Tonight, as on every night, powerful instruments of research receiving radio and light waves search out stars far away. However, they are examining stars in a new way. They are looking for planets circling around those stars. Beginning in 1992, planets outside of our solar system were detected. Those celestial objects are now called “exoplanets.” We have entered into a new world, one that is indeed a vast universe.

New Planets and Extraterrestrials

There is an extensive search for exoplanets. In less than twenty years, over 300 planets have been discovered outside of our solar system. In 2009, NASA launched a space observatory named Kepler to study 155,000 suns and to search out possible planets. A recent announcement from NASA says that Kepler, after a search of two years, has found 715 new planets. Among those planets in our galaxy a considerable number of them resemble Earth. Moreover, some circle their stars in a zone more or less conducive to life. Finding a planet in “a habitable zone” around a star like our Sun is a significant step towards finding Earth-like planets. Astronomers point out that planets resembling Earth and so more likely to have intelligent life are not rare and frequently are not so distant from us.
North of San Francisco, a radio telescope with forty-two dishes has been set up; there will be 350 dishes when the Allen Telescope Array is complete. One of its purposes is to search for life in outer space. Two years ago a new telescope in Europe began the examination of 120,000 stars.¹

How many stars in one galaxy? Twenty years ago, the estimate was 500 million stars in one galaxy. That rose upwards to 5 billion, 10 billion suns? Now the estimate is 100 billion to 400 billion in a galaxy. So many galaxies, each with billions of solar systems, can only increase the likelihood of distant civilizations with intelligence. Just in our Milky Way, whose number of estimated stars varies from 100 to 400 billion, some astronomers have estimated four billion exoplanets. The universe is indeed vast.²

Some years ago a group of scientists produced an exercise in probability: the Drake Equation. It looks at: a) the percentage of galaxies with the right kinds of stars suited to forming planets; b) the percentage of planets hospitable to life; c) the percentage conducive to animal life; d) the minimal percentage of planets suited to intelligence; e) and the percentage of those communicating at this time. In terms of the Drake Equation, Michael D. Lemonick concludes: “If the average civilization does in fact endure for between one thousand and one million years, then the number of [communicating and intelligent] civilizations in one galaxy is between one thousand and one million.”³ This is just in one galaxy.

### Extraterrestrials and the Christian Faith

A theologian would not presume to decide whether there are other intelligent beings in the universe or not. Neither theologians nor astronomers should dictate to divine intelligence and power what it has fashioned or will initiate. Does the Christian faith insist that only one salvation history exists—The one recorded in the Bible? Is Jesus so central a figure that only he and his Middle Eastern religious world can reveal God?

The subject of the following pages, a quite speculative exo-theology, is creatures living on other planets orbiting other suns. To be involved with the divine, the creature needs to be intelligent and free. Also, we are concerned here with intelligent beings in our material universe. “Extra-terrestrials” have some form of body, some matter; we are not concerned with beings without corporeality spirits, traditionally called “angels.” Further, there would be countless forms of animal and vegetable life in the universe; we are interested in them if they have mind and freedom.

### Extraterrestrials amid Nature and Grace

Are there intelligent creatures on planets orbiting stars in our galaxy? Are there only a few such races? Are there many of them?

Three topics appear constant and basic in religion. They are also very much the subject of the Christian faith. These areas underlying much of religion are: a) the knowing person, b) the person’s relationship to God, c) sin, and evil. This triad is the format in which human beings on Earth ponder what in hope and ritual is called religion. It offers an initial approach to the new topic of the condition of extraterrestrials in terms of creation and redemption.

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¹ French astronomers attempt to picture in color exoplanets according to their relationships to their stars locations in Guillaume Ducrot, “Les Exoplanètes les plus spectaculaires de 2013, Collection Science & Espace. Exoplanètes, les nouveaux mondes (Naintre: Diverti, 2014), 29-39. A position for ethics and religion at the Centre National des Études Spaciales in France is held by Jacques Arnould; see his publications in French and in English such as Icarus’ Second Chance. The Basis and Perspectives of Space Ethics (Vienna/New York: Springer, 2011) and Une brève histoire de l’Espace (Paris: J. C. Béhar, 2011).

² Recently, in Paris, the Institut pour l’Astrophysique de Paris offered the hypothesis that there are more planets than stars (suns) in a galaxy.

1) The Knowing Person. We on Earth should be open to varieties of creatures, imagined or barely glimpsed to unusual races. Carl Sagan observed: “There is no reason to think that there is only one path to intelligent life. The selective advantage of intelligence is clearly high.” For Christian faith and theology, the natures of other intelligent creatures, when they exist, would be open to variation, dramatic variation. Like everything in the universe, their forms comes from a divine wisdom and love that are themselves its only limits. The extent of the universe suggests a variety of ways of life and so of intelligent life. For instance, for inhabitants of a planet around a distant sun, their personal and religious life might be timeless; the divine presence would dwell among people without story or history. Time lies not in their happy nature. There can be different kinds of minds, cultural energies, and temporalities.

2) Grace. Christian faith is not about God’s existence. Christian faith teaches about God’s life and love touching human beings in a special way. Christians call that special contact with God “the kingdom of God,” “life in the Holy Spirit, or “grace.” What religions call revelation and grace are expressions of a special presence of God. Words like “revelation” and “grace” attempt to present facets of the divine life offered silently to us. In this regard, Christian faith poses a further question: do intelligent creatures draw forth from God’s free plan some special contact? Does God relate in a personal way only to us on Earth? There might be a number of modes of supernatural life with God: a variety of God’s intimate life shared with intelligent creatures in a billion galaxies. Is it likely that there are millions of bands on the spectrum of natural life but only one form of created supernatural life? After all, a spiritual and graced existence is higher and more open to variety. Or, do other intelligent beings have in their psychological and biological energies no longing for fulfillment from beyond. They would have no aspiration to life after death and no longing for a special contact from God. On the other hand, would not this or that intelligent creature receive some special life and information, grace and revelation, from God? Roch Kereszty concludes,

   Considering the consistency and unity of what we already know about God’s plan of salvation...a perfect participation in God’s life through the Son in the Holy Spirit, we may assume with some probability the same supernatural goal for all other possible spiritual beings.5

3) Evil. Towards kinds and degrees of evil too there must be openness and imagination. Evil does not exist necessarily. Being and life and intelligence are good; evil is not their necessary companion. If evil exists elsewhere in the cosmos, it might be of various kinds. A race might be involved in natural disasters, in illnesses—they might be free of all of them. Sin in one race might not weaken the personality extensively (as it does on Earth); or it might touch individuals but not the collectivity (as Earth’s transmission of original sin does). It might not infect an entire species on one planet. It might be that in the universe a creature’s free choice for serious evil is an exception. Much of science fiction finds creatures coming to Earth from elsewhere inevitably violent. Movies and television depict extraterrestrials as deadly viruses or as huge flying machines resembling dinosaurs. And also, writings on science not infrequently speak of an almost inevitable de-

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5 Roch Kereszty, “Christ and Possible Other Universes and Extraterrestrial Intelligent Beings,” Jesus Christ: Fundamentals of Christology (New York: Alba House, 1991), 380. Some theological traditions like the Franciscan school or churches in Eastern Orthodoxy hold that intelligence tends to call forth from a freely generous God some sharing in divine life beyond the forms of being. Other, largely Western, theologies can imagine persons living in a purely natural world, living without grace.
cline for any intelligent civilization into conflict and self-destruction. There is no need to think that in the cosmos evil is more prominent than grace. How curious that in these considerations, art and science would be pessimistic and faith optimistic.

So, in each of the three basic religious areas, humans should be open to varieties of life and existence.

Four Theologians

There are a number of Christian theologians who through the centuries, have discussed this topic. Four stand out.

1) Origen. In Alexandria, the center of the intellectual world of Hellenism and then the Roman Empire, in the early third century, Origen taught philosophy and science in order to prepare people for his Christian theology. His view of the universe placed its beginnings in God's creation of a vast number of minds destined to enjoy a divine happiness. The Creator first produced free intelligences and then, in a distinct second stage, matter and non-rational creatures. All the rational creatures—they became angels, devils, stars, and humans—were created together and as equals. They were absorbed in the contemplation of God, but their attention wandered; they more or less lost interest in celestial life and fell away from their pristine state. They fell in different degrees, and the degree of the fall gave diversity to angels and demons in modes of existence, and it diversified human beings in their sensual animality. The preexistent intelligence destined to serve as the soul of Jesus born in Bethlehem did not fall. Joined to the Word of God, this intelligence—the man Jesus—is the instrument by which the Word on Earth explains sin and grace and teaches men and women how to pass through the sufferings of Earth, its darkness, and even death into future spirituality. A journey forward to God is offered to all; souls ascend through various heavens, living and learning in order to become more knowledgeable and balanced. Origen affirmed an apocatastasis, the happy resolution of all intelligences in the Word, who on Earth is the risen Jesus Christ. The end mirrors the beginning.

In the universe, the Logos works salvation in several forms for several worlds. He becomes a human being for humanity, and he becomes an angel for each kind of angel. The created and personal reality (angels too have some slight form of a body) united to the Logos acquires an angelic condition among the angels just as among terrestrials it acquires a human condition. Thus Origen gave a cosmic variety to the incarnation. The Logos moves from nature to nature as redemption operates throughout the universe.

2) Thomas Aquinas. A millennium after Origen, Thomas Aquinas fashioned an original theological system for his cultural age, one formed not by Middle Platonism but by Aristotelian science. Aristotle rejected an infinite universe and a plurality of worlds, maintaining that the universe was composed of a finite amount of matter where the activity, purpose, and symmetry of nature were central. Aquinas also affirmed one universe. A single unity for all beings finds support from science as well as from theology. He treated the topic of one or many worlds as an issue in metaphysics and physics and not in Christian theology. Cosmologies asserting many worlds had two problems: first, they located the origin of the universe in chance, and second, they neglected wisdom's order. Aquinas was considering not other units within a single universe, a world much greater than the Ptolemaic system like a gathering of galaxies, but other universes with no connection to the stars and planets of the Milky Way or to each other. Plural worlds meant a number of worlds with no single source, no focal point, and no relationships among the parts.

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In looking at Aquinas' theological directions and attempting to think along with him, it is a mistake to stop with this or that conclusion from medieval philosophy. Otto Pesch concludes, “Anyone who knows a little of St. Thomas is never safe from making surprising discoveries.” A few of Aquinas' principles offer supportive insights for considering extraterrestrials theologically. God is without limits and is intelligent and eminently active. “Comprehending all in itself, it contains being as an infinite and indeterminate sea of reality.” In God are many ideas, ideas for everything that was made, will be made, or that could be made. God is a creator-artist who, out of the ideas of all realities, freely leads forth beings into their actuality. The divine motive for all its actions towards beings is goodness. Generosity comes from that goodness and is realized in love pouring itself outward by bestowing existence on others. Love carries the divine plans into external realizations. “God is a living fountain, one not diminished in spite of its continuous flow outwards.” God intends a universe that is diverse and also coherently empowered.

Intelligent creatures are the summit of the universe; they exist on Earth and in countless spiritual (angelic) forms. Intelligent creatures reflect the divine in a special way, and as such they are the image of God mentioned by Genesis, an image found in the ability to know and to be free. Angels and earthlings are part of a wider polity of divine life, beings with whom God can be friends.

The divine motive for creation is God's goodness diffusing itself. That is also the motive for what is called incarnation. Incarnation means that a divine person (from the community of three) without losing its identity becomes an individual creature. In Jesus of Nazareth the mission of the Word has a particular intensity: a silent presence of God brings a special grounding of Jesus' reality. “The incarnation was suitable to God because of the infinitely high level of his goodness intent on human salvation.” While the Word and Jesus are one, the life of Jesus on Earth does not curtail the divine Word’s being and activity: “The power of a divine person is infinite and cannot be limited to anything created.” The universe is vast. Did Aquinas think there could be other incarnations? “But it is impossible for the Uncreated to be circumscribed by the created. Whether we look at the divine power itself or its personhood (the term of the union [with Jesus]), the divine person can assume more than one human being.” All three persons can become incarnate because incarnation is only one aspect of an endlessly rich divine power, and so each divine person could be incarnate (beyond Jesus) in further creatures. Aquinas observed that the species of nature, including the human race, have precise properties and these influence the activities of divine grace in the human person. Specificity and diversity in nature and grace would be true in other intelligent peoples. Given

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9 Thomas Aquinas, Summa Theologiae I, 13, 11.
10 Aquinas, Summa Theologiae I, 14, 8. Aquinas spoke of “the art of divine wisdom and the realm of divine goodness” in Summa Theologiae III, 1, 1, 3.
12 Aquinas, Summa Theologiae I, 47, 3. “Consequently it is the entire universe that participates in and represents the goodness of God more than any one creatures” (see also I, 47, 1).
13 Aquinas, Summa Theologiae I, 93, 4 and 5.
14 Aquinas, Summa Theologiae I, 20, 2, 3.
16 Aquinas, Summa Theologiae III, 7, 3.
17 Aquinas, Summa Theologiae III, 7, 3 Culturally and religiously each incarnation would have something proper drawn from the world where it was incarnate in a creature (Summa Theologiae III, 8, 3).
Aquinas’ emphasis upon higher forms of life, is it not likely that the universe contains a variety of them? A variety of civilizations with billions of persons in the universe suggests a variety in number and in kind of intense relationships with the Trinity.

3. Guillaume Vauroillon. A Franciscan living in the first sixty years of the fifteenth century and taught at the University of Paris and serving as a theological expert at the Council of Basel drew on the Franciscan tradition to ponder openly creation and incarnation. Vauroillon began by saying that God could create a vast number of worlds, worlds like our or worlds better than this one. “Infinite worlds, more perfect than this one, lie hid in the mind of God...it is possible that the species of each of these worlds is distinguished from those of our world.” 18

He did not think, however, that information about those worlds would ever reach Earth, for they are too far away.19 The insightful theologian in the 1440s pondered what would revelation, sin, and a redeemer be on another planet. “If it be inquired whether people existing on that world have sinned as Adam sinned, I answer, No. They would not have contracted sin because their species is not from Adam.”20

What is the role of Jesus Christ? Vauroillon’s answer was nuanced. If different kinds of sin are hypothetical, then redemption is also hypothetical.

As to the question whether Christ by dying on this Earth could redeem the inhabitants of another world, I answer that he was able to do this not only for our world but for infinite worlds. But it would not be fitting for him to go to another world to die again.21

He means that the Incarnate Word by its power can exercise wider redemption, but that Jesus the man does not belong in other worlds.

His conclusion is that neither our sin nor our redemptive grace, nor our redeemer, has a role beyond Earth. How interesting and surprising: already at the end of the Middle Ages and the beginning of the Renaissance, we have a fundamental theology of extraterrestrials.

4. Karl Rahner. The Jesuit theologian already in 1974 mentioned what he called “the possible history on another star of Geist,” of intelligence and freedom.22 We can conceive of creatures on other “stars” who are corporeal and intellectual, that is, like human beings or similar to them. The gigantic number of stars argues for other intelligent civilizations. Rahner in a challenging way asked: Why in worlds where life is a potentiality or a reality would God stop the development of life short of intelligent creatures. The possibility of the development of life to the point of intelligent consciousness cannot be excluded.

It would be excessively anthropomorphic to view the Creator-God as directing cosmic evolution at another location in the universe to the point where the immediate possibility of free and intellectual life is present—but then casually breaking off that development.23

For Rahner, the active, self-seeking person draws forth from God a richer contact. Would there not be for each civilization of extraterrestrials revelation and grace as the special self-communication of God?

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19 Quattuor librorum Sententiarum Compendium venerabilis patris fratris Guillermi Vorrillonis Lib. 1, dist. xliv, folio 105.
20 Quattuor librorum Sententiarum Compendium venerabilis patris fratris Guillermi Vorrillonis Lib. 1, dist. xliv, folio 105.
21 Quattuor librorum Sententiarum Compendium venerabilis patris fratris Guillermi Vorrillonis Lib. 1, dist. xliv, folio 105.
We presuppose, therefore, that the goal of the world consists in God’s communicating himself to it. We presuppose that the whole dynamism which God has instituted at the very heart of the world’s becoming by [its] self-transcendence (but beyond what constitutes nature) is always meant as the beginning and first step toward this divine self-communication.24

Are not intelligent beings normally or always invited to God’s special friendship? Rahner expects that a special presence of grace comes to others even as he recognizes the religious independence of other planets.

One could say that these other corporeal and intelligent creatures in a meaningful way also have a supernatural determination within an immediacy to God (despite the totally unmerited reality of grace). At the same time we can conclude nothing about the history of freedom of these creatures.25

Christian theology should accept the limitations of its religion and revelation as they are on Earth. He concludes:

A theologian can hardly say more about this issue than to indicate that Christian revelation has as its goal the salvation of the human race; it does not give answers to questions which do not in an important way actually touch the realization of this salvation in freedom.26

The four theologians just presented have expressed a modesty about what Christian revelation and theology might say on the topic of extraterrestrials. And too, they tend to look at the three basic topics of the knowing person, grace, and evil.

Conclusion

As an amateur, I read in spectacularly illustrated books about clusters of 30,000 stars or clusters of galaxies each with billions of stars. It seems more and more likely that because of the size of the universe, there is somewhere another race of knowing and free people. The reflections above, however, lead to a further challenge. It would seem probable that there are many such civilizations. Would there not be hundreds, thousands of many civilizations of intelligence and culture in the past, the present, and the future? Billions of galaxies with billions of solar systems seem to make this inevitable. It is not our responsibility on Earth to limit the divine power or to manage the number of created beings or the kinds of divine presence in galactic planets. The Trinity is not afraid of the cosmos it created.