

catechized from our youth up. But we must also understand science and its methods, and not venture to contradict science on its own grounds. Only then can we properly engage in a search for the right relationship with creation. Only then will we possess both the wisdom and the credibility to begin a dialogue with science and

its practitioners. Only then will we be able to offer to science the wealth of our theological understanding, built up across many millennia, since the ancestors of ancient Israel first began thinking about their God. We can keep in mind that, in contrast, the scientific world view is only a few centuries old. There is much work to be done. *

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FAITH AND REASON

Taxonomy and Anthropology

Sergius Halvorsen

Taxonomy, the science of classification, is a basic means of understanding the world around us. In biology, organisms are classified according to the well-known system of kingdom, phylum, class, and subsequent levels of increasing specificity, all the way down to species and subspecies. Taxonomy is not inherent in the organisms themselves, however. People are not born with the label *Homo sapiens*. Rather, taxonomy is a hermeneutic, a method for systematically defining and understanding creation. While every classification system is based on quantifiable, objective data (such as morphology, genetics, and reproduction of fertile offspring), the act

of classifying organisms or objects into particular taxa is a hermeneutic exercise. Moreover, taxonomy is not static; over time, systems for classification change to reflect deeper understandings emerging from new observations. Even though the objects that are classified have not changed, modifications in taxonomy can result in striking reorganizations. The implications of taxonomical classification and reclassification are manifold, for both science and faith.

An example of taxonomy's importance—and of how quickly it can change—was revealed in a recent episode of the radio show *Radiolab*,

“Stranger in Paradise,” in which producer Simon Adler investigated the strange scientific journey of the Guadeloupe raccoon.¹ In 1911, Gerrit S. Miller, a zoologist and curator at the United States National Museum, received a specimen from the Caribbean island of Guadeloupe. Miller’s analysis concluded that this small raccoon, which he named *Procyon lotor minor*, was a unique species. It became known more commonly as the Guadeloupe raccoon, and in 1996 it was placed on the list of endangered species by the International Union for Conservation of Nature. Much beloved by the islanders, the raccoon is an iconic symbol of Guadeloupe. Even though the raccoons cause substantial damage to crops and livestock, the residents of Guadeloupe love their eponymous raccoons.

When a new species is discovered, specimens are collected and stored in biological archives to serve as reference specimens against which future discoveries can be compared. The animal that Miller received in 1911 became the reference specimen for the Guadeloupe raccoon and it remained in relative peace until 2000, when it came under new scrutiny. Biologists noticed characteristics of a juvenile raccoon in its skull. This explained the specimen’s small size, which had been considered one of the unique features

of the species. After performing additional morphological and genetic analyses, zoologists concluded that the raccoons living on Guadeloupe are no different than standard, garden-variety North American raccoons. The Guadeloupe raccoon, far from being unique to the island, is actually an invasive species that arrived there a few hundred years ago.

Armed with the results of this research, zoologists went to Guadeloupe and spoke with authorities on the island, informing them that the raccoon was not indigenous. Additionally, conservationists explained that Guadeloupe raccoons threaten populations of native endangered species, by raiding sea turtle nesting sites and the eggs of certain species of birds. The islanders’ response to this news was anything but enthusiastic. Most local authorities simply rejected the biologists’ reclassification, in many cases covering up reports that identified the raccoon as an invasive species and leaving laws protecting it in place. Several of the Guadeloupe residents interviewed at the end of the *Radiolab* broadcast greeted the news of taxonomical reassignment with skepticism, saying that they would continue to regard the raccoons as a national treasure. Yet in July of 2016 the European Union placed the Guadeloupe raccoon on a blacklist of invasive species, and it is possible that within the coming year the legal status of the Guadeloupe raccoon will change from a protected, endangered species to an invasive one that should be managed as a pest. While the biology of the Guadeloupe raccoons has not changed, their zoological classification has gone from endangered to invasive, from friend to foe.

Taxonomic reclassification is not limited to the field of biology. Consider

¹ “Stranger in Paradise,” *Radiolab*, January 27, 2017. www.radiolab.org/story/stanger-paradise

Photo Credit: Guillaume Aricique.



the case of Pluto, that tiny celestial body, 18 percent the mass of the moon, whose orbit is so far from the sun that sunlight takes more than five hours to reach it. Discovered in 1930, Pluto was for sixty years numbered ninth among the planets of the solar system. Questions about Pluto's planethood arose in the early 1990s when other, slightly larger objects were discovered in the Kuiper Belt, one of the most distant realms of the solar system. In 2006, the International Astronomical Union changed the definition of a planet and Pluto was reclassified as a dwarf planet. While few people are as personally invested in the classification of Pluto as the residents of Guadeloupe are in their raccoons, "Pluto is a planet!" was nevertheless a popular response to the change.

These two stories strikingly illustrate an important fact: for most people, taxonomic classifications are regarded as absolutes, since they function as the hermeneutical landmarks that allow us to understand and navigate our world. As we learn about science—about plants, animals, fossils, and planets—we must decide how particular things and groups of things should be organized into a taxonomic system that provides order to the world around us. We are told that the Guadeloupe raccoon is a unique species; that Pluto is a planet; that Neanderthals were a distinct species of hominid. These taxonomic assignments are almost always popularly received as new dogma, not as provisional classifications subject to later revision. Changes in classification can seem like the hermeneutic equivalent of moving the goalposts or altering the rules in the middle of the game. To be told that Pluto is not a planet or that a beloved local animal is an invasive species, whether because of new information or the application of

a new hermeneutic paradigm, evokes a strong response because it violates our firm sense of how things in our universe should be properly ordered. Reclassification is never easy, and consternation over taxonomic fluidity is clearly a universal human condition.

The question of taxonomy hits even closer to home when we consider human origins and paleoanthropology. When the first nearly complete Neanderthal skeletons were discovered and analyzed in the early twentieth century, scientific consensus defined Neanderthals as a unique hominid species. However, there is mounting genetic evidence to indicate that ancient humans (*Homo sapiens*) interbred with Neanderthals, and that the resultant offspring were not only capable of reproducing, but were, in fact, our ancestors. Since the reproduction of fertile progeny is one of the basic definitional requirements of a species, our current classification system regards *Homo sapiens* and Neanderthals as subspecies. In other words, the two are more closely related than earlier classifications indicated. When considering skeletal remains, anthropological artifacts (such as tools, cave paintings, and burial sites), and the fossils of hominids, the line between human beings and nonhuman beings becomes rather fuzzy. This raises fascinating theological questions about anthropology. What exactly is meant when one speaks of human nature? In exploring evolutionary theory, one faces the somewhat disquieting question of where to draw the border between human and nonhuman.

Whether Pluto is numbered among the planets is important to astronomers studying and classifying objects in the solar system, and it may be an emotional question for people who, as children, memorized the names of the

nine planets with a mnemonic such as “My Very Educated Mother Just Sent Us Nine Pizzas.” Similarly, the question about Neanderthals may have greater or lesser importance in relation to scientific and theological questions about human origins. But the most important—and often the most difficult—kinds of reclassification are those that directly affect ethical decisions. The case of the Guadeloupe raccoon is exactly this sort. A friend now appears to be a foe.

² www.mos.org/exhibits/colby-room

Taxonomic re-sortings with ethical implications can be seen in a variety of contexts. In the twentieth century, a number of substances such as the gasoline additive tetraethyllead, DDT, thalidomide, tobacco, and chlorofluorocarbons were initially labeled as harmless only to be reclassified as toxic, carcinogenic, or destructive to the environment. Reclassifications like this are never easy: those who will be adversely affected by them argue against those who seek to protect themselves and others from the newly discovered deleterious effects. One sees similar conflicts today regarding the classification of greenhouse gasses and genetically modified organisms (GMO) in food. People are passionate about these questions because the classification directly affects ethical and legal decisions, often in the form of government regulation.

An excellent example of the ethical dimension of reclassification can be seen in the Colby Trophy Room at the Museum of Science in Boston. The museum refers to the exhibit as

a re-creation of Colonel Francis T. Colby’s den in Hamilton, Massachusetts. Like a snapshot in time, the room contains original artifacts and animals representing both the life travels of Colonel

Colby and the mindset of a generation. . . . Although unusual from a modern perspective, this room represents the roots of current attitudes toward ecology and conservation.²

For someone who has lived through the birth and development of the ecological movement, this exhibit represents an earlier era when wild animals, and their wild habitats, were powerful and dangerous forces that threatened the existence of humanity. When the natural world is classified in this way, a trophy room—filled with animal skin rugs on the floor, taxidermic heads on the wall, and impressive racks of hunting rifles—is a positive statement about the ability of men such as Colonel Colby to dominate nature. A person of a particular age might recall a time when such an exhibit would have evoked feelings of awe and admiration (this is certainly what Colonel Colby intended).

When young children look at the same exhibit today, the response is likely to be one of puzzlement. “Daddy, why are all these skins and heads and guns in here? This is kind of creepy.” Over the course of the last fifty years, the natural world and the animals that inhabit it have been formally and informally reclassified. Animals that once constituted threatening forces to be subdued and dominated are now regarded as precious resources that can be easily destroyed and which must be conserved. Many previously threatening species are now endangered. Today, a video showing healthy populations of endangered animals, thriving in well-managed game preserves—the same kinds of animals whose heads and skins are on display in the Colby Trophy room—demonstrates human power (in this case, the power to curb our own capacity to extirpate natural



environments). Not only are rare animals and their habitats reclassified as valuable and worth cultivating and preserving, but human beings are placed in a different category as well: those who once struggled to dominate nature are now responsible for preserving nature from destruction and extinction.

Another example of informal taxonomy and classification is seen in the heated debates between vegans and omnivores. A vegan might look at a pig and see an intelligent, sentient being: a pet, a companion. An omnivore might look at the very same pig and primarily see pork chops, sausage, and bacon. Substantially different classifications often result in incompatible ethical decisions, revealing the subjective nature of taxonomy as a hermeneutic. The pig, Pluto, and the

pesticide do not change; it is our perspective on how they fit together that makes the difference in our treatment of them. In a profound way, taxonomy is intimately connected to ethics, because it speaks to us at the deepest levels about relationship and value.

The value constructs inherent in taxonomies become particularly apparent in questions of anthropology. Many contemporary moral and ethical debates boil down to the question of who or what is human. Questions relating to the sanctity of life—the unborn, the disabled, the elderly, the terminally ill—are fundamentally questions of what it means to be human. More broadly, questions regarding immigrants, refugees, race, and religion are closely tied to the question of who a human being is. If some are dehumanized, it is much easier for one

The recreation of Colonel Francis Thompson Colby's "gun room" at Boston's Museum of Science. Photo: www.wbur.org/artery/2016/03/25/taxidermy-in-contemporary-art.

group to marginalize another systematically. The question becomes even more critical in issues of war, justice, and capital punishment. The language used to refer to an enemy or a criminal reflects this. "He is a monster." "They are inhuman." Or consider the language that describes the death or injury of innocent men women and children in warfare: collateral damage. In order that the killing and suffering of war might be more easily justified, the people who are injured or killed—whether civilians or enemy combatants—are not thought of as people like you and me. Instead, they are just part of the scenery that has to be destroyed in order to accomplish the mission.

The question of taxonomy as hermeneutic has an interesting analog in Christian faith. When Jesus asks, "Who do you say that I am?" and Peter answers, "You are the Christ" (Mark 8:29, Matt. 16:15), we see the relationship between faith and taxonomy. Jesus's opponents looked upon the same man as Peter, yet classified Jesus differently. They classified Jesus as a blasphemer and an enemy of the state, which led them to condemn him to death. The contrast between the two confessions comes into dramatic focus in the juxtaposition of Mary, who stood weeping at the foot of the cross, and the crowd, who jeered and taunted, "Let him come down now from the cross, and we will believe him" (Matt. 27:42). The man on the cross does not change, but the two taxonomic judgments, expressed in two incompatible confessions of faith, are radically different. Whether one regards Jesus as an imposter or as the Christ is a confession of faith. Both perspectives can be argued based on the evidence, based on relevant data, yet they lead to substantially different conclusions.

Paul's mission to the Gentiles was another example of reclassification and taxonomy as hermeneutic. The circumcision party (Acts 11, 15) believed that a Christian must follow the halakhic laws of ritual purity. However, to Paul, and later to the somewhat reluctant Peter, the Gospel of Jesus Christ required a reclassification of Jews and Gentiles. As Paul famously wrote, "There is neither Jew nor Greek, there is neither slave nor free, there is neither male nor female; for you are all one in Christ Jesus. And if you are Christ's, then you are Abraham's offspring, heirs according to promise" (Gal. 3:28–29). The mission to the Gentiles was an example of taxonomic reclassification: those once rejected—the unclean, the nations, the outsiders—were now the ones whom the apostles were called to serve. Another example was Paul's definition of the spiritual warfare: we do not fight against flesh and blood—against other people—but against the "spiritual hosts of wickedness in the heavenly places" (Eph. 6:12). In the same way that followers of Christ confess belief through the symbol of faith (the Creed), "I believe in one God," the taxonomic classification of who or what is an enemy, or who or what is human, is also a confession of faith.

In an age of "fake news" and aggressive critiques of "postmodern relativism," this perspective on taxonomy as a confession of faith may seem a bit unsettling, like an embrace of subjectivism in which there are no absolutes, but merely a chaotic sea of "truthiness" where "my facts are just as good as your facts." However, such a pessimistic conclusion is itself a confession of faith (or at least faithlessness). It is far more constructive to focus on the process by which we come to make our confessions, particularly as we engage in discussions with those who hold different confessions.

Every confession, like a mathematical proof, is based on a set of givens, ideas that are accepted to be true. This is true of scientific theories. Acknowledging the confessional nature of ideas that are *accepted as* true is an act of profound honesty and humility. Thomas Hopko often remarked, “We must always admit that we may be wrong.” Acknowledging the limits of understanding and taxonomic certainty is not an abandonment of truth, but rather a deeper perception of it. Yet to make a confession of faith in God is much more than promoting a claim of objective fact; it is instead the beginning of a relationship, with God and one’s neighbor, and requires the recognition that in every relationship there is always uncertainty. To acknowledge uncertainty—to embrace mystery—is not to abandon a search for objective truth or to say that everything is entirely relative. Categorical reality is not defined by my confession: my neighbor is still my neighbor whether I classify him as an enemy or a brother. However, the nature of my confession matters far more than the nature of my neighbor.

This confessional faith is central to our relationship with God and with

our neighbor, a reality perfectly illustrated through the common biblical metaphor of the marital relationship between God and his people. In any marriage, “faithfulness” is central to the ongoing health of the relationship, even though the fact of a spouse’s ongoing faithfulness can almost never be definitively proven; indeed, any marriage in which one spouse is constantly looking to *prove* the faithfulness of the other is doomed to either failure or crippling dysfunction. Ultimately, marital faithfulness is a classification leading to a hermeneutical act of faith: you are my spouse, *ergo* I shall be faithful to you, and also presume that this faithfulness will be reciprocal. The cruciality of faithfulness in a healthy relationship, expressed through the marital language of Christianity, also sets the standard for our love of neighbor. Deciding to *be* faithful, while fully aware of the underlying uncertainties, may be the most difficult and important act of Christian faith. The residents of Guadeloupe, no matter how their beloved raccoons are classified, continue to confess their love for these animals, even though they are objectively, at times, very difficult to love. For all of us, this is perhaps the most meaningful confession of all. ✱

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