Introduction
Professor Thomas Eich, from the University of Hamburg, is an internationally renowned, award-winning researcher who has studied the history of Islamic thought on the beginning of human life.¹ In multiple academic contexts he has shown how the study of historical sources can have direct import for contemporary discussion of important Islamic bioethical questions related to the moral status of prenatal Homo sapiens.² I spent several years with him on the Contending Modernities working group, which focused explicitly on a dialogue between Catholicism and Islam in the areas of bioethics, science, and the human person.³ In this article I will use my engagement with Eich’s work on Islam to show how attention to history is similarly important for Roman Catholic bioethical questions on this topic. I will also attempt to show how such an historical analysis illuminates opportunities for contemporary Muslim/Catholic discussion of moral theology more generally (particularly the need to go beyond scripture to bring in sources outside the primary theological tradition), as well as specifically in relation to moral-theological discussion about the status of prenatal Homo sapiens. I propose that there is much

³. https://contendingmodernities.nd.edu/about/research-areas/science-and-the-human-person/members-working-group/
room to make a genuine attempt at what theologian David Tracy calls “mutually-critical correlation.”

The challenges that each tradition offers the other can make both traditions stronger and more authentic.

First Trimester Homo sapiens: Sources and Historical Development of Views

Scripture

Prof. Eich notes that the Qur’an, though it seems to imply that the fetus goes through morally-relevant stages of development (semen, blood clot, flesh) never mentions the concept of ensoulment. In trying to determine whether a personal soul has been infused – and someone with full moral status is present – Muslims had to go beyond the Qur’an to focus not only on the Hadith tradition, but on other traditions of interpretation of both Qur’an and Hadith. These traditions were often dependent on the medical assumptions of their day.

Christians have faced a similar struggle to find a scriptural basis for answers to these questions, for the Bible also says nothing about ensoulment. Luke 1:39-45 speaks of a prenatal John the Baptist leaping for joy when Mary came near, and Christian thought about the personhood of the child was virtually unanimous and uncontroversial. Most of the debate, instead, focuses on the first few months of pregnancy. Jeremiah 1:5 is sometimes invoked to show the moral status of prenatal Homo sapiens, although this passage claims that God knows us before we are knit in our mother’s womb. It seems rather to be a reference to God’s foreknowledge and not any claim about the moral status of the prenatal child. Use of Psalm 139:15 is on stronger ground given its claim that God knit me in my mother’s womb, but it is still not clear at what point I am “me” in that process of knitting – or if it was ”me” the whole time, from the beginning. As we will see below, most early Christian churches did not think of it as “me” from the beginning, and Exodus 21:22-23 even seems to imply that causing a pregnant woman to miscarry is not the killing of a person. Indeed, it prescribes two different penalties for (1) when a violent act causes the death of a pregnant woman (which is treated as murder) and (2) when it causes only the fetus to die (treated as less than murder).

Moral-Theological Traditions on Ensoulment: The Impact of Outside Traditions

Prof. Eich is keen to point out, in part because the Qur’an says nothing of ensoulment, that ongoing Muslim tradition on the topic (also understood as revelation) serves as the basis for their view on ensoulment. Eich notes that the Hadith tradition, and particularly that of Ibn Masud, interprets the Qur’an’s statements about shift through “semen, blood clot, flesh” as referring to the process of ensoulment. But, again, contemporary interpretation of both the Qur’an and Hadith passages can benefit from studying the insights and influence of outside traditions.

Development of the Roman Catholic perspective on ensoulment also relies on a post-scriptural tradition understood as revelation.

And at least for the early Church, this tradition is dominated by


5. For the purposes of this section of the chapter I rely on John Connery, SJ’s magisterial work J. Connery, *Abortion: The Development of the Roman Catholic Perspective* (Chicago: Loyola University Press, 1977).
the writings and sayings of the Church Fathers – people deeply influenced by outside traditions. Many, for instance, relied on the Septuagint for their translation of the Hebrew Bible, and it is interesting and important to note that this Greek translation has a significantly different version of the Exodus 21 story mentioned above. Instead of basing different penalties on whether the woman or fetus was killed, it bases them on whether the fetus was “unformed” (lesser penalty) or “formed” (treated as murder). No such distinction had existed previously in Jewish thought, so it is likely an addition by a Greek translator who was importing Greek metaphysics. Aristotle argued that the soul went through a three stage (vegetable, animal, and rational) process of development— with male fetuses having a rational soul at 40 days and females at 90 days.

Cyril of Alexandria – though saying nothing of ensoulment explicitly – notes in his commentary on the Exodus passage that the fetus is not formed until after 40 days. Other Church fathers who make the formed/unformed fetus distinction include Tertullian, Basil the Great, and Lactantius, among others. The relationship of the formed/unformed distinction to the process of ensoulment, however, was debated in the Church for many centuries. Even major figures like Augustine and Jerome said different things about these matters that are confusing and can be understood in multiple ways.

Especially for our purposes in this article, it is interesting to note that Augustine described the physical transformation of the fetus as going from a milk-like substance, to blood, and then to flesh. It is also interesting to note that none of the Fathers – though several are happy to use the 40 day mark – explicitly make the Aristotelian distinction between the ensoulment of male and female fetuses. Indeed, this distinction would not appear against until Aristotle is rediscovered by the scholastics of the Middle Ages. It is this era which sees the Church’s tradition of ensoulment is carefully explored and detailed.

The first major Christian thinker to rediscover Aristotle in the West was Albert the Great. And though he does not explicitly cite the idea as Aristotelian in origin, it is with Albert’s writings that the male/female ensoulment distinction returns. Use of Aristotle is certainly taken to a new level when Albert’s student, Thomas Aquinas, is explicit about his use of Aristotle’s concept of ensoulment. Thomas’s eventual and radical influence on Church teaching was to push Aristotle’s gradualist approach to ensoulment as a viable orthodox position until the pontificate of Pope Pius IX who, in 1869, taught that animation with a rational soul was immediate. It is perhaps of interest to note that this is the same pope who also defined the dogma of the Immaculate Conception of Mary in 1854 which, to this day, is celebrated nine months before the feast of her nativity.

Islam and Catholicism, it should now be clear, have significant overlap when it comes to their theological traditions and investigating questions of ensoulment. We see in both the need to go

6. Ibid., 17.
7. Ibid., 50.
8. Ibid., 54–59.
10. Ibid., 51
11.Ibid., 108.
12.Ibid., 307.
beyond scripture and the influence of outside traditions. I now turn to the numerous points of contact which provide contemporary opportunities for dialogue.

Contemporary Conversation
The Sources and Method of Moral Theology

Abdulaziz Sachedina has shown – and lamented – the fact that Islam has taken a jurisprudential approach to bioethics. He argues that contemporary Muslim bioethical discussion focuses mostly on the implications of *fiqh* rather than on a critical analysis of the historical sources which have served as the basis of various legal claims. But Eich’s analysis shows that the sources which have produced the *fiqh* now being used to determine Muslim bioethical conclusions and practices has been influenced by multiple outside traditions.

So one important opportunity for contemporary conversation between Roman Catholicism and Islam would be a common, critical, and moral-theological investigation of the sources of our traditions which impact the ethical questions raised in this article. Are any of these sources worthy of more critical analysis? How do they stack up with the latest relevant scientific findings? How do they comport with the general theological trajectories of our traditions? Answers to these questions, as mentioned above, could benefit from mutually-critical correlation of Muslim and Roman Catholics traditions. The following is one attempt give some broad suggestions for how it might work.

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Roman Catholicism’s Challenge to Islam

Prof. Eich has provided a classic example of how some Muslim theological traditions have wrestled with a complex question over time, a question little mentioned in Islamic scriptural sources. At what point does a new, full member of our moral community come into existence? It is a ridiculously important contemporary moral question, which not only gets to fundamental questions of justice for vulnerable persons, but intersects with a great number of highly-visible and contemporary bioethical problems. Muslim and Christian communities have paid very close attention to this question in the last 40 years, given that its answer impacts everything from early abortion, to *in vitro* fertilization, embryonic stem cell research, surrogacy, cloning, and abortifacient contraception. This last issue, and its impact on the moral status of very early Homo sapiens, is the source of much public debate in the United States.

Especially given the justice issues at stake for early Homo sapiens, and the contemporary importance of the aforementioned issues, I suggest that Roman Catholicism can challenge the Muslim traditions to move beyond jurisprudential edicts and do critical theological analysis of the sources which have led to many of the conclusions dominant in *fiqh* traditions of thought. What do Muslims find when critically engaging these sources? It goes without saying that medical science and embryology have moved radically beyond what was available to giants of the traditions with whom Eich is concerned. What parts of these traditions need updating based on new scientific insights? What implications may such an updating have for contemporary bioethical questions? And what does the best science say about a metaphysics of ensoulment? Do
we have good scientific reasons for thinking that the distinction being a formed or unformed fetus is a useful one?

The Roman Catholic Church has answered that final question in the negative. Interestingly for my purposes in this article, Catholics and Muslims share many sources and traditions of thought in common. Thus, it is anything but surprising that we have seen Catholic and Muslim traditions come to very similar positions on very young Homo sapiens over the centuries. But in light of developments in contemporary embryology and prenatal medicine, the Catholic Church has rejected its previous positions on ensoulment.

Biological understanding of the early embryo by ancient and medieval sources has been eclipsed by contemporary science, and we now have no good biological reasons for making metaphysical distinction between the first few days of development or the period through birth. Human persons are human organisms, and the life of new member of the species Homo sapiens cannot reasonably be described as passing through these three stages of ensoulment.

Roman Catholic moral theology has developed its positions as it subjected its sources to critical reflection, and I suggest it could also challenge Islam to do the same. There is no longer a good reason to use a marker of 40 or 120 days. The rational soul infused by God is present in the very nature of the human organism, whether mature or immature, healthy or sick, wanted or unwanted. Eich’s historical analysis – one which demonstrates plurality, disagreement and development of this question – naturally opens up the very real possibility of even more movement of Muslim traditions on ensoulment, especially in light of contemporary biology.

Islam’s Challenge to Roman Catholicism

If we are authentically engaging in mutually-critical correlation, we must also emphasize that Islam has multiple important challenges to offer Roman Catholicism. First, to more “conservative” Catholics in the mainstream pro-life movements, Islam can offer skepticism around claims to conception or fertilization occurring in a given “moment” or “instant.” Though perhaps the Church was right to reject its three-stage concept of ensoulment, Muslims could plausibly argue that Catholics were wrong to give up altogether on our shared ancient tradition that ensoulment is a process rather than a moment. Indeed, this kind of binary thinking – which assumes that the entity must be one of two things (either human or non-human) – has been shown to be problematic in other contexts. There is day and there is night, but there is also dusk. There is that which is neither day nor night, but rather on its way to becoming night.

Contemporary embryology confirms that fertilization is a process rather than a moment. There is a point in the process in which the entity is not merely connected gametes, but neither is it yet a human organism. It is on its way to becoming one of us. Perhaps Roman Catholics are right to insist that this happens well before day 120, and even well before day 40, but we may also be mistaken in claiming that ensoulment happens in a “moment.” Muslims could challenge traditional pro-life Catholics to reevaluate and recapture our shared theological tradition on this matter, investigate contemporary embryology, and come to the conclusion that

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14. It must be noted as ironic that most Catholics who hold strongly to the full moral status of the early embryo imagine themselves as conserving the traditional position when, in fact, they are embracing a relative novelty and development of doctrine.
ensoulment is a process.

But if we are talking about a process rather than a moment, can we identify when that process has concluded? If by “one of us” we mean an entity that has what we recognize as human/personal traits – like a capacity to love, rationality, self-awareness, autonomy, etc. – then even the newborn child fails to pass muster. Perhaps even an adolescent Homo sapiens is not yet “one of us” in the sense that his brain is not fully developed until he reaches his 20’s. But this cannot be what Muslims and Catholics mean by “one of us.” Indeed, despite the fact of immaturity and (some) even mental or physical disabilities, both early Muslim and Christian traditions stood strongly on the side of newborn infants, and against the ancient pagan practices of infanticide and exposure. For both traditions, being ”one of us” means being a fellow member of our species, and not a fellow member “with actualized trait x”, where x = rationality, self-awareness, capacity to love, etc. All members of our species, regardless of maturity level, health, capacity, etc., are equal in dignity and deserve equal justice under the law.

But back to the original question: when does the process of becoming a member of our species conclude? Answers vary, but one that has received some significant attention is the point and time at which the embryo develops what is known as the “primitive streak,” the cluster of cells that will become the brain and spinal cord. This stage could be considered morally significant because beyond this point, the embryo can no longer “segment” or “twin.” Her integrity as an individual organism is such that this becomes impossible. Before the development of the primitive streak, however, the embryo can twin; essentially, one embryo can segment and become two (or more) embryos. Those who argue for the threshold of primitive streak development could argue that the process of becoming an individual member of our species does not conclude until then, at about the 14th day of embryonic growth.

Some Roman Catholic moral theologians have defended this position in the context of Aristotelean and Thomistic views of ensoulment. For instance, the well-known Thomist Jean Porter, argues that although Aristotle and Thomas Aquinas got the biology wrong, their basic insight about “delayed hominization” was correct.15 She claims that they are right in arguing that a process of development beyond fertilization is necessary for a rational soul to be infused—but their inferior understanding of biology caused them to be badly mistaken as to where the threshold actually lies. For Porter, we should be looking for the point at which a “biological substratum” is present such that a rational soul could be infused. Given that the primitive streak is primordia of the brain and spinal cord – the locus, some would say, of rationality in Homo sapiens – it cannot be before this point. It is, therefore, no accident that this also happens to be the point at which twinning becomes impossible. The development of the primitive streak is the point at which a rational soul of an individual person has been infused.

Porter’s argument is not easily dismissed. I believe that she is right, along with broad understanding of Muslim moral-theological traditions, to refuse to abandon the idea that ensoulment is a process rather than a moment. However, I believe that her choice of threshold – though plausible – is ultimately mistaken. For instance, when Aristotle speaks of a “rational soul”

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being infused, he assumes that this is the fundamental characteristic of human beings. It is that which makes us persons. But is the fundamental characteristic of human persons our rationality?

The answer to this question is complicated. At least according to Catholic tradition and teaching, human beings (along with angels, demons and perhaps some other non-human creatures) are persons in light of our being “substances of a rational nature.” What, precisely, is meant by “rational” in this formulation? At least in the context of post-Enlightenment culture, this word generally refers to a kind of calculated process of thinking and decision-making – often in contradistinction to thinking and making decisions based on emotion. But in the era of supercomputers which can embarrass even our smartest humans at games of chess and Jeopardy, this concept of “rationality,” at least, doesn’t look very helpful.

Thomas Aquinas’ pre-Enlightenment understanding of rationality focused on the capacity of persons to know and love God. Rather than from abstract reasoning, this particular capacity comes from our ability to form a conscious relationship of mutual self-giving. It goes beyond the scope of this article to make the argument, so I am forced to simply assert here that – from the Christian perspective – this is a much more theologically-sound understanding of the characteristic trait which makes us human persons. Rather than rational calculation, we should instead focus our attention on the capacity to consciously give ourselves in love to another.

If it is post-Enlightenment understandings of rationality that we have in mind, it makes good sense for Porter to claim that the primordia of the brain must be present in order for the infusion of a rational soul to take place. The brain, after all, is rightly described as the place where such calculation happens. But why would we think of the brain as the place where “consciously giving one’s self in love” happens?

The source of our consciousness as human persons is a biological and philosophical puzzle which remains unsolved – despite the efforts of great philosophers and biologists who have devoted most of their lives to the topic. This argument, too, is obviously beyond the scope of this paper, but I find myself most convinced by thinkers like Alva Noe who argue that consciousness – far from something housed in the brain – is the achievement of the whole human animal in his or her particular environment.

If this is correct, then the “biological substratum” for consciousness is not the particular development of the brain or any other specific biological development in the human organism—but rather the development of the organism herself. If Noe and others like him are correct in arguing that consciousness is a function of the holistically-considered organism, then when have a new human organism we also have an entity capable of having the soul of a human person.

And if Noe is correct then the argument for the primitive streak threshold fails. Failure, however, does not mean that we should abandon the idea of ensoulment as a process rather than a moment. Muslims can and should still hold Catholics accountable to this tradition. The formation of a new member of the species Homo

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17. See his Summa Theologiae I, 79, 8.
sapiens, though it is complete well before 14 days, is not instantaneous. Fertilization, which involves the sperm’s penetration of the ovum and reprogramming cellular material from gametes into a totipotent zygote, takes time.

**Conclusion: Continuing the Conversation**

From the perspective of official Catholic teaching, there remains lots of room for conversation on these matters. The most recent bioethics document coming from the Vatican, for instance, insisted that the Church continue to refuse to take an official position on the philosophical and theological arguments about ensoulment and the early embryo. As Roman Catholics continue struggling with this question, I propose that we open ourselves to the challenge of the Muslim traditions on ensoulment, especially with regard to the claim that it is a process rather than moment.

In concluding this article, let me outline some additional areas for ongoing Catholic-Muslim dialogue in light of what I have said above:

1. Rather than in our capacity to love, it is my understanding that Muslim theology locates the primary capacity of the human person in our ability to submit to the will of God. How is this similar and/or different from capacity to love? Is “submission of the will” something that can be located in the brain or other biological substratum? Or, like consciousness, might it be something that is a function of the entire organism, holistically considered? Or is there another option to consider?

2. In her *Theological Studies* article cited above, Jean Porter challenges those who believe in an Aristotelean, hylomorphic account of ensoulment to come up with a biological account of embryonic/fetal/infant development consistent with their philosophical and theological claims. Can we come up with such a biological account? Nicanor Austriaco, a Roman Catholic moral theologian and cellular biologist, suggests that “systems biology” may be a good candidate. Are there others? Perhaps both Muslim and Catholic theologians and biologists could think together about this question.

3. Whenever we argue that the soul of a human person comes into existence (fertilization, primitive streak, 40 days, 120 days, actualized development of rationality in infant, etc.), we are still left with the question of how we should think about this “third category” which breaks up the person/non-person binary. How should we think about the moral status of a being who is “on the way” to becoming one of us? Interestingly, even when the Church considered the early embryo/fetus as not yet a fully human person, abortion was still condemned as very seriously wrong. Furthermore, and despite views about 40 or 120 days, significant majorities in Muslim countries apparently believe that abortion is immoral. More work needs to be done around thinking about...
the moral status of entities who are in this third, “on our way to becoming one of us”, category.

The overlapping histories of thought in Muslim and Roman Catholic traditions on these matters is interesting. But, it becomes downright powerful – as I hope I’ve been able to show in this brief article – when combined with mutually-critical correlation of these traditions with an eye to contemporary issues and the debates they inform. Here’s hoping Muslims and Christians can sustain such dialogue for many decades and even centuries to come. The moral status of the embryo, giant issue though it is, would be just one of dozens of critical issues that would benefit from such engagement.

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