

FREEDOM FROM RELIGION *foundation*

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March 29, 2017

Sent via email only to: penelope.j.boston@nasa.gov

Dr. Penelope Boston
Director, NASA Astrobiology Institute

Re: Unethical relationship between NASA-CTI officials and unconstitutional NASA grant to Center of Theological Inquiry

Dear Dr. Boston:

As you know, our national organization, which works to protect the constitutional principle of separation between state and church, contacted you several times last summer to object to the NASA Astrobiology Program's grant to the Center of Theological Inquiry (NNX14AR81G).

Mary Voytek responded to that letter on July 21, 2016, indicating that she had reviewed CTI's grant and concluded that it did not violate the First Amendment. That response contained several critical misstatements of constitutional law that render it incorrect. We explained this in our August 8 reply but did not receive a response from Voytek. Please see the attached letter.

Since that exchange, our FOIA requests have been denied, appealed, and granted (twice). After reviewing those records FFRF has two major concerns. **First**, we are deeply concerned that Voytek may have accepted gifts from William Storrar, head of CTI, in violation of federal ethics rules and federal law. We have communicated these possible violations to the Office of General Counsel. A copy of that explanation is attached.

Second, FFRF continues to object to the \$1.1 million grant awarded to CTI for theological research as a violation of the Establishment Clause. Voytek's approval of this grant, defense of the grant's constitutionality by misstating federal law, and her questionable relationship with the recipient of this grant requires a thorough investigation of the grant, its legality, and its propriety by NASA.

1. Voytek's relationship with CTI and Storrar raises serious ethical questions.

For a full accounting of this relationship and the records that revealed it, please see the attached letter to the Office of General Counsel. In brief, during the time Voytek was administering NASA's grant to CTI and considering a future grant to CTI, Voytek accepted gifts from Storrar and CTI including travel to the UK, to Florida, accommodations in both locations, and unidentified "thoughtful gifts," to use Voytek's phrase. None were reported to the Director of the Office of Government Ethics.

As you probably know, this raises serious ethical questions under 5 C.F.R. § 2635.202(b)(1), 5 C.F.R. § 2635.202(b)(2), and legal concerns under 31 U.S.C. § 1353(b).

The close, ongoing relationship between Voytek and Storrar raises concerns about the entire grant to CTI. Email correspondence between the two between June 2014 and October 2016 illustrate a close relationship blurring the line between professional and personal. Included in the

correspondence, Voytek gives advice to Storrar about how to draft the proposal and apply for the grant CTI was awarded. Voytek states multiple times that she will help CTI get funds and details personal meetings between herself and Storrar in Chicago, Baltimore, and the United Kingdom.

2. The FOIA records support FFRF’s contention that the grant was unconstitutional.

Voytek was the NASA officer in charge of administering, approving, and, later, defending the grant. Given her relationship with CTI, each of these must be re-examined in light of FFRF’s initial complaint: the grant of public money for a principally theological purpose is unconstitutional.

CTI’s member handbook listed 12 biographical sketches for the scholars that were working on the investigations the grant funded.¹

Name	Professor of . . .	Work
Neil Arner	Theology	Provide a “Christian response to . . . scientific research on the biological ‘origins’ of morality.” “Propose several ways in which Christians can appropriate within a theological outlook those scientific claims . . .”
Ulrike Auga	Theology & Gender Studies	“analyze the discursive power of space Images and propose alternatives for NASA space image politics.”
William Brown	Old Testament	Developing a new model of “biblical exegesis” (interpretation) that is “framed by “wonder.”
Judith Gundry	New Testament	Relate the theme of existence in 1 Corinthians to astrobiology.
Robin Lovin	Theology (CTI senior fellow)	Ethics and astrobiology, likely informed by his book, <i>Christian Ethics</i> (2011).
Lucas Mix	Evolutionary Biology	Research programs in “astrobiology and Christian theology.” Early work, see previous letter, suggests Mix attempts to reconcile an astrobiology discovery with Christianity and Christian theology.
Anne Marie Reijnen	Theology	Looking at astrobiology impacts, e.g., “As a consequence for Christian doctrine, redemption can no longer mean the redemption of humankind only”
Susan Schneider	Philosophy & Cognitive Sci.	Artificial intelligence and whether non-biological AI could be capable of consciousness.
Frederick Simmons	Life Sciences & Christian Ethics	“This project explores the notion that the life sciences may lead Christians to expect God’s beneficence to all organisms to constrain God’s beneficence to each... [and] how that aesthetic perspective could impact basic Christian ethical commitments.”
Dominique Steiler	Mindfulness, Well-Being at Work, & Economic Peace	“explore how spiritual transcendence, secular ethics and moral virtues can lead us toward a more peaceful economic and working life.”
Andrea Vicini	Moral Theology	Address the possible societal implications of astrobiology with “theological ethics.”
William Werpehowski	Catholic Theology	“I intend to write and publish a monograph that considers forgiveness between parents and children from a Christian theological perspective.”

¹ All quotes in this table are from CTI Grant Member Directory. Available in FOIA record excerpts from the NASA Astrobiology Program’s grant to the Center of Theological Inquiry (NNX14AR81G). Obtained by FFRF, pages 1-13. Herein after “FOIA record excerpts.”

There are only three non-theologians: Mix, Schneider, and Steiler. Mix is an episcopal priest and college chaplain whose work at CTI focused on “astrobiology and Christian theology.” Steiler’s work “focus[ed] on the themes of spirituality, well-being, and the economy.”² Only Schneider, a professor of philosophy and cognitive science, had a teaching focus that was not theological *and* work that was not theological.

Other than a seemingly out of place stab at spirituality, the only theology represented is Christianity.

The work proposed for the grant included:³

- formulating a “Christian response” to scientific studies on morality,
- developing a new model of biblical interpretation,
- relating themes from First Corinthians, a book in the Christian bible, to astrobiology,
- the author of *Christian Ethics* applying those ethics to astrobiology,
- reconciling a potential astrobiology discovery with Christian theology,
- looking at how astrobiology would affect the Christian doctrine of redemption,
- examining Christian ethics and Christian doctrines of human obligation,
- looking at societal implications of astrobiology with “theological ethics,”
- and writing a monograph on Christian forgiveness.

If there were other scholars involved, CTI would have sent that information to NASA and it would have been in the records we requested. There were not others. There were ten Christian theologians, one spiritualist, and one scientist.⁴

FFRF was originally concerned because it appeared that NASA was funding a religious organization’s theological musings:

FFRF does not object to the NASA Astrobiology Program’s goal of studying and funding “the potential societal impact of finding life beyond Earth.” We object to NASA funding a fundamentally religious organization to engage in religious scholarship.

The records bear out our concern.

The records show that the purpose of CTI’s grant proposal was religious: “This proposal provides a program to explore the societal implications of astrobiology, **with particular reference to religious traditions and faith communities.**”⁵ As the above indicates, the “particular reference” was exclusive to Christianity. This is echoed elsewhere in the records and

² *Id.*

³ Bulleted list, *see Id.*

⁴ One of the researchers described the team slightly differently, though not enough to mitigate the constitutional issues. Andrea Vincini apparently told a Huffington Post reporter, “The team of our researchers involved in the research project at the Center of Theological Inquiry on the societal implications of astrobiology was composed of 10 theologians and one philosopher and one expert in management.” *See* Suzan Mazur, “A Chat w/ NASA-funded Italian Jesuit Andrea Vicini,” Huffington Post, March 8, 2017, available at http://www.huffingtonpost.com/entry/a-chat-w-nasa-funded-italian-jesuit-andrea-vicini_us_58c07f8ae4b0c3276fb7810c.

⁵ CTI Grant Proposal Summary. *See* FOIA record excerpts, page 15.

grant proposal (i.e., “While we are particularly concerned with the relationship between astrobiology and theology, religious studies, and religious institutions . . .”⁶)

The records show that CTI’s “mission is to promote interdisciplinary thinking that advances theology’s contribution to the solution of global problems.”⁷ One of our concerns, and one of the requirements of the First Amendment, is that the government not take action or fund projects that advance religion. *See, e.g., Committee for Public Education and Religious Liberty v. Nyquist*, 413 U.S. 756, 763-64 (1973)(“Absent appropriate restrictions on expenditures for these and similar purposes, it simply cannot be denied that this section has a primary effect that advances religion...”)

In other words, CTI’s grant proposal explicitly stated its “mission is to promote” and “advance[] theology’s contribution” to the world. This mission, if publicly funded, is directly contradicts the Constitution. *Tilton v. Richardson*, 403 U.S. 672, 683 (1971) (If federal grants are “used to promote religious interests, the original federal grant will in part have the effect of advancing religion” and is therefore unconstitutional).

This purpose is echoed elsewhere in the records, which show that CTI is, as its name indicates, a thoroughly religious organization. Its articles of incorporation show four purposes, all of which are religious:

- (a) Inquire into the relationship between theological and non-theological disciplines...
- (b) Inquire into the relationship between diverse religious traditions, particularly Christian and nonChristian...
- (c) Inquire into the present state of religious and quasi-religious consciousness...
- (d) Examine such other facets of religion in the modern world...

It is truly difficult to understand how this grant could have been approved in the first place. Let alone how the grant money could have been used for such clearly religious work *after* it was challenged by FFRF. There is simply no excuse for disregarding the separation of state and church in such a manner.

Voytek suggested that FFRF wished to bar any grantseeker with a religious affiliation:

Moreover, to exclude one entity from competing for funding simply because some of its members have religious viewpoints would place NASA in the unfortunate situation of choosing between theistic and non-theistic viewpoints; this is precisely what the Establishment Clause forbids the agency from doing.

But refusing to fund theological research does not raise Establishment Clause concerns. FFRF never stated, let alone suggested, that NASA withhold funding from an entity because some members are religious. We are informing NASA that it cannot constitutionally fund theology, which safeguards the First Amendment, rather than violates it. The Supreme Court has explicitly held that refusing to fund scholarships for theology is not religious discrimination under the First Amendment. *Locke v. Davey*, 540 U.S. 712, 720–21 (2004).

⁶ CTI Grant Proposal, Method, page 2. *See* FOIA record excerpts, page 17.

⁷ CTI Grant Proposal, Management, page 5. *See* FOIA record excerpts, page 20.

We again request that NASA rescind CTI's grant. FFRF is committed to pursuing this issue. To that end, we have submitted yet another FOIA request to learn more about Voytek and Storrar's relationship. Thank you for your time and attention to this matter.

Sincerely,



Andrew L. Seidel
Constitutional Attorney

Enclosures:

1. FOIA record excerpts from the NASA Astrobiology Program's grant to the Center of Theological Inquiry (NNX14AR81G). Obtained by FFRF. "FOIA record excerpts."
2. FFRF letter on possible ethical violations to the Office of General Counsel.
3. FFRF letter to Voytek, August 11, 2016, explaining the legal problems with the grant.

Member Directory



Neil Arner

Assistant Professor of Theology

Notre Dame University, USA

A Critical, Constructive, and Christian Response to Biological Accounts of Morality

Over the last decade, morality has become one of the hottest topics within the biological sciences. Several high-profile scientists have undertaken to "biologize" morality by subjecting the matter to rigorously scientific scrutiny. These figures portray their method of inquiry as a novel means of cutting the Gordian knots that have been tied over the centuries by philosophers and theologians. Some scientists even claim that their analyses categorically prove the falsity or irrelevance of religion in relation to morality. Despite the broad pretensions of such work, few philosophers of religion or theological ethicists have developed careful responses to it. My research project will culminate in a book that provides a critical, constructive, and Christian response to the most cutting-edge scientific research on the biological "origins" of morality. I will first implement a jointly scientific, philosophical, and theological critique of the conclusions about morality and religion advanced by the three most influential scientists who wish to biologize morality. I will then propose several ways in which Christians can appropriate within a theological outlook those scientific claims that have passed this initial scrutiny. I will show how theological reflection on human nature, moral sanctification, natural law, and providential grace can be enriched by incorporating the sound insights from the biological study of morality. These constructive appropriations will illustrate that Christians can engage the natural sciences critically-yet-appreciatively rather than relating to such work only in dismissive or disinterested ways.

Among the societal implications of astrobiology are distinctively moral considerations. What are the prerequisites for moral agency among lifeforms? What pro-social or anti-social dispositions are inculcated by the processes by which life emerges and diversifies? One way to address questions like these is by studying the only documented cases of evolved conscientiousness--those manifested by earth-dwelling great apes. To the extent that all forms of life share common characteristics, these terrestrial studies hold universal significance. My project will critically analyze what leading primatologists, neuroscientists, and psychologists are claiming about the biological "origins" of morality. Although many of these scientists portray their discoveries as falsifying religious accounts of morality, I will argue that the evidence does not demand this sweeping conclusion. To the contrary, I will show how theological accounts of human nature, moral sanctification, natural law, and providential grace can be enriched by incorporating insights from these biological studies. My project will thus illustrate how Christians might engage scientific accounts of life in a manner that is both critical and constructive.

Neil Arner serves as an Assistant Professor in the Theology Department at the University of Notre Dame. He collectively earned six academic degrees in mathematics, biology, philosophy, and theology from the Georgia Institute of Technology, Princeton Theological Seminary, Yale Divinity School, and Yale University. He served in professional ministry for two years in Sarajevo, Bosnia-Herzegovina, and he is currently an ordained teaching elder in the Presbyterian Church (U.S.A.). Prof. Arner's research focuses on the compatibility of natural-law and divine-command theories of ethics, the prospects for a Protestant recovery of natural law theory, the potential for an ecumenical ethics shared by Catholics and Protestants, the contemporary relevance of early modern reflections on morality, and biological explanations of the origins of morality. He is currently completing a book on theological metaethics from the late medieval to early modern eras, and his next major project will provide a theological response to empirical studies of morality.



Ulrike Auga

Professor of Theology and Gender Studies
Department of Religious Studies

Humboldt University, Germany

Life and Visuality in Space Images: A Contribution to the Epistemological Foundations of Astrobiology

Current public and astrobiological discourse on terrestrial and extraterrestrial 'life' works on a biopolitically informed exclusionary model. The project tries both to build an epistemological framework for astrobiology and suggests a non-immunitary semantics of norms for a non-violent community of the universe. The focus is on NASA space image production. Those images coining our idea of space and 'life' are highly manipulated due to technological, optical, political, religious and ethical 'requirements'. The project develops an astrobiology of "diffraction" and "deep ecology" to support an instituting social imaginary aiming at a non-violent, open "*communitas com munus*" of the universe. The interdisciplinary research is based between astrobiology, bioastronomy and cultural, gender, and religious studies.

CTI's excellence, independence, and social responsibility are an ideal place for a full year of creative work. Working with specialists in observatory and image production contexts, and with the NASA Astrobiology and Society Focus Group will greatly enrich the study. My focus is on NASA space image production, which plays an outstanding role in the scientific and public perception of 'life' in the universe. To avoid diverse violent effects, I analyze the discursive power of space images and propose alternatives for NASA space image politics. I develop an epistemological framework for astrobiology and analyze the mechanisms of knowledge production and discourses on 'life' in this discipline, suggesting an astrobiology of "diffraction" and "deep ecology" as a non-exclusive scientific knowledge production strategy.

Ulrike Auga is a transdisciplinary Religious Studies, Cultural Theory and Gender Scholar. Since 2008 she has been Professor for Theology and Gender Studies at Humboldt University of Berlin, Germany. In 2014 she was the Dietrich-Bonhoeffer-Endowed-Chair at Union Theological Seminary/Columbia University New York City. Dr. Auga is the cofounder of the International Association for the Study of Religion and Gender. Born in East-Berlin she participated in the peaceful revolution in 1989 against the East German dictatorship and became involved with social movements and issues of justice, solidarity, gender and theology. She further developed her postcolonial and postsecular critique when she worked for several years in South Africa, Mali, Israel, and the Palestinian Territories. Her current research interests include: Epistemology and Astrobiology; Bio-Politics, Religion and Life; Visual Culture Critique and Religion; Religion and Science.



William Brown

William Marcellus McPheeters
Professor of Old Testament

Columbia Theological Seminary, USA

From Text to Table: A Hermeneutical Adventure

All too often, exegesis is regarded as a series of discrete analytical techniques or tools designed to help the interpreter unlock the meaning(s) of biblical texts. Taught and practiced in this way, **biblical exegesis** fails to account for how meaning is actually constructed (namely, by the interpreter) and, thereby, fails to be a sustaining discipline in the practice of theological inquiry and ministry, itself a vocation of profound meaning making. There is nothing particularly sustaining about exegetical practices that are concerned primarily with explaining the biblical text while ignoring the text's various capacities to engage diverse contexts in powerfully meaningful ways. Moreover, the practice of biblical exegesis can easily become isolated from community life: it is often viewed as something conducted primarily in the privacy of one's study with the requisite lexica and commentaries. To address these deficiencies, **I propose developing a new, inclusive model of exegesis framed by a hermeneutic of wonder.** Such a hermeneutic is driven by curiosity, imagination, and aesthetic enjoyment. It welcomes all forms of human inquiry, including science, and hospitably engages the perspectives of others seated together at the table, all in service of exploring the text's "wondrous depth" (Augustine's *mira profunditas*) in the various contexts of life.

I have always been enthralled with what I call the "Cosmic Paradox," namely that the cosmos is marked by plentitude and constraint. The universe, on the one hand, reflects creative abundance with its rich population of solar systems and galaxies and, on the other, is characterized by insurmountable physical limitations, given the great distances that prevent close interstellar contact with life beyond Earth, particularly beyond our solar system. Into that paradox enters the emerging field of astrobiology. As more exoplanets are discovered, the universe seems to be becoming alive, potentially so, with each new discovery. When extra-terrestrial life is discovered, even if it is merely microbial in form, profound questions arise. Is life on earth all that special? As biological evolution has been (falsely) considered a threat to humankind's dignity, does the discovery of extra-terrestrial life erode the specialness of terrestrial life? Theologically, if God's providential care is discerned to be at work elsewhere in the universe, does that detract from God's work here on earth? Astrobiology also raises the fundamental question of what constitutes life. Does it have the potential of expanding or revising the definition of life as we know it (DNA-based)? **Finally, the discipline of astrobiology will compel me, a biblical scholar, to interpret with greater appreciation the lesser-known creation traditions that extend the dignity of life to all creatures (e.g., Job 38-41; Psalms 104; 148). It will also provide a new lens to the hermeneutical task of interpreting more well-known creation traditions (Genesis 1-3).** Perhaps the greatest question posed by astrobiology is whether or not humanity will be able to discern any sort of connection to life beyond Earth. In either case, the implications will be enormous.

William P. Brown is William Marcellus McPheeters Professor of Old Testament at Columbia Theological Seminary. William Brown has abiding interests in the use of Scripture in the life of the church and in contemporary theological discourse. Some of his specific interests include Psalms, wisdom literature, Genesis, and creation theology. His Ph.D. is from Emory University and his M.Div. from Princeton Theological Seminary. He was a Henry Luce III Fellow in Theology in 2007-08, and his research was published in 2010 by Oxford University Press as *The Seven Pillars of Creation: The Bible, Science, and the Ecology of Wonder*. His most recent books are *Wisdom's Wonder: Character, Crisis, and Creation in the Bible's Wisdom Literature* (Eerdmans), the edited volume *Oxford Handbook to the Psalms* (Oxford), and *Sacred Sense: Discovering the Wonder of God's Word and World* (Eerdmans). Bill and Gail have two grown daughters.



Judith Gundry

Associate Professor of New Testament

Yale Divinity School, USA

The Body, Sex, Sexual Reproduction, and Gender

Embodied existence is an important and multi-faceted theme in 1 Corinthians. My project focuses on three key discussions of embodiment in this ancient text, and seeks to spell out the connections between them. In chapter 7 Paul gives a programmatic statement, in the light of his eschatology, on relating to the material world, and specific directives on whether to marry, have sex, and produce children. In chapter 15 Paul explains the resurrection from the dead in terms of transformation into a "spiritual body" which is incorruptible. In 1 Corinthians 13 Paul suggests that agape is the key ingredient in embodied life which has perduring significance, since agape "abides" and "never falls away." Each of these texts sheds light on the other in ways not yet brought out in the scholarly literature. It is important both to reflect on the resulting picture of embodied existence in this ancient Christian writing from the perspective of new discoveries about life on other planets.

I aim to relate the ideal of embodied existence which I reconstruct in 1 Corinthians, based on a historical critical analysis, to embodied existence as understood in the field of astrobiology. Since one part of my project focuses on sex, sexual reproduction, and gender, I am particularly interested in questions such as the evidence for sex/sexual difference apart from sexual reproduction, the possible evolutionary advantage or disadvantage in sexual reproduction, the possibility that sexual reproduction serves the purpose of combining advantageous genes and/or evading the accumulation of disadvantageous mutations, the implication of these for gender – and new discoveries in the field of astrobiology that shed light on these issues. Since my project addresses the more general question of the sustainability of life on Earth and how this has been, or may be, impacted by a programmatic early Christian statement on "using the world," I am interested in new discoveries about life on other planets that may shed light on sustainability. Since my project also looks at the moral and social aspects of the ideal, embodied life in early Christian thought, I am interested in how these kind of views may play into astrobiologists' assumptions on what life will look like in alien contexts.

Judith M. Gundry is Research Scholar and Associate Professor (Adjunct) of New Testament at Yale Divinity School. She came to Yale in 1998 after having been on the faculties of the Eberhard-Karls-Universität in the former Yugoslavia and Fuller Theological Seminary. She earned the Th.D. from the Eberhard-Karls University of Tübingen, Germany (1988), M.A. from Fuller Theological Seminary (1980), and B.A. from Westmont College (1978). Her research focuses on the letters of the Paul, and on early Christian views on women, gender, and the family. She is the author of *Paul and Perseverance: Staying in and Falling Away* (1990), co-author of *A Spacious Heart: Essays on Identity and Belonging* (1997), and has published numerous scholarly articles. She is an active member of the Studiorum Novi Testamenti Societas, the Society of Biblical Literature, and various editorial boards and steering committees.



Robin Lovin

William H. Scheide Senior Fellow in Theology

Center of Theological Inquiry, USA

Astrobiology and the Necessity of Ethics

The problems of modern politics are leading to a rediscovery of the necessity of ethics. While ethics originally encompassed *politikē*, the public deliberation about human goods, modern political and moral theories have treated these questions and irresolvable and potentially divisive, so that ethics in society becomes, first, impossible and then, eventually, unnecessary. The failure of these theories to resolve the problems and prevent the conflicts they feared leads us to consider again the practical deliberations about human good that take place in a variety of social institutions and that may again deserve consideration in the realm of public reason.

While science changes rapidly, human understanding develops slowly. Knowing ourselves requires reflection on the whole history of science, its interactions with society, and the ethical use and misuse of the knowledge it has provided. Astrobiology, with its interest in the origin, extent, and future of life in the universe is clearly directed toward this kind of comprehensive understanding, as well as toward new scientific discoveries. Indeed, a full investigation of the origin and extent of life is a project that will stretch at least as far into the future as the human search for knowledge can be traced back into the past. In each direction, the horizons recede as we approach them. Astrobiology is an intergenerational undertaking of unprecedented scope, in which we will shape the future of life as well as investigate its possibilities. Astrobiology thus includes politics and ethics as surely as it builds on biology and physics. We will never know about life beyond our solar system unless we commit resources to projects that will not be completed in our lifetimes. We will not be able to make those commitments unless we develop ideas of responsibility that hold us accountable to future generations and make those yet unborn stewards of our aspirations. The techniques of science change with dizzying speed. Public life seems to become more democratic only by becoming short-sighted and self-interested. One way to envision a different kind of science and society is to ask what sort of politics and ethics would make astrobiology possible.

Robin W. Lovin is William H. Scheide Senior Fellow at the Center of Theological Inquiry in Princeton, New Jersey, and Cary Maguire University Professor of Ethics *emeritus* at Southern Methodist University. A resident scholar at CTI since 2012, he became a member of the SMU faculty in 1994, and served as Dean of SMU's Perkins School of Theology from 1994-2002. Robin Lovin's most recent books are *Christian Realism and the New Realities* (2008) and *An Introduction to Christian Ethics* (2011). He has also written extensively on religion and law and comparative religious ethics. He is a former Guggenheim Fellow, former president of the Society of Christian Ethics, and a member of the advisory board for the McDonald Centre for Theology, Ethics, and Public Life at Oxford University.



Lucas Mix

Postdoctoral Fellow
Evolutionary Biology

Harvard University, USA

Meanings of Life

In the course of a year at CTI, I propose to research and write a book setting forth five interrelated perspectives on life present in our culture: visceral, mythic, essential, operational, and systemic. Each perspective has a long tradition and influences different stakeholders in the question of how we define life. Through research and conversations with other scholars, I hope to document a framework for understanding what people want from a definition of life, citing examples from both philosophical writing and science fiction. Building on my recent research into how definitions of life work in science (1, 2), I hope to suggest concrete research programs in both astrobiology and Christian theology that will improve our understanding of life as an aspect of our world.

My research into meanings of life will be enhanced by work at CTI in three ways. First, very few institutions have a concentration of scholars working on the societal implications of astrobiology. As my research depends on identifying and articulating a diversity of stakeholders and perspectives, I can imagine no better aid to progress than weekly interaction around these issues. Second, my research requires a breadth of resources in science, philosophy, history, theology, and popular culture. Princeton provides a world-class library as well as university and seminary faculty interested in questions of science and religion. Third, a year of support will allow me to devote the time and energy necessary to articulate a systematic approach to such diverse issues.

Lucas Mix studies concepts of life as approached in biology, history of science, and theology. He holds a Ph.D. in evolutionary biology from Harvard and serves as a priest in the Episcopal Church. Lucas Mix has been involved with the NASA Astrobiology Institute since 1999, working on interdisciplinary communication, and producing introductions for specialists (*The Astrobiology Primer*) and the public (*Life in Space: Astrobiology for Everyone*). He works as a college chaplain, lecturer and research scholar and specializes in facilitating communication between fields.



Anne Marie Reijnen

Professor of Theology

Institute Catholique de Paris

Cosmos or Chaos: Theology for the Space Age

This inquiry starts from the commonplace image of the Earth seen from space: a powerful reminder of the planet as the "common place", where all forms of life find their sustenance. It reinforced the ecological awareness of the precariousness of our planet, and the interconnectedness of all living organisms on earth. **As a consequence for Christian doctrine, redemption can no longer mean the redemption of humankind only:** "nature is the theatre of grace." In the past, Western theology focused primarily on history and on human beings as the agents of history; presently, the need is felt to think about space, where lives are led on scales that are infinitesimally small (micro-organisms) or astronomically large (the quest for life in our galaxy). Away from a narrow anthropocentrism, life is seen as world-wide web of being(s). Finally we ask what a holistic understanding of divine providence would entail: "chaos or cosmos."

The upcoming "Inquiry on the Societal Implications of Astrobiology" of the Center of Theological Inquiry with support from the NASA Astrobiology program will contribute to heal the rift between increasingly specialized fields of research. Understanding the workings of life — its origins and evolution, and reflecting about the meaning and purpose of life have become almost completely separate endeavours, as though the laboratory and the observatory on the one hand and the study of theologians and scholars in the humanities belonged to parallel worlds. A brilliant exception to that rule, and an example for all, is the theologian and paleontologist Pierre Teilhard de Chardin. Teilhard's book on *The Place of Man in Nature* (1950) thinks "cosmically" about the adventure of life. Although it is not possible to predict the outcome of the dialogue, I know from experience that the confrontation with scholars from other disciplines is extremely fruitful. As a theologian, I expect to make a contribution to the best of my capability to the interdisciplinary dialogue and will certainly benefit greatly from the extended and intensive collaboration with scientists and with scholars from the humanities.

Anne Marie Reijnen is a Protestant theologian. After many years as the chair of Dogmatics at the Faculté Universitaire de Théologie Protestante in Brussels, she is currently the Kairos Chair of ISEO, at the Institute Catholique de Paris. She was ordained in 1986 and has been a commissioner of Faith and Order. She is the past president of the French-speaking Paul Tillich Association (APTEF), and since 2010 a member of the Groupe des Dombes.



Susan Schneider

Associate Professor in Philosophy &
Cognitive Science

University of Connecticut, USA

Postbiological Intelligence in the Cosmos

This project considers new issues involving the possibility of postbiological intelligence throughout the universe as part of a trade book and larger series of academic papers. I've argued, together with Steven Dick, Seth Shostak, Paul Davies and others, that it is likely that the most sophisticated alien civilizations will be postbiological, being forms of artificial intelligence (AI). Further, I've urged that the most sophisticated alien civilizations will tend to be forms of superintelligence: intelligence that is able to exceed the best human level intelligence in every field – social skills, general wisdom, scientific creativity, and so on. I draw from theories of mental processing in cognitive science, and especially accounts of the computational nature of the mind, such as that offered in my book, *The Language of Thought*, and in certain work on consciousness in neuroscience. I also consider the question of whether superintelligent AIs (SAIs) could have conscious experience. Perhaps all their information processing happens in the dark, so to speak, without any inner experience. The matter of whether AI is even capable of conscious thought is important, given the increasing feeling among AI researchers that greater than human intelligence may be created on Earth within 50 years. These matters go beyond the topic of life on other planets, for they are relevant to managing the development of artificial intelligence on Earth as well, and to cases in which humans may themselves opt to enhance their brains using silicon components.

My work is on the nature of the self and mind, which I examine from the vantage point of issues in metaphysics, philosophy of mind/cognitive science, astrobiology, philosophy of science, and applied ethics. I have recently been intrigued by issues in artificial intelligence – matters that require the integration between philosophy and science – such as whether or not non-biological creatures are capable of consciousness, the safe development of superintelligence, and whether humans may one day be able to upload their minds to computers. My work at the Center of Theological Inquiry involves a multifaceted project on the singularity called *The Singularity Papers*, in two of the chapters I argue that the most intelligent alien civilizations are likely forms of superintelligent artificial intelligence. I focus on ways that humans might understand the advanced thought patterns of a superintelligent being. Other chapters focus on taking a critical approach to viewing the self or mind as some sort of computer program, which I argue does not follow from the brain's being computational.

Susan Schneider is an associate professor of philosophy and cognitive science at the University of Connecticut. Previously she was on the faculty of philosophy at the University of Pennsylvania. Her earlier books include *The Blackwell Companion to Consciousness*, *Science Fiction and Philosophy*, and *The Language of Thought: a New Philosophical Direction*.



Frederick Simmons

Assistant Professor of Ethics
Contemporary Life Sciences & Christian Ethics

Yale Divinity School, USA

Beauty and Duty: The Relationships Between Christian Ethics and Aesthetics

This project explores the notion that the life sciences may lead Christians to expect God's beneficence to all organisms to constrain God's beneficence to each by examining aesthetic interpretations of this connection between parts and the whole. It then investigates how that aesthetic perspective could impact basic Christian ethical commitments. In particular, perception of the world's beauty frequently requires detachment, since that beauty stems from a dynamism and dissonance that are difficult for the organisms that participate in them. I argue that aesthetic consideration of these natural processes can foster satisfaction and transcendence of self-concern despite these processes' disvalue by orienting us to greater ethical goods that may inculcate deliberate self-limitation for others' sakes, and so help harmonize our moral duties to others and ourselves. I thus conclude that ethical factors properly inform Christian perceptions of aesthetic values, and aesthetic principles rightly influence Christian doctrines of human obligation and flourishing.

The prospect of participating in the work of the Center particularly appeals to me because my scholarship has consistently advanced most in the context of residential, interdisciplinary research community. My scholarship concentrates on the ethical, aesthetic, and theological implications of what we have learned about the origin, evolution, interdependence, and future of life on earth. Since the relationship between extant ecological exigencies and God's creation decisively shapes my analysis of these implications, astrobiology is directly relevant to my work, for if life were found beyond our biosphere, its character would affect Christian judgments about whether ecological processes reflect God's will for creation or punishment for sin. After all, while contemporary biology detects ecological processes before the human advent and seemingly independent of human influence, it remains restricted to our relatively immediate environment. Astrobiology, of course, is not similarly limited, and thus it may yield new insights into the connections between life and ecological processes. Likewise, because I examine how our growing understanding of the nature of life may affect Christian ethics and faith, I hope my work would enrich others' research investigating the theological and societal implications of astrobiology.

Frederick Simmons' research and teaching examine the moral implications of Christian theological commitments and the relationships between ethics, aesthetics, and the life sciences. He spent nearly two decades at Yale University—first as a student, then as an Assistant Professor of Ethics at the Divinity School; he has also taught at Amherst College, La Pontificia Universidad Católica del Ecuador, and La Universidad Politécnica Salesiana. His current projects include a monograph on the ethical and potential soteriological significance of ecology for contemporary Christians, and a co-edited volume on love and Christian ethics.



Dominique Steiler

**Professor of Mindfulness, Well-Being at Work
and Economic Peace**

Grenoble Ecole de Management, France

Economics, Wellbeing, Spirituality and Mindfulness

My research develops the idea that economic peace is not only a distant goal, but also a daily behavior of any employee, manager or CEO who chooses to align him or herself with a basic humanistic philosophy. My work involves a specific approach to considering the aims of a company in regard to economic peace. In contrast to a company oriented exclusively to the goal of producing financial wealth, I seek to develop a paradigm aimed at developing economic peace, thereby reinforcing the social fabric and contributing to a better place to live and work. My work views profit creation and market competitiveness as instrumental goods which undergird the broader aim of making a positive contribution to society and to the common good. During my time at CTI I will focus on the **themes of spirituality, well-being and the economy.** In particular, I will explore how spiritual transcendence, secular ethics and moral virtues can lead us toward a more peaceful economic and working life.

I am excited at the prospect of weaving the common thread of my research - the dynamic relationship between biological and mental life - into our inquiry on astrobiology and its implications for life in society. Whether teaching and coaching in physical education and high level, Olympic sports performance, serving as a jet pilot, or now conducting applied research on wellbeing, mindfulness and peace building in the economy, a scientific knowledge of the biological basis of life is a core requirement of my work. The opportunity the Center of Theological Inquiry and NASA have given me to engage in dialogue with leading scientists on their search for life in the universe and to reflect on its implications for ideas of life operating in the economy and business world is a rare privilege that I embrace with gratitude.

Dominique Steiler is Professor of Mindfulness, Well-Being at Work and Economic Peace at Grenoble Ecole de Management. His research and consultancy focus is on personal development, stress management and well-being, and their relationship to performance. Initially educated as a professional of social rehabilitation and later as a fighter jet pilot officer in the French Fleet Air Arm, the operational and relationship-based approach he uses is both pragmatic and humanist. Dominique has delivered leadership programs and coaching interventions for corporate executives and Olympic teams and holds a doctorate in Management from Newcastle upon Tyne University.



Andrea Vicini

Associate Professor
Moral Theology

Boston College, USA

The Role of Emotions: Scientific, Anthropological and Ethical Perspectives

Astrobiology has societal implications that might affect its present and future developments as well as the reception of its findings. Theological ethics helps to discern and address these implications by focusing on human emotions and, in particular, by examining how emotions are a relevant component of ethical discernment and moral decision making for researchers, scholars, and citizens in contemporary society. The project will study scholarly reflections on emotions in philosophy, psychology, neuroscience, and theology by applying them to astrobiology. Moreover, the project aims at articulating a new constructive approach focused on emotions and shaped by scientific, anthropological, and ethical perspectives. The publication of peer-reviewed essays will expand the scholarly debate and be part of a future volume.

As an Italian Jesuit, pediatrician, and moral theologian, teaching at Boston College I have long appreciated the need for ecumenical theological work, interdisciplinarity, and the relationship between science and ethics. Reflecting on astrobiology will expand and strengthen my studies on emerging scientific research—having already published on the social implications of genetics, new biotechnologies, as well as trans- and posthumanism. I appreciate scientific progress and I articulate an ethical agenda that promotes flourishing, responsibility, justice, and the common good. I hope to contribute my experience in theological ethics and medicine to the inquiry on the societal implications of other scientific disciplines (e.g., genetics, biotechnologies, sustainability, and global health). I look forward to participating in interdisciplinary ethical conversations that will provide theoretical and practical resources for addressing astrobiology's societal implications.

Andrea Vicini, S.J., is a pediatrician with a PhD in theological ethics from Boston College and a STD from the Faculty of Theology of Southern Italy (Naples). He is currently associate professor of moral theology and interim chair of the Ecclesiastical Faculty of the School of Theology and Ministry. Specializing in fundamental moral theology, bioethics, sexuality, medical ethics, and environmental issues, he has published numerous articles and book chapters. In 2015 he co-edited two collections: *Just Sustainability: Technology, Ecology, and Resource Extraction* (with Christiana Z. Peppard) and *The Legacy of Vatican II* (with Massimo Faggioli). Forthcoming are his volume *Emerging Issues in Theological Bioethics: Global Health, Regenerative Medicine, Neuroscience, Synthetic Biology, Nanotechnology* and essays on sustainability, communication in medical settings, and ethical issues in global health.



William Werpehowski

Robert L. McDevitt, K.S.G., K.C.H.S. &
Catherine H. McDevitt L.C.H.S. Chair in
Catholic Theology

Georgetown University, USA

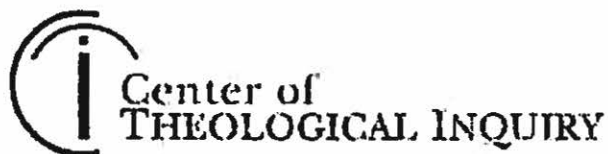
Forgiveness Between Parents and Children

I intend to write and publish a monograph that considers forgiveness between parents and children from a Christian theological perspective. The study will integrally involve attending to relevant materials in contemporary philosophy, literature, childhood studies, and what has come to be known and appreciated as "the science of forgiveness." My approach will be to test and critically revise a general and plausible vision of forgiveness as a work of Christian love that is a matter of "wiping the slate clean" in one sense or other, as that is based upon and analogous to essential features of divine mercy (cf. Psalm 51: "Purge me with hyssop, and I shall be clean; wash me, and I shall be whiter than snow."). The specific relational cases of parents forgiving children and children forgiving parents will lend focus and concreteness to the scientific, literary, and above all theological contributions.

In my capacity and work as McDevitt Professor of Catholic Theology at Georgetown, my research, scholarship, and teaching will be enriched generally by the Astrobiology Inquiry as it is an increasingly significant subject for Roman Catholic reflection and just so bears on central theological topics such as the character of creation, the reach of divine redemption, and the meaning of Christian love. My attention to forgiveness between parents and children works out an account of forgiveness as a feature of Christian agape, as it is related to, incarnate within, and redeeming what I take to be the a gift of creation, the love constitutive of parental-child bonds. The specific analyses, arguments, and conclusions I reach will necessarily involve and reflect a more general and critically expansive vision of agape, and therefore will pertain to Christian responses to the inquiries and discoveries of astrobiology.

William Werpehowski holds the Robert L. McDevitt, K.S.G., K.C.H.S. and Catherine H. McDevitt L.C.H.S. Chair in Catholic Theology at Georgetown University. He is the author of *Karl Barth and Christian Ethics: Living in Truth* (Ashgate, 2014) and *American Protestant Ethics and the Legacy of H. Richard Niebuhr* (Georgetown University Press, 2002). He has also co-edited, with Gilbert Meilaender, *The Oxford Handbook of Theological Ethics* (Oxford, 2005). A former president of the Society of Christian Ethics, Werpehowski worked at Villanova University for over three decades before joining the Georgetown faculty, and directed its Center for Peace and Justice Education from 1999-2010.

CTI Grant Proposal



PROPOSAL SUMMARY

Although astrobiology is a new field, little known to the general public, the information it provides is destined to play a large part in politics, economic life, and the human self-understanding provided by theology, philosophy, and the arts. **This proposal provides a program to explore the societal implications of astrobiology, with particular reference to religious traditions and faith communities.** The program is designed to provide essential scientific information to leading scholars in the humanities and social sciences through sustained interdisciplinary discussions over a period of two years.

This proposal centers on a residential symposium program involving six to eight Research Fellows in the humanities and social sciences during each of two years, beginning in the fall of 2015. Research Fellows will work and live in facilities of the Center of Theological Inquiry, an independent research institution located in Princeton, New Jersey. During their year in residence, Research Fellows will participate in three symposium conferences with scientists involved in astrobiology research. They will also have opportunities for further discussion with astrobiologists in monthly videoconferences, and they will participate in a weekly colloquium to share their own work in progress.

In addition to the two yearlong residential symposium programs, this proposal includes an opening Astrobiology and Society Conference for prospective program participants and a concluding conference to share the work of the research Fellows with the scholarly community. Two weeklong workshops for Ph.D. students and recent Ph.D. graduates in the humanities and social sciences are also proposed.

The Center of Theological Inquiry has extensive experience in planning and managing scholarly programs of this scope and design. CTI facilities provide a setting for productive research and writing, scholarly collaboration, and comfortable living for resident Research Fellows and their families.

TABLE OF CONTENTS

1. Purpose	1
2. Method	2
2.1 Residential Symposium Program	
2.2 Conferences on Astrobiology and Society	
2.3 Young Scholar Workshops	
3. Management	4
3.1 The Center of Theological Inquiry	
3.2 CTI Leadership	
3.3 CTI Program Experience	
4. Biographical Sketches	7
William Storrar – Principal Investigator	
Robin Lovin – Co-Investigator	
5. Current and Pending Support.....	10
6. Budget	11

ASTROBIOLOGY, RELIGION, AND SOCIETY
A Symposium Series to Support Research on the Societal Implications of
Astrobiology

1. Purpose

Astrobiology is a key part of the science that will shape the human future. Research into the origin and extent of life in the universe includes planetary science that will give us a better understanding of our own planet, biology that helps us see our own evolutionary possibilities, and exploration of extraterrestrial environments that may put us in contact with other intelligent life or provide a habitat for human life beyond our planet. While the science that investigates these questions is little known to the general public, the information it provides seems destined to play a large part in future politics, economic life, and the human self-understanding provided by theology, philosophy, and the arts (Mix 2009). It is important to begin now to explore the societal implications of astrobiology, incorporating the results of current science and anticipating the direction of future investigations on the basis of expert advice.

From ancient cosmological speculation to modern physics (Whitehead 1985) and evolutionary biology (Rolston 2010, van Huyssteen 2006), scientific findings have had to be taken into human self-understanding. Knowledge has limited effects until it is integrated into the ways that people relate to one another in their moral lives, organize their societies, and orient themselves to the whole of reality through religious rituals, ideas, and images. To change the world, science has had to transmit its findings to philosophers, priests, prophets, and poets.

In the past, the scientist, the philosopher, and the priest were often the same person. As recently as the European Renaissance, clergy made scientific observations and scientists discussed the theological implications of their findings. The "renaissance thinker" is still an attractive figure to contemporary intellectuals, but the extension of knowledge now clearly requires greater specialization and more planning, not only in the scientific investigations themselves, but in the dialogue between science and society. A twenty-first century renaissance will have to be the result of a collaborative effort that allows for the emergence of new ways of thinking that connects the methods of science, social science, and the humanities (Kagan 2009). No one approach guarantees the success of these collaborations, nor can their outcomes be specified in advance, but previous experience suggests some characteristics of the discussions that can make a difference (Lyll, et. al. 2011). Successful collaborations are:

Open. Societal implications of science become clear as participants risk entering new ideas into discussion and try to use ideas and methods that are not their own. No one discipline determines the terms for such discussions, so innovative thinking and critical rigor must be supported by the attitudes of the participants, rather than supplied by a shared method.

Expert. Openness to new ways of thinking must be balanced by recognized expertise in the disciplines represented in the discussion. In particular, the NASA Astrobiology Roadmap encompasses a large number of specialized scientific investigations, and understanding their societal implications begins, even for other scientists, with attention to the details of these findings. At the same time, the social sciences and humanities bring a range of different and sometimes competing methods to bear on the same historical events, social trends, and institutions. These methods be should presented well and taken seriously on their own terms before the discussion moves toward more general conclusions.

Sustained. Especially in the humanities and social sciences, a discussion that makes a difference for future work is more than a report of results. Participants need opportunities to present ideas, respond to criticism, and revise their work for further consideration. In an effective program for sharing information, conversations continue informally, and new collaborations emerge from work in progress.

Interdisciplinary. The transition from astrobiological findings to societal understanding does not proceed serially, handing information off from scientific investigation to theological interpretation to social implementation. The understanding of biological life beyond our planet and the social and technical organization required to support its study must be approached from many angles of vision simultaneously. It is not only how theology, anthropology, law, and ethics each understand astrobiology, but also how they all understand each other attempting to understand astrobiology.

Transformative. In the long run, scholars in the humanities and social sciences change their disciplines by changing their own work in significant ways as a result of their participation in interdisciplinary discussions. These discussions must therefore be structured in a way that requires a commitment to future research and writing, and participants must be chosen through a selection process that tests that commitment, as well as reviewing previous scholarly accomplishments.

2. Method

The Center of Theological Inquiry proposes a two year program centered on a resident research team and designed for maximum impact on the future of studies of the societal implications of astrobiology in the humanities and social sciences. While we are particularly concerned with the relationship between astrobiology and theology, religious studies, and religious institutions, our experience has shown that effective study of any question about religion and science requires an interdisciplinary approach that locates religious ideas and institutions in a larger social context. Our aim is to select participants and structure programs in ways that provide that interdisciplinary approach for this study of the societal implications of astrobiology.

A Residential Symposium Program is at the heart of our proposal, with additional Conferences on Astrobiology and Society and Young Scholar Workshops.

2.1 Residential Symposium Program. We propose to select teams of Researchers who will participate in two nine-month residential symposium programs during 2015-16 and 2016-17. Each year's symposium program will include three weeklong meetings with scientists engaged in astrobiology research and monthly videoconferences with astrobiologists to discuss the Research Fellows' work in progress. In addition, each Research Fellow will have his or her own research and writing project, which will be developed through regular colloquium meetings with other team members. Research Fellows will also have opportunities for individual consultation with astrobiologists engaged in research relevant to their particular projects in the humanities and social sciences. Each of the two nine-month residential symposium programs is thus organized around the following elements:

2.1.1 A Residential Team of 6 Research Fellows in theology, religious studies, social sciences, and the humanities, chosen on the basis of peer-reviewed applications. In addition to previous scholarly achievements, successful applications must propose a relevant individual research and writing project and give evidence of aptitude for interdisciplinary dialogue and collaborative work. Research Fellows will receive a grant of up to one-half their annual salary and must be available for the full nine-month program in at the Center of Theological Inquiry in Princeton, New Jersey, where they will have a study as their daily workplace and a fully furnished townhouse residence.

2.1.2 Three Weeklong Symposium Conferences with scientists engaged in astrobiology research, generally to be scheduled in September, January, and March. These scientists would be chosen in consultation with NASA's Astrobiology Institute, based on the significance of their work for a current understanding of astrobiology, its societal relevance, and its fit with the particular interests of the resident Research Fellows. Symposium Conferences would include formal presentations of research results by the scientists, discussions of societal implications led by members of the resident research team, and opportunities for individual consultation between the visiting scientists and members of the research team. Invited participants from the Princeton academic community would also be included to encourage further interactions with the resident research team.

2.1.3 Six Videoconferences with research scientists, scheduled in the months without Symposium Conferences. Also chosen in consultation with NASA's Astrobiology Institute, these scientists would be asked to review the Research Fellows' work in progress and engage in discussion of the societal implications of recent work in astrobiology. Together with the Symposium Conferences, these videoconferences provide an ongoing scientific perspective on the work of the Research Fellows.

2.1.4 Fifteen Colloquium Meetings for the resident Research Fellows, generally scheduled weekly from September through May. These meetings provide opportunities for Research Fellows to share their own work in progress and to engage in extended discussions of the societal implications of astrobiology and the conduct of interdisciplinary research. Their conversation will be enhanced by the contributions of the 6 other scholars in theology and the humanities in CTI's regular resident program.

Cumulatively, then, the two year Residential Symposium Program provides opportunities for 12-16 scholars in the humanities and social sciences to pursue their research and writing projects through six Symposium Conferences, twelve videoconferences, and thirty Colloquium meetings.

2.2 Conferences on Astrobiology and Society. To open and close the Symposium series, we propose two additional Conferences on Astrobiology and Society. The first, to be held in the summer of 2015, would precede the first research year and provide an opportunity to convene the newly selected Research Fellows for discussion with invited research astrobiologists, NAI staff, and other scholars who have done research on the societal implications of astrobiology. The purpose would be to identify overarching research questions for consideration over the following two years. The second Conference on Astrobiology and Society, at the conclusion of the series in 2017, would draw on selected work by members of the two resident research teams present a synoptic view of the societal implications of astrobiology for an invited audience of scholars in the social science and humanities.

2.3 Young Scholar Workshops. The future of a new area of scholarship depends heavily on engaging the interest of scholars who are just beginning to plan their own careers of research and writing. To provide this engagement with the study of astrobiology and society, we will provide weeklong workshops in June 2016 and June 2017 for Ph.D. candidates and recent Ph.D. graduates. Each workshop will include 8-10 students chosen through a competitive application process and will be led by two or three faculty recruited from the Research Fellows in the Residential Symposium Program that will have just concluded.

Each of these program elements has been designed to advance study of the societal implications of astrobiology through a program that is, as described above, **open, expert, sustained, interdisciplinary, and transformative.** The selection process seeks out Research Fellows and young scholars who are committed to interdisciplinary discussions and have an aptitude for collaborative work. Expert presentations of current research become a part of sustained discussions among humanities and social science scholars who are themselves recognized leaders in their fields, and their participation in the ongoing colloquium assures that problems under discussion will receive attention from a variety of different disciplinary perspectives. In addition, each of the Research Fellows will leave the program with an individual writing project that has been shaped by these discussions and that is potentially transformative of the field. Some of these Research Fellows will also provide leadership for the Young Scholar Workshops, where those who will become the next generation of teachers and researchers will shape their understanding of the societal implications of astrobiology.

3. Management

The Center of Theological Inquiry offers unique resources for planning, hosting, and directing the program we have proposed. CTI has years of experience with programs of similar design and purpose. Necessary facilities and staff are part of CTI's ongoing

operations, so that the funding we seek supports scholars and programs, without indirect costs.

3.1 The Center of Theological Inquiry is an independent research center located in Princeton, New Jersey, and incorporated as a non-profit educational institution. Our mission is to promote interdisciplinary thinking that advances theology's contribution to the solution of global problems. We do this primarily through residential programs that can provide up to twelve scholars with opportunities for research, writing, and sustained collaboration with colleagues, using dedicated study space in CTI's Luce Hall headquarters and living in furnished townhouse residences located nearby. CTI is also able to provide its resident scholars with access to library resources at Princeton Theological Seminary and Princeton University.

3.2 CTI Leadership includes Dr. William Storrar, Director, who provides overall executive leadership and has responsibility for budget, strategic planning, and invitations to resident Research Fellows. Dr. Robin Lovin, Director of Research, provides leadership for scholarly programs. Dr. Storrar and Dr. Lovin are the Principal Investigator and Co-Investigator for this proposal. Ms. Shirah Brown, Center Administrator, provides support services for academic programs and conferences and manages CTI facilities.

An Academic Advisory Panel advises on scholarly programs and guides the review process for competitive fellowships and other selective programs. Members of the Panel for 2014-15 include:

João Biehl, *Professor of Anthropology, Princeton University*

Francis Clooney, S.J., *Parkman Professor of Divinity and Professor of Comparative Theology, Harvard University*

Angela Creager, *Philip and Beulah Rollins Professor of History (History of Science), Princeton University*

David Fergusson, *FRSE, FBA, Professor of Divinity, University of Edinburgh*

Friederike Nüssel, *Professor of Systematic Theology, University of Heidelberg*

Peter Paris, *Elmer G. Homrighausen Professor emeritus, Princeton Theological Seminary*

3.3 CTI Program Experience includes, most recently, a three-year residential research fellowship program designed to encourage interdisciplinary thinking in areas of religious, social, and scientific concern. Themes include Evolution and Human Nature (2012-13), Religious Experience and Moral Identity (2013-14) and Law and Religious Freedom (2014-15). Each of these years has included important elements of the proposed program on Astrobiology, Religion, and Society, including an application and selection process for research fellowships, a nine-month program of symposium conferences, weekly colloquium meetings, and other program events, and a weeklong workshop for young scholars. In addition, CTI has organized a variety of scholarly programs since its inception in 1978 and has hosted resident research scholars in Luce Hall since 1984. Although CTI is an independent research institution, it cooperates on program events with Princeton Theological Seminary, and with the Center for the Study of Religion and the Program in Law and Public Affairs at Princeton University.

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WILLIAM STORRAR, Ph.D.
Principal Investigator

William Storrar is the Director of the Center of Theological Inquiry (CTI) in Princeton, New Jersey, with fourteen years of experience in leading interdisciplinary research centers, programs, and global initiatives in the USA and UK.

Interdisciplinary Research Leadership

In the period since his appointment as Director of CTI in 2005, William Storrar has run an international visiting scholar program that has attracted leading research scholars in theology, the natural and social sciences, humanities and law; raised \$4million in grant support for CTI's interdisciplinary research program; and developed collaborative research partnerships with a range of academic, professional, and non-profit institutions, including the International Bar Association, Salzburg Global Seminar, and the Center for the Study of Religion and Program in Law and Public Affairs at Princeton University. He came to his current leadership position at CTI from the University of Edinburgh in the UK, where he held the Chair of Christian Ethics and Practical Theology, and served as Director of the university's interdisciplinary Centre for Theology and Public Issues (CTPI). As a professor and research center director at Edinburgh University, he initiated the Global Network for Public Theology which links 25 interdisciplinary research centers and programs in higher education institutions in Africa, Asia, Oceania, Latin America, North America, and Europe, pursuing collaborative research on theology and public issues.

William Storrar is a triple graduate of the University of Edinburgh, with an MA in Politics, **BD in Ecclesiastical History, Christian Ethics and Practical Theology, and PhD in Practical Theology**. He is an ordained minister of the Church of Scotland. After eight years in parish ministry, 1983-1991, he was appointed as Lecturer in Practical Theology at the University of Aberdeen, 1992-1996; Lecturer and Senior Lecturer in Practical Theology at the University of Glasgow, 1996-2000; and Professor of Christian Ethics and Practical Theology, University of Edinburgh, 2000-2005. As an applied theologian, his research interests are in the contemporary life of religious congregations, the work of ordained ministry, the contribution of theology to public life, applied social ethics, and methods in interdisciplinary research. His publications include the edited interdisciplinary volumes, *Public Theology for the 21st Century* (2004); *A World for All? Global Civil Society in Political Theory and Trinitarian Theology* (2011); and *Yours The Power: Faith-Based Organizing in the United States* (2013). His work on medical ethics includes *Human Genetics* (1994).

William Storrar is an Extraordinary Professor at the University of Stellenbosch, South Africa; a Visiting Professor and Magnusson Fellow of Glasgow Caledonian University, UK; and an elected member of the International Academy of Practical Theology, and the American Theological Society. He has also served as a Trustee of Morven Museum, Princeton, NJ, historic home of Richard Stockton, Founding Father.

Institutional Leadership of the Center of Theological Inquiry

As Director of CTI since 2005, William Storrar has been responsible for the following interdisciplinary and inter-religious research projects at the Center.

1. Humanities Scholarship in the Abrahamic Traditions

This CTI research project brought Humanities scholars in Judaism, Islam, and Christianity together to consider the interpretation of common sacred texts and their contribution to human flourishing. This project produced a joint volume of essays, *Crisis, Call, and Leadership in the Abrahamic Traditions* (2009).

2. Law and Religion

A research project on religion and international law, 2006-2010, under the co-leadership of Jeremy Waldron, University Professor of Law, New York University, and Robin Lovin, then University Professor of Ethics, Southern Methodist University. Among its publications are *The Power and Purpose of International Law* (2008), and *Islamic Law and International Human Rights Law* (2011). Work in law and religion will continue in 2014-2015 with a resident inquiry on law and religious freedom.

3. Science and Religion

With a \$3.5 million grant from the John Templeton Foundation, CTI has held two year-long resident inquiries in the interdisciplinary field of science and religion:

Evolution and Human Nature, 2012-2013

This project convened a research team of 12 scholars in evolutionary biology, anthropology, psychology, theology, and philosophy to consider the religious and societal implications of recent advances in the scientific study of human evolution.

Religious Experience and Moral Identity, 2013-2014

This recently completed inquiry convened 12 resident scholars in psychology, neuroscience, theology, and philosophy to consider the religious and societal implications of scientific advances in the study of the brain and moral behavior.

4. Societal Implications of Astrobiology, 2012-2014

William Storrar has served in its first three years on the advisory committee for the appointment of the Baruch S. Blumberg NASA/Library of Congress Chair in Astrobiology at the John W. Kluge Center, Washington D.C. In that capacity he has reviewed applications in the sciences and humanities for this distinguished Chair and developed a strong commitment to interdisciplinary scholarship in this field.

ROBIN LOVIN, Ph.D.
Co-Investigator

Robin Lovin is the Director of Research at the Center of Theological Inquiry in Princeton, New Jersey, and Cary Maguire University Professor of Ethics *emeritus* at Southern Methodist University. He joined the SMU faculty in 1994, and served as Dean of Perkins School of Theology from 1994-2002. Prior to this, he was Dean of the Theological School at Drew University in Madison, New Jersey, and a member of the faculty at the Divinity School of the University of Chicago.

He holds the B.A. from Northwestern University and the B.D. and Ph.D. from Harvard University. In 2013, he held the Maguire Chair in Ethics and American History at the Library of Congress. He is a former Guggenheim Fellow, former president of the Society of Christian Ethics, and a member of the advisory board for the McDonald Centre for Theology, Ethics, and Public Life at Oxford University. He has been an editor of the *Journal of Religion* and served on the editorial boards of the *Journal of Law and Religion*, the *Journal of Religious Ethics*, *Studies in Christian Ethics*, and the *Journal of the American Academy of Religion*.

Robin Lovin's scholarship centers on religious ethics, with an emphasis on twentieth century Christian political ethics, religion and law, and comparative religious ethics. His books include *Christian Faith and Public Choices* (Westminster, 1984), *Reinhold Niebuhr and Christian Realism* (Cambridge, 1995), and *Christian Realism and the New Realities* (Cambridge, 2011). He co-edited, with Frank E. Reynolds, *Cosmogony and Ethical Order: New Studies in Comparative Ethics* (Chicago, 1985) and has authored more than fifty articles in peer-reviewed journal and scholarly publications. He directed the Project on Religion and American Public Life at the University of Chicago Divinity School (1982-85) and co-chaired, with Richard Mouw, the Project on the Public Presence of the Theological School sponsored by the Association of Theological Schools in the United States and Canada (1998-2001).

Since 2006, Robin Lovin has worked closely with the Center of Theological Inquiry on its interdisciplinary research programs. With Jeremy Waldron, University Professor of Law at New York University, he co-lead CTI's research project on Religion and International Law from 2006-2010. He participated in the International Bar Association project that led to *Islamic Law and International Human Rights Law* (Oxford 2011) and contributed an epilogue to that volume. He participated in preparation of the proposal for the three year, interdisciplinary research grant on New Approaches in Theological Inquiry and has served as Project Leader for the resulting program since its inception in 2012. As Project Leader, he shared responsibility with senior Research Fellows for guiding the program for resident scholars in 2012-13 and in 2013-14. In June 2014, he participated in a public conversation at the Library of Congress on "Astrobiology and Theology" with Steven Dick, and he will participate in the NASA/Library of Congress Astrobiology Symposium, "Preparing for Discovery" in September 2014.

5. Current and Pending Support

5.1 The Center of Theological Inquiry (CTI) will approach other potential funders and donors to support the participation of visiting astrobiologists in the Symposium Series on Astrobiology, Religion, and Society, 2015-17. These potential supporters include:

5.1.1 The John Templeton Foundation, which is currently supporting CTI's resident research program in theology and science with a \$3.5 million grant, 2012-2015.

5.1.2 The Development Committee of CTI's Board of Trustees has identified at least one potential donor with an interest in planetary science to be approached for a major gift to provide additional support for the resident Symposium Series, including additional fellowships, conference support, and media resources.

6. Budget Justification: Narrative and Details

6.1 Budget Narrative

6.1.1 NASA Grant Proposal: Resident Symposium Fellowships CTI is seeking NASA grant support primarily to fund 6 competitive fellowships a year for 2 years to enable 12 outstanding scholars in the humanities and social sciences to participate in a residential Symposium Series on the societal implications of astrobiology, 2015-17. (See 2.1.1 above.)

6.1.2 Workshops and Conferences CTI is seeking additional NASA funding to cover the travel costs (transport and lodging) of 2 workshops for young scholars and 2 conferences on astrobiology and society during the 2 year Symposium Series, 2015-17. (See 2.2 and 2.3 above.)

6.1.3 Proposing Organization The Center of Theological Inquiry will fund all other program and operating costs related to the residential Symposium Series, including personnel, administration, and facilities, calculated at \$560,000 per annum. CTI does not seek indirect costs in the NASA grant proposal.

6.2 Budget Details

6.2.1 NASA Grant Proposal There are two budget elements in the grant proposal:

(i) **Stipends: \$1,000,000** - \$500,000 a year for 2 years to fund 6 competitive fellowships each year (1 up to \$150,000 and 5 up to \$70,000), 2015-16, and 2016-17. This is the level of current fellowship awards at CTI, normally set at up to half salary with a cap on the upper figure for an award, determined by the total amount available for the 6 fellowships.

(ii) **Travel: \$108,000** - \$54,000 a year for 2 years, 2015-17, to fund 2 workshops and 2 conferences on the societal implications of astrobiology: an annual workshop for 10 young scholars and an annual conference for 15 scholars in humanities & social sciences.

6.2.2 Costings The cost of the travel budget for the special events has been calculated according to the following template which CTI uses to budget for travel to workshops and small conference events in Princeton:

Flights to Newark, NJ, or Philadelphia, PA, for Princeton

Domestic Flights: \$500

Foreign Flights: \$1,500

Lodging in Princeton

Hotel Group Booking Rates: \$200 per night

Catered Meals: \$60 per day

6.2.2.3 Young Scholar Workshops

Accommodation for 10 students and 2 workshop leaders for 5 nights - \$12,000

7 Domestic Flights - \$3,500

5 International Flights - \$7,500

Meals - \$3,600

Ground Transportation - \$1,400

Total per workshop - \$28,000 per annum

6.2.2.4 Conferences

Accommodation for 15 scholars for 3 nights - \$9,000

10 Domestic Flights - \$5,000

5 International Flights - \$7,500

Meals - \$2,700

Ground Transportation - \$1,800

Total per conference: \$26,000 per annum

6.3 Proposing Organization Budget

Annual Operating Budget: \$1,120,000

Salaries, Payroll Tax, & Fringe

Benefits - \$530,000

Program - \$200,000

Facilities - \$300,000

Management - \$90,000

CTI estimates that 50% of its budget will be devoted to program and operating costs for the Symposium Series during the two years of the program.

6.4 Budget for Residential Symposium Series in Astrobiology, Religion, and Society

Support, 2015-17: Center of Theological Inquiry - \$1,120,000; NASA - \$1,108,000

Income: \$2,228,000

Expenditure: \$2,228,000

FREEDOM FROM RELIGION *foundation*

P.O. BOX 750 | MADISON, WI 53701 | (608) 256-8900 | FFRF.ORG

March 30, 2017

SENT VIA U.S. MAIL AND EMAIL TO:

sumara.m.thompson-king@nasa.gov

Sumara M. Thompson-King
Designated Agency Ethics Official
Office of General Counsel
NASA Headquarters
300 E. Street SW, Suite 5R30
Washington, DC 20546

Re: Improper Receipt of Gifts by NASA Technical Officer

Dear Ms. Thompson-King:

I am writing on behalf of the Freedom From Religion Foundation, a national non-profit organization that works to protect the constitutional principle of separation between state and church, regarding improper gifts accepted by NASA Technical Officer Mary Voytek. FFRF discovered the improper gifts after receiving documents related to a Freedom of Information Act request¹ regarding a grant awarded by NASA to the Center for Theological Inquiry (CTI).²

Factual Background

NASA awarded grants to CTI to study “the societal implications of astrobiology, with particular reference to religious traditions and faith communities.”³ The first on September 12, 2014 and the second June 20, 2016. The technical officer assigned to each of these grants was Mary A. Voytek. CTI Director William Storrar was listed as the principal investigator for each. While CTI and Storrar have done business with NASA, they appear to have given Voytek gifts.

Trip to the UK—Flight and Lodging

While administering the first CTI grant but prior to approving the supplemental grant, Voytek participated in a panel at CTI’s *Science & Society: a new conversation* held at Windsor Castle in the United Kingdom on July 3, 2015.⁴ According to emails between Voytek and Storrar, CTI arranged for Voytek’s travel to and from this event.⁵ A subsequent email from Storrar’s office to Voytek, confirmed her attendance and explained that travel plans would be arranged in the near future and paid for by CTI. CTI would reserve Voytek accommodations at St. George’s House at

¹ FOIA Case Number: 16-HQ-F-00846.

² Grant Number: NNX14AR81G.

³ CTI Grant Proposal Summary. Appendix A.

⁴ Program for *Science and Society: a new conversation*. Appendix B.

⁵ E-mail from William Storrar to Mary Voytek (Feb. 19, 2015, 7:56AM) (Appendix C).

Windsor Castle from July 2 through July 6.⁶ Finally,⁷ Storrar stated a car service would pick Voytek up from and return her to Heathrow airport.⁷

These emails were exchanged, the travel arranged, and the travel completed while Voytek was administering one grant from CTI and considering or shortly to be considering a second CTI grant. These emails indicate that Voytek received improper gifts: free travel and lodging from CTI.

Trip to Florida and Unstated Gifts

In another email sent during the same period, Voytek says:

Thank you so much for the invitation to join you in Florida and to meet your Board Members. Likewise, they sung your praises to me and even before meeting them I would have joined that choir! They are huge fans and it is well deserved! I also must thank you for your thoughtful gifts and for the opportunity to meet your wife. I hope to see more of her during our collaboration.⁸

Storrar invited Voytek to this meeting in September 2014.⁹ The FOIA records do not reveal the nature of the “thoughtful gifts” CTI gave to Voytek in addition to her travel and lodging.

Ethical Violations

As you know, employees of the executive branch of the United States of America “may not . . . accept a gift from a prohibited source.”¹⁰ A prohibited source includes any person who:

- “does business or seeks to business with the employee’s agency.”¹¹
- “is seeking official action by the employee’s agency,”¹² or,
- “has interests that may be substantially affected by the performance or nonperformance of the employee’s official duties.”¹³

CTI is or was a prohibited source under each of these definitions.

Violations of Federal Law

Voytek’s actions also raise concerns under federal statutes. An executive branch employee may not accept payment “for travel, subsistence, and related expenses with respect to attendance of the employee at any meeting or similar function relating to the official duties of the employee” from a non-Federal source.¹⁴

⁶ E-mail from Shirah Brown to Mary Voytek (May 7, 2015, 2:12PM EDT) (Appendix D).

⁷ E-mail from William Storrar to Mary Voytek (Jun. 24, 2015, 3:59PM EDT) (Appendix E).

⁸ E-mail from Mary Voytek to William Storrar (Feb. 20, 2015, 8:59AM) (Appendix C).

⁹ E-mail from William Storrar to Mary Voytek (Sep. 25, 2014, 5:19PM EDT) (Appendix F).

¹⁰ 5 C.F.R. § 2635.202(b)(1).

¹¹ 5 C.F.R. § 2635.203(d)(2).

¹² 5 C.F.R. § 2635.203(d)(1).

¹³ 5 C.F.R. § 2635.203(d)(4).

¹⁴ 31 U.S.C. § 1353(a) and (b).

There are instances where executive branch employees may accept gifts related to travel costs if related to their official duties, however that does not appear to be the case here. Legitimate gifts are disclosed. NASA is required to report the travel arrangements to the Director of the Office of Government Ethics.¹⁵ Voytek's trip to the UK castle would have appeared in the report covering April 2015 to September 2015.¹⁶ There is no log in that report concerning travel by Mary Voytek, nor is there a log of any payment by CTI in that time.

The same goes for Voytek's trip to Florida. There is no log regarding Voytek's trip to the CTI retreat, the gifts she received, or even any mention of CTI in the October 2014 to March 2015 travel report.

By accepting free travel arrangements from CTI and not following proper procedures regarding approval and documentation, Voytek violated 5 C.F.R. § 2635.202(b)(1), 5 C.F.R. § 2635.202(b)(2), and 31 U.S.C. § 1353(b).

Additional Ethical Concerns

An executive branch employee may not "accept a gift given because of the employee's official position."¹⁷ The mere appearance of a *quid pro quo* relationship between Ms. Voytek and CTI is problematic. That Ms. Voytek was acting as the Technical Officer for CTI's grant raises concern that she was offered these various gifts because of her role in the administration of CTI's grant, rather than as a NASA scientist. Because Ms. Voytek did not follow proper procedures for securing travel related to her work as a NASA representative, it appears she received the gifts due to her official position. Ms. Voytek receiving gifts because of her official position violates 5 C.F.R. § 2635.202(b)(2).

The close, ongoing relationship between Voytek and Storrar raises concerns about the entire grant to CTI. Email correspondence between the two from June 2014 and October 2016 illustrate a close relationship blurring the line between professional and personal. Included in the correspondence is:

- Voytek giving advice to Storrar about how to draft the proposal and apply for the grant CTI was awarded,
- Voytek stating multiple times how she will help fund CTI apart from their grant, and
- details of personal meetings between the two in Chicago, Baltimore, and the United Kingdom.¹⁸

That CTI was awarded supplemental grant in June 2016¹⁹ indicates that the relationship between CTI and NASA is ongoing. This ongoing professional relationship makes the personal relationship between Voytek and Storrar appear increasingly improper. The totality of the relationship indicates Voytek is not acting as a disinterested government employee, but has

¹⁵ 31 U.S.C. § 1353(d)(1).

¹⁶ 31 U.S.C. § 1353(d)(2)(C).

¹⁷ 5 C.F.R. § 2635.202(b)(2).

¹⁸ Appendix G

¹⁹ Grant Number: NNX14AR81G S01.

entangled herself with CTI and its director, who rely on her NASA position to fund their research.

Further problems arise due to the constitutionally suspect nature of the grant itself. The \$1.1 million was approved so that CTI could investigate the impact of a potential future discovery in astrobiology on theology. Put more simply, NASA gave more than one million dollars to a religious organization for it to investigate how a scientific discovery will impact religious dogma. FFRF objected to this grant previously, and now, in light of the records and this apparently improper relationship, FFRF renews that objection.

Conclusion

FFRF requests an investigation into the relationship between Mary Voytek and William Storrar, including an inquiry into the nature of the gift Voytek received while attending the CTI retreat in Florida. If warranted, Voytek should be appropriately disciplined, which includes repayment of the amount she received in gifts—as provided for under 31 U.S.C. § 1353(b)(1). Additionally, it would be improper for Voytek to continue serving as NASA’s liaison to CTI.

Finally, FFRF requests a complete review of the grants awarded to CTI, including a determination as to whether the awards violated the Constitution by providing funds to a religious institution for research with a religious purpose and effect. FFRF requests NASA take all appropriate actions to ensure constitutional and ethical compliance, which may include rescinding the awards to the extent possible.

Please inform us in writing of the steps you are taking to address these ethical violations and all additional ethical concerns.

Sincerely,



Andrew L. Seidel
Staff Attorney

ALS:lws

Enclosures

cc: Adam F. Greenstone (adam.f.greenstone@nasa.gov)
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FREEDOM FROM RELIGION *foundation*

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August 11, 2016

Sent via email only to: mary.voytek-1@nasa.gov, penelope.j.boston@nasa.gov

Dr. Mary A. Voytek
NASA Senior Scientist for Astrobiology

Re: Rescind NASA grant to Center of Theological Inquiry

Dear Dr. Voytek:

Thank you for your July 21, 2016 response to our letter requesting that NASA review and rescind its May 2015 grant (NNX14AR81G) to the Center of Theological Inquiry (CTI). That response indicates that you had reviewed CTI's grant and concluded that it did not violate the First Amendment. FFRF continues to object to the \$1.1 million grant awarded to CTI for theological research. Despite the claims in your letter, the grant violates the Establishment Clause.

FFRF does not object to the NASA Astrobiology Program's goal of studying and funding "the potential societal impact of finding life beyond Earth." Nor much of what the grant funds:

inquiries into what constitutes life, reflections on the nature and implications of superintelligent alien life, human understanding of space time, and how society might react to the discovery of extraterrestrial life, in addition to studies of political theology as a subject, and the relationship of astrobiology to religious ethics.

We have no problem with NASA funding or conducting research into human or alien life, or space time, or biomedical research (51 U.S.C. § 40501-505) or research on environmentally friendly aircraft (51 U.S.C. § 40701-704) or maintaining a Science, Space and Technology Education Trust Fund (51 U.S.C. § 40901) or partnering with museums (51 U.S.C. § 40907) because there is no separation of state and science or state and technology. However, our Constitution requires a separation of state and church. That prohibits the government from funding theological studies.

First, please understand that it is difficult to evaluate the full scope of this grant because NASA has refused to release CTI's grant application—the document that would best illuminate the purpose of the grant. Without it, we have only CTI President William Storrar's clear public statements about that purpose: "The aim of this inquiry is to foster theology's dialogue with astrobiology on its societal implications, enriched by the contribution of scholars in the humanities and social sciences." We are appealing this FOIA denial and have requested additional documents to help us determine the possible scope of this constitutional entanglement.

In the meantime, NASA cannot sidestep CTI's purpose by claiming that:

CTI's purpose is not the key inquiry for determining whether the Establishment Clause has been violated. Rather, the government's purpose is the key inquiry. In providing grant funds to a broad class of institutions, NASA's purpose is simply to advance the dialog on the topic of astrobiology and society, which may or may not include religious perspectives.

NASA cannot simply divorce its claimed purpose from CTI's admitted purpose. Imagine a public school hires a new science teacher, a young earth creationist who promises to teach his creationist theology in the science class if hired. The school's legitimate purpose (teaching science) is irrelevant because it hired a teacher with an openly religious purpose. NASA chose to fund CTI's theological inquiry, and "[i]n the absence of an effective means of guaranteeing that the state aid derived from public funds will be used exclusively for secular, neutral, and nonideological purposes, it is clear from our cases that direct aid in whatever form is invalid." *Comm. for Pub. Educ. v. Nyquist*, 413 U.S. 756, 780 (1973). As to NASA's purpose, the Supreme Court "has taken the view that a secular purpose and a facial neutrality may not be enough, if in fact the [government] is lending direct support to a religious activity. The [government] may not, for example, pay for what is actually a religious education, even though it purports to be paying for a secular one, and even though it makes its aid available to secular and religious institutions alike." *Roemer v. Bd. of Pub. Works of Md.*, 426 U.S. 736, 747 (1976).

Roemer is instructive. Citizens challenged Maryland's grants to religious colleges. Those grants were upheld because the use of funds for sectarian purposes was strictly prohibited and "religion did not so permeate the defendant colleges that their religious and secular functions were inseparable." *Id.* at 750. Schools that gave "only seminarian or theological degrees" were disqualified from the grants. *Id.* at 740. Here the same cannot be said. The grant funds a self-professed theological inquiry to an institute that, as its name indicates, is solely geared towards theology.

We are not arguing that NASA could not, for instance, give a grant to a scholar on religious history or comparative religion. We are not even arguing that NASA cannot study the impact of astrobiology on society, of which religion is a part. The issue is with what the money is being used for: theology.

NASA is not merely "includ[ing] religious perspectives." Instead, NASA is directly funding religious debate. For example, the only published article mentioned in CTI's Progress Report—indeed the only completed, tangible product from this grant according to that report—is Lucas Mix's "Life-Value Narratives and the Impact of Astrobiology on Christian Ethics." *Zygon*, vol. 51, no. 2 (June 2016): 520-535. NASA could spend \$1.1 million more effectively than that.

NASA failed to produce this article in our FOIA documents so perhaps NASA scientists have not yet read it, not that it will be terribly valuable to those scientists. Dr. Mix is using "scripture" to engage in Christian apologetics.

Mix's article appears in the "Exoplanets and Astrotheology" category on the *Zygon* website, and in the journal alongside other articles such as "Astrobiology and Astrochristology"¹ and "Astrotheology: On Exoplanets, Christian concerns, and Human Hopes."² From the abstract, Mix, an Episcopal priest with a doctorate from Harvard, appears to be arguing that although astrobiology shows humans to be just another form of life and not special in some way, "this should not be viewed as opposed to Christianity."

¹ From the abstract: "The first issue deals with the question: should Christians expect many incarnations, one for each inhabited exoplanet; or will the single incarnation in terrestrial history suffice? The second issue deals with the question: why is there an incarnation in the first place? Does the divine presence in the historical Jesus mark a divine attempt to fix a broken creation or does it mark a divine self-communication that would occur with or without creation's fall into sin and death?"

² http://www.zygonjournal.org/issue2016_2.html

Stripped of academic verbiage and rhetorical throat clearing, the article basically argues that Christianity, and specifically the bible, should be interpreted to show that humanity's place in the universe agrees with modern science. The author sought "to reground discussion of astrobiology and life-value narratives in scriptural exegesis and contemporary science." In other words, he's trying to include theology in the scientific study of astrobiology.

The author "only had time here to discuss a few prominent Biblical themes, but Christian theology offers a number of critical and helpful insights into the question of human uniqueness, privilege, and place." Five pages of the 14-page article make up a section entitled, "Scriptural Witness," which is what it sounds like: the author interpreting the bible. Entire paragraphs in the article read like Christian apologetics:

The New Testament challenges us to look for God's action specifically in humans and typically in Jesus Christ. Human exceptionalism comes to the forefront. **If humans enjoy unique value in God's eyes, what aspects of our humanity account for this? We can ask by what traits or faculties God acts through humanity to bring about the new creation?** By what traits or faculties do we resist? Our role as saviors or defilers rests on such distinctions. **Neither can they be separated from our anthropology (understanding of humanity) or soteriology (understanding of salvation).** Benedict XVI (2007), quoting Gregory of Nazianzus, has said, "What has not been assumed has not been healed." **The incarnation must be comprehensive, with Christ fully human, so that redemption may also be comprehensive** (see also Hebrews 2). Other theologians set the parts against one another. If our human uniqueness is in our intellect and our intellect opposes our appetite, then the appetite must be diabolical. Alternatively, **if God acts through our will in opposition to our reason, then the reason becomes a stumbling block.** [Page 532].

Again, we are not suggesting that such disputation is off limits—just that it cannot be furthered with federal funds dedicated to that religious purpose.

CTI might include scholars from other disciplines, but that does not detract from its primary objective, which is evident from its name, website, its podcasts, and the publications it has produced since receiving NASA's grant. In the "Our Mission" section of CTI's website, it reads, "We convene leading thinkers in an interdisciplinary research environment where theology makes an impact on global concerns, and we share those discoveries to change the way people think and act." CTI's purpose, then, involves interdisciplinary research, but only toward the end of theology and its impact. Not only that, but the desire to share such research to change the way people think sounds awfully similar to proselytization. Furthermore, the section goes on to read, "The Center of Theological Inquiry in Princeton, New Jersey, is an ecumenical institute for interdisciplinary research in the field of religion. James I. McCord founded it in 1978 to cultivate a theological renaissance through dialogue."³ CTI is a religious organization that engages in religious scholarship, one so "permeated" with religion that it is ineligible for NASA's grants.

Finally, refusing to fund theological research does not raise the constitutional concerns you noted:

³ Thank you for clarifying that CTI is not officially affiliated with the Princeton Theological Seminary as our original letter mistakenly noted.

Moreover, to exclude one entity from competing for funding simply because some of its members have religious viewpoints would place NASA in the unfortunate situation of choosing between theistic and non-theistic viewpoints; this is precisely what the Establishment Clause forbids the agency from doing.

This interpretation is incorrect. First, we have never stated, let alone suggested, that NASA withhold funding from an entity because some staff members are religious. We are informing NASA that it cannot constitutionally fund theology; complying with the Constitution does not violate the Constitution. The Supreme Court has explicitly held that refusing to fund scholarships for theology is not religious discrimination under the First Amendment. *Locke v. Davey*, 540 U.S. 712, 720–21 (2004).

We again request that NASA rescind CTI's grant. FFRF is committed to pursuing this issue. To that end, we have submitted another FOIA request to learn more about the grant's awarding and NASA's relationship with CTI. Thank you for your time and attention to this matter.

Sincerely,



Andrew L. Seidel
Constitutional Attorney

ALS:anz