others remain trapped in these damaging and costly lifestyles?” Dr. Giordano’s study will focus in-depth on the spiritual changes of approximately 50 women and men who were highly delinquent during their youth, but experienced a transformation as they matured. Her goal is “to understand the process of spiritual transformation itself, and how spiritual experiences stimulate a new sense of direction, foster new social experiences, and provide a blueprint for productive life changes.”



As part of a larger study, Dr. Giordano’s research documented that spiritual transformations can be one important part of new direction in life. In-depth portraits will be augmented with statistical analyses of the larger group of criminal offenders to determine whether these religious experiences have a more lasting effect than other, more heavily studied factors such as marriage and employment.

Researchers have repeatedly examined factors related to the movement *into* criminal activity, but the processes associated with movement *away from* an antisocial and criminal lifestyle have not often been investigated. This project extends work in the sociology of religion and criminology by focusing on spiritual transformation as an active and dynamic process involving an agentic social actor working to improve his/her life.

The project builds on a long-term follow-up of 210 highly delinquent female and male individuals and uses its unique

longitudinal design to explain a diversity of outcomes from a pool of initially similar subjects. Complementary quantitative and qualitative techniques of analysis will elucidate how spiritual transformations provide a new sense of direction and a plan to move away from a life of crime, and will examine the circumstances under which such plans become successful or derailed. ●



Courtesy of Getty/Thinkstock.

Spiritual Transformation in the Face of Illness: AIDS

Gail Ironson is Professor of Psychology and Psychiatry at the University of Miami. She specializes in behavioral medicine and has served as the president of the Academy of Behavioral Medicine Research. She is a fellow in the Society of Behavioral Medicine and the Academy of Behavioral Medicine Research, and serves on the editorial boards of several journals. She has conducted extensive research in the areas of behavioral medicine with HIV, cancer, and cardiac patients, and has published over 100 peer-reviewed articles and book chapters. She holds a Ph.D. from the University of Wisconsin-Madison and an M.D. from the University of Miami.

Heidemarie Kremer, Investigator
(University of Miami)

George Gallup, Consultant (Gallup Poll)

Dale Ironson, Consultant

Jean Kristeller, Consultant
(Indiana State University)

Principal Investigator:

GAIL IRONSON,
UNIVERSITY OF MIAMI

One of the most profound crises people encounter in life is being confronted with a life threatening illness. Dr. Ironson's study will examine transformative experiences and the relationship between spirituality/coping with disease progression, distress, and death anxiety over time. "This longitudinal investigation of HIV patients explores whether spirituality, religiousness, and spiritual transformation can be a result of dealing with being diagnosed with a life threatening illness. We will also study how effectively spirituality and/or religious faith and behavior can help a person to deal with such diagnosis, improve health outcomes, and enhance the quality of one's life."



Spiritual transformations often take place when people are confronted with crises. Previous research by Dr. Ironson has shown that spirituality is associated cross-sectionally with long-term survival in people with HIV and identifies helping others and low cortisol as mechanisms for that effect.

Having HIV represents a time of crisis, which is ripe for re-examination of spiritual issues and one's connection to the sacred. In addition to describing the spiritual transformation experiences in an HIV population over time, the study will examine its effects on coping, and will incorporate the study of spiritual transformation into psychological indices designed to measure coping with distress and anxiety. A longitudinal sample of diverse people with HIV, maintained by Dr. Ironson and followed now for an average of four years, will be analyzed using prospective and retrospective methodology, and both quantitative (questionnaire) and qualitative (interview) methodologies.

The investigation will also further develop the Ironson-Woods Spirituality-Religious Index, which measures spirituality and religious behaviors, an Index of significant value to other researchers.

"The results from this study will provide insights into the nature of spiritual transformation, and how spirituality, religiousness, and spiritual transformation relate to health and well being. It may also provide helpful insights for people dealing with catastrophic illness in terms of the kinds of interventions and beliefs that can produce beneficial health outcomes." ●



The AIDS Memorial Quilt, © 2003 The NAMES Project Foundation.
Photo: Paul Margolies.

A Prospective Study of Awe and Spiritual Transformation

Dacher Keltner received his Ph.D. from Stanford University, and for three years was a post-doctoral fellow at UC San Francisco. He is Professor of Psychology at the University of California, Berkeley, and Director of the Berkeley Center for the Development of Peace and Well-Being. His research focuses on three broad questions: the determinants and consequences of power and status; how individual differences in emotion shape the individual's relationships life course; and the forms and functions of the different positive emotions, including awe, love, gratitude, compassion. He has published more than 60 papers on these subjects.


Jonathan Haidt, Co-Principal Investigator, Associate Professor of Psychology (University of Virginia)

Adam Cohen, Project Director, Post-Doctoral Researcher, Institute for Personality and Social Research (University of California, Berkeley)

Principal Investigator:

DACHER KELTNER,
UNIVERSITY OF CALIFORNIA, BERKELEY

Powerful feelings of awe during moments of spiritual, aesthetic, and moral experience seem to prepare the mind and heart to make changes, and these changes seem to be almost always for the good. Dr. Keltner's study is based on his theory that awe and related emotions may work like a "reset button" in the human mind and lead to spiritual transformation.

“ntil now the role of awe in spiritual transformation has only been studied by retrospective self-report, so there is very little direct empirical evidence to support it. Our proposed study aims to measure directly the effects of awe as they happen in people's lives, to document the role of awe in growth, change, and spiritual transformation.”

Awe is intimately involved in spiritual transformation. Dr. Keltner's team has theorized that awe triggers changes in attachments to principles, concepts, and entities that transcend the self. This research project seeks to identify the predictors and to document the consequences and the determinants of lasting spiritual transformation. Investigators will follow a sample of 200 young adults through their first two years in college, a time when a large number of spiritual transformations occur. They will take a variety of measures at the start of the study (including proneness to

awe), and then ask all participants to fill out monthly diaries on a web-based survey.

Participants who undergo a spiritual transformation will be brought back to the lab (along with comparison participants who did not experience a transformation) for a second round of measures and for another year of study to document the time course and durability of the transformation. ●



Courtesy of Getty/Thinkstock.

Spiritual Transformations Across the Life Span

Michael E. McCullough is Associate Professor of Psychology at the University of Miami in Coral Gables, Florida. He received his Ph.D. from Virginia Commonwealth University. His work focuses on religion, spirituality, and virtues, how these unfold in people's lives, and how they are linked to health and well-being. He has written over 70 peer-reviewed journal articles and book chapters. He has also authored or edited four books, including *Forgiveness: Theory, Research, and Practice* (2000), *Handbook of Religion and Health* (2001), and an upcoming volume on the psychology of gratitude.

Steven Boker, Consultant (University of Notre Dame)

Jean-Philippe Laurenceau, Consultant (University of Miami)

Maria Llabre, Statistician (University of Miami)

Principal Investigator:

MICHAEL E. MCCULLOUGH,
UNIVERSITY OF MIAMI

Dr. McCullough seeks to shed light on spiritual transformations over the adult life span, as these affect the psychological aspects of people's lives and relationships. His study will use cutting-edge statistical and design methodologies to analyze data gathered in the Terman Longitudinal Study.

“**B**y using modern methods for the analysis of change, the findings that result will contribute toward a much enriched scientific understanding of spiritual transformations across the adult life span, and their links to other important psychological domains — including family environment, personality, serious life events, and health and well-being.”

In Study 1, the team will use the statistical tool, General Growth Mixture Modeling, to develop a taxonomy of the forms of spiritual change that occur during adulthood. They will also examine the influence of early childhood religious socialization, emotional quality of respondents' relationships with their parents, personality traits, and the interaction of these factors on people's likelihood of following particular trajectories of spiritual transformation over the lifespan. In Study 2, they will examine how spirituality might be influenced by combat during wartime. Study 3 will attempt to identify self-regulatory dynamics that might govern individual change in religiousness during adulthood. The team will also examine whether personality traits are predictive of the rates at which people's religiousness stabilizes over time. ●



Inner Life, 1989, by Squeak Carnwath.
Photo: M. Lee Fatherree, Oakland, CA.

The Context and Consequences of Spiritual Transformation

Mark D. Regnerus is Assistant Professor of Sociology at the University of Texas, where he is also a faculty research associate with the Population Research Center. He received his Ph.D. from the University of North Carolina. His research interest concerns the influence of religion on adolescent behavior. His work has been published in *Social Forces*, *Journal for the Scientific Study of Religion*, *Social Psychology Quarterly*, and *Social Science Research*, and reported in USA Today, Washington Post, and Time Magazine. He is a collaborator on a Lilly Endowment-funded study of religious practices of American adolescents.


Christopher G. Ellison, Co-Investigator
(University of Texas at Austin)

Daniel A. Powers, Research Associate
(University of Texas at Austin)

Principal Investigator:

MARK D. REGNERUS,
UNIVERSITY OF TEXAS AT AUSTIN

Dr. Regnerus will examine the social environment in which spiritual and religious transformations occur, and what—if any—behavioral consequences such transformations are likely to bring about in American adolescents and young adults. This study will use data gathered in the National Longitudinal Study of Adolescent Health and the National Study of Youth and Religion.

“ Social scientists know more about which American teenagers are religiously and spiritually active than how they got there. Our research study proposes a comprehensive analysis of (1) the social, ecological, and genetic contexts that may shape spiritual/religious transformations in youth and young adults; and (2) how such transformations in turn influence behavior.”

Religion is an inherently social phenomenon and is typically experienced in the company of others. The investigators plan to focus not only on spiritual and religious transformations as an outcome of interest, but also as a primary stimulus to observable behavioral change. According to Dr. Regnerus, the National Longitudinal Study of Adolescent Health and the National Study of Youth and Religion, taken together, comprise the best available large-scale data to study religious and spiritual transformations and their consequences among American adolescents and young adults. This project intends to produce and disseminate conclusive findings about such transformations, their contexts, and their consequences. ●

Baalei Teshuvah's Spiritual Transformational Soul Work

Roberta G. Sands is Professor at the University of Pennsylvania School of Social Work, where she teaches courses in advanced social work, mental health, human behavior, and qualitative research. Her research focuses on interprofessional communication, mental health, and intergenerational family relations. She is the author of *Clinical Social Work Practice in Community Mental Health* (1991) and *Clinical Social Work Practice in Behavioral Mental Health: A Postmodern Approach to Practice* (2001) and co-author of *Interprofessional and Family Discourses: Voices, Knowledge, and Practice* (2002). She has written over 50 articles and book reviews for social science journals as well as several book chapters. She holds a Ph.D. from the University of Louisville.


Rivka Danzig, Co-Principal Investigator, School of Social Work (University of Pennsylvania and Chai Consulting)

Samuel Klausner, Consultant (University of Pennsylvania, Emeritus)

Principal Investigator:

ROBERTA G. SANDS,
UNIVERSITY OF PENNSYLVANIA

Dr. Sands' study aims to build a dynamic model of the stages of spiritual transformation ("soul work") of Jewish adults who have become Orthodox, the baalei teshuvah (BTs). A full model of this process has not been addressed in previous research.

“ ur study seeks to hear the voices of “embedded reporters” on the frontiers of spiritual transformation within Judaism. Participants in our study, *baalei teshuvah*, are Jews who have become Orthodox.

We are particularly interested in their processes of “soul work,” the ways in which they change internally and in their everyday lives as they increase their commitment to the teachings of the Torah.”

The primarily *qualitative component* of this study addresses these research questions: (1) What are the stages of spiritual transformation of *baalei teshuvah*? (2) How are identity transformations, changes in life domains, changes in webs of relationships, and changes in social integration incorporated within and across stages over time? (3) In what ways do stages of spiritual development intersect with stages of psychosocial development? (4) What kind of work does soul work entail? How is it expressed? This component will use in-depth interviews with BTs, interviews with key informants, rabbis, therapists, outreach workers, and a focus group comprised of mental health workers.

A *quantitative component* aims to identify and assess other modes of religious intensification within Judaism (e.g., changing from a secular Jew to joining the Conservative movement) so that the study of those who become Orthodox can be seen within a larger national context. This consists of a quantitative analysis of responses to the National Jewish Population Survey of 2000-2001.

“We want to look at spiritual transformation as it unfolds over time and is fused with daily life experiences. We wonder what kinds of changes *baalei teshuvah* make in their identities, family relations, and connections with other people and institutions, and how integrated they become into the larger Orthodox community.” ●



Sanctuary, sculpture by Steven Tatar.
From the book *Artists Confronting the Inconceivable*, 1992.
Courtesy of National Liberty Museum, Philadelphia, PA.

National Study of Spiritual Transformations

Thomas W. Smith is an internationally recognized expert in survey research specializing in the study of social change and survey methodology. Since 1980 he has been Co-Principal Investigator of the National Data Program for the Social Sciences and Director of its General Social Survey (GSS) at the National Opinion Research Center (NORC). This is the largest and longest-term project supported by the sociology program of the National Science Foundation. Smith is also co-founder and secretary general (1997-2003) of the International Social Survey Program (ISSP), the largest cross-national collaboration in the social sciences. Smith has authored over 400 scholarly papers. He holds a Ph.D. in American History from the University of Chicago.

Andrew M. Greeley, Advisor (NORC)

Kenneth A. Rasinski, Advisor (NORC)

Principal Investigator:

THOMAS W. SMITH,
NATIONAL OPINION RESEARCH CENTER
(NORC) AT THE UNIVERSITY OF CHICAGO

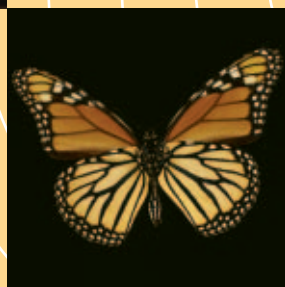
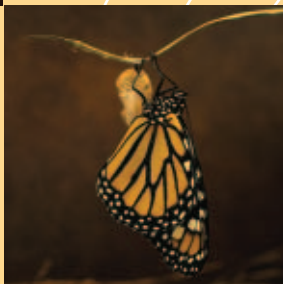
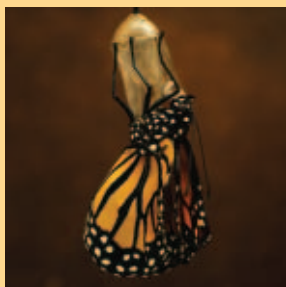
Dr. Smith's national opinion survey of spiritual transformation will bridge the gulf between studies using representative and generalizable national samples and those with small, unrepresentative samples and case studies. It will be conducted as a module of the 2004 General Social Survey and will feature a nationally representative sample to examine the phenomena of spiritual transformation. "We will learn about the profile and distribution of spiritual transformations, their frequency, and how they impact people's lives."



his full-probability, in-person interview with a target of 1500 respondents will bridge the gulf between 1) studies of spiritual transformation using representative and generalizable, national samples, with only limited and closed-ended measures, and 2) those with small, unrepresentative samples and case studies (often based on self-selection), that collect rich, insightful, open-ended narratives of religious experiences.

The study will use the highest quality, national sample to: collect data that generalizes to all adult Americans, utilize carefully developed and pre-tested items to measure people's religious experiences, produce reliable measures of the incidence and distribution of religious experiences, ascertain key facts about the occurrence of spiritual transformation (including age of occurrence, whether sudden or gradual, individualistic or organized, radical or moderate, intellectual or emotional), ascertain the frequency of the events, and capture in-depth reports of the causes, nature, and consequences of the spiritual transformations.

"By collecting a sufficient and nationally representative sample of such spiritual experiences, our survey will help us better understand the nature of these religious experiences. We will learn whether the experiences recorded by rich, but unrepresentative, collections are typical or atypical. For example, we will gain some sense of the relative importance of what Lewis Rambo lists as the main motifs of conversion: intellectual, mystical, experimental, affectional, revivalist, and coercive." ●



Cancer and Spiritual Transformation: A Practical Theology

Leonard M. Hummel is Assistant Professor in Religion at Vanderbilt University and Vanderbilt Divinity School. He also serves as an Adjunct Professor in Vanderbilt's Community Research and Action Program and is the Director of Research for Religion and Spirituality in the Pain and Symptom Management Program at the Vanderbilt-Ingram Cancer Center. He has published on European Pietism, religious coping, community and cultural psychology, and pastoral care and is the author of *Clothed in Nothingness: Consolation for Suffering* (2003). He is currently working on two book projects: *A Thing That Cannot and Can Be Changed: A Practical Theology of Cancer*, and *Pragmatics of Religious Coping*.

Jean L. Kristeller, Co-Principal Investigator and Collaborator (Indiana State University)

Beth A. Conklin, Consultant (Vanderbilt University)

Edward A. Farley, Consultant (Vanderbilt University)

Bonnie Miller-McLemore, Consultant (Vanderbilt University)

Principal Investigator:

LEONARD M. HUMMEL,
VANDERBILT UNIVERSITY

Dr. Hummel's study will analyze the spiritual experiences, shifts and transformations of persons with cancer from the perspective of "practical theology"—the critical comparison of the contextual meaning of these spiritual processes for those involved with other interpretations of these processes in religious and theological literature.



his study will be creating a multidisciplinary foundation for further theoretical and empirical religious studies of that process among the ill, in general, and among persons with cancer, in particular. By involving a team of researchers from religious studies and anthropology, and by linking its research with that being conducted concurrently by a team of psychologists and health researchers, this study will offer a model for interdisciplinary and collaborative research on spiritual transformation.

The practical theological aim of this study, derived from Kristeller's concurrent study, "Living with Cancer" (see p. 29) will involve three phases: I) a descriptive theological analysis of the data set that integrates religious and theological significance of the quantitative and qualitative data from "Living with Cancer"; II) an analysis of the religious and theological literature relevant to the relationship between illnesses such as cancer and spiritual transformation; III) a critical analysis of the findings about spiritual processes among persons with cancer from phases I and II.



Comfort Quilt, Allegra Kraft McIver, 1993. From the exhibition "Confronting Cancer Through Art," Arthur Ross Gallery, University of Pennsylvania, 1997.

Few scientific studies outside the field of anthropology have focused on spiritual transformation among those who are ill. In order to better understand the nature and process of spiritual transformation associated with illness, this project will investigate that phenomenon among persons with cancer—those who have experienced a threat to "the very fiber of [their] being." ●

Spiritual Rebirth and Maturation Among College Students

Sung Joon Jang is Associate Professor of Sociology at Louisiana State University. His research focuses on the effects of family, school, peers, religion, and community on deviance and crime, especially juvenile delinquency. He has published articles in such journals as *American Sociological Review*, *Journal of Research in Crime and Delinquency*, *Journal of Quantitative Criminology*, *Social Science Quarterly*, *American Journal of Community Psychology*, and *Journal of Youth and Adolescence*. Jang received his Ph.D. in sociology from the State University of New York at Albany.

Keith A. Davy, Co-Investigator
(Campus Crusade for Christ)

Alan J. Lizotte, Consultant (SUNY, Albany)

Paul R. Payne, Technical Support
(Campus Crusade for Christ)

Principal Investigator:

SUNG JOON JANG,
LOUISIANA STATE UNIVERSITY

Dr. Jang's research will focus on antecedents and outcomes of two distinct forms of spiritual transformation observed among college students: one is the discrete event of being "born again" or spiritual rebirth, and the other is the subsequent, gradual process of spiritual development.



pecifically, this research will examine how spiritual rebirth and other related factors affect the longitudinal patterns of spirituality. It will also examine how school- and/or county-level

"community" contexts affect (either help or hinder) an individual's spiritual transformation of rebirth and maturation.

Goals of this study include: 1) to develop a conceptualization and measurement of the two kinds of spiritual transformation; 2) to explore the antecedents and outcomes of both types of spiritual transformation; and 3) to examine spiritual transformation in a developmental and community framework.

The project will draw nationally representative samples of Christian and non-Christian college students through a two-stage sampling procedure and conduct a web-based survey, to collect prospective, longitudinal data. It will use two major modeling techniques, latent-variable structural equation modeling and multilevel modeling to test hypotheses.



The Flight of the Angels from the Urban Miracles Series.
© by Lydia Nakashima Degarrod, 2002.

"About nine out of ten people living in America today consider themselves as religious or spiritual, and the world's major religions maintain that the human predicament of evil and suffering is a spiritual problem. However, the religious influence is conceptualized primarily or even exclusively as sociological rather than spiritual. This project directly addresses this important gap in the research." ●

Contribution of Temperament to a Spiritual Outlook

Jerome Kagan is Professor of Psychology and Director of the Mind, Brain, Behavior Interfaculty Initiative at Harvard University. He received his Ph.D. in psychology from Yale University. During the last 38 years he has studied cognitive and emotional development in children, the development of morality, the effect of surrogate care on infants and the role of temperament on social and personality development. Kagan is a fellow of the American Academy of Arts and Science and a member of the Institute of Medicine of the National Academy of Sciences. He is the author of many books and chapters and has served with both government and private advisory and philanthropic groups.

Nancy Snidman, Project Director
(Harvard University)

Principal Investigator:

JEROME KAGAN,
HARVARD UNIVERSITY

Dr. Kagan's study will seek to determine the degree to which temperament, in each of two well validated categories—high reactive/inhibited and low reactive/uninhibited—contributes to a spiritual outlook in middle class adolescents. Adolescents belonging to each of these two groups, who have been followed in his laboratory since they were four months old, will be interviewed, tested, and administered several physiological procedures. The interview will assess the subjects' conscious understanding of their spirituality.



here is good reason to expect a relation between temperament and a spiritual attitude. The basis for expecting this relation is the fact that individuals who experience greater arousal in autonomic and other targets, and detect that activity, will be more reflective over their inner experience. This attitude, which is reminiscent of Jung's description of the introvert, should potentiate a spiritual outlook.

Dr. Kagan's laboratory has been following, since infancy, a large group of middle class Caucasian children who belong to different temperaments. The two most salient, and complementary, groups are called high reactive/inhibited and low reactive/uninhibited. The former group inherits a low threshold of excitability in limbic structures. This temperamental bias is reflected at four months of age in a profile of high motor activity and distress to unfamiliar stimuli. The other bias is reflected in infancy in low motor activity and low distress and in later childhood by a sociable and spontaneous profile. This group tends to show low arousal on biological measures.

Three psychological test procedures will be administered to these two groups to evaluate implicit attitudes toward spirituality. The biological measures, especially high power in the EEG, right frontal activation, a large evoked potential from the colliculus, and high sympathetic tone, will be analyzed to determine whether they, alone or in combination with a temperament, influence a spiritual outlook.

"This project is unique in science, for, to our knowledge, no investigator or team of investigators has probed the antecedents of a spiritual outlook with such a broad evidential basis." ●

Spirituality in an Alaska Native Alcohol Treatment Program

Robert F. Kraus is Professor of Psychiatry and Anthropology at the University of Kentucky. He is a graduate of the Medical College of Wisconsin and received psychiatric training at Eastern Pennsylvania Psychiatric Institute. His graduate training in anthropology was at the University of Pennsylvania. Kraus is Acting Chairman of the Department of Psychiatry and Behavioral Sciences at the University of Washington and Chairman of the Department of Psychiatry at the University of Kentucky. His research has focused on the relationship between culture and psychiatry with reference to the Arctic and Sub Arctic peoples. He has conducted extensive fieldwork in the circumpolar countries.

Theodore Godlaski, Co-Investigator
(University of Kentucky)

Robert Morgan, Co-Investigator
(Southcentral Foundation Dinliishla)

Verner Stillner, Co-Investigator
(Juneau Recovery Hospital)

Tom Farquhar, Consultant
(Southcentral Foundation Dinliishla)

Edith Lund, Consultant (Southeast Alaska
Regional Health Corporation)

Principal Investigator:

ROBERT F. KRAUS,
JUNEAU RECOVERY HOSPITAL (ALASKA)
AND UNIVERSITY OF KENTUCKY

Dr. Kraus' project will introduce and determine the effectiveness of a traditional, culturally sensitive and spiritually appropriate intervention, operating side by side with the existing Western-oriented alcohol treatment program for Alaskan Natives. This study will involve the Juneau Recovery Hospital which offers treatment programs for both natives and non-natives. Approximately 300 Tlingit/Haida Indians are admitted to this program each year, about 1/3 of whom are women.



Alcoholism is a major public health problem among Alaska Natives and is a cause for great concern among native leaders and scholars. Certain themes emerge from the literature: 1) current non-native

Western treatment approaches tend to be more effective for non-natives than for natives; 2) the incorporation of culturally and spiritually appropriate healing approaches seems to result in a better outcome for natives; and 3) for these reasons native leaders recommend that treatment programs for natives should not be instituted without significant native input, participation, and control.

Components of this program will include Healing Circles, Diagnostic Circles, individual and family counseling and community involvement with the participation and oversight of native elders and healers. Two native community groups will provide oversight, supervision and consultation.

The analysis of these data will result in the development of a modern conceptual model for Tlingit/Haida spirituality and spiritual transformation as these relate to process and outcome in the treatment of substance misuse.

“An experienced and respected native healer once told me that some American natives were like disabled birds. One wing was functional but the other wing had gradually atrophied. As a result, when the bird tried to fly, it wheeled around in circles and was dashed to the ground. The functional wing was the materialistic part of the person. The atrophied wing was the spiritual side... The central theme is that recontacting traditional spiritual and cultural values will heal the wing and restore the person to a functional life.” ●



Tlingit Eagle Hat from Sitka, Alaska.
University of Pennsylvania Museum.

Living with Cancer: Spiritual Shifts and Transformation

Jean L. Kristeller is Professor of Psychology at Indiana State University and Adjunct Associate Professor at the Indiana University School of Medicine. Her research includes evaluating physicians' attitudes toward addressing spiritual issues, assessing the viability and effectiveness of a brief physician-delivered spirituality intervention, improving quality of life in cancer patients, and using meditation as a therapeutic modality. She is currently funded through the NIH Center for Complementary and Alternative Medicine for a study of the use of mindfulness meditation in treating binge eating disorder. She received her doctorate in clinical and health psychology from Yale University.

Leonard M. Hummel, Co-Principal Investigator and Collaborator (Vanderbilt University)

Larry Cripe, Co-Principal Investigator, Associate Professor of Medicine and Associate Director of Clinical Affairs for the Indiana University Cancer Center (Indiana University School of Medicine)

Betsy Frank, Co-Investigator (Indiana State University)

Richard Frankel, Co-Investigator (Indiana University School of Medicine)

Thomas Johnson, Co-Investigator (Indiana State University)

Virgil Sheets, Co-Investigator/Statistician (Indiana State University)

Gail Ironson, Consultant (University of Miami)

Principal Investigator:

JEAN L. KRISTELLER,
INDIANA STATE UNIVERSITY

"A serious illness, such as cancer, brings with it a feeling of vulnerability and often raises issues of existential identity and mortality even if the prognosis is good. Our recent research has identified that even a brief inquiry from a physician into spiritual resources may improve mood and cancer-related quality of life." Dr. Kristeller's project will extend the current literature to investigate the range and quality of engagement with spiritual growth and transformation as it occurs in response to a diagnosis of cancer. This study will use qualitative techniques to identify meaningful typologies (and their prevalence) of spiritual engagement with cancer as they occur over time. A related goal is to examine the extent to which quantitative measures of spiritual experience usefully capture these differences or identify predictors or sequelae of change.



Approximately 150 patients at various stages of cancer who are receiving active care will be assessed at baseline and at regular intervals using two types of assessment: 1) brief semi-structured interviews of all patients, and 2) quantitative measures of spiritual and religious domains, quality of life, and medical and demographic status. While the primary focus is on establishing a typology of spiritual change as a function of coping with cancer, the repeated collection of data will contribute to development of a model of spiritual transformation across time, and identification of possible predictors and objective markers of such change.

In addition, 30 cancer patients will be randomly selected to receive a standardized brief spiritual inquiry from their oncologist. Their perception of the effect of this exploration on their engagement with their own spirituality will be qualitatively evaluated. Data will also be examined from the perspective of practical theology by a collaborator, Dr. Leonard Hummel (see pg. 25). To the degree feasible, the investigators will use parallel measures to those being proposed by Dr. Gail Ironson in her study of spiritual transformation in AIDS patients (see pg. 18) to assess the possible universality of such shifts in dealing with life-threatening illness. ●

Childbirth as a Pathway to Spiritual Transformation

Sandra D. Lane is Research Associate Professor in the Department of Obstetrics and Gynecology at State University of New York (SUNY) Upstate Medical University. She holds a Ph.D. in medical anthropology from the University of California, San Francisco and Berkeley, and a M.P.H. in epidemiology from the University of California, Berkeley. Her research focuses on gender and ethnic disparities in health. It includes work on rural Egyptian women's access to health care, traditional female genital surgeries, and disproportionate mortality rates. She has written more than 25 articles and book chapters, served as the Ford Foundation Reproductive Program Officer for the Middle East, and worked with the World Health Organization, UNFPA, and the Onondaga County Child Death Review Committee.

Robert Rubinstein, Co-Principal Investigator, Professor of Anthropology and of International Relations, and Director of the Program on the Analysis and Resolution of Conflicts, Maxwell School (Syracuse University)

Gail Dolbear, Co-Investigator (SUNY Upstate Medical University)

Robert Keefe, Co-Investigator (Syracuse University)

Ambika Krishnakumar, Co-Investigator (Syracuse University)

Principal Investigator:

SANDRA D. LANE,
SUNY UPSTATE MEDICAL UNIVERSITY

Dr. Lane's hypothesis is that during childbirth both mothers and fathers may experience a range of potentially positive changes in consciousness that could result in spiritual transformation. A secondary hypothesis is that women and men who experience elements of spiritual transformation during their infant's birth will have enhanced parenting ability, as measured by parental sensitivity, infant attachment and infant development at the baby's first year of life.



This is a systematic study of a group rather than a case series and will involve a diverse group of people. Earlier studies were with more homogeneous groups. This study enrolls participants in the third trimester of pregnancy, and follows them until the baby's first year of life. The research involves an observational cohort design, with qualitative and quantitative variables. The primary outcome variable is experience of elements of a spiritual transformation. The secondary outcome variables are measures of parental competence and infant development.



The researchers will also closely examine the social, symbolic and clinical structuring of the antecedent conditions that allow childbirth to serve as a pathway to spiritual transformation. From this they hope to gain an understanding of the necessary conditions under

which childbirth can tune neuropsychological structures to support spiritual transformation. "The enduring effects of childbirth-induced spiritual transformation may enhance the quality of parenting and also have implications for spiritual transformation as a pathway to better parenting."

The experience of childbirth is so common, that the spiritual transformation experienced in this process falls into the realm of an "ordinary miracle." The capacity for spiritual transformation appears to have an evolved, neuropsychological basis. ●

Varieties of Spiritual and Social Transformation

Donald E. Miller is Executive Director of the Center for Religion and Civic Culture and Firestone Professor of Religion at the University of Southern California (USC), where he received his Ph.D. He is the author or editor of several books, including *Portraits of Survival and Hope* (2003), *GenX Religion* (2000), *Reinventing American Protestantism* (1997), *Survivors: An Oral History of the Armenian Genocide* (1993), *Homeless Families: The Struggle for Dignity* (1993), *Writing and Research in Religious Studies* (1992), and *The Case for Liberal Christianity* (1981). Miller has had major grants from the Lilly Endowment, The Pew Charitable Trusts, the Ford Foundation, The James Irvine Foundation, Haynes Foundation, California Council for the Humanities, and Fieldstead Company. He is currently writing a book on global Pentecostalism.

Grace R. Dyrness, Co-Principal Investigator, Associate Director, Center for Religion and Civic Culture, (USC)

Gregory C. Stanczak, Co-Principal Investigator, Postdoctoral Research Fellow, Center for Religion and Civic Culture, (USC)



Grace Dyrness shows video footage to residents of Kwa Mtoro, Tanzania
Photo: Donald E. Miller

Principal Investigator:

DONALD E. MILLER,
UNIVERSITY OF SOUTHERN CALIFORNIA

Is individual spiritual transformation a unique motivation and sustaining force for local NGO workers participating in social change? Dr. Miller's research focuses explicitly upon the perceived connections, if any, between individual spiritual transformation and social transformation by Non-Governmental Organization (NGO) employees and volunteers. It will be conducted within two NGOs, World Vision International and the Anglican Church in Tanzania.



faith-based Non-Governmental Organizations (NGOs) have proliferated throughout the developing world over the past two decades. While many NGOs use religion and spirituality as rhetorical devices in generating charitable donations to fund their work, little research has been done on the actual role of religion or personal spirituality among workers.

Interviews, focus groups, and field observations will be conducted throughout two-week site visits by each member of the research team. On-site analysis will facilitate team evaluations and interpretations. All elements of the research will be videotaped with participant consent. This procedure provides the research team with rich data to code and analyze. Video cameras will be used beyond documentation as an integral element of the research design. Participants will be asked to review their videotapes immediately following interviews in order to clarify or comment on their statements. The research team will offer interpretations and ask follow up questions during the review of the videotape that the participant can agree with or challenge.

This project is intended to produce a research model that may be extended comparatively to other Christian NGOs, to NGOs of various faith traditions, and to NGOs in various global regions. The research fills a significant void in the social science literature and NGO literature. As such, the findings will generate conceptual frameworks for understanding individual spirituality within the context of social transformation.

“Taking Tanzania as the focus, this research project on faith-based Non-Governmental Organizations is a unique contribution to understanding the role that religion plays in addressing social crises in the developing world.” ●

Psychological Maturity and Religious Conversion

Carol J. Nemeroff is Associate Professor of Psychology at Arizona State University, where her work focuses on both deleterious and enriching aspects of magico-moral thinking. Her publications range from *Jewish Folklore and Ethnology Review*, and *Ethos*, *Journal of the Society for Psychological Anthropology*, to *Health Psychology*, and *The Encyclopedia of the Cognitive Sciences*. She serves as chair of ASU's Institutional Review Board. Nemeroff completed her Ph.D. in clinical psychology at the University of Pennsylvania, where she studied magical thinking about contagion, comparing lay models of contagion with biomedical germ theory.

Mariam Cohen, Co-Principal Investigator, Psychiatrist and founding member of the Southwest Center for Psychoanalytic Studies, and Adjunct Faculty at Arizona State University

Principal Investigator:

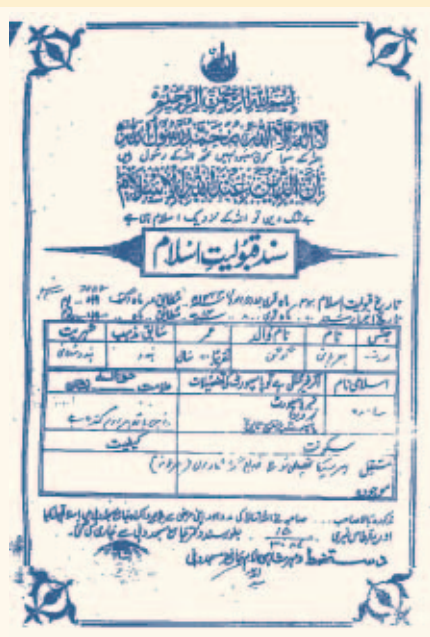
CAROL J. NEMEROFF,
ARIZONA STATE UNIVERSITY

Dr. Nemeroff's premise is that persons who are in a process of formal religious conversion may also be in a process of changing their personal relationship to God and that this process is reflected in maturational changes in their "intrapsychic god image." This longitudinal prospective study looks at converts to Catholicism, Judaism, and Islam, combining qualitative and quantitative research designs, with the goal of uncovering aspects of the conversion experience that have not been delineated in previous studies.

“We hypothesize (I) that formal religious conversion involves not only a change in religious identity but also a maturational change in the convert's relationship to God occurring concomitantly with religious and spiritual education leading to conversion; (II) that those potential converts who at the start of the religious education show a more mature level of object relations development and general psychological health will be more likely to experience further maturation and (III) that those potential converts who show a more primitive level of object relations development are more likely to experience regression and psychological distress.”

Up to 120 participants will receive a battery of quantitative measures at the beginning, middle, and end of their formal conversion process. These will include measures of general psychological symptoms, level of object relations, and god image. In addition, 20 to 30 participants will be interviewed in depth at the same points in time, allowing assessment of their relationship to God and their narrative accounts of the conversion experience; they will also complete the questionnaire battery. Data analysis will include repeated-measures analyses of various changes in god image, and hierarchical multiple regressions prospectively predicting god image based on initial psychological health. Qualitative analysis will follow a grounded theory approach based in psychodynamic object relations theory.

“Our study will explore the extent to which religious conversion is more than just a switch from one 'brand of religion' to another but rather, involves significant inner change. We will be exploring whether and how people mature in their relationship to divinity as they go through conversion within the three religions.” ●



Shahi Imam's certificate of Islamic conversion. Mewat, India, 2002. The Milli Gazette, New Dehli.

Learning by Spiritual Examples: Measures & Intervention

Douglas W. Oman is Lecturer and Principal Investigator in the School of Public Health of the University of California, Berkeley, Division of Maternal and Child Health. His research and professional publications involve theoretical, observational and experimental studies of spirituality, religion and health, including epidemiologic studies of religious involvement and mortality, the application of social cognitive theory to religion and spirituality, and studies of effects on health professionals from receiving training in a comprehensive nonsectarian spiritual toolkit. Oman obtained his doctorate in biostatistics from U.C. Berkeley. He was principal investigator on a grant from the National Institute of Aging and from the Fetzer Institute. He has advised faith-based healthcare organizations regarding how to integrate spirituality into health promotion and healthcare.

Albert Bandura, Consultant
(Stanford University)

Joseph Driskill, Consultant
(Graduate Theological Union)

Carl E. Thoreson, Consultant
(Stanford University)

Principal Investigator:

DOUGLAS W. OMAN,
PUBLIC HEALTH INSTITUTE/UNIVERSITY
OF CALIFORNIA, BERKELEY

Dr. Oman's long-term goal is to better understand how spiritual modeling works, how it contributes to overall spiritual transformation, and how spiritual modeling perspectives can be applied to facilitate spiritual growth: How do people learn from the experiences of others? This study pursues "crucial empirical work for further developing spiritual modeling perspectives on spiritual growth and transformation."



A recent paper by Oman and Thoresen argues that a major function of religious traditions throughout history has been to facilitate the observational learning of spiritually-relevant skills and behaviors from persons who function as spiritual exemplars. Applying Bandura's (1986) social cognitive theory, Oman and Thoresen suggest that four major processes underlie how people learn from spiritual models—attention, retention, reproduction and motivation—and introduce a new assessment tool called the Spiritual Modeling Inventory of Life Environments (SMILE).

This study contains two major empirical components, the first observational and the second experimental. SMILE will be administered to samples of college undergraduates, middle-aged churchgoers, and older churchgoers. A wide range of other demographic and psychosocial measures will be assessed, tested, and correlated. Spiritual modeling measures are hypothesized to correlate positively with psychological virtues (e.g., forgiveness and hope), health status and health behaviors, and well-being. The experimental component

examines effects from a small-scale randomized study of an intervention developed to facilitate spiritual modeling.

"Science has long known that we learn from role models, and science is now confirming that spirituality and religion can contribute to well-being. Now is the time to link these two dynamic ideas into a synergy that will produce both improved scientific understanding and improved tools for teaching and learning spirituality." ●



Mother Theresa holding a baby. Courtesy of AP Wideworld.

Spiritual Transformation in Recovery from Alcoholism

Elizabeth A. R. Robinson is Assistant Research Scientist at the Addiction Research Center in the Department of Psychiatry at the University of Michigan. She is currently investigating spiritual and religious changes in early recovery from alcohol problems, through funding from the Fetzer Institute and the National Institute on Alcohol Abuse and Alcoholism (NIAAA). She has published numerous papers on gender differences and sleep problems among substance abuse treatment seekers, family stress and coping with severe mental illness, particularly the impact of causal attributions and gendered family roles on family functioning, and the effect of supportive health education. Robinson received her Ph.D. in psychology and social work from the University of Michigan.

Kirk J. Brower, Co-Investigator
(University of Michigan)

Brenda Gillespie, Consultant
(University of Michigan)


Ernest Kurtz, Consultant
(University of Michigan)

Jon Webb, Research Fellow
(University of Michigan)

Principal Investigator:

ELIZABETH A.R. ROBINSON,
UNIVERSITY OF MICHIGAN

Dr. Robinson's team will carry out intensive qualitative and quantitative interviews with 90 individuals who, while in treatment for alcohol disorders, participated in a previous study in which they reported having had a life-changing spiritual or religious experience at some point in their lives. This new research will obtain respondents' narratives about particular experience and its impact on their lives, as well as their alcohol use and recovery stories.

“ any who have recovered from alcoholism or who treat alcoholics believe that spiritual transformations play a role in recovery. However, little is known about how common such transformations are, the nature of those transformations and how they affect recovery. More specifically, we don't know what types of spiritual transformation trigger sobriety decisions or what might initiate a spiritual transformation. Are there benevolent consequences for the individual as a result of these experiences? Are there long-term changes in their hopefulness, gratitude, humility, forgiveness, love of God, acceptance of self and others, and other aspects of their character or quality of life, especially their alcohol use?”

Quantitative measures of religious and spiritual coping, mysticism, forgiveness, hope, gratitude, love of God, surrender, AA involvement, treatment experiences, and alcohol consumption will assess these constructs. Qualitative analysis will include narrative and content analysis to identify common and idiosyncratic themes and patterns, aided by a qualitative software package. These analyses will provide descriptions of the respondents, including patterns of multi-variate relationships, particularly the characteristics of the individuals and their transformations and individuals that are associated with greater sobriety. ●

Children in Robes: Aesthetics, Ritual, and Language

Jeffrey Samuels is Assistant Professor in the Department of Philosophy and Religion at Western Kentucky University where he teaches courses on Asian religions, cultures, and languages. His primary area of research is the Theravada Buddhist traditions of Sri Lanka and Thailand, with specialization in Buddhist education, the formation of monastic identity, and the concept of social service in contemporary Sri Lanka. He has published peer-reviewed articles on the topics of Buddhist monasticism, portrayals of lay Buddhist practitioners, conceptions of social service in contemporary Sri Lankan Buddhism, and the Bodhisattva ideal in Theravada Buddhism. He holds a Ph.D. from the University of Virginia in history of religions.



Young novice monks, Kandy, Sri Lanka. Courtesy of Jeffrey Samuels.

Principal Investigator:

JEFFREY SAMUELS,
WESTERN KENTUCKY UNIVERSITY

The aim of Dr. Samuels' study is to arrive at a greater understanding of the causes and processes surrounding spiritual transformation among children. This research project explores the factors that contribute toward the spiritual transformation of young boys and monks in contemporary Sri Lanka, who have decided themselves to enter the monastic order.



pecifically, “Children in Robes” examines the roles that aesthetics, ritual performance, and language play in boys’ initial decisions to become monks (*objective* conversion) as well as in the processes by which young boys and monks become deeply committed to and oriented toward the sacred (*subjective* conversion). The aim of this study will be reached through an examination of the range of factors that precipitate objective conversion experiences among children, the circumstances that contribute to the subjective transformation of children monks, and the relationships that may exist between the causes that engender a decision to adopt a religious lifestyle (*objective* transformation) and one’s commitment to the sacred (*subjective* transformation).

The research methods will be a person-centered ethnography combined with closely observed accounts of monastic life. The majority of the data for this project will be collected from in-depth, semi-structured interviews with young boys and children monks, the head monks of three temples in the Kandy district of Sri Lanka, and the parents of a select group of monks. Using multiple qualitative methods grounded in a “person-centered” approach, this project will examine the monks’ experiences and preconceptions of Buddhism prior to an *objective* transformative experience as well as the factors that have contributed to a radical change in young monks who have undergone a spiritual transformation. It will also explore the degree to which a person’s *subjective* transformation is determined by initial motivating forces leading one to adopt a religious lifestyle.

“While many of the previous models have focused on the psychological side of spiritual transformation, holistic models that point to the close interplay between the body and mind, action and thought, will not only advance current understandings of spiritual transformation in general, but will also lead to a greater appreciation and understanding of the phenomenon among children.” ●

Spiritual Transformation and Marriage in Urban America

W. Bradford Wilcox is Assistant Professor of Sociology at the University of Virginia. His research focuses on the influence of religious belief and practice on marriage and parenting. He has published articles in *The American Sociological Review*, *Social Forces* and the *Journal of Marriage and Family*. His first book, *Soft Patriarchs and New Men: Religion, Ideology, and Male Familial Involvement*, is under contract. The Pew Forum on Religion and Public Life recently issued his report entitled *Sacred Vows, Public Purposes: Religion, the Marriage Movement, and Public Policy*. His research has also been featured in *The Washington Post*, *The Los Angeles Times*, *CBS News*, and numerous *NPR* stations. He earned his Ph.D. at Princeton University and held research fellowships at Princeton University and Yale University.

Principal Investigator:

W. BRADFORD WILCOX,
UNIVERSITY OF VIRGINIA

“Unwed mothers and fathers in urban America often have a spiritual awakening in connection with the birth of a child or other significant event. This project seeks to understand the effect of spiritual transformation, if any, on family formation among these parents.” Dr. Wilcox will explore the spiritual implications of family change and investigate the effect that a spiritual transformation has on the odds of marriage among unwed parents in urban America.



re urban congregations now experiencing greater difficulty in attracting members since urban residents are now more likely to postpone or forego marriage?

Marriage typically makes people – especially men – more likely to attend church and to experience a spiritual transformation.

The recent retreat from marriage, concentrated among lower-class and minority groups, may have important consequences for the vitality of religion in urban America. This may be accompanied by a parallel retreat from the spiritual transformations that typically occur among adults after they marry and have children. On the other hand, urban religious institutions have given spiritual, moral, and social support to the institution of marriage and to norms of mutual service and sexual fidelity for the married.

Using data from the ongoing Fragile Families and Child Wellbeing Study, which focuses on new urban parents in 20 cities around the U.S., this research project aims to answer two central questions: (1) Is the retreat from marriage influencing the likelihood that urban parents will experience a spiritual transformation marked by an intensification of religious practice, a change from one faith tradition to another, or a transformative religious experience? (2) Are spiritual transformations among unmarried urban parents associated with improvements in the quality of their relationships and with transitions to marriage?

This project also asks: Does the relationship between spiritual transformation and marriage in urban America vary by race, ethnicity, and gender? Are the effects of spiritual transformation on family-related behavior generic, or do they vary by religious tradition? ●



“OUR ORDINARY ALTERATIONS OF CHARACTER, AS WE PASS FROM ONE OF OUR AIMS TO ANOTHER, ARE NOT COMMONLY CALLED TRANSFORMATIONS, BECAUSE EACH OF THEM IS SO RAPIDLY SUCCEEDED BY ANOTHER IN THE REVERSE DIRECTION,...

Looking to the Future



hinking about the changes in our own lives, whether a seemingly serendipitous happening or a personal spiritual transformation, makes us

wonder about the transforming changes that occur in the lives of others and their loved ones. The Metanexus Institute's Spiritual Transformation Scientific Research Program has just begun to examine these under the lens of science.

We are seeking quantifiable data derived from scientific studies to help us understand the nature and processes of transforming experiences, and to help us find information about the benefits of the spiritual dimension in our lives.

This is an endeavor of great magnitude and originality, initiated and generously supported by Sir John Templeton and the John Templeton Foundation.

Based on Sir John's vision, the STP project has now been launched and initial grants have been made for the first round of investigations. As evidenced by the individual projects described in this report, the research undertaken is both wide and deep, covering a spectrum of experiences, with the potential to yield a range of meaningful insights.

The results of this rigorous, high-level research are already beginning to provide the basis for our next wave of investigative projects.

Advisors see a need for more studies on meaning and measurement; the roots and triggers of spiritual transformation; longitudinal studies to track its development; the degree to which it is expressed and experienced in distinctive ways across various social and cultural contexts; applied health aspects; even the practical assessment of spiritual transformation as a means through which people can undergo positive change leading to healthier—more peaceful—interpersonal and community relationships.

Thanks to the John Templeton Foundation, STP has been given a solid start. Now we are seeking to include additional intellectual and funding partners to help carry forward the important next steps.

We hope that you will continue to follow the progress of this innovative scientific research program, and participate in our exciting journey of discovery.

For the latest findings and further information about STP research and programs, please visit www.metanexus.net/spiritual_transformation or contact Dr. Solomon Katz at 215-789-2200 or skatz@metanexus.net

...BUT WHENEVER ONE AIM GROWS SO STABLE AS TO EXPEL DEFINITELY ITS PREVIOUS RIVALS FROM THE INDIVIDUAL'S LIFE, WE TEND TO SPEAK OF THE PHENOMENON, AND PERHAPS TO WONDER AT IT, AS A 'TRANSFORMATION.'"

—WILLIAM JAMES, *Varieties of Religious Experience*

ABOUT THE METANEXUS INSTITUTE

The Metanexus Institute advances research, education and outreach on the constructive engagement of science and religion. The Spiritual Transformation Scientific Research Program is a major project of Metanexus.

Metanexus is part of a growing network of individuals and groups exploring the interrelated dynamics of cosmos, nature and culture in communities and campuses worldwide. Metanexus sponsors public lectures, faculty trainings, workshops, research seminars, grant programs, and a variety of conferences and events.

Other Metanexus projects include the Local Societies Initiative, funding up to 200 organizations worldwide, and the Templeton Research Lectures at leading universities. Metanexus also hosts an online discussion forum and publishes an online magazine with over 7000 subscribers from 57 different countries. For more information, go to www.metanexus.net.

meta (prefix)

beyond, among, transforming,
transcending, as in *metazoan*,
metamorphosis, *metaphysics*
[Greek, from *meta*, through, beside]

nexus (noun)

a means of connecting, a link, a tie,
the core or center
[Latin, from *nectere*, to bind]

ABOUT THE JOHN TEMPLETON FOUNDATION

The mission of the John Templeton Foundation is to pursue new insights at the boundary between theology and science through a rigorous, open-minded and empirically focused methodology, drawing together talented representatives from a wide spectrum of fields of expertise.

Using “the humble approach,” the Foundation typically seeks to focus the methods and resources of scientific inquiry on topical areas that have spiritual and theological significance ranging across the disciplines from cosmology to healthcare.

In 1987 the John Templeton Foundation was established by world-renowned investor John Marks Templeton. Knighted in the same year by Queen Elizabeth II for his philanthropic efforts, Sir John is universally regarded as a pioneer in the development of high-yield globally diversified mutual funds, having created the highly successful Templeton Growth and Templeton World Funds. Sir John, now 91 years old, has spent a lifetime encouraging research, discovery, and open-mindedness. For more information, go to www.templeton.org.

SPIRITUAL TRANSFORMATION SCIENTIFIC RESEARCH PROGRAM

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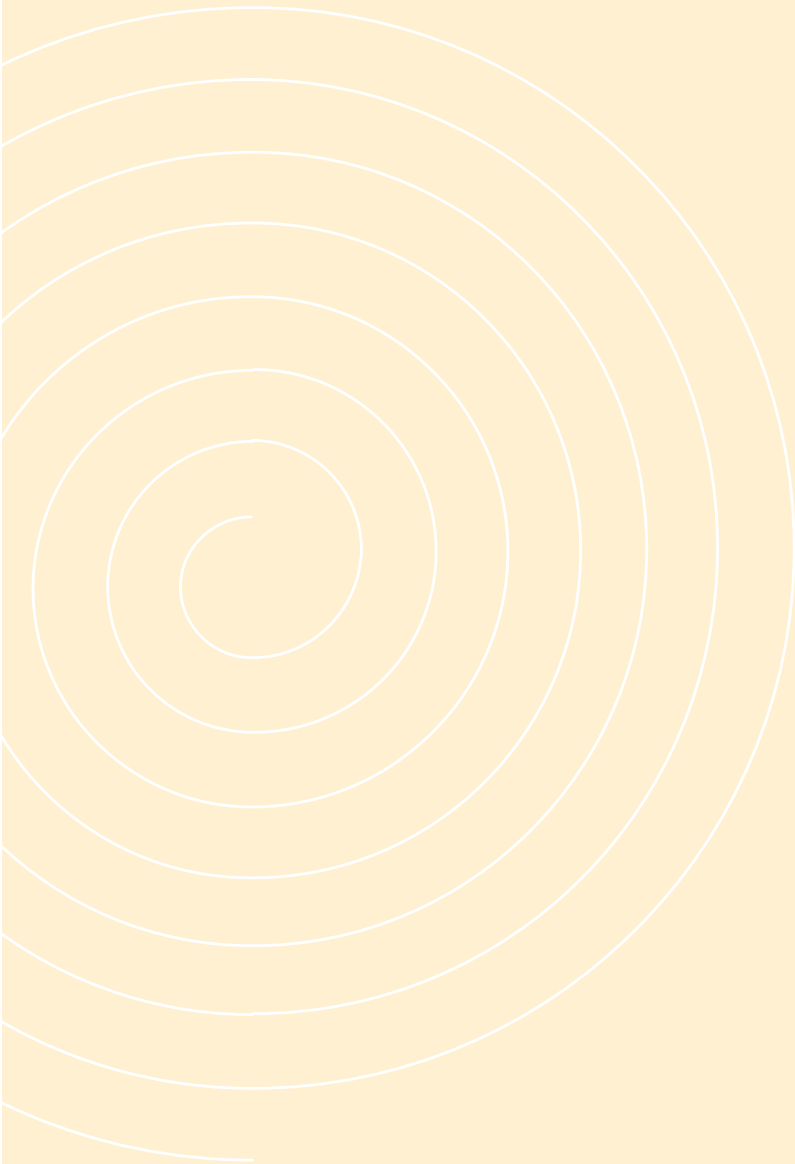
Richard Wood

University of New Mexico



Throughout history and in our own time, humans have had profound experiences with a spiritual dimension of reality. In all traditions, individuals testify that their lives are no longer the same in the aftermath of these experiences—that they have been transformed. Independent observers often attest to these changes as well. Can the study of the nature of such changes offer another possibility for developing new insights into, improved understandings of, and greater appreciation for spiritually transforming experiences?

—Sir John Templeton



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