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Chapter 12

At Home in the Cosmos

Ted Peters

It is one thing to exist in a context. It is quite another to feel at home in one's context. It's still another to invite guests to feel at home in our home. We know we're home when we feel centered, connected, and comforted.

Victor Hugo (1802–1883), remembered for *Les Misérables*, compares a house to a home.

A house is built of logs and stone,

Of tiles and posts and piers.

A home is built of loving deeds

That stand a thousand years.

A loving home can stand for a thousand years. Can it stand for a thousand light years? For 13.7 billion years and counting?

A home can be the house we live in. It can be our hometown. It can be the farmland of our ancestors, where you or I were born. We can feel at home in the context of our culture, our native tongue, or the songs we sing. Against the backdrop of outer space, Earth is our home.

Can we imagine a connection between our home and places we've never visited? Can we imagine turning our house into a home for those visiting from far off places? Can we imagine hosting a family dinner with guests from a planet orbiting Proxima Centauri? Can we imagine loving aliens, aliens from across the border or across the galaxy? "You shall also love the stranger" (Deuteronomy 10:19).

If we are to feel at home in the cosmos as well as in our hometown, we might ponder the cosmic scope of family love. After all, God loved the whole cosmos (John 3:16:).

Scandinavian Creation Theology (SCT) “does not picture the world as a cold and hostile place—instead it is our home,” writes Bengt Kristensson Uggla elsewhere in this volume. “This means that Christian faith does not promote the Church, the ‘Christian home’ or the ‘heavenly home’ as a privileged place where we belong—in separation from the world we share with all living creatures.”

All creatures? Only terrestrial creatures? Or might extraterrestrial creatures be included? More than creatures. How about the very physical cosmos itself in all its unfathomability, magnificence, and grandeur? Can we love the cosmos as God loves it in John 3:16? Can we think of ourselves at home in the entire cosmos? Let’s try this thought on for size.

Here is the task at hand. I wish to show that the resources exist within SCT to prepare for communication with new space neighbors and to invite extraterrestrials to our hometown for a covered dish potluck dinner.

CREATION WITHOUT COSMOS AND WITH COSMOS

To think of our created world as our home is central to the renaissance of Scandinavian Creation Theology. Christians are not to be considered as aliens in the world. Nor do we think of Christians as mere pilgrims on their way to another world. The world is God’s creation. This is where God has placed us and wants us to be. To live an ordinary human life among other living creatures involves participating in God’s life.¹

Now, I ask: does God’s creation include the cosmos or not? By “cosmos” I mean the physical world with its own natural history that is studied by our natural scientists. In a previous treatment of SCT, I pitted Regin Prenter against Niels Henrik Gregersen on this issue.² Prenter gives us creation without cosmos, whereas Gregersen gives us creation with cosmos. I recommend synoptic vision: both the eye of faith and the eye of cosmos.

On the one hand, one-eyed Prenter relies exclusively on what he knows theologically about our home in God’s creation. He need not anticipate learning new things from telescopes and microscopes. The model for relating faith and science Prenter adopts is what Ian Barbour calls *independence* and I label the *two-language model*.³ “There is no real problem with respect to the relationship between natural science and faith in creation. The two do not deal with the same questions, unless one or the other fails to keep within its own proper field.”⁴ The theology of creation can learn nothing relevant from scientific cosmology. With this as a theological method, it would be difficult

to forecast how future discovery of new galaxies or communication with extraterrestrial creatures might impact our understanding of Earth as home.

On the other hand, two-eyed Gregersen takes advantage of both faith and science. The "Book of Nature" runs "parallel to the Book of the Bible."⁵ Just as theologians interpret the Bible, scientists interpret nature. With one eye Gregersen reads the Bible. He reads the Book of Nature with the other eye. Or, more likely, he gives both eyes to both alternately.

When assessing the significance of autopoiesis within biogenesis, Gregersen notes with amazement that God has created creativity within creation. "How could one from an informed Christian perspective think consistently about God's relation to a universe that seems to be self-organizing, if not self-creative? Could it be that God has so created the material world that it has an innate ability to form life out of matter and thus give rise to new emergent phenomena such as perception, feeling, and consciousness?"⁶

Gregersen's notion of divine creation includes the cosmos. I propose that Gregersen is taking two giant steps forward here. First, methodologically, he is stepping beyond the perceptive horizon of the eye of faith to see things through the eye of science as well.⁷ Second, what he comes to see through the eye of science—creativity within nature—then qualifies if not edifies the doctrine of creation he sees through the eye of faith.

Gregersen is by no means alone in asking science to contribute to theology. Sweden's former Archbishop Antje Jackelén illustrates such a method that leads to a faith-informed theology of nature. According to Jackelén, theology's vision of creation approaching new creation "can be reconciled with the findings from the field of natural sciences, but it cannot be derived from them."⁸ A theology of nature incorporates scientifically procured knowledge, but it rests first on special revelation as reported in Scripture.

Might a method such as Gregersen's or Jackelén's provide a launch pad for rocketing toward what we earthlings might yet learn about cosmos? Might we learn that creativity within extraterrestrial civilizations has contributed to the direction some parts of our cosmic history are taking? Might extraterrestrial histories someday become meaningful to us when our astronomers and astrobiologists inform us of them?

For us to feel at home not only on Earth but also in the cosmos, we will need a basic commitment to loving God's creatures we have not yet met. Whatever love we can muster must expand beyond Earth to those we have yet to communicate with elsewhere in our galaxy and the universe beyond. How can we think about love on such a scale?

LOVE IN THE HOME AS CARITAS

Don Browning and I argued over two things. One argument ended in a stand-off. The other argument he won.

As a seminarian I had read Don S. Browning's book nee dissertation, *Atonement and Psychotherapy*. I loved it. I looked forward to studying with Professor Browning when I would later work on my doctorate at the University of Chicago Divinity School. While taking his courses at Chicago, we did become friends of a sort.

Two decades after my graduation, Don became principal investigator for a Lilly Endowment grant on "The Family, Religion, and Culture." Don invited me to join his team of scholars. My contribution was later published as *For the Love of Children: Genetic Technology and the Future of the Family*.⁹ Don along with Ian S. Evison coauthored the foreword.

By this time, Don had succumbed to the charm of evolutionary psychology, a child of the selfish gene theory within sociobiology. "The genes hold culture on a leash," claimed E. O. Wilson, whom Browning admired. "The leash is very long, but inevitably values will be constrained in accordance with their effects on the human gene pool."¹⁰ What is being said here is this: the creativity of culture can be explained by appeal to the selfish gene.

Don believed that genetic determinism within evolutionary theory could help explain family and home life. I thought then and still do that genetic determinism is pseudoscience. This is because the creativity of culture exhibits its grand epigenetic traits that cannot be reduced to biology. I believe this despite the fact that sociobiology's progenitors occupied professorships at Harvard and Oxford. I applauded Don for taking science into this theology, but booed when he selected bad science rather than good science. Don and I simply agreed to disagree on evolutionary psychology's value. The argument ended in a standoff.

Our other argument is relevant to the question we are asking here: can we earthlings feel at home in the cosmos? This second debate had to do with the kind of love in the home that makes a family a family.¹¹

I spouted off the value of love understood in Greek as *agape*. This kind of love comes to its highest expression in self-sacrifice, in giving one's life for the neighbor (John 5:13). God's love for the cosmos in John 3:16 is *agape*.

Don Browning was not favorably impressed. He sharply criticized me. "Ted, that *agape* stuff is just Protestant heroics and histrionics. Some sort of super-love. That's not the way love works in real life. Get realistic!"¹²

I was aghast.

"What we need," Browning continued, "is love understood in the medieval Latin sense of *caritas*. Thomas Aquinas understood love. He really

understood how love works. This kind of love begins with intimacy in the family at home. Sociobiologists call it *kin altruism*. Then, in the form of mutuality-in-community, love spreads to the neighborhood, the town, the country, and the world. Loving the stranger is an application of loving that we all learned first at home. Kin altruism is prerequisite for inclusive fitness."¹³

I balked. Well, at first I balked. But then I began to look again at the dynamics of love that are observable in human experience. After observing, I concluded that Don Browning was right. Love begins experientially with the intimacy of home life. Whether we label it, "kin altruism," or not is beside the point.

Those of us who grow up with compassion for the needy combined with a passion for justice are expressing something we learned very early in our family life. Whether we label it, "inclusive fitness," or not is beside the point. From family to the world including the enemy is the direction the love arrow flies. I concede: Don S. Browning was more helpful than me on this particular point. He writes,

Christian love is more than love of kin, however. It entails in principle loving all humans, including the stranger and the enemy. The point of my argument, as it was with Aquinas, is that love of the other—even the nonreciprocating stranger and hostile enemy—builds on and extends the natural entanglements of self-regard and other-regard embedded in kin altruism. God's grace does not suppress kin affections; it builds on and extends these natural affections to include the other, be it non-kin neighbor, stranger, or oppressive and angry opponent. Extending this natural affection, with the help of God's grace, requires acts of self-sacrifice, but this sacrificial love builds on natural affections. It does not function to extinguish them.¹⁴

First, *caritas*. Then, *agape*. That's how we experience love. That's how we absorb love and subsequently exhibit the virtue of charity.

How is this relevant to the question: could we feel at home in the cosmos? It has to do with the expanding context of meaning. Intimate love at home with the family expands its context to the neighborhood, the hometown, the nation, the world, and then to the cosmos. The cosmos? Might that be too big of a stretch? Well, let's stretch.

THE EXPANDING CONTEXT OF MEANING

With the universality of Christian love in mind, let me turn to the hermeneutical concept of the expanding context of meaning. I will rely here in large

part on the philosophical work of Hans-Georg Gadamer and theology of history propounded by Wolfhart Pannenberg.¹⁵

Meaning is contextual. Fragments of meaning have their contexts, even if the context is not immediately obvious. Further, each context has its more comprehensive context. Now, where might this take us? Like building a Lego house, we start small but end up large.

Let's start with a word. What does each word mean? To grasp a word's specific meaning, we must understand its place within the sentence. Yet, the meaning of the sentence is dependent on its context within the paragraph, which in turn is dependent upon the meaning of the book in which it is a part. Further, the meaning of a book is dependent upon its genre and even its epoch. Each epoch is dependent upon its context within the broad sweep of history, which finally is determined by its place in the consummate whole which is the totality of reality.

The totality of reality does not exist anywhere now. Why? Because it's not done yet. History is not complete. There is yet no whole to history. What we experience on Earth is a finite set of parallel yet overlapping histories we know as traditions. Despite attempts by the United Nations and other ecologically conscious do-gooders, stimulating a sense of planetary unity remains but an idealist's dream.

Only when history becomes a whole in God's eschatological new creation will the precise meaning of your and my experience at this moment be determined. Only then will the meaning of everything that has happened on Planet Earth be determined. It takes the whole of reality to determine the meaning of each part. It takes the future of reality to retroactively determine the meaning of present and past events.

GOD OF CREATION AND CONSUMMATION

When we begin addressing the question of the totality of reality, we are asking about God. At least, according to Wolfhart Pannenberg. "It belongs to the task of theology to understand all being (*alles Seienden*) in relation to God," writes the late Munich theologian; "so that without God they simply could not be understood. That is what constitutes theology's universality."¹⁶ I think of the task of systematic theology as one of showing how all things in reality relate to the one God of grace.

The very fact that you and I experience meaning now is indirectly testimony that a whole to history is anticipated in our very experience of meaning. In fact, the whole of history is the condition for the possibility that you and I experience meaning in the moment. In your and my subjectivity, the objectivity of God's promised consummation of all things is proleptically present.

"God" is not merely interchangeable with "the totality of reality," to be sure. Even so, avers Pannenberg, "speaking about God and speaking about the whole of reality are not two entirely different matters, but mutually condition each other."¹⁷ The whole and the part mutually condition one another. Does it follow that God and creation mutually condition one another?

How might this affect our question regarding feeling at home in the cosmos? Might there exist intelligent civilizations on exoplanets within the Milky Way with their own respective histories? Do those extraterrestrial histories also contribute fragments of meaning to what will yet be the consummate history of the cosmos? Will Earth's histories converge with off-Earth histories so that the angels will tell only one story about the totality of God's creation?

CAN BIG HISTORY DO THE JOB WITHOUT GOD?

Big History attempts to unite all cultural histories into a single natural history and to do so without God. And without eschatology. Will this suffice?

If you don't know what Big History is, let me introduce you. According to the International Big History Association, "Big History seeks to understand the integrated history of the Cosmos, Earth, Life, and Humanity, using the best available empirical evidence and scholarly methods."¹⁸ One big historian, Ken Gilbert, tries to emphasize how truly *big* Big History can be. "The cosmos itself, beginning with the Big Bang, has now come to be seen, not as an inert or static backdrop for the planet, but an ever-changing manifestation in which everything is essentially historical and developmental."¹⁹

What's relevant for our discussion here is this: big historians assume that "the history of the universe [is] a single process."²⁰ In short, nothing in physical reality is excluded from the cosmic story the big historian tells. Might Big History's future include the confluence of Earth's past with the pasts of exoplanets within the Milky Way?

Our friends in Big History stop after eating their salad. They never taste the entrée let alone the desert to come. They stop short of asking about the whole of reality. They stop short of asking about the meaning of history. They stop short of asking about God.

If Pannenberg's cosmological argument based on the expanding context of meaning is sound, then what might be the implications for Big History? My answer is this. If Big History is to become big enough, it will have to incorporate—or fuse with—the many histories of other civilizations appearing on extraterrestrial planets. One can easily speculate that we will soon face the challenge of parallel histories meeting, exchanging interpretations, converging, and finally fusing.²¹ But, if we fail to understand ourselves on Earth as

fully historical, the prospect of fusing histories with our extraterrestrial neighbors may be postponed or even precluded.²²

LOVING OUR EXTRATERRESTRIAL NEIGHBORS

In a recent book, Ryan McAnnally-Linz and Miroslav Volf list four defining qualities of a home: (1) resonance, (2) attachment, (3) belonging, and (4) mutuality.²³ Might contact and communication with ETI—should that day ever come—count as resonance? On the basis of what we have learned so far, it is not unrealistic to expect some level of interaction or resonance through SETI (Search for Extraterrestrial Intelligence) or METI (Messaging Extraterrestrial Intelligence International) via an as-yet-to-be-developed medium of communication.²⁴

Shortly after alien contact, we'll clean the church basement and welcome strangers from afar to a covered dish pot luck dinner.

FROM ASTROETHICS TO PUBLIC POLICY

The cosmos is too vast to be understood by science alone. Certainly, space exploration including plans to establish settlements on the Moon and Mars require extra-scientific societal input. In short, science needs ethics to formulate public policy. Might creation theologians become public theologians and contribute to the discussion of public policy? Might providing sound ethical deliberation become the first concrete step we take up the path toward loving our space neighbors?²⁵

The field we are talking about here is called *astroethics* or *astrobioethics* or *space ethics*. Of the many issues already being debated is the question: does life off-Earth possess intrinsic value? How the space community answers this question will be decisive when formulating public policy regarding exploration and exploitation of other worlds.

Astrobiologists tell us that it is quite possible that we will soon discover microbial life within our solar system, most likely on Mars or a moon orbiting either Jupiter or Saturn. For life similar to *Homo sapiens*, we must look beyond our solar system. The prospect of ETI is very high for exoplanets within the Milky Way. Almost every one of the perhaps four hundred billion stars in our galaxy has planets, some of which are rocky earthlike planets within the habitable zone.²⁶ With these prospects in mind, right now is the time for ethicists to consider what contact might be like and what moral posture our scientists should adopt.

A few years ago, I published an article in *The International Journal of Astrobiology*, "Does Extraterrestrial Life Have Intrinsic Value? An Exploration in Responsibility Ethics."²⁷ Because public policy was at stake, I could not simply appeal to so-called sectarian religious foundations. So, I appealed to responsibility ethics to ground my assertions.

The key to making such a responsibility ethic viable, I argued, is the simple logic of the good. Because the good is self-defining and is presupposed in all moral discourse, and because living creatures can participate in the good and appreciate the good better than non-living things, it follows that life should be treated as possessing intrinsic value. We *Homo sapiens*, then, are morally responsible to respect, protect, and even enhance life.

Now, suppose such a justification for human responsibility toward life wherever it is found would become persuasive. Then, perhaps we could also provide a persuasive argument for the intrinsic value of life as we find it on Earth and elsewhere in the Milky Way.

Could we find support for such an argument from SCT? Of course. "Scandinavian creation theology wants to highlight the intrinsic value of the created world" says Jacob Wolf in, "At Home in the Universe?" If the good is already present within creation due to God's grace, then the good within creation could provide foundational axioms for public ethics.²⁸

Where do I go to take this step? To Knud Ejler Løgstrup. First, as a philosopher in the traditions of Martin Luther and Martin Heidegger, Løgstrup could recognize that responsibility is built right into our fundamental relationships. Our responsibility is inescapable. "By our very attitude to one another we help to shape one another's world. By our attitude to the other person we help to determine the scope and hue of his or her world, we make it large or small, bright or drab, rich or dull, threatening or secure."²⁹ In sum, space explorers already have a responsibility to the regions in our cosmos where they become present.

Second, our responsibility toward creatures like us requires love. Further, such love implies a form of treating the other creature as having intrinsic value. In Kantian language, our default position would be to treat an off-Earth creature like us as a moral end, not merely a means to a further end.

Such a categorical imperative is incorporated within Løgstrup's notion of the primal ethical demand. We can easily imagine applying Løgstrup to first contact communication that would take place between terrestrials and extraterrestrials. "Regardless of how varied the communication between persons may be, it always involves the risk of one person daring to lay him or herself open to the other in the hope of a response. This is the essence of communication and it is the fundamental phenomenon of the ethical life."³⁰

Hans Fink, commenting on Løgstrup, recognizes how communication already implies an ethical demand to be trustworthy, to be loving, to treat the alien as a moral end and not merely as a means.

It is a fact that we have power over the life committed to us in trust. To have this power is to be faced with the choice between either taking care of the life thus placed at our mercy, or destroying it. There is no third and neutral option, and the responsibility for what we choose is our own. . . . If we take advantage of the trust of others and use it against them for our selfish purposes, we shall have failed them. . . . Løgstrup uses the term 'ethical' exclusively to refer to the demand to act unselfishly for the best of each of the other persons who trust in us.³¹

In sum, I believe the resources exist within SCT to prepare for communication with new space neighbors and to invite extraterrestrials to our hometown for a covered dish potluck dinner.

CONCLUSION

We know we're home when we feel centered, connected, and comforted. If we love one another as God loves, then we will invite neighbors and even strangers into our home so that they can feel at home. Might this apply to strangers on a planet orbiting Proxima Centauri?

If Scandinavian Creation Theology follows the synoptic Gregersen model and reads both the Bible and the Book of Nature, we could rightfully speculate that future neighbors in space could become part of our known world. And, if the entire world is graced by its creator God, that grace will apply to extraterrestrial creatures as well as terrestrial creatures. We will have to ask: How do we think of "home" when considering space strangers becoming neighbors?

NOTES

1. This is the recurrent theme in Niels Henrik Gregersen, Bengt Kristensson Uggla, and Trygve Wyller, editors, *Reformation Theology for a Post-Secular Age: Løgstrup, Prenter, Wingren, and the Future of Scandinavian Theology* (Göttingen: Vandenhoeck und Ruprecht, 2017).

2. Ted Peters, "The Eye of Faith and the Eye of Science: Regin Prenter and Niels Henrik Gregersen on God's Creation," *Dialog* 57:2 (June 2018) 126–32; <https://doi.org/10.1111/dial.12393>.

3. Ian G. Barbour, *Religion and Science: Historical and Contemporary Issues* (New York: Harper, 1997) 84–89; Ted Peters, *Science, Theology, and Ethics* (Aldershot UK: Ashgate, 2003), 18–19.
4. Regin Prenter, *Creation and Redemption*, tran. Theodore J. Jensen (Minneapolis, MN: Fortress, 1967) 226.
5. Niels Henrik Gregersen, “Is the Universe a Sacrament? Denis Edward’s Contribution to Sacramental Thinking,” *God in the Natural World: Theological Explorations in Appreciation of Denis Edwards*, eds., Ted Peters and Marie Turner (Adelaide: ATF Press, 2020) 25–42, at 40.
6. Niels Henrik Gregersen, “The Creation of Creativity and the Flourishing of Creation,” *Currents in Theology and Mission*, 28:3–4 (June–August 2001), 400–10, at 400.
7. Other SCT scholars similarly respect the value of science for theology. Finnish-American Veli-Matti Kärkkäinen, for example, forcefully asserts that “dialogue with sciences must be had.” It is demanded by the inner thirst of creation theology itself in an era where the worldview is “dynamic, interrelated, evolving, in-the-making.” Veli-Matti Kärkkäinen, *Creation and Humanity* (Grand Rapids, MI: Eerdmans, 2015), 10–11. Norwegian Pentecostal Knut-Willy Sæther finds traces of God in nature as viewed by science. Knut-Willy Sæther, *Traces of God: Exploring John Polkinghorne on Theology and Science* (Trondheim: Tapir Academic Press, 2011). Jan-Olav Henriksen writes, “Theology is not an attempt to explain the world scientifically. It is a way of interpreting human experiences from all possible sources in the best way possible and building on the sources of tradition as well as the sciences.” Jan-Olav Henriksen, “Distinct, Unique, or Separate? Challenges to Theological Anthropology and Soteriology in Light of Human Evolution,” *Studia Theologica* 67:2 (2013) 166–83, at 168.
8. Antje Jackelén, *Time and Eternity: The Question of Time in Church, Science, and Theology* (Philadelphia: Templeton Foundation Press, 2005), 221.
9. Ted Peters, *For the Love of Children: Genetic Technology and the Future of the Family* (Louisville, KY: Westminster John Knox, 1996).
10. Edward O. Wilson, “Ethics, Evolution, and the Milk of Human Kindness,” in *The Sociobiology Debate*, edited by Arthur Caplan (New York: Harper & Row, 1978), 313.
11. According to Don Browning and Carol Browning, “The Central Ethic of Christian love should be ‘equal regard,’ and the primary task of families (and hence of the church in supporting families) is raising children to take their place in the kingdom of God.” Cited by Betty Vos, “Practicing a Love Ethic for All Families,” *Christian Century* 108:33 (January 1, 1991) 1060–62, at 1060.
12. Browning’s emphasis on *caritas* or mutuality-in-community by no means precludes self-sacrificial *agape* love. “Christian love defined as a strenuous equal-regard for both other and self also requires sacrificial efforts to restore love as equal-regard when finitude and sin undermine genuine mutuality and community.” Don S. Browning, “Love as Sacrifice; Love as Mutuality; Response to Jeffrey Tillman,” *Zygon* 43:3 (September 2008), 557–62, at 557.

13. Browning thought Thomas Aquinas and evolutionary psychology taught the same thing. "Aquinas believed this natural interweaving of self-regard and other-regard in kin relationships extends to siblings, parents, and other kin. The insight that Aquinas had is consistent with contemporary evolutionary psychology and its doctrine of inclusive fitness." *Ibid.*, 559. Finally, I find inclusive fitness, even if an accurate category scientifically, falls well short of what Christians include in *agape*. They are not equivalent, even if the comparison is illuminating.
14. *Ibid.*, 559–60.
15. Ted Peters, "Truth in History: Gadamer's Hermeneutics and Pannenberg's Apologetic Method," *The Journal of Religion*, 55:1 (January 1975), 36–56; and Ted Peters, "Clarity of the Part versus Meaning of the Whole," *Beginning with the End: God, Science, and Wolfhart Pannenberg*, eds., Carol Rausch Albright and Joel Haugen (Chicago: Open Court, 1997), 289–301.
16. Wolfhart Pannenberg, *Basic Questions in Theology*, 2 volumes (Minneapolis MN: Fortress, 1970–1971), 1:1.
17. *Ibid.*, 1:156. "Home is to be considered as an eschatological reality directed towards the future and based on the power of *promise*," says Ugglä elsewhere in this volume.
18. International Big History Association, <http://www.ibhanet.org/>. This definition derives in part from the work of Walter Alvarez, who has been teaching Big History at the University of California at Berkeley since 2006. See <http://eps.berkeley.edu/people/walter-alvarez/>.
19. Ken Gilbert, "The Universal Breakthroughs of Big History: Developing a Unified Theory," in *Teaching and Researching Big History: Exploring a New Scholarly Field*, ed. Leonid Grinin, David Baker, Esther Quaedackers, and Audrey Korotayev (Volgograd: Uchitel, 2014), 122–46, at 128–29.
20. Barry Rodrigue, Leonid Grinin, and Andrew Korotayev, "Introduction," *Our Place in the Universe, Volume I*, 1–16, at 10.
21. The fusing of historicized horizons of understanding (*Horizontverschmelzung*) is a Gadamerian term. Hans Georg-Gadamer, *Wahrheit und Methode* (Tübingen: J.C.B. Mohr / Paul Siebeck, 1965).
22. Ted Peters, "The Future Fusion of Terrestrial and Extraterrestrial Big Histories," *Theology and Science* 19:1 (2021), 18–32.
23. Miroslav Volf and Ryan McAnnally-Linz, *The Home of God: A Brief Story of Everything* (Grand Rapids, MI: Brazos, 2022), 16.
24. SETI is passive. METI is active. SETI "searches are considered passive searches in that they are not aiming to elicit contact, but instead are merely listening for the presence of others. METI projects, however, intentionally aim to elicit a response through their own signals and are thereby considered active searches." Chelsea Haramia and Julia DeMarines, "An Ethical Assessment of SETI, METI, and the Value of Our Planetary Home," in Octavio A. Chon Torres, Ted Peters, Joseph Seckbach, and Richard Gordon, eds., *Astrobiology: Science, Ethics, and Public Policy* (Hoboken, NJ: John Wiley & Sons and Scrivener Publishing, 2021), 271–91, at 273.
25. Before asking whether the ETI we meet might be benign or hostile, we need to ask whether *we Homo sapiens* will be benign or hostile. "In contrast to ETI's

demonstrated sophistication, humankind often is deluded about the degree of its own intelligence. To ETIs, however, human beings must appear profoundly immature in their impulses and outbursts, particularly those that hurt and kill other human beings, eradicate other species, and damage the environment." Jensine Andresen, "Mind of the Matter, and Matter of the Mind," in Jensine Andresen and Octavio A. Chon Torres, eds., *Extraterrestrial Intelligence: Academic and Societal Implications* (Cambridge, UK: Cambridge Scholars Press, 2022), 281–330, at 305.

26. "Yes, life is out there. Based on our current scientific knowledge, it is highly unlikely that we are alone. Just because we haven't communicated with anyone yet, does not change the end result that there is other life in the galaxy." Heidi Manning, "Yes, We'll Meet Them: The Drake Equation Tells Me So," in Ted Peters, Martinez Hewlett, Joshua M. Moritz, and Robert John Russell, eds., *Astrotheology: Science and Theology Meet Extraterrestrial Life* (Eugene, OR: Cascade, 2018), 133–45, at 144.

27. Ted Peters, "Does Extraterrestrial Life Have Intrinsic Value? An Exploration in Responsibility Ethics," *International Journal of Astrobiology* 17:2 (2018), 1–7; <https://www.cambridge.org/core/journals/international-journal-of-astrobiology/article/does-extraterrestrial-life-have-intrinsic-value-an-exploration-in-responsibility-ethics/5DCA161726CE8F4FC9E58EE8E6D04B81>. See University of Lund astro-ethicist Erik Persson, "The Moral Status of Extraterrestrial Life," *Astrobiology* 12:10 (2012), 976–85.

28. I think the ethicist's category of "intrinsic value" imputes to a human person dignity. Dignity means being regarded as having intrinsic value rather than practical value for someone else's end. "Act so as to treat humanity, whether in your own person or in that of another, at all times also as an end, and not only as a means." Immanuel Kant, *Groundwork of the Metaphysics of Morals*, 2nd Section. Might this apply to microbial life or intelligent life with a second genesis off-Earth?

29. Knud Ejler Løgstrup, *The Ethical Demand* (Notre Dame, IN: University of Notre Dame Press, 1997), 18.

30. *Ibid.*, 17.

31. Hans Fink, "The Conception of Ethics and the Ethical in K.E. Løgstrup's *The Ethical Demand*" in *Concern for the Other: Perspectives on the Ethics of K.E. Løgstrup*, edited by Svend Andersen and Kees van Kooten Niekerk (Notre Dame, IN: University of Notre Dame Press, 2007), 15.