

Exoplanets and Astrotheology

with Andreas Losch, "Astrotheology: Exoplanets, Christian Concerns, and Human Hopes"; David Wilkinson, "Searching for Another Earth: The Recent History of the Discovery of Exoplanets"; Michael J. Crowe, "William Whewell, the Plurality of Worlds, and the Modern Solar System"; David Dunér, "Swedenborg and the Plurality of Worlds: Astrotheology in the Eighteenth Century"; Ted Peters, "Astrobiology and Astrochristology"; Howard Smith, "Alone in the Universe"; and Lucas John Mix, "Life-Value Narratives and the Impact of Astrobiology on Christian Ethics."

ASTROBIOLOGY AND ASTROCHRISTOLOGY

by Ted Peters

Abstract. *Astrochristology*, as a subfield within the more comprehensive *astrotheology*, speculates on the implications of what *astrobiology* and related space sciences learn about our future space neighbors. Confirmation of the existence of extraterrestrial intelligent civilizations living on exoplanets will force Christian theologians to decide on two issues. 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? Sorting these issues out is one task for astrochristology. My own position is to affirm both a single incarnation on Earth valid for cosmic redemption from the brokenness of creation in its present state.

Keywords: astrobiology; astrochristology; astrotheology; incarnation; prolepsis

"Being able to see the sky is something that makes us human," Brother Guy Consolmagno, director of the Vatican Observatory, told *Science*. "Our souls have to be fed every bit as much as our stomachs" (Carlidge 2015, 17). Outer space feeds the inner soul. Perhaps it is the near infinity of the cosmos that elicits from within us a profound respect for the creation's grandeur along with a feeling of gratitude for the grace that permits us to appreciate it. Grandeur and gratitude irrupt together.

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Astrobiology is more than just one more science among others. Astrobiology twangs our religious sensibilities like strings on Jimmy Buffett's guitar. Good science has the capacity to inspire a theological sing-along. And astrobiology is, at minimum, good science. Astrobiology is "the study of the origin, nature, and evolution of life on Earth and beyond," says Chris Impey (2007, 42). Lucas Mix elaborates. "Astrobiology is the scientific study of life in space. It happens when you put together what astronomy, physics, planetary science, geology, chemistry, biology, and a host of other disciplines have to say about life and try to make a single narrative" (Mix 2009, 4).

When the astrotheologian starts to hum the astrobiologist's tune, the newly formed duet stumbles through lyrics that celebrate the grandeur of God's creation along with the gratitude welling up within the human soul. This makes for joyful harmony.

However, when the astrotheologian turns to questions of Christology and soteriology, the singing pauses momentarily. It's not clear which lyrics will best fit the astrobiological tune. Whose praises should we sing about? The historical Jesus who on Earth accomplished salvation for the entire cosmos? Or, the cosmic Christ who may become incarnated again and again on each inhabited planet? Does the cosmos have one history, or many? Does God's redemption require one incarnation, or many? The lyricist must decide before writing the song and rehearsing the choir.

Three separate stanzas seem to compete with one another. The first says that Christology is nonsense. The second says that multiple incarnations, one on each inhabited planet, make more sense. The third says that a single incarnation on Earth makes the most sense. Which should the choir sing? We'll listen to all three in the paragraphs to come.

We're working here within the field of astrotheology. Astrotheology interprets astrobiology, of course; yet, it covers much more. *Astrotheology is that branch of theology which provides a critical analysis of the contemporary space sciences combined with an explication of classic doctrines such as creation and Christology for the purpose of constructing a comprehensive and meaningful understanding of our human situation within an astonishingly immense cosmos* (Peters 2009; 2011; 2013a, 2013b; 2014). In this case, it is Christology that concerns us. Perhaps we could label it, *Astro-Christology*, *AstroChristology*, or *Astrochristology*.

CHRISTOLOGY IS NONSENSE

The problem with Christian theology, say some critics, is its chauvinism. By believing in the universal scope of salvation wrought by God's incarnation in the historical Jesus Christ, the imperialistic impetus gets Christians into trouble when considering extraterrestrial mission fields. American founding father Thomas Paine (1737–1809), for example, was sharply critical of the

Christian belief system. Paine held that Christian theology logically requires belief in only one world, Earth. Paine found this geocentrism objectionable: "Though it is not a direct article of the Christian system that this world that we inhabit is the whole of the habitable creation," he grants in his widely read *The Age of Reason*. Even if the "Christian system" does not affirm Earth-centrism, Paine still proceeds to criticize the Christian religion for its Earth-centrism (Paine 1794, Part I, section 12). Curious.

Paine continues. "To believe that God created a plurality of worlds . . . renders the Christian system of faith at once little and ridiculous, and scatters it in the mind like feathers in the air. The two beliefs [Christian faith and other worlds] cannot be held together in the same mind." He insisted that "the Christian system of faith . . . forms itself upon the idea of only one world," and then Paine proceeds to draw out the absurdity of the idea of multiple incarnations. "The Son of God, and sometimes God himself, would have nothing else to do than to travel from world to world, in an endless succession of death, with scarcely a momentary interval of life" (Paine 1794, 3). In short, when one considers other worlds in space, Christology appears to be nonsense.

A century later Mark Twain (1835–1910) repeated Paine's attack on alleged Christian Earth chauvinism. "How insignificant we are, with our pigmy little world! . . . Did Christ live 33 years in each of the millions and millions of worlds that hold their majestic courses above our heads? Or was our small globe the favored one of all?" (Crowe 2008, 463). Christian commitment to the universality of Christ counts as geocentrism by critics.

When we turn to the contemporary debate among those in the field of theology and science, some scholars sympathetic to the Christian tradition also sing the nonsense melody. Willem Drees asks rhetorically: is Bethlehem the center of the universe? "Just as we don't like to be accused of racism or sexism, so too we should find planetism unacceptable. We on Earth cannot assume to be closer to God than they [extraterrestrials] are" (Drees 2000, 69). Arthur Peacocke similarly asks rhetorically, "What can the cosmic significance possibly be of the localized, terrestrial event of the existence of the historical Jesus? Does not the mere possibility of extraterrestrial life render nonsensical all the superlative claims made by the Christian church about his significance?" (Peacocke 2000, 103).

Paul Davies sings loudest the stanza which announces the nonsense of astrochristology. Davies contends that Christian theologians are hopelessly trapped in the absurd commitment to posit a planet-hopping Christ, that is, a God who becomes incarnate repeatedly to accommodate various species. His refrain, "little green men," is intended to undo astrochristology. "Theologians and ministers of religion take a relaxed view of the possibility of extraterrestrials. They do not regard the prospect of contact as threatening to their belief systems. However, they are being dishonest. All the major world religions are strongly geocentric, indeed homocentric.

Christianity is particularly vulnerable because of the unique position of Jesus Christ as God incarnate. Christians believe that Christ died specifically to save humankind. He did not die to save little green men” (Davies 2000, 51). Elsewhere he sings out: “The prospect of a host of ‘alien Christs’ systematically visiting every inhabited planet in the physical form of the local creatures has a rather absurd aspect” (Davies 1983, 71). The idea of multiple incarnations seems “absurd.” Despite the fact that theologians say they will welcome extraterrestrial neighbors, they are “dishonest,” says Davies. Theologians are dishonest because they fail to admit to the internal vulnerability of their Christology.

Lucas Mix reminds us that our homocentrism right along with geocentrism might not have much of a future. “Intelligent life on another planet would force humans to question whether the uniqueness of humanity comes from some particular property or simply reflects our own ego” (Mix 2009, 285). This challenge to homocentrism and geocentrism suggest that Christology—which is allegedly tied to these two . . . isms—is a song some just do not want to hear. In short, whether a theologian holds to either a single incarnation astrochristology or a multiple incarnation astrochristology, he or she is singing nonsense. At least, according to these critics.

MULTIPLE INCARNATIONS MAKE MORE SENSE

John Polkinghorne does not sing the nonsense stanza. Multiple incarnations ring much more pleasantly in his ear. Polkinghorne can imagine an additional hypostatic union taking place on an exoplanet just as it did on Earth in the historical Jesus (Polkinghorne 1989, 90–92). Polkinghorne can even imagine a little green incarnation. “There must surely be many sites in the universe suitable for the development of some form of life. Theology does not altogether know what to think about extraterrestrial possibilities. God’s creative purposes may well include ‘little green men’ as well as humans, and if they need redemption we may well think that the Word would take little green flesh just as we believe the Word took our flesh” (Polkinghorne 2004, 177). According to Davies’s criterion, Polkinghorne would belong in the choir with “dishonest” theologians.

Notre Dame’s astrotheologian, Thomas O’Meara, sings the same stanza: extraterrestrial “incarnations would correspond to the forms of intelligent creatures with their own religious quests” (O’Meara 2012, 48). Neither Polkinghorne nor O’Meara appear to feel astrochristology is nonsense; nor do they appear to be aware that they are being dishonest.

Boston University astrotheologian John Hart sings of multiple incarnations, but they do not belong necessarily to the cosmic Christ. Rather, a more generic spirit is responsible. “The Cosmic Christ is a local, terrestrial concept . . . among Christians,” he says; whereas “The Cosmic Spirit is

a cosmic concept and reality—more extensive, accessible, and universal” (Hart 2014, 275). Hart sings the multiple-incarnation tune, but not quite in harmony with other Christian astrotheologians.

Paul Tillich sings in the multiple-incarnation choir. In his still very influential *Systematic Theology*, Tillich addresses directly the question of the efficacy of redemption on Earth for life on other planets. How should we “understand the meaning of the symbol ‘Christ’ in the light of the immensity of the universe, the heliocentric system of planets, the infinitely small part of the universe which man and his history constitute, and the possibility of other ‘worlds’ in which divine self-manifestations may appear and be received The function of the bearer of the New Being is not only to save individuals and to transform man’s historical existence but to renew the universe The basic answer to these questions is given in the concept of essential man appearing in a personal life under the conditions of existential estrangement. This restricts the expectation of the Christ to historical mankind” (Tillich 1951–1963, 2:95).

After affirming the efficacy of redemptive action by God in Jesus Christ, Tillich speculates about extraterrestrial possibilities. “At the same time, our basic answer leaves the universe open for possible divine manifestations in other areas or periods of being. Such possibilities cannot be denied Incarnation is unique for the special group in which it happens, but not unique in the sense that other singular incarnations for other unique worlds are excluded” (Tillich 1951–1963, 2:96). Multiple incarnations would be reasonable to Tillich, even though to date we have no proof that such a thing has happened. Tillich expositor Durwood Foster similarly contends that “the love of God manifest in Jesus Christ has surely not remained unknown wherever there is spiritual receptivity” (Foster 1971, 125). What seems to be operative here is the assumption that the function of incarnation is primarily revelatory, an event in which God’s eternal grace and love become known to creaturely consciousness.

What about sin and estrangement? Would an extraterrestrial civilization be fallen and in need of redemption? This is where the Christian vocabulary regarding sin enters with words such as *sin* and *evil*. “Sin is the estrangement between God and humans instigated by human defiance or abnegation. Evil is the disorder within humans individually and among them collectively,” writes Mark Heim (2001, 60). Might alien civilization exist within a condition similar to ours: fallen, estranged, subject to sin? Does the extraterrestrial situation need redemption? Redemption is more than mere revelation. Redemption constitutes the soteriological or atoning *work* of incarnation, the *work* of reconciliation, not merely the revelatory presence of God.

Perhaps we should distinguish two types of Christology: a revelatory Christology versus an atoning-work Christology. On the one hand, an astrochristology which emphasizes that Jesus is primarily revelatory would

find it logical to affirm multiple incarnations. As revelatory, the cosmic Christ could appear to many rational civilizations with the same message. On the other hand, an astrochristology which emphasizes that Jesus's work of atonement is efficacious for the entire creation would find it logical to affirm a single incarnation. The soteriological work accomplished on Earth would apply to the cosmos regardless of who knows or does not know about it.

One could sing the revelation tune without necessarily tying it to the historical Jesus. The Bible is filled with accounts of divine revelations to humans: the appearance of God in the burning bush to Moses; call visions to prophets such as Jeremiah and Isaiah; communication through dreams; along with "signs and wonders." Jesus provides one more in a long list of revelation moments. Even though Jesus was revelatory of God, to be sure; God is not without a means of self-revelation in countless ways, with or without Jesus. With this in mind, an atoning-work astrochristology could both affirm the definitive work of Christ in Earth's history and still anticipate additional divine revelations on other planets. The saving work would be done on Earth, even though divine revelations could occur anywhere at any time.

Tillich seems to rely upon this revelatory or even exemplarist type Christology, according to which each incarnation makes present the eternal creative and redemptive power of God. Like Liberal Protestants of the late 19th century, Tillich folds his Christology into the doctrine of creation. Therefore, if aliens live in an estranged situation, God as the ground of their being would still be at work with reconciling love, according to Tillich. "If there are non-human 'worlds' in which existential estrangement is not only real—as it is in the whole universe—but in which there is also a type of awareness of this estrangement, such worlds cannot be without the operation of saving power within them The expectation of the Messiah as the bearer of the New Being presupposes that 'God loves the universe', even though in the appearance of the Christ he actualizes this love for historical man alone" (Tillich 1951–1963, 2:96). God acts one way in the historical world of human beings and in a parallel way for the extraterrestrial worlds of non-humans. Incarnations of the one Christ could be multiple.

A SINGLE INCARNATION MAKES THE MOST SENSE

The Paine and Twain stanza accuses classic Christian theology of two things: Earth chauvinism and the absurdity of positing multiple incarnations. If, on the one hand, a theologian would place God's redemptive incarnation once and only once on planet Earth, then he or she would be guilty of planetary chauvinism. If, on the other hand, the theologian would opt for multiple incarnations, one for each inhabited planet, then his or her position would be absurd. Both are nonsense, accordingly.

Can a theologian affirm that Jesus' redemptive work within Earth's history is efficacious for the entire cosmos without belting out a prideful Earth anthem? To the question of planetary chauvinism we now turn.

This issue is not new. Two centuries ago, Thomas Chalmers (1780–1847), a popular preacher in Glasgow, Scotland, on November 21, 1815, began a series of sermons, *A Series of Discourses on the Christian Revelation Viewed in Connection with the Modern Astronomy*. Is Christian theology inescapably geocentric? By no means. "The assertion is that Christianity is a religion which professes to be designed for the single benefit of our world . . . Christianity makes no such profession." Chalmers proceeded to de-center terrestrial life. "We should learn not to look on our Earth as the universe of God, but as one paltry and insignificant portion of it." If our Earth would suddenly disappear, the universe at large would suffer as little as a forest would suffer at the fall of a single leaf. Living on the other planets in space are many other intelligent beings who worship the "Supreme Being." Despite the immensity and splendor of our universe, Psalm 8 teaches us that God can still care for each of us individually, giving "every comfort" we can enjoy (Crowe 2008, 240–59). If extraterrestrials have fallen into sin, the Glasgow pastor affirmed that Christ's redemptive work on Earth alone would suffice for the redemption of extraterrestrial sinners.

In the twenty-first century, the late Wolfhart Pannenberg sang in the single incarnation choir. Pannenberg, like Tillich, would agree that God's redemptive as well as creative work would be present in other worlds. Still, Pannenberg comes closer to saying that the saving work of Jesus Christ in Earth's history is efficacious for the entire universe, whether aliens know it or not. "It is hard to see . . . why the discovery of nonterrestrial intelligent beings should be shattering to Christian teaching. If there were such discoveries, they would, of course, pose the task of defining theologically the relation of such beings to the Logos incarnate in Jesus of Nazareth, and therefore to us. But the as yet problematic and vague possibility of their existence in no way affects the credibility of the Christian teaching that in Jesus of Nazareth the Logos who works throughout the universe became a man and thus gave to humanity and its history a key function in giving to all creation its unity and destiny" (Pannenberg 1991–1998, 2:76).

Pannenberg can express confidence in the universal efficacy of Jesus's atoning work because his incarnation is the incarnation of the universal Logos, the principle by which all of creation is generated and held together. Like thoughts originating in our mind, the Logos originates in God. And as our thoughts come to expression in speech, when God speaks the Son becomes differentiated from the Father, and the world with all of its particularity comes into existence. This is the divine nature of the Son, the universal ground of all finite reality.

Like Tillich, Pannenberg is momentarily stepping back from redemption to the doctrine of creation. However, there is a slight difference. Pannenberg associates creation with the Trinity, not with the Father alone. It is through the Son as the Logos that the existence of the entire finite creation is wrought. “If the Logos is the generative principle of all the finite reality that involves the difference of one thing from another—a principle grounded in the self-distinction of the eternal Son from the Father—then with the advent of ever new forms differing from what has gone before there comes a system of relations between finite phenomena and also between these phenomena and their origin in the infinity of God. As the productive principle of diversity the Logos is the origin of each individual creature in its distinctiveness and of the order of relations between the creatures” (Pannenberg 1991–1998, 2:62). Note that the Logos establishes both individuality and the relations between individuals. Perhaps this is the condition that makes it possible for the Logos to become a single individual, Jesus of Nazareth, while still expressing universal finite reality. In sum, Pannenberg sings with gusto the single incarnation stanza.

Talk of logos can easily become talk about reason. When the topic of extraterrestrial minds gets discussed, frequently the question of creaturely rationality comes up. The Christian tradition, following Plato, holds that God is rational and we, God’s creatures, share in this rationality. The question of rational capacity is distinct from the question of estrangement or need of redemption. If rational creatures living on another planet are curious and capable of understanding, then one could easily posit that God would communicate simply to share communion with creatures. Both Tillich and Pannenberg would admit that the divine logos or divine reason maintains the same structure everywhere in the cosmos, so rational creatures would be by nature attuned to the presence of God, whether incarnate in flesh or merely apprehensible through mind.

Back to sin and evil. If we add to the rational capacity the condition of estrangement—fall into sin—then the situation becomes more complex. As human reason on Earth becomes distorted by sin, so also we could expect that extraterrestrial reasoning might be similarly distorted. Extraterrestrial incarnation may need to be more than merely revelation. It might include a dimension of atoning work leading to reconciliation, the gracious overcoming of estrangement.

Perhaps the loudest solo voice in the single incarnation choir is David Wilkinson, an astrotheologian teaching at Durham University. The multiple incarnation tune grates on Wilkinson’s ears. The logic of the multiple incarnation position has implications, and four of these implications are worrisome. First, “to drive a wedge between the cosmic Christ and the human Jesus does begin to open the door to the view that Jesus was just a good man used by God” (Wilkinson 2013, 158). It turns Jesus into a mere revelatory exemplar and undercuts the creation-wide implications of

the eternal logos taking up residence in the temporal Jesus. Jesus isn't just a nice guy God used for his generation alone.

The second worrisome implication is this: "if God's nature is to reach out in love in embodied form, why should there not have been multiple incarnations in different cultures on Earth?" God is certainly manifest in multiple cultures, but Christian theologians have restricted the idea of incarnation to one and only one instance, Jesus in Israel. "Jesus is still held to be supreme," says Wilkinson (2013, 158–59).

Thirdly, God is not limited to revelation through incarnation alone. "The Bible is full of other images of God communicating, including through visions, through awe at the natural world, through angelic visitations, through burning bushes, through dreams, through the written word, through prayer, and through prophets." Should God wish to reveal the divine self to races of extraterrestrial beings, methods other than incarnation are available.

Fourth and most importantly, the multiple incarnation position would make sense only if the function of incarnation is revelation. If incarnation also entails salvation, then more is at stake. "The incarnation is about both revelation and salvation," Wilkinson makes clear (2013, 158–59). If the atoning work of Jesus Christ in terrestrial history is efficacious cosmically, then this must include all creatures within God's creation, terrestrial and extraterrestrial alike. In short, a single incarnation by God in the Earthly Jesus makes the most sense.

SHOULD A CHRISTIAN BAPTIZE AN ALIEN?

In *Nostra Aetate*, the Second Vatican Council sang the single incarnation stanza. God's universal grace is ontologically tied to God's historical action to the event of Jesus Christ on planet Earth. This warrants preaching, the sharing of news about this event. "Christ in His boundless love freely underwent His passion and death because of the sins of all [creatures], so that all might attain salvation. It is, therefore, the duty of the Church's preaching to proclaim the cross of Christ as the sign of God's all-embracing love and as the fountain from which every grace flows" (Abbott 1966, 667). Vatican II did not address directly the question of extraterrestrial life, yet we could surmise that God's grace would be effective on other planets even though this grace expresses the love of the very same God revealed in Jesus Christ on Earth.

More recently in Roman Catholic circles, "the question of baptizing an extraterrestrial" has come up, according to Vatican Observatory researchers Guy Consolmagno and Paul Mueller. How do they answer? "Only if ET really exists and only if ET asks for it, with a good understanding of what baptism means: initiation into the hope and challenge of the Christian way of life—the way of life modeled by Jesus and lived oh-so-imperfectly

by Christians ever since” (Consolmagno and Mueller 2014, 250). This assumption that baptism is only for those who ask for it relies on belief in human reason and human autonomy. Would this apply to aliens? We will have to ask them.

WHY INCARNATION? THE FIX-A-BROKEN-CREATION MODEL

As we listen critically to the various stanzas, perhaps we should pause to ask: why would God incarnate in the first place? One reason might be this: the broken creation needs fixing. The sending of Jesus Christ as Savior repairs what is broken. An alternative reason might be this: in the incarnation God continues to communicate with creation, and God would self-communicate whether the creation is broken or not. The fix-a-broken-creation or atoning-work model would tend to support a single incarnation, whereas the divine self-communication or revelation model would tend to support multiple incarnations.

In the minds of most Christian theologians incarnation and redemption seem to belong together in the fix-a-broken-creation model. Both Latin and Byzantine church traditions long remember Athanasius (296–373) saying of Jesus Christ, “He was made man that we might be made God” (Athanasius, *Incarnation of the Word*, §54). Byzantine Christians still hold that in the incarnation Jesus Christ recapitulated all that is human, healed it, and set us on a course toward deification, *theosis*. Such deification had been God’s original plan in creation, to be sure; but because of human sinfulness God found it necessary to take redemptive action. “The Fall demands a change, not in God’s goal, but in His means,” writes Russian Orthodox theologian Vladimir Lossky: “For the atonement made necessary by our sins is not an end but a means, the means to the only real goal: deification” (Lossky 1989, 110–11). According to this line of thinking, the Christ event fixes a broken creation; it lifts up what has fallen.

Robert John Russell extends the concept of the fall into sin to the extraterrestrial situation. Most likely, he contends, alien beings exist in a non-Edenic situation. Because of the physics that governs everything in the universe, including biology, extraterrestrials will find themselves in the same situation of ambiguity that we find ourselves. “I predict that when we finally make contact with life in the universe . . . it will be a lot like us: seeking the good, beset by failures, and open to the grace of forgiveness and new life that God offers all God’s creatures, here or way out there” (Russell 2000, 66). The physical features of reality are constant regardless of where one lives in this universe; so it is reasonable that extraterrestrial beings experience the same struggles with the same failures and achievements we have come to know. With this as an assumption, it should follow that the atoning work of Christ on Earth should apply to off-Earth civilizations. It

should follow as well that one incarnation should suffice for the cosmos, even if other divine revelations occur in other corners of the cosmos.

Tillich and Pannenberg line up on opposite sides of the fence on this issue. Tillich seems to assume that our situation of estrangement calls out for an incarnate visitor from the ground of being. Fallenness calls out for redemption. Pannenberg, in contrast, makes the incarnation independent of the Fall. “The incarnation cannot be an external appendix to creation nor a mere reaction of the Creator to Adam’s sin” (Pannenberg 1991–1998, 2:64). God’s presence in Jesus Christ adds the grace of redemption to the grace of creation. The latter is a completion of the former. It would appear to me logically that Tillich should favor a single incarnation and Pannenberg multiple, but, curiously, the reverse is the case.

One more case. Andreas Losch and Andreas Krebs sing the single incarnation stanza with Pannenberg, but with a lot less gusto. Like both Tillich and Pannenberg, they recognize that the universal Logos would be present on every planet, bringing each planet within the sphere of divine creation and revelatory grace. Christianity’s “revelatory tradition has a universalistic tendency that makes this possible. One would have to accept extraterrestrials as created in the image of God and created through the word of God, viz., Christ as well” (Losch and Krebs 2015, 241). With this as a premise, Losch and Krebs add that this would apply regardless of the number of incarnations. “Whether many incarnations were needed or whether the one on Earth suffices for all species, we want finally to leave to the wisdom of God . . . Therefore one would not need to send missionaries into space” (Losch and Krebs 2015, 241). No missionaries? This conclusion—no missionaries to announce God’s saving work on Earth are needed on extraterrestrial planets—implies that extraterrestrial civilizations already have sufficient knowledge of God’s gracious love through their access to the Logos. This logic suggests that Losch and Krebs must be singing in the choir we will listen too next, the Divine Self-Communication choir.

WHY INCARNATION? THE DIVINE SELF-COMMUNICATION MODEL

According to the alternative model—which centers on revelation and could be called the divine self-bestowal, divine self-communication, or incarnation-anyway model—some theologians argue that God would become present in creation with or without the fall into sin. Latin theologian Bonaventure (1221–1274) may turn out to be the patron saint of the divine self-communication model. He rejected the idea of the incarnation in Christ as some sort of afterthought, a way to fix what was broken. Incarnation was willed by God for its own sake, not for the sake of a lesser good. In addition, said Bonaventure, God’s entry into the created realm as a human serves to unite all of creation with humanity. The incarnate Christ

serves to perfect nature. All of God's creative work is a form of incarnate self-expression (cited in Delio, 2007).

Another theologian in the Latin tradition, John Duns Scotus (1265–1308), sees friendship love (*amor amicitiae*) as the spontaneous divine motivation for creation as well as redemption through Christ. This divine love needs to be shared, so to speak, first with the soul of Christ and then with all of creation. The soul of Christ is the first goal of God in creation and, then, all creatures spread throughout the entire created universe become co-lovers for Christ's sake. Scotus works from within the divine-self-bestowal or incarnation-anyway model. "*Incarnation and redemption are logically independent projects,*" comments Marilyn McCord Adams (2006, 184).

For Karl Rahner, the incarnation in Jesus Christ is, flatly, God's self-communication. "The world and its history are from the outset based on the absolute will of God to communicate himself radically to the world. In this self-communication and in its climax (i.e., in the Incarnation), the world becomes the history of God himself" (Rahner 1976–1988, IV:110). On the one hand, through the incarnation God actualizes our human potential. On the other hand, we human beings and all of creation get taken up into God's own history. "The incarnation of God is therefore the unique, *supreme*, case of the total actualization of human reality. . . . God has taken on a human nature, because it is essentially ready and adoptable. . . . and comes therein to the fulfillment of its own incomprehensible meaning" (Rahner 1976–1988, IV:110). This understanding of incarnation within the divine-self-bestowal model is one of adding grace upon grace.

Significant to the Rahner view is that through the incarnation God's own life becomes historical; the world becomes internal to the divine life. That would include all histories, including histories on other planets. We see a nascent variant of this view articulated as well in the Christology of Marilyn McCord Adams, who begins by recognizing the hostility that exists in the created world toward God. The material world is a world filled with horrors, horrific evil. For God to become incarnate means, among other things, that the horrors of this world become internal to God's history. This leads Adams toward the fix-a-broken-creation model. "On my view, Christ is primarily *head of the cosmos*. God makes the world in order to become Christ for it, shares the natures of the whole material universe by making Godself a member of the human race. On my view, there is no 'anyway' to Incarnation, because God's making us in a world like this leaves us radically vulnerable to horrors" (Adams 2006, 200). But this does not preclude multiple incarnations. Without directly addressing the extraterrestrial intelligence (ETI) question, she writes, "multiple incarnations are metaphysically possible, whether by the same or by different Divine persons" (Adams 2006, 198). Whereas Rahner would stress that only the

second person of the Trinity would become incarnate, Adams leaves it open to any of the three.

Thus, we have two contrasting models to work with. According to the fix-a-broken-creation model, what motivates the incarnation is God's desire to redeem a fallen world from sin. According to the divine self-communication model, the incarnation would happen anyway, whether the creation fell or not. According to this second model, God's incarnation in Christ is one more chapter in the story of God's self-giving love that began with creation. Even though it appears logical to me that the fix-a-broken-creation model would rely upon a single fix and, hence, a single incarnation, many who sing this song do not also sing the single incarnation stanza. It appears logical to me that the divine self-bestowal model should logically lead to divine self-communication everywhere God finds a rational ear to listen, even on exoplanets. Yet what seems logical turns out not necessarily to be the preferred melody among our theologians.

Rahner, O'Meara, and Delio, however, form a small choir making the logical connection between divine self-communication and multiple incarnations. All three begin with the divine self-communication model. Drawing upon Rahner, O'Meara says, "As incarnation is an intense form of divine love, would there not be galactic forms of that love? An infinite being of generosity would tend to many incarnations rather than to one. . . . A succession of incarnations would give new relationships and new self-realizations of God. . . . Incarnations among extraterrestrials would not be competing with us or with each other" (O'Meara 2012, 47).

Also following Rahner's lead yet running parallel to O'Meara, Franciscan Ilia Delio affirms divine self-communication in Christ and similarly affirms multiple incarnations. More exhaustively than either Rahner or O'Meara, however, Delio places God's self-communication in the embodied Word within a Teilhardian scheme of theistic evolution. The Christ principle imbues biological development wherever that biological development takes place, guiding it, perfecting it. This universal Word of God can then take on specific embodiment and be perceived as the divine Word by any creatures who are intelligent. "Incarnation on an extraterrestrial level could conceivably take place, as long as there is some type of intelligence within the extraterrestrial species to grasp the Word of God through knowledge of the divine embodied Word. . . . many incarnations but one Christ" (Delio 2012, 169). The divine self-bestowal trio, so to speak—Rahner, O'Meara, Delio—makes a formidable case for connecting the self-communication model with the multiple incarnation option.

OPTIONS IN ASTROCHRISTOLOGY

Where have we been? It appears that we have identified four logical positions. The first would assume a fix-a-broken-creation Christology with

a single terrestrial incarnation. The second position would assume a fix-a-broken-creation Christology with multiple incarnations, one for each planetary civilization. The third would assume an incarnation-anyway model that relies upon a single incarnation on Earth. The fourth would assume an incarnation-anyway Christology combined with multiple incarnations.

Single Incarnation Fix-Broken-Creation	Multiple Incarnations Fix-Broken-Creation
Single Incarnation Self-Communication	Multiple Incarnations Self-Communication

Of these alternatives, I believe the most coherent position is the first: a fix-a-broken-creation Christology (more precisely, soteriology) combined with reliance upon the atoning work of the single Earthly incarnation event. I would add that I would incorporate a high Christology rather than a strictly revelatory or exemplar Christology. Accordingly, in the historical incarnation on Earth God accomplished something with ontological import, import for everything in the material world no matter how distant in space or time.

In my judgment, George Coyne, SJ, former director of the Vatican Observatory, gets it right. Coyne presumes that the fallen or sinful state of creatures warrants the divine work of redemption. More to our point here, however, is that this redeeming work seeps into the very depths of material reality, the material reality present in stars and planets everywhere. “How could he be God and leave extraterrestrials in their sin? After all he was good to us. Why should he not be good to them? God chose a very specific way to redeem human beings. He sent his only Son, Jesus, to them and Jesus gave up his life so that human beings would be saved from their sin. Did God do this for extraterrestrials? . . . There is deeply embedded in Christian theology . . . the notion of the universality of God’s redemption and even the notion that all creation, even the inanimate, participates in some way in his redemption” (Coyne 2000, 187). In sum, the one incarnation of God in the Jesus of Earth’s history will suffice for the entire cosmos.

A PROLEPTIC ASTROCHRISTOLOGY

Let me develop this position further. Let me ask again directly: just what is really at stake with the concept of incarnation? Why does this curious doctrine appear within the Christian scheme of redemption? Answer: because the love of God for the world is at stake. That little gospel in miniature so ubiquitous on posters during football games, John 3:16, begins: “For

God so loved the world . . .” The word for world is *kosmos*. The concept of *kosmos* includes all things, even all physical things. To be sure, when the biblical writers looked up in the sky they saw a lot less than modern scientists with telescopes can see. They saw 6,000 stars, not 140 billion galaxies. But this does not change the fundamental insight: God loves the physical world and, in Jesus Christ, God took the existence of the physical world into the divine life. What took place was a communication of attributes (*communicatio idiomata*) in which the world took on divinity and the creator took into the divine being what is created. This interchange of attributes means that the divine power of renewal—the promise of ultimate transformation—belongs now in the world itself.

When God raised Jesus from the dead on the first Easter, this became for us *Homo sapiens* and for all creatures a divine promise for a future resurrection from the dead. Actually, Jesus’s Easter resurrection is for us a prolepsis, an incarnate anticipation of the promised new creation to come. This future redemption is anticipated in the form of biblical symbols such as Kingdom of God, New Jerusalem, Heaven, or New Creation. This divine promise is valid for the entire cosmos, inclusive of all cosmic history between the Big Bang and the Big RIP (Rest In Peace). Exactly what this eschatological redemption will look like is unknown and somewhat mysterious; yet, we know that it will look like a cosmic version of what happened to Jesus on Easter.

Here is the implication for astrochristology: Jesus’s Easter marks a threshold in not only Earth’s history but also in cosmic history. Aliens living in civilizations on exoplanets such as Gliese 832 or Kepler 90 (Johnson and Kelly 2014) will eventually enjoy the benefit of God’s atoning work on planet Earth. They will be included in God’s redemption whether they know it or not. If Tillich is right, they will receive one or more revelations that will inspire trust in divine grace.

Defending this position risks some unhappy repercussions. For example, I might get accused of neo-geocentrism; because it appears that I grant our planet a specially chosen status. However, I do not wish to defend any brand of geocentrism, because I deem salvation to be an eschatological gift of divine grace for all of creation, all of the galaxies. What happened on Earth in the Jesus event was a prolepsis, an anticipation of the cosmic wide transformation which the Jesus event promises. This is the case for the cosmos, I think, whether conscious beings realize its truth or not.

This accusation of geocentrism might carry a rider, namely, that a historical event on Earth might never be known on an extra-solar planet; and this implies that we Earthlings have exclusive access to a cosmic truth. Doesn’t this claim entail *hubris* or homocentrism? No, because I do not deny other forms or events of divine self-revelation that could take place anywhere at any time. With Tillich, I can almost forecast that God would make the power of creation and redemption known where creatures are beset with

the sting of death or the horrors of sin. When it comes to revelation, this position is not geocentric.

CONCLUSION

“Without a cosmic eschatology there can be no assertion of an eschatological existence of [humanity] . . . world-picture and faith are inseparable,” trumpets Jürgen Moltmann (1967, 69). With a world-picture that includes the entire universe we perceive the grandeur, and with faith we feel the gratitude. As audacious as it may sound, the Christian world-picture includes a vision of a coming new creation for the whole of the cosmos. The Christian claim is that what happened to Jesus of Nazareth on the first Easter models what will happen to the entirety of God’s creation in the future.

This is what the concept of the incarnation is intended to convey. It would be misleading if we think of incarnation in terms of a heavenly being taking a vacation on planet Earth or a spiritual being dressing temporarily in human skin. Rather, incarnation is an abbreviated cipher for the entire life, death, and resurrection of Jesus; and it is nested inextricably within God’s promise of renewal of all that exists in the creation. Astrochristology delivers a promise that extends well beyond Earth; it includes all the stars and all our space neighbors.

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