Gaming Addiction

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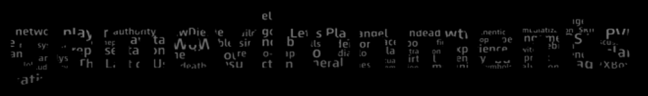

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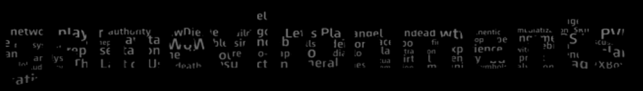

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articles

The Self Across the Gap of Death: Some Christian Constructions of Continued Identity from Athenagoras to Ratzinger and Their Relevance to Digital Reconstitutions

Joshua Wise

Abstract
The difficulty of continuity of identity across the gap of death is a well-known problem in Christian eschatology. This article looks at three ways in which this has been addressed by Christian theologians: Relational Material Identity, Natural Numerical Identity, and Supernaturally Established Permanence. These three approaches are then abstracted and applied to the problem of the continuity of a game-body across a gap of non-existence presented either by in-game death or by program termination. Pointing out difficulties in Relational Material Identity, a tentative model of Natural Numerical Identity is seen as possible, while the Supernaturally Established Permanence, in this case rooted in the mind of the player, is seen as the most plausible means of guaranteeing continuity for a game body across gaps of non-existence.

Keywords: Resurrection, Eschatology, Digital Bodies, Avatars, Embodiment, Intermediate State, Identity, gamevironments

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Introduction

There is an immediate familial resemblance between the idea of human beings entering digital worlds and the Christian concept of the Incarnation of the Second Person of the Trinity. In both situations, a being from a higher and more real world enters a lower and contingent world. The relationship between the Supernatural and the Natural is always hierarchical, whether the supernatural world is that of God to our own natural world, or our world as supernatural to fictional or digital worlds

(Wise 2014a). The natural always, at least from the position of much Christian theology, is dependent on the supernatural, but is also always able to deny its existence or importance. This is the result of the integrity of the subordinate nature. So, it is that both a person in our world and a conscious NPC in a future video game, can doubt that their worlds are anything other than material systems that depend on nothing beyond themselves. This, at least potential, similarity between the relationship our reality has with the supernatural and the relationship that digital worlds have with our natural world, allows us to apply similar methodology to certain problems presented in both reality pairings. In a previously presented paper (Wise 2014b) I applied the methodology of 4th century debates over models of the Incarnation to consider a theological anthropology of human interaction with virtual worlds. In this paper, I will apply a similar methodology by considering three general ways in which Christian theology has attempted to answer the problem of the continuity of self across the discontinuous gap of death.

The central hope of Christianity is the resurrection from the dead. That resurrection is not merely the raising of an immortal spirit to a spiritual world, but the raising of *this* body to new and perfected life in a perfected cosmos. As we will see, there is a strong tradition in Christianity, at least in its intellectual forms that rejects the idea that humans are merely spirits trapped in flesh waiting to be free. Instead, humans are flesh and spirit; body and soul. Each person's hope lies in the fact that her body, and thus her self, will rise, and not another's. Thus, the intellectual problem of the continuity between this body and the coming eschatological body has been paramount.

This article will give a brief survey of how this question has been answered by some important patristic, scholastic, and contemporary thinkers.[i] It will then abstract from

these answers their general form and test these answers against the problem of continuity of the game body. In this last section, the three layers of digital worlds will be taken serious: Hardware, software, and presentation/imagination. It will be within this hierarchy that I will attempt to offer the solution that the strongest argument for continuity between the game body across the gap of death exists in this third arena, the presentation/imagination and how this is consonant with certain Christian constructions of the resurrection of the body. This article will not attempt to give firm definitions for the concepts of matter or body but will use these terms in a general and common sense manner while affirming that the digital does not meet this common-sense usage of the terms. Further, I am not here interested in different philosophical constructions of the nature of the game body, or, for the most part, how we identify with the game body, except in the very last section of the paper. Thus, this paper will not delve deeply into how we might define the game body in social or philosophical terms. It will, however, maintain a perspective of an analogy of being between the digital and real that borders on nominalism.

Historical Survey

Material Continuity of Identity: Justin Martyr, Athenagoras and Augustine

The earliest serious theological works on the question of the resurrection of the body in Christianity are *On the Resurrection* by Justin Martyr[ii] and *The Resurrection of the Dead* by Athenagoras of Athens.[iii] These two works seek to define and justify the Christian belief in the resurrection, potentially as a cultural marker of the Christian people (Setzer 2007).

Both works are apologetic in nature, aimed at defending the Christian belief that the future of the human being after death is not a kind of Middle-Platonic escape from

the prison of the flesh, but instead the reconstitution of the body and its reunion with the soul. Both authors understand their opponents as presenting similar arguments against the resurrection. Both Justin and Athenagoras present the first problem as one of power (Martyr 1993, 296, Athenagoras 1956, 80-81). Can God raise the dead once their flesh has been dispersed through deaths of many kinds? The second problem is one of appropriateness. Justin understands his opponents as saying that the flesh is vile and should not be reassembled. Athenagoras presents the objection that the resurrection is not in accord with God's will. Athenagoras summarizes his opponents' objections as saying that "it is either impossible for God, or contrary to His will, to unite and gather together again bodies that are dead, or even entirely dissolved into their elements, so as to constitute the same persons" (Athenagoras 1956, 80-81). Finally, for Justin, there is a third objection, and that is that in the promise of the resurrection there is no promise that the flesh itself should be raised.

Responding to the first objection, both men appeal to the omnipotence and omniscience of God. Quoting Homer (Martyr 1993, 296), Justin shows that his opponents believe that their gods can do all things easily. If those gods are evil spirits, how much more then can the true God accomplish the task of resurrection? Athenagoras, on the other hand, argues that any task that is impossible to a particular agent is due to either a lack of knowledge or power on that agent's part (Athenagoras, 1956, 80). Given that, God is both all-knowing and all-powerful, God cannot fail to know where all the elements of a body have gone to and cannot fail to reconstitute them.

While both authors are interested in making cases for the resurrection, Athenagoras lays the groundwork for St. Augustine, and the medieval tradition after him, by seeing the problem of the resurrection of the body as mainly a problem of the reconstitution

of the same materials that once made up the body. He goes to some pains to demonstrate that the flesh of human beings cannot properly nourish animals or other humans, and thus they cannot become elements necessary to be raised in other beings. He is concerned that every element that made up a person should be found and brought back together again so that the body is restored. Further, he goes on to show that it is not unjust that God should restore body and soul together neither to spiritual beings which suffer no injustice by humanity's resurrection, nor to animals who either will not continue to exist, or, continuing to exist, would be unharmed by humanity's resurrection, nor humans themselves who are both body and soul.

Athenagoras moves on to the second part of his treatise, which is no longer an argument against objections to the resurrection, but arguments for it on its own grounds. He asks whether humanity was made for a purpose or without purpose. Since God, all wise, has made humanity, and no work of wisdom is without purpose, then humanity has a purpose (Kline 1968, 255). The question is then, is that purpose inherent in the nature of humanity itself or is it for the purpose of another. Since neither God, nor angels, nor beasts need humanity, then the purpose for humanity must be in its own continued life.

In a somewhat more complicated argument, Athenagoras argues that the rational and reflective capacities of humanity, which allow humans to know and contemplate God, guarantee a continued existence. Further, he considers arguments both based in justice and teleology.

A few considerations of Athenagoras' concern for the matter of the human body are worthwhile here. First, Athenagoras is not particularly concerned with proving that the soul of a human being goes on. He is firmly within the Middle-Platonist tradition

(Kline 1968, 250) which saw the body (soma) as a prison (sema), though he himself rejects the idea that the soul is the actual person. Instead, the person is a composite of body and soul, which necessitates the resurrection of the body if the person is to live forever (Rankin 2009, 149-150). Thus, he is concerned with the material continuity of the body. However, there appears to be no connection for him between the material identity of the body and the existence of animals. The nature of humanity is not essentially one that is in an interconnected relationship with all of creation, including animal life, but is independent from it and subjugates it.

Secondly, it is noteworthy that for Athenagoras the question of purpose of existence is answered by the needs of the other beings that exist. He knows that God has no need of anything, and from his perspective, neither do spiritual beings. Animals serve humanity and are for humanity's needs, so humanity does not exist for the animals. This line of reasoning has implications for the consideration of virtual bodies and their own integrity. As well, Athenagoras' considerations of the capacities of humanity to know and contemplate God have ramifications for this discussion as well.

In both Saint Augustine's *City of God* (2011) and his *Enchiridion* (1953), elements of Athenagoras' line of questioning can be found, especially regarding the reconstitution of the body after death and possible consumption. Augustine does not use Athenagoras' answer that human bodies are not fit nutrition for animals and men. Instead, he insists that if one human eats the flesh of another human, that flesh is essentially a loan, which must be repaid. Thus, the flesh of one person may nourish another, but the flesh shall rise in the person to whom it first belonged. He seems unconcerned that the flesh of humans should be taken up by animals as food. In this, he misses a nuance of Athenagoras' argument, which Hamlet summarizes so neatly as "how a king may go a progress through the guts of a beggar" (Shakespeare 2003,

154).

Augustine's own concerns are less about the ability of God to reconstitute the body, but how the body might be transformed by the resurrection. His concerns are twofold: That God should return to all beings what is justly their own according to nature, and that beauty should obtain in the resurrected body. Thus, Augustine (1953, XXIII.85 and 2011, XXII.15) maintains that the unborn will achieve their full stature of body that would have been theirs according to nature, and the elderly will have the wounds of time removed. All matter, no matter what it was, that came from the body, shall be returned to it, including hair and nail clippings. Indeed, even what Augustine calls "monstrosities" will receive all their matter back to them. Though in both cases the matter will be redistributed to the person in a fashion that is beautiful (ibid., XXIII.89 and 2011, XXII.19).

For all three authors considered here, the human being is a composite of body and soul. For Athenagoras and Augustine, the concern for the restoration of the particular flesh of particular people back to them is paramount. The body is raised if, and only if, the matter that belonged to it is restored to it once again. For both men, it is a question of the body's relationship to nature and justice. Since each person is only themselves if their particular soul is coupled with their particular body, the continuity of identity lies in this specific reassembly of spirit and matter. This is not the case for Thomas Aquinas, to whom we now turn.

Thomas Aquinas

Consideration of Aquinas' eschatology is something of a tricky matter. St. Thomas died before he could write the section on eschatology in his masterwork, the *Summa Theologiae* (1981). And, while it is true that the question of the resurrection is dealt

with in the supplement to the third part, this work was not authored by Thomas. Thus, we are left to consider only that which is in the *Summa Contra Gentiles* (1975) and his commentaries. I will, for the sake of brevity, focus on Thomas' comments in the third book of *Summa Contra Gentiles*.

In the eightieth chapter, Aquinas (1975) follows the standard model of discussions of the resurrection of the body by presenting objections first. While not entirely jettisoning the concerns of Athenagoras and Augustine, Thomas's main objections are distinct. For Aquinas, the main difficulties of the resurrection are not how God will gather together the same material again, but instead focus on how an object, having been destroyed, can be said to be the same once reconstituted. He suggests a number of objections to the resurrection that seem to undermine the numerical identity of the mortal body and the resurrection body.

First, that once a thing has been corrupted or has started to lack something that it used to have, can it be said that whatever has been lost could be restored with numerical identity. Second, a thing cannot be said to be numerically identical if one of its essential principles changes. Third, that that which is not continuous cannot be numerically identical. The fourth and fifth objections are ones inherited by Augustine, with the fifth dating at least back to Athenagoras. The fourth objection considers how unseemly it would be if all the matter were restored to a person that they lost throughout their lives, resulting in an "unseemly enormity." The fifth objection concerns cannibalism. The sixth objection argues that it is unnatural that a human should rise, and the seventh objection considers whether all people should rise or only those who are in Christ.

It is the first four questions that concern us here, as the others cover similar ground

Augustine or Athenagoras, or are outside of the scope of this article. The first objection can be summarized simply as “the dead do not come back to life.” Aquinas’ answer to this objection is that by the process of nature, this is certainly so. But the supernatural power of God can cause natural effects, even if the means of bringing them about are beyond the reach of nature. In brief, Aquinas is here appealing to divine power, much as his predecessors did.

The second objection is addressed in stages. He first responds that if we see the essential qualities of humanity as soul and physical matter, then neither of these really is reduced to nothingness (and thus lacks numerical identity) in death. If necessary, they can be restored, and the same person numerically will be found again in the resurrection. In this first answer, Aquinas is in continuity with the thinkers we have already considered. But he moves on from here with a more complex answer. Aquinas appeals to his former arguments for the immortality and incorruptibility of the human soul (Aquinas 1975, II.79). It is here that he places the essential principles of humanity that the second objection suggests are discontinuous through death. Aquinas insists that in fact the particulars of a person’s matter are not essential insofar as they are human. The essentials are found in their nature, not in their matter. Even the functions of the body that cease at death, which might be considered essential as the soul regarded as the act of the body, are considered to be numerically one, because while their operation has ceased, they find their source in the operation of the soul which is not discontinuous. Thus, when the body is restored, the functions of the body are numerically identity as they reside in the soul.

The third objection gets at the heart of the matter directly. If something is not continuous, it cannot be numerically identical. If I destroy a boat and build a new one, even to the same specifications, it is not the same boat. Aquinas’ answer is simple: While that may be true for all other beings in which the soul is merely the form of the

body, it is not so for the human being. For all other things, souls and bodies are utterly bound together as the soul is the form of the thing. It defines and explains the whole of the thing excepting any individuations. For example, all that a rabbit does is coterminous with its soul. It eats, it sleeps, it procreates, and it hops. The material of the rabbit's body enacts the function of its soul. When the rabbit dies, the soul dies, as it is not some separate entity from the rabbit. A form does not exist except when united with matter, and matter has no identity without union with a form. This is not the case, Aquinas says, for humans. There is a function that the human person does that no organ can be assigned to, and that is reason. Aquinas argues earlier in the work that intellect is purely spiritual, not a combination of spirit and matter since the intellect receives non-material things. (ibid., II.51, 56) Insofar, then, that the soul has operations that exceed the material body, so too does it have an existence that exceeds the material body. Because of this, human souls are not destroyed when their accompanying matter is destroyed. Instead, they are immortal. The being of a person resides in the immortal soul, and thus the being is numerically one when matter is restored in the resurrection.

Aquinas goes to great lengths to demonstrate the continuity of the person through death, and his arguments rarely rest on the restoration of particular matter. Indeed, in his response to the fourth objection he demonstrates that the body is considered numerically the same due to its species, not its parts. Since humanity is in material flux its whole life, and yet remains numerically one its whole life, then this change of matter cannot be a bar to the body rising numerically one.

It is in responses three and four that we see most succinctly the difference between Aquinas and his predecessors. He places numerical identity in the soul and explicitly rejects it in the identity of particular matter.

A Modern Take on the Soul: Joseph Ratzinger

In his book *Eschatology: Death and Eternal Life*, Joseph Ratzinger (1988), before his tenure as Pope Benedict XVI, argued for an understanding of the immortality of the human soul that took into account Thomas Aquinas' idea of the soul as the form of the body, but also addressed modern concerns about the influence of Greek philosophy on Christian thought. Discussions in the twentieth century, stemming largely from the observations of Oscar Cullmann (1958), challenged the long established Christian assumption of the natural immortality of the soul.

Focusing on the critique that Thomistic theology gives a kind of substance to the soul that contains within itself its own immortality, Ratzinger proposes that the soul's immortality is fundamentally dialogical. The immortality of the soul, which then is the guarantor of identity across the gap of death, is fundamentally guaranteed by the twofold creation and address of God. God makes humanity capable of seeking for and receiving God. Got addresses humanity and holds it fast in being.

> "Firstly, the determinative starting point of the Christian understanding of immortality is the concept of God, and from this it draws its dialogical character. Since God is the God of the living, and calls his creature, man, by name, this creature cannot be annihilated…Immortality cannot be accounted for in terms of the isolated individual existent and its native capacities, but only by reference to that relatedness which is constitutive of human nature." (Ratzinger 1988, 157-8)

Ratzinger's observation is that humanity endures as itself both in relatedness to God and in relationship with each other. While this is enough for our purposes, it is worth noting that Ratzinger sees no discontinuity between his rendering of the concept of the immortality of the soul and that of Thomas Aquinas.

Concerns and Methods

Having looked at three major moments within Christian theology regarding the continuity of the human person across the gap of death, I will now briefly categorize these three into three loose methods or ways of approaching this problem. These three lenses for looking at the problem will then inform my final discussion regarding the problem of continuity regarding the digital body.

Relational Material Identity

The approach taken by Justin, Athenagoras, and Augustine reflects a material understanding of the body that is largely static. The main concern is how God might be able to reconstitute the same body after its dissolution. "Same body" here means precisely that body made up of the same matter. At least for Augustine, the matter need not be organized in the same fashion. Augustine allows that the matter allotted to nails and hair, or even to "deformities," might be reapportioned to allow for the body to participate in aesthetic beauty in the resurrection. Thus, we find a kind of hierarchy of importance when relating to the matter. The first, and most important factor, is that all the matter that belonged to a person should be restored to them. Second, that that matter be arranged in a way that is becoming and lovely to behold. Only then is the function of the matter taken into account. Indeed, when it comes to the reproductive elements of the human being, the function of the matter is essentially removed.

Thus, we may categorize this way of understanding the continuity of the person across death as primarily valuing the numerical identity of the matter of the present body with the matter of the resurrection body. The body, and thus the self, is the same body across the gap of death because it is reconstituted by the same matter.[iv]

Natural Numerical Identity

The Thomistic perspective is also concerned with a numerical identity, but it is not the identity of the matter, but of the form, which is, for the human being, the soul. The soul, being naturally immortal for Thomas, is the guarantor of numerical continuity. Thomas is happy to acknowledge that the body's matter changes and that this does not in any way make the body different from day to day. He does affirm that where it is fitting, matter should be returned to a person, and that the "seed" of a person should in fact rise with them, but he is far less worried about the identity of the matter.

In this model, then, we see that it is a preservation of an object, which gives identity to the matter in the first place that guarantees the continuity of identity in the resurrection body. This model of then has two existents: one, which holds the identity of the object and gives form to the second object, which is the material element of the object. These two together make up the single object.

Supernaturally Established Permanence

Ratzinger's view can be summarized into a hierarchical lending of permanence though dialogical address. A being higher on an ontological hierarchy grants a greater existence to beings lower down on the ontological hierarchy. Indeed, to borrow Buber's language, it is precisely this address from the higher existence that grants the object of address a genuine existence as a "thou" instead of an "it." It is the treatment of the lower object as worthy of being addressed by the higher object that elevates that lower object to something approximating the higher object's level of being.

The Continuity of the Game Body Across Death

Considering the Game "Body"

Our final section will be an attempt to apply these three models to the idea of the digital or game "body." The use of quotation marks here is to indicate a general difficulty present in discussions of digital media, which generally speaks of the relationship between digital realities and our reality with a perspective that theologians would call an analogy of being that borders on univocity. In other words, discussions of digital realities can tend to speak of digital trees as if they are really like trees in our world. This can border quite strongly on a perspective once stated at a conference where I was delivering a paper, that there is no difference between the digital and the real. This practical univocity of being between the digital and the real deserves its own article, but it is worth saying that this article stands firmly against any concept of a univocity of being between the digital and the real. Instead, this article is written from the perspective that even an analogy of being between the digital and the real is largely rooted in the mind of the person observing digital worlds, and thus holds to an analogy of being that borders on nominalism.[v]

In brief, this means that while there appears at first that there is strong similarity between, for example, a rock in the digital world and in our own, those similarities exist merely in appearance, in what we might, in Aristotelian terms, call the accidents. It is only by a fictional appropriation of terms that we may call a rock in a virtual world "rock." It may be that, if we are quite taken with the aesthetics of particular rock formations that we, upon encountering stunning digital representations of "rock formations" we will have the same subjective experience, and, for all practical purposes treat the digital in the same way that we treat the real. Michael Heim's (1993, 108) tentative definition of virtual reality as that which "is real in effect but not in fact" is apt. But, barring a phenomenology with no actual real causes of

phenomena, here is where the similarity with the world ends.

My use of the term body here then indicates several entities grouped together. The first is the game object as it resides in the memory of whatever computer is running the program. This is both at the same time a particular arrangement of electrons in our world that conform to a particular pattern dictated both by the program, the operating system, and the hardware of the computer at same time as the particular organization of information that that pattern represents in the program's logic. Second, the game body is that which is represented sensually to players. This is, inherently, a very different thing than the electric pattern and the organization of information. The electric pattern and the information may be, as a real body, tightly packed together, continuous, and genuinely interdependent, but they may not. It is entirely possible to create a game body from disparate elements that only relate to each other by means of the last element of this body: the fictionalized element in the player's mind. The body and its representation can be tightly knit together, but they need not. The amount of "health" that a body has in a game is rarely an actual representation of changes that take place within the game body, but instead, is a disconnected and unrelated number that, should it reach a predetermined number, will likely end the whole game world, not merely the game body, and is thus more directly connected to the fundamental reality of the game world than the game body.[vi]

The last element, as mentioned above, is the fictional identification of all these elements together as the "body." This happens entirely within the player's mind. The presentation of the body within the context of the game program is intended to elicit precisely this identification. However, it is only within the mind of the player or observer that the game body genuinely comes into being. This fictionalization and

identification stems from a human capacity and not from anything inherent in the game "body" itself.

It is with this three-tiered view of the game body in mind that I wish to consider our three models of continuity across the gap of death in gaming. As the game body does not live, it cannot die. So, then the term death must be applied only analogously to the game body. Therefore, by the term death I mean moments of discontinuity that interrupt the existence of the game body in the game world. This could be something as simple as Pac-Man's death when hit by a ghost monster. It could also be the break between levels in a game, the break between game sessions, or even the break between playing the same game with the same save on different machines.

Finally, a further note of consideration is necessary here regarding power. When considering the following views, the question of our capacity to enact any of the following models is ever present. If we are considering the game body as persistent across the gap of death as it pertains to virtual existents, and not a final eschatological reconstruction of the game body as part of a cosmic reconstitution in the manner that Christianity has proposed, then we cannot fall back to the omnipotence of God to justify any method's possibility. Certainly, if this were a consideration of how, if a human lived most of her life interacting with the virtual as her primary mode of identity, God might incorporate that virtual existence into her eschatological body, defaulting to divine omnipotence may both be expedient and necessary. However, insofar as the scope of my examination here is to see how, within this present cosmological structure, a body might be considered "the same" across the gap of virtual death, human capacity is the measure of the practicality of each of these models.

Relational Material Identity: Digital Identity as Reconstituted Matter

It must be said immediately that the concern over "matter" that so occupied the minds of the patristic thinkers must be reframed in this discussion. For the authors considered, it is safe to categorize their understanding of matter in a platonic framework in which "prime matter" is joined to forms to bring out objects (Plato 1971, 49-52). If we jettison their definition of matter for another, we are in difficult waters. We could opt for a Kantian definition of matter, a Newtonian definition of matter, or a quantum definition of matter among many others. None is especially helpful to us here and leads into discussions beyond the scope of this paper. Instead, a common-sense definition of matter will be used here. Matter is here that "stuff" which makes up physical objects and gives them their properties in relationship with other physical objects. Rocks have properties because they are made up of matter that inherently gives them their properties. These are different than the "stuff" that makes up a bird. Matter intrinsically contains its behaviors given the nature that it occupies. To change its behavior would be to intrinsically change its entire makeup.

Given this, there appears to be two possible applications of the concept of matter in a virtual world: 1) The Matter of the game body as the material pattern in our world, and 2) Virtual Matter. I will consider each below and how the reconstitution of the "same" game body might be possible if this definition of matter is given.

1. Matter could here mean the matter of the world in which the program is running and not matter in the game world. This would require no reconsideration of the concept of matter in a virtual world but rely entirely on the matter of our own world as the underlying matter of the game body (and all game world objects).

If the matter of the game body is simply the matter of our world insofar as its arrangement forms the pattern that are used by the computer to present images and sounds to the player, the same game body can be reconstructed only if the same hardware and electrical patterns are reassembled. Within the patristic model of material reconstruction, one must gather the matter back together again to have the same body. To have *this* body again, we must reassemble *these* electrons to *these* capacitors. If we take the body in relationship to the world into consideration, then we must have precisely the same memory configuration in the same computer.

This formulation immediately gives rise to the same criticism that can be levelled against patristic conceptions of the body: the digital body, like the material body, is in constant flux. No particular set of electrons, with the exclusion of any another, can be said to be "this body" any more than a particular set of atoms, with the exclusion of any others, can be said to make up my body.

There seems no way around this critique. Bodies are in flux, and thus the insistence on a numerical identity between the basic building blocks of existence from one instance of the body to anther stumbles on the inherent fluidity of matter. In our world this is rooted in our existence as bio-chemical machines that replace our parts in an ongoing fashion. From a computational perspective, this is rooted the electron and its relationship to the capacitor in memory. Finally, such a model of the matter of a body leaves reconstitution of that body outside of the realm of human capacity. At least with current technology, we cannot gather up the electrons of each moment of a game body's life and return them once again to that body.

2. Matter could mean the matter in the virtual simulation of the game. However, this raises significant questions regarding what this could even mean and brings us back

once again to the problem of analogy, univocity, and nominalism. When matter interacts in our world, it is of course not as simple as two things colliding. There are complex realities involved at the atomic and subatomic levels. Two rocks do not merely hit each other, but instead interact in a highly complex way that appears to us to be something simple. However, in a video game, objects do not, in fact, hit each other except in the most abstracted way. By and large, what happens is a comparison of numerical values that determine whether two objects should continue in a particular state, which is itself merely a numerical value, or whether one or both should somehow change to a different state (another numerical change).

Now, one might object that that is what is happening in our reality when two rocks come together, but this would be a confusion of categories. Epistemologically, when it comes to two rocks colliding, there are three things. There is the event (the thing known), the observation of the event (the means of knowing), and the knowledge about the event (the knowing). We can take our knowledge about the event and reduce it to numerical description, but this numerical description exists entirely in our minds, and though it is an incredibly useful means of describing the world, it is not the same as the world. The numerical description exists in the third thing (the knowing) and not in the first thing (the thing known). In other words, our description of the world is not identical with the world itself except insofar as the event of our knowing is one of the things happening in the world.

However, a computer program is, in fact, at least at the software level, genuinely reduceable to numbers, indeed to simple 1's and 0's. It is true that these 1's and 0's represent a reality in our own world of the states of electrons in a computer's memory, but if we remain at the level of the software, then we find that the actual reality of the game is purely numerical. It is not a matter of a more complex reality

taking place that naturally presents itself as something simpler (atomic and sub-atomic events presenting themselves as a rock bouncing), but a somewhat more complex reality representing simple number calculations (a shot ricochets from a wall in a dual-joystick shooter).

This is a rather prolonged way of saying that there is no real equivalent of matter in a video game. There is the formal presentation of numbers as if they are matter, much as we describe matter in our world at times with numerical representations. But this no more means that the formal presentation is to be mistaken for actual matter in the virtual than it does that the numerical presentation of matter in our world is to be taken as the real identity of rocks.

Thus, it seems an insurmountable problem to say that one piece of virtual "matter" might be gathered again with another piece of virtual "matter" to create a "body." From this perspective, there is no matter for a body to be made up of, only numbers that relate to each other, not by the rules inherent to matter, but to the rules inherent to numbers. Given our definition of matter above, the software of any computer program is devoid of matter.

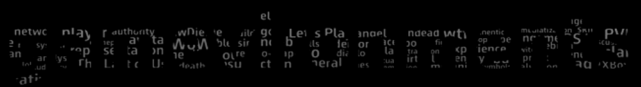
Numerical Identity: System-memory Based Approach in Which The Game Object is Preserved Across Play Sessions

Given the problems with the material approach, we turn to the model presented by Thomas Aquinas. Continuity could mean the reconstruction of the same game objects which existed in the software that the game then used as a source of the presentation known as the game body by the player. In other words, the game body here is considered to be the object as it exists in the program's execution.

The question of sameness here would, it would seem, rely entirely on the computational definition of sameness regarding programming objects. At least within the C-class of families,[vii] sameness can generally be identified as obtaining when a collection of data is clustered into an object pattern at one or more specific memory addresses. Reassembling the object or bringing it back into existence would be a matter, perhaps, of simply creating a new object pattern, identifying the memory addresses where the information is contained, and pointing the object at that memory. In this case, the object pattern is analogous to the material of the body, while the data in memory is the identity of the body, or, in Thomistic terms, the soul. The data residing in the particular memory location is the thing that guarantees the continuity of identity across the destruction of the game object.

Regarding human capacity, this is a far less daunting task than a model of matter based within the hardware and electrical patterns of the machine running the program in which the game body exists. This requires something as simple as a pointer to the address of the game object by which we can reconstitute that object once it has been destroyed. The practical matter of keeping the current program, or another running on the same hardware, from overwriting that memory space while the object is in the state of virtual death is not a significant difficulty.[viii]

Of course, a major assumption at play in this model is that "death" in the game necessitates the destruction of the game object that constitutes the game body. But such a destruction is not strictly necessary. Any number of design patterns can utilize either a persistent game object across player lives[ix] or unendingly destroy and create objects anew. If there is no destruction of the game object, then there is no player death from this perspective. The death of the player is only apparent, but not actual. The game world state may be set back, but the game body is not destroyed.



However, while this may be the case within a single play session, the death of the game body across game sessions is far more problematic. We may keep a game running, we may even keep running certain programs on a piece of hardware that, for the purposes of insuring memory continuity, lock and keep safe certain memory addresses so that when the game is started after a break, the objects may pick up from where they left off. Normally this is done by abstracting information from the program, storing it on a hard-disk, and then retrieving it to system memory when the game is loaded. However, if we are asking the question of numerical continuity across game sessions, this seems to be the only way, at least from this approach. From a practical perspective, this is a more complex task, and a potentially insurmountable one if our numerical identity is tied to the state of memory in the computer, as conventional memory storage requires electricity.

To summarize, it should be reiterated here that in this model we are not considering a simple pattern to be sufficient to numerical identity across the gap of death. Any pattern could be replicated by a new object in memory. This is not a problem. Instead, we are considering what it might mean for the body to remain continuously "the same" across a gap of discontinuity. A simple copy of the data to hard disk and then replication back to memory would not answer Thomas Aquinas' objections regarding numerical identity. These would be identically patterned, but not numerically the same, objects. Indeed, the replication and of the patterns allows for multiple instances of the identical pattern that are not numerically identical.[x]

The problem of numerical identity across death then is, at least within the context of a single play session, or at the extremity, a single operation of a computer, solvable given certain program design patterns that instantiate and maintain only a single player body object that lives in protected memory. However, given that, the

protection of memory across play sessions is needless with existing computer design, and given that even if this were enacted, computers do turn off and back on again, we are left with an impractical solution to the question of continuity across the gap of death for the game body from Thomas Aquinas's perspective. This brings us to our third and final possibility.

Supernaturally Established Permanence: The Identity of the Player with the Game Body

Finally, continuity could mean the reassembly of elements in the game that the player identifies as their body in their own subjective fictionalization of the game world. In this case, matter is that which appears to the player, either by means of a visual representation or by means of a collection of information presented to the player, which is recognizably their game body. Visual representations are familiar enough, but a collection of information may be something like information regarding health and an inventory, as in text adventures like *Zork* (1977) and *Wishbringer* (1995) or Multi-User Dungeons (MUDs) like *Medievia* (1992).

In this case, only a particular and recognizable pattern must be reassembled to present once again the same body to the player as the player's own fictionalization of the presented material is the anchor for the concept of sameness across a period of discontinuity. It is within the player's own conceptions of the fictionalized reality that the continuity continues and matters. This is also true of important discontinuity. It may be that several of the same objects, same data, or same hardware are used in the simulation of a character with the same name and general appearance of a character presented to the player. But if the player is told, "this is someone else's save, but it's pretty much the same as yours" there can (though need not) be a significant rejection of the character as "not mine."

From this viewpoint, it is the history of the player with the character and the relationship with the game body that exists in the mind of the player that identifies the game body as her own. Thus, barring damage to the player's memory or ability to process information, the identity of the game body exists across all possible gaps of play. It is the same body across the gap of fictional death, of player-initiated program cessation, and of hardware failure.

It is the grounding in the foundational reality that gives the virtual something more than an ephemeral existence. Indeed, it is only the interpretation of the virtual by the foundational reality that elevates it beyond the simple natural interaction of electrons in capacitors built from natural materials. It is well known, but it bears repeating that all computational activities are, at a basic level, simply the organization of natural events that are interpreted by the human mind to have meaning. This process is enabled by the imposition of several layers of interpretive media, from operating systems to compiled programs to audio, visual, and tactile stimuli.

Ratzinger's model of relational identity that ensures a continuity across natural death is therefore apt and applicable to the problem we have taken up. We, as a conscious part of the foundational reality of the virtual, address the virtual as if it were more than simply electrons in capacitors and pixels on a screen. We identify with it, we claim it as our own. It is then that the virtual body becomes "my" body, not in the same way that my natural body is my own, but in the way that my nature allows me to claim a virtual body, or many virtual bodies.

There are further ramifications to Ratzinger's observation for the virtual that we do not have space for here. Questions exist about the relational nature of the body to its world, considering how my body in *Fallout 4* (2015) is particularly related to the world

of the Boston Wasteland that would be out of place if plopped down into the world of Battlefield. Further, one could also delve into the relational nature of "my body" to "your body" in an MMO setting across the gap of death. Finally, a further consideration of how history plays its part in the continuity of bodily identity across death could be fruitful. For now, however, this exploration will suffice.

Conclusion

From a theological perspective, the problems involved in the continuity of the virtual body across a gap of non-existence are like the problems of the continuity of the human body across the gap of death, decomposition, and potentially the ending of the cosmos. This article has attempted to consider three main methods of solving this problem that have been presented in the Christian theological tradition, to abstract these methods from their historical situations, and to apply them to the problem of the gap of non-existence for the game body.

From these three possible models, two have been presented as viable methods of solving the problem of continuity, one, which is software/hardware based, and one which is based in the mind of the human person. Of these two, it is the last that presents the most robust model for continuity. However, caution must be taken when considering this last model as it has little to do with computers themselves. Instead, the capacity for continuity of identity of the game body lies almost entirely in the mind of the human being: in her imagination and memory. It is only because we are we that the game body can be called "the same" across discontinuity.

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[i] For another good approach to the question of continuity of identity across the gap of death, see Walls (2002).

[ii] There is some debate over whether Justin wrote this work, though it is generally assigned to the second century nonetheless.

[iii] There is also debate as well over whether Athenagoras wrote this text. For this paper, we shall assume that Athenagoras is, indeed, the author of the work, or, barring that, simply use Athenagoras as the convenient name for the author of the work. For a fuller discussion of the debate on this issue, see Rankin (2009).

[iv] One presumes that the identity of the spirit is rather important to this whole process, but Augustine and Athenagoras do not emphasize this identity. The reason for this is clear, their opponents were not at odds with them about this matter. The Middle and Neo-Platonic worlds of the two men were in full support of the immortality of the soul, a point of contention for much modern Christian theology.
5For a further discussion of why this position is held, see my article "Ontological Frameworks" (Wise 2014a, 164ff).

[v] For a further discussion of why this position is held, see my article "Ontological Frameworks" (Wise 2014a, 164ff).

[vi] One might argue at this point that in fact, the entire game world is inextricably interconnected to the game body, and this may be true in a way that is analogous to the way in which our bodies are inextricably interconnected to our cosmos. However, such considerations are outside of the scope of this article, and we will content ourselves to distinguish between the game body and its world.

[vii] I will take the C-family of programming languages as generally representative of game development as that family of languages is predominant in game development using C, C#, Java, and C++.

[viii] For example, a simple application of VirtualProtect (https://msdn.microsoft.com/en-us/library/windows/desktop/aa366898(v=vs.85).aspx) and VirtualAlloc (https://msdn.microsoft.com/en-us/library/windows/desktop/aa366887(v=vs.85).aspx) in C++ serves this purpose.

[ix] For example, the application of DoNotDestroyOnLoad in Unity.

[x] One thinks of the *Riker* problem presented in the Star Trek: The Next Generation episode "Second Chances."