Biological Life and the Partiality Relation

by

Ryan Ravanpak

B.A. Philosophy
UC Berkeley, 2016

SUBMITTED TO THE DEPARTMENT OF LINGUISTICS AND PHILOSOPHY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY
AT THE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SEPTEMBER 2022

Signature of Author:.....
Department of Linguistics and Philosophy
August 18, 2021

Certified by.....
Bradford Skow
Laurence S. Rockefeller Professor of Philosophy
Thesis Supervisor

Caspar Hare
Professor of Philosophy
Thesis Supervisor

Accepted by:.....
Bradford Skow
Laurence S. Rockefeller Professor of Philosophy
Chair of the Committee on Graduate Students

Biological Life and the Partiality Relation

by Ryan Ravanpak

Submitted to the Department of Linguistics and Philosophy on
August 18, 2021 in Partial Fulfillment of the Requirements for the
Degree of Doctor of Philosophy

ABSTRACT:

The first chapter defends an account of the metaphysics of identity which combines two sensible claims in the personal identity literature. The first is a Parfitian thesis that we are persons whose persistence is tied to the appropriate continuity of certain psychological activities. The second is an Animalist thesis that we are human animals whose persistence is tied to the continuation of biological functioning such as respiration and metabolism. Supporters of the former often argue against the latter and vice versa. I argue that both are true on the grounds that there is good reason to believe that psychological activities of the human animal count as forms of biological functioning. I then motivate the substantive thesis that we are neither human animals nor persons essentially. What we are essentially is a broader thing—an organism—which can be a human animal, person, or both, but need not be either of them.

The second chapter considers diachronic questions about when an organism at one moment persists at the next. I claim that the persistence of a kind of event—a biological life—is a crucial piece of the persistence of an organism, and that the appropriate continuation of biological activities is necessary and sufficient for the persistence of biological life. I offer a performance-centered account of "appropriate biological functioning" which can be applied to biological activities ranging from digesting, breathing, perceiving, and feeling. It depends on two forms of "functional continuity". The first, *intra-functional continuity*, consists in chains of causal dependence between token instances of the same function-type. The second, *inter-functional continuity,* consists of chains of causal dependence between token instances of distinct function-types. I suggest that organisms are best conceived as systems consisting of a set of distinct biological activities which are connected to one another by both the intra-functional continuity and inter-functional continuity relation.

In the third chapter, I argue for the thesis that one significant source of the relation of partiality comes from degrees of biological connectedness and continuity between organisms. I argue that this account fares better than a competing account of the source of partiality which relies on psychological connectedness and continuity. I then answer a skeptical challenge about why biological connections and continuity generate the relation of partiality. Although I am not an egoist, I end the chapter by suggesting that my position may make egoism more tolerable than it would be otherwise.

Thesis Supervisor: Bradford Skow
Title: Laurence S. Rockefeller Professor of Philosophy

Thesis Supervisor: Caspar Hare
Title: Professor of Philosophy

Table of Contents

Acknowledgements

I am grateful to Sophia Gibert.

I am grateful to my faculty advisors: Brad Skow, Caspar Hare, Sally Haslanger, and Justin Khoo.

I am grateful to my colleagues, friends, and family.

I am grateful to the many houseplants and creatures that have brought joy to my life and with whom I share a special ontic kinship.

Introduction

Among the many accounts of our personal identity and persistence, there are two that stand out to me. The first, which we may call the *Parfitian* (or *Neo-Lockean*) position, holds that we are essentially persons—most conventionally taken to be things which have a certain psychological profile[1]—and that the persistence of a person depends on the continuity of their psychological states, activities, or properties.[2] The second, which we may call the *Organic Animalist* position, makes three claims: first, that we are essentially human animals—i.e., members of the species Homo sapiens;[3] second, that the persistence of an animal's biological life is necessary and sufficient for the persistence of that animal;[4] third, that the appropriate continuation of biological functioning, such as metabolic or respiratory functioning, is necessary and sufficient for the persistence of a biological life.[5]

These two positions stand out to me because at the heart of each of them lies a conviction so sensible that I cannot convince myself to deny it. The first is the idea that the continuation of certain psychological activities is sufficient for my persistence—a thesis regarded as so intuitive that it is often taken as the starting point for inquiry related to personal identity. The second is that I am essentially a biological thing—not entirely different from the rabbits that sprawl out in my backyard or the raccoons that dig through my trash—whose persistence is tied to the continuity of metabolic processes such as respiration or organic tissue generation.

---

[1] For the classic account: Locke, John. *An Essay Concerning Human Understanding*, Book II, Chapter XXVI, Section 9. For more modern accounts, see: Baker, Lynne., *Persons and Bodies: A Constitution View*. Chisholm, Roderick., *Person and Object*.
[2] See: Parfit, Derek, "Personal Identity"; Parfit, Derek. *Reasons and Persons*. Perry, John. "Can the Self Divide?" Shoemaker, Sydney. "Persons and Their Pasts." Swinburne, Richard. "Personal Identity: The Dualist Theory."
[3] Olson, Eric. *The Human Animal*, p. 124-125.
[4] *Ibid,* p. 138.
[5] *Ibid,* p. 135-136. Note: There are other Animalist accounts that will not say that Animalists must continue be alive in order to persist. These accounts usually focus on the bodily structure of the animal or its capacities.

Philosophers in the personal identity literature often cater to one or the other of these thoughts, but not to both of them. Animalists exclude the relevance of psychological functioning for persistence. Parfitians exclude the relevance of biological functioning for persistence.

The aim of this project is to argue for an account of identity and persistence which holds that the Animalist and the Neo-Lockean accounts both get something right, but they also get something wrong. My account accommodates the thought that psychological activities matter for persistence alongside the classic metabolic activities' characteristic and intimately related to the presence of and continuation of a biological life. But given my position, we are neither human animals nor persons essentially, but only contingently. We are essentially a broader kind of thing—an organism—and an organism, under the right conditions, can also be a human animal and can also be a person, but need not be either of these things.

There are a number of matters to spell out about my position. The first is about synchronic identity— that is, about what you are and what you can be at each moment that you exist. On my account, you are at least three distinct kinds of things simultaneously. First, you are an organism. Second, you are human animal. Third, you are a person.[6] The matter of whether something that exists at a given time is an organism, animal, or person is subject to distinct, though often related, criteria. First, my account says that what it is to be an organism is, plainly, to be a living thing, and that something is a living thing at a time if and only if is performing a sufficient degree of biological functions. Paradigm examples of biological functions can include those of the metabolic, respiratory, and circulatory systems. But in my view, psychological functioning of the right kind, such as those

[6] When we say "*x* is *y*" we could mean a number of different things. There is the 'is' of identity and contingent identity. There is the 'is' of predication and accidental predication. There is the 'is' of constitution and overlap. I suspect that what we are after is the 'is' one of the former two, though I won't go into much more detail here. Kinds are taken to individuate the entities that they are. Perhaps what the kind 'organism' individuates is 'living thing,' however, and 'person' and 'animal' are instances of accidental predication through the presentation they give of the living thing.

psychological activities that happen by way of the organically constituted brain, count as biological functions to be treated on a par with metabolism, respiration, circulation, and others.

Second, what it is to be a human animal is to be a certain kind of organism. There are many ways to be an organism besides being a human animal, of course, just as there are other ways of being red beyond being scarlet. An organism could be an organism by being a plant or a bacterium, just as a red object could be red by being crimson or carmine. On my account, what it takes to be a particular kind of organism, such as a human animal, is to perform particular biological functions in certain distinctive ways—presumably, the human animal performs biological functions that include the respiration of the lungs, the perceiving processed by the brain, the circulation of blood by the heart, the metabolic functions of the digestive tract, and so on. Different organisms have different biological functioning and ways of realizing or performing that functioning.

The relationship between being an organism and being a person is a bit different. Locke described persons as thinking and reflective beings that can consider themselves as themselves at different times.[7] Broadly speaking, I am happy to say that living organisms can be persons if they meet the right kind of psychological profile, and, for all I am aware, certain psychologically equipped non-organisms can also be persons. Often, however, the psychological functioning which allows an organism to be a person contributes to their being an organism. Human animals, for example, are usually taken to be persons because of their brain-based psychological capacities, and on my view, the exercising of these capacities is a kind of biological functioning in the same sense that metabolism or respiration is—*i.e.* these are all functions whose performance can make or be part of what makes something alive in a biological sense relevant to organism identity. But there are also many organisms that are not persons, such as cabbage plants and fungi, and even those organisms

[7] Locke, John. *An Essay Concerning Human Understanding*, Book II, Chapter XXVI, Section 9.

which are persons need not always be, as when a human animal loses its psychological capacities but continues a sufficient degree of basic biological activities such that it still can be considered alive.

In summation of the synchronic matters, what determines whether something is an organism is whether it is alive. Whether something is alive depends on what it does—specifically, whether it performs biological functions like metabolism, respiration, brain-based psychological functioning, tissue repair, and so forth. Whether something is a specific kind of organism depends on which of those functions it performs and by what means it performs them. Whether something is a person depends on whether it has the right psychological capacities. A thing can be all three things (an organism, animal, and person) simultaneously—they are not mutually exclusive ways to be—although strictly speaking, only one of these things is what we must be, for only one of these things is what we are essentially. In my view, that thing which you are essentially is an organism.

This project also concerns diachronic matters of the persistence of organisms. We have said that what it takes to be an organism at a time is to be engaged in the performance of a sufficient degree of biological activities. In order for something that is an organism at one time to be the numerically same organism at another time, however, there must be a further connection between that organism at the earlier time and that at the later time. On my account, there are two relevant relations for persistence of this kind, both of which invoke causal dependence. I call the first *intra-functional continuity*. The relation consists of chains of causal dependence between token instances of the performance of the same function-type. For example, respiration at T1 is intra-functionally continuous with a respiration at T2 if and only if there is a chain of causal dependence between performance of the respiration at the earlier time. I call the second relation the *inter-functional continuity* relation. This relation consists of chains of causal dependence between token instances of the performance of type-distinct functions. Respiration at T1 is inter-functionally continuous with a digestion at T2 if and only if there is a chain of causal dependence between performance of the

respiration at the earlier time and the digestion at the later time. I suggest that organism persistence depends on both the intra-functional continuity and inter-functional continuity relation.

In many ways, the account of persistence that I am giving can be understood to be spelling out of the account of persistence that John Locke gave for animals many years ago. Locke, in his tenure, said that an animal persists if and only if it continues its life. But he did not go on to say much more about what it meant to continue a life. My account spells this out, but it applies it to a more general sort of kind than the kind, "animal." It applies it to the broader kind, "organism."

Locke furthermore thought that the life of an animal (and so, presumably, an organism) constituted a kind of event. I agree. In many ways I think that one can understand my account of persistence better by considering an analogy to other events, such as a performance of a piece of music, an eruption of a volcano, or the occurrence of a tornado. There is, to take the first example, a symmetry to the question "What does it take to be and continue a musical performance?" and the question "What does it take to have and continue the same life?" insofar as both are kinds of events.

How do events like musical performances persist? One suggestion is that a musical performance derives identity and persistence conditions from the performance of a temporally allocated series of musical notes and rests created by individual musical instruments that are related to each other in the right kind of way such as to unify them into a cohesive whole.[8] In my view, we can get a sense of how organisms persist by considering the performance much like this—that is much like the performance of a piece of music—but replacing each musical note with an instance of a biological function; Replace C# with an instance of metabolizing, E with respiration, and so on. These functions are performed by "instruments"—in this case, organic structures—and are related

[8] The reader may not like this example. They may hold a view that the continuity of an event of musical performance is determined by something else—like an intention. In such a case, a better example may be the occurrence of certain natural kind events (which musical performance may not be taken to be) such as the event of a tornado, or hurricane, or volcanic eruption. What does it take for a tornado-event to persist? Perhaps a causally related set of gusts caught up in a distinctive pattern of behavior where each instance reinforcing the next. For a more detailed discussion, see Chapter 2.

to one another in a certain way that unifies them into a cohesive whole. That is, on my account, what it is to be an organism—and a crucial piece of what it takes for an organism to persist is for it to continue the event that constitutes its biological life—in much the same way that we may believe what it takes for a musical performance to continue is to continue the event that constitutes it.

The last chapter of this project concerns the normative matter of partiality. In our day to day life, we have special concern towards those with whom we share intimate relationships, such as our families, friends, spouses, children, and loved ones. This special concern seems normatively justified to us. But what are the sources of this special concern? What is distinctive about our intimate relationships such that they generate the relation of partiality and the reasons associated with it? On my view, one overlooked source comes from the biological connections we have towards other organisms. The fact that there is a certain kind of functional connectedness continuity between my biological functioning and your biological functioning is one grounds of the relation of partiality.

There are two supplementary points that I make in the third chapter. The first is about why biological connectedness and continuity can matter for partiality. As I will have argued by this point, this form of connectedness and continuity is what unifies discrete biological events into a cohesive biological life, and the fact that there is degrees of functional connectedness and continuity between the activities of one organism and the activities of another therefore supports the claim that they share, in degrees, their biological lives. Of course, having your biological life go well is something each of us is deeply concerned with. Hence, it is fitting that biologically connected and continuous organisms should care, protect, and advance each other's interests. Doing so is constitutive of their own good. Again, this is not to claim that all reasons of partiality come from this prudential kind of concern. It is only to say that one such source involves this sort of element.

The second is that accepting these claims about one of the sources of partiality allows us to defend a less offensive egoism. To be clear, I am not an egoist. However, on my view, egoism is

more tolerable than it would otherwise. This is because biological connections of the relevant kind can come rather cheap. A solitary interaction with a grocery store clerk is enough to generate at least a weak reason of partiality towards them because it is sufficient to create at least a weak chain of the right kind of biological connectedness. The egoist, who believes that they ought to do what is in their best interest and only what is in their best interest, will therefore have at least pro tanto reasons to act in the interests of many of those around them. Extensionally, the egoist has more in common with her rivals than might have been previously supposed.

Here is roughly how this project proceeds. In the first chapter, I tackle the synchronic question of the identity of an organism. I argue that brain-based psychological functions make for the presence of a biological life in the same way that metabolism and respiration make for the presence of a biological life and that this point resolves a longstanding tension in the personal identity literature. I go on to argue for the claim that we are essentially organisms, contingently animals, and contingently persons.

In the second chapter, I move on to diachronic question of organism persistence. I give an account of 'functional continuity' that explains the persistence of biological life and is a crucial component of organism persistence. Then, I consider the limits of organism persistence and further complications that will arise for my view when we consider the matter of fission.

In the third chapter, I apply my position to normative questions about prudential concern and partiality. I motivate an account of one source of partiality that depends on biological connectedness and continuity. I claim it fares better than competing psychological reductionist accounts put forward by philosophers such as David Brink. Then, I answer an explanatory challenge about why biological connections matter for partiality. Here, I suggest that the partiality which stems from biological connectedness has the same grounds as prudential concern. As, given my metaphysics of biological life, the life of an organism can extend to include other organisms which

are functionally connected with it. Hence, I haven reason to care for others in the same sense that I have reason to care for myself. My biological life includes them; acting in their interests can be a way of acting in my own, and acting against their interests is a way of acting against my own.

I motivate how this point might bear on the tolerability of egoist conceptions of morality and I consider a parity challenge posed by Parfit which says that one ought not be "agent-biased" and "time-neutral," meaning that there are no good grounds for caring about *whom* gets benefits but not caring about *when* they get those benefits. Following others, I claim that there are good reasons for such a position. Compensation is guaranteed in intrapersonal cases of aide, but not interpersonal cases of aide. But this does not mean we do not have reason to care for others. According to my view, partiality through biological connectedness comes cheap, and acting in the interests of others often does come with an automatic compensation.

As I will repeat at the end of the project, I believe that the position I advocate for in this project takes seriously the intimate relationships we have with our loved ones, family members, animal companions, and other organisms. It says, in the most serious way, that you have reason to treat them with the dignity and respect you afford to yourself. It says that they really, in a special sense, share a biological life with you. When they pass away, part of your biological life has been taken away from you. When you act against their interests, you are often acting against your own. I believe this position therefore does justice to what we are concerned about on the day to day, and to our many relationships, and I hope the reader will find something of value in it.

It is important to be clear about how I use the terms "function," "functioning," and "biological life."

Function | Objects can have functions. Let us say that these functions are a specific subset of the things that the object does or can do—a subset of their abilities or capacities. They are not the set of everything that the object does or can do. A toaster's function is to toast, not to be a projectile or a paperweight. This is so even though there is a way in which we use our natural language where we may say, for example, that the toaster holding down my paper is functioning as a paperweight. Even if objects can "function as" many things, it does not mean that those are the function(s) of that thing.

Functioning | The realization of a function is different from having that function as an ability, capacity, or disposition. It is one thing to say that something can perform or is disposed to perform a function and another thing to say that it actually is performing a function. For the purposes of this project, I sometimes call the performance of a function a "functioning." Ontologically speaking, an occurrence of a "functioning" is best understood as an event, i.e. some form of activity in the world. To say that a thing is continuing the functioning of respiration, for example, is to say simply that it is continuing the activity of respiration. Functional continuity is, likewise, a form of continuity between certain activities.

Biological Life | By "biological life," I mean a large event consisting of smaller, related, biological functionings (activities). My life is a large event spread out across time which is composed of small biological events such as (but not limited to) respiration, tissue repair, and metabolism, related to each other in ways that unify them into a cohesive whole—a life.

Chapter 1: Psychological Continuity and Organism Persistence

A proposal offered by contemporary biology says that whether something is alive depends on whether it is performing biological functions. Is it metabolizing? Is it respiring? Is it repairing and generating new organic tissue? If this kind of proposal is right, it is natural to wonder where the line is between those functions that are biological functions, and hence matter to being alive, and those that are not. Wherever that line is, a popular thought says that the psychological functions are not biological functions; although certain organisms perform psychological functions, the performance of these functions are not what makes these organisms alive in the biological sense. There are at least three ways to motivate this thesis. A first argument draws support from the idea that unlike psychological functions, biological functions are shared by all living things. The second draws support from the observation that, read as a generic, the statement that says "living things perform psychological functioning" is false. The third emphasizes that psychological functions have more in common with uncontroversially non-biological functions than the biological functions. In this chapter, I claim that these arguments are unconvincing and that psychological functions that happen by organic means are biological functions Accepting this position has theoretical virtues. First, it dissolves a longstanding tension in the personal identity literature between Animalists and Neo-Lockeans by reconciling the claim that we are human animals with the thesis that psychological functioning matters for persistence. Second, it allows Animalists to explain persistence in "remnant persons" cases so long as they accept, as many already do, that we are fundamentally living things. Spelling out the details of this last point, I provide a taxonomical architecture that explains the relationship between being an organism, being an animal, and being a person. We are all three of these things simultaneously. We are *essentially* organisms, defined plainly as living things, *contingently* animals and *contingently* persons. I will explain what I mean by this later on.

I. The Exclusionary Thesis

Consider a living thing, such as a cat taking a nap on your windowsill, a rose blooming in the foliage, or a squirrel burying an acorn in the front lawn. In virtue of what do we say that these things are alive? What is that we find so remarkably special about them such that we make a sharp distinction between them and objects such as boulders, brooks, gravel, and dirt? Among the accounts of "being alive" in the biological sense offered by the humanities and empirical sciences, what is called *Life-Functionalism* is among the most distinguished. It has endured, in one form or another, from Aristotle to the contemporary biologist, and it is generally stated in the following way:

LF *x* is alive if and only if *x* is performing a sufficient degree of biological functions.[9]

But what kinds of things count as biological functions?[10] Whatever they are, it is not uncommon to accept that the psychological functions are not among them.

Exclusionary Thesis (ET) Psychological functions do not make or are not part of what makes any *x* alive when they are performed by *x*.

A prevailing position says that, although certain kinds of living things perform the psychological functions that happen, *e.g.* by way of the organic brain, it is not in virtue of this functioning that those living things are alive in the biological sense. Instead, it is in virtue of the performance of other activities such as, for example, respiration and metabolism.

ET is a popular thesis. Eric Olson and others sympathetic to Animalism accept it.[11] But surprisingly, there is little in the way of a formal argument given for it. Even so, the standard way of understanding biological views of identity is through terms sympathetic to ET. Olson writes:

---

[9] Cleland and Chyba note the scientific literature is filled with accounts of life that follow this form. See: Schrödinger, 1945; Monod, 1970; Feinberg and Shapiro, 1980; Dyson, 1985; Kamminga, 1988; Fleischaker, 1990; Joyce, 1994; Shapiro and Feinberg, 1995; Rizzotti et al., 1996; Koshland 2002. (Cleland, Carol. Chyba, Christopher. "Defining Life" P. 388)

[10] There is a question to ask about whether the locution of "making" is the best way to understand the concept of life-relevance. The reader might prefer to accept that being life-relevant means "being able to explain, at least partially, what makes *x* alive," or "being a reason why *x* is alive." I am happy to accept these alternative locutions. As far as I can tell, the point of this paper can be made using any of them. But I have been told it is always better to be uniform.

[11] Olson, Eric. *The Human Animal*, p. 135-136; *Ibid,* p. 138.

> What it takes for us to persist through time is what I have called *biological continuity*: one survives just in case one's purely animal functions — metabolism, the capacity to breathe and circulate one's blood, and the like — continue. I would put biology in place of psychology, and one's biological life in place of one's mind, in determining what it takes for us to persist: a biological approach to personal identity. [12]

It's useful, of course, to emphasize that on biological views, matters of the mind are not *kingmakers*. They do not alone dictate the terms of our identity and persistence. But it is another matter to do what is often done, which is to extend this idea to say that psychological activities have no relevance to our persistence whatsoever. Olson makes this further claim, thereby also committing him to the claim that psychological functions are not biological functions to be treated on a par with metabolism, tissue repair, circulation, or respiration.

I am not convinced of this claim. To start, psychological activities performed by the human animal have a lot in common with other classic biological functions. Just as an animal's metabolic and respiratory functioning are kinds of activities that are supported and carried out by its advanced cellular organic structures, so too are the psychological activities of the cerebrum. And just as the classic metabolic and respiratory functions play a crucial evolutionary role in the organism—so too does psychological functioning of its cerebrum play such a role. Furthermore, popular accounts of biological life—which admittedly, are rather coarse—seem to support the idea that psychological functioning can count as a form of biological functioning.[13] It is often said on these accounts that the degree and patterns of response to external stimulation provided by the world have salience to our judgement of a things being biologically alive. What more representative thing can there be that achieves this sort of aim than the psychological functions of the organic mind—those functions which, when performed, regulate the behavior of an animal and its interaction with the external world in which it finds itself a part?

---

[12] *Ibid.* p. 16.

[13] These accounts point to a broad range of characteristics of living organisms. Included s the notion of an organism's ability to "respond to stimuli." See: McKay, Chris. "What Is Life—and How Do We Search for It in Other Worlds?"

1.1.1

Given these kinds of reason, why have Animalists—many of whom believe that biological continuity is what explains our persistence—been so insistent that psychological functions are irrelevant to our persistence? It will be helpful to try to answer this question. I will start by considering one argument that is suggested in the personal identity literature. According to the Animalist, biological functions are what ground or constitute the biological life of the organism. They are what makes the organism alive in the interesting sense that plants are alive, bacteria are alive, and raccoons are alive. If we want to know which properties, events, activities, and processes, ground or constitute a biological life in the sense, a natural first thought is that we should look for a common denominator shared by all living things. Eric Olson employs this strategy. When discussing which functions are those relevant to the continuation of life, he points to those that all living organisms share.[14] Taken to its extreme, this thought leads us to believe that psychological functions, such as desiring, perceiving, and imagining, do not count as biological functions because there are many living things that do not perform them. The argument goes like this:

1. Many living things, like cabbage plants, do not perform psychological functions.
2. If (1), then no psychological functions are biological functions. That is, no psychological functions are what make, nor can they be part of what makes, anything alive.

C. No psychological are biological functions. That is, no psychological functions are what make, nor can they be part of what makes, anything alive. (Exclusionary Thesis)

I am using the term "making" here in a way that is interchangeable with the term "grounding," where grounding is understood as an asymmetric constitutive dependence relation.[15] I am doing this because I take it to be true that, in explicating the concept of biological life, we want a one-way relationship that is constitutive of the concept. We want to know, when we make the claim that something is alive at some time, what is happening at that time which underlies that fact that a thing

[14] Olson, Eric. *The Human Animal,* p. 112.
[15] See: Fine, Kit. "Guide to Ground." In *Metaphysical Grounding.*

is biologically alive. There are, of course, other uses of "making," such as the use of the term to account for causation over time. But here we are concerned with the concept we call grounds.

The argument for the Exclusionary Thesis canvassed rests on the fact that there are many living things that do not perform psychological functions. But it is one thing to search for a common denominator shared by all living things when first beginning to query what makes a thing a living thing, and another to say that anything that makes a living thing a living thing must be shared by all living things. The stronger claim, "L1," is what supports the second premise.

> L1 An activity or property, *x*, can make or be part of what makes some particular thing alive only if *x* is performed by all living things.

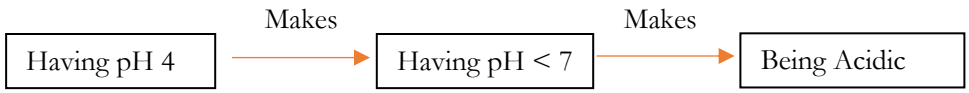
There are reasons to be suspicious of L1. First, we might wonder how L1 is motivated. If L1 is supposed to be motivated by a more general principle from which it is derived, it would be:

> G1 An activity or property, *x,* can make or be part of what makes some particular thing F only if *x* is had by all F things.

But G1 is false. The easiest way to see this is to consider the relation of a determinate to its determinable. The scarlet hue of a red object, for example, is what makes it red. But, of course, not all red things are scarlet. Likewise, having a pH of 2 is what makes a particular object acidic but it does not follow that all acidic things have a pH of 2. The problem is that these properties are too finely-grained. Strictly speaking, we may think that what makes something red is a coarser property entailed by the finely-grained property, such as having a hue that falls in a certain range, and what makes something acidic is also a coarser property, such as having a pH under 7.

If *only* the coarse properties are makers of F, then G1 is plausible. Saying, for example, that if having a pH under 7 is what makes this particular thing acidic then having a pH under 7 is something that is had by all acidic things, is sensible. But it is false that only these coarse properties are makers of F. Accepting that a coarse property of F makes an F thing F shouldn't lead us to accept that finer properties of F do not also make the F thing F. First, to say this is so is to suggest

that the finer properties are akin to properties that are irrelevant to making an F thing F. But there is clearly something special in the relation between acidity and having a pH 4 that is not had, for example, in the relation between acidity and being oblong. Second, accepting the more restrictive claim about what makes something F will lead to a violation of the transitivity of grounding. We can see this point by considering determinates and determinables once more. Determinates are taken by a number of philosophers to ground determinables.[16] As Gideon Rosen puts it, if G is a determinate of the determinable F and *a* is G, then the fact that Fa is grounded in the fact that Ga.[17] Let's suppose, for the sake of argument, that determinables are disjunctions of determinates.[18] Having a pH of 4 is a determinate of the determinable having a pH under 7, understood as a disjunction of many properties such as having a pH of 1, 2, 3, 4, 5 , or 6. It follows that this thing, which has a pH of 4, has a pH under 7, and that this fact is grounded in its having a pH of 4. We also said that having a pH under 7 was what makes a thing acidic. We therefore have the following chain:

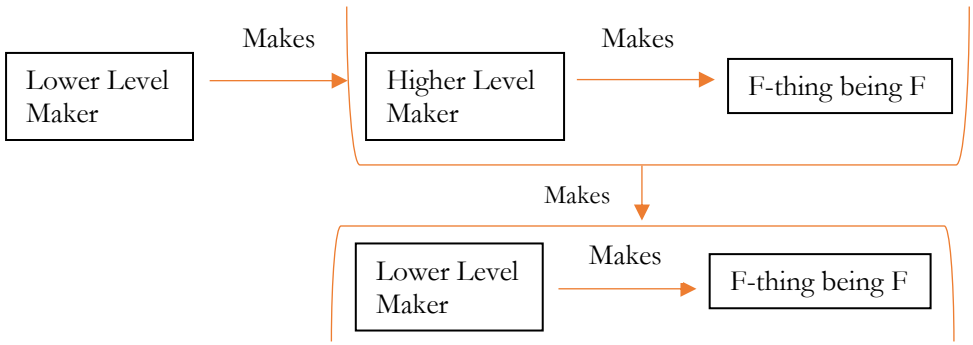


Grounding is commonly taken to be a transitive notion. If the arrangement of these atoms grounds this table's being solid, and if this table's being solid grounds its disposition to reliably hold my toaster, then the arrangement of the atoms of the table grounds its disposition to reliably hold my toaster. If determinates ground determinables, and determinables ground an F-thing being F, then, by transitivity, determinates also ground an F-thing being F. Having pH 4 makes something acidic,

[16] See: Schaffer, Jonathan. "On what Grounds What." In *Metametaphysics: New Essays on the Foundations of Ontology*.
[17] See: Rosen, Gideon, 2010, "Metaphysical Dependence: Grounding and Reduction", in *Modality: Metaphysics.*
[18] This seems to be the most common reductive proposal. See: Bigelow, John, and Robert Pargetter,. *Science and Necessity*,; Clapp, Lenny. "Disjunctive Properties: Multiple Realizations; Rodriguez-Pereyra, Gonzalo. *Resemblance Nominalism: A Solution to the Problem of Universals*; Antony, Louise M, 2003, "Who's Afraid of Disjunctive Properties?"

assuming that having a pH under 7 makes something acidic and having pH 4 is a way to make something have a pH under 7.

We should therefore not deny that finely grained makers of F (such as determinates whose determinables make F-things F) do not also make F-things F. Instead of supposing that only coarser properties discussed ground an F-thing being F, we ought to make a distinction. To continue with the example of acidity, let us call an object's having a pH under 7 a "higher-level maker" of its being acidic, and let us call the object's having a pH of 2 a "lower-level maker" of its being acidic. Higher-level makers of F things make F things F, and they also make lower-level makers of F things make F things F. The relation of the lower-level maker to the higher-level maker is realized, for example, whenever there is a determinate to determinable relation, where that the determinable stands in a making relation to something being F. That is, whenever there is some determinate, such that the determinate realizes a determinable, and the determinable acts as a maker of the F-thing, then so too (by transitivity) do all the determinates of that determinable act as makers of F. In this case, having a pH under 7 makes the object acidic. It also makes having a pH of 2 such that it makes the object acidic. The lower-level maker for F gets its status as a maker from the higher-level maker.



With this in mind, we can revise G1, which said the following:

G1 An activity or property, *x,* can make or be part of what makes some particular thing F only if *x* is had by all F things.

To a nearby principle which says:

G2 An activity or property, *x*, can be the highest-level maker that makes or is part of what makes some particular thing F only if *x* is had by all F things.

I don't have a problem with G2. But it does not support L1. L1 says that some activity or property can be what makes something alive only if it is performed by all living things. But this would only be true for the highest-level maker of being alive. Strictly speaking, G2 supports:

L2. An activity or property, *x*, can be the highest-level maker that makes or is part of what makes some particular thing alive only if *x* is performed by all living things.

But L2 does not secure the thesis that psychological functioning does not count as biological functioning. To exclude psychological functioning as biological functioning, one must show that psychological functioning cannot be a lower-level maker of being biologically alive.

First, nobody has shown that. Second, if psychological functioning were to count as a form of biological functioning, we would wholly expect it to be a lower-level maker. So far as I can tell, all of the other biological functions we have discussed are lower-level makers. There is, generally, a way to test whether something would make or be part of what makes a thing F at a lower-level or a higher-level. The test is to consider whether there is something that is F but which does not have the property or does not perform the activity that is being tested as a maker of F. We can ask, for example: are there red objects that are not scarlet? If so, then either being scarlet is not the highest-level maker of being red or it is not a maker at all. Denying that being scarlet has "making significance" to being red is not plausible. It is, then, best considered a lower-level maker.

We can run this test for many uncontroversial biological functions such as photosynthesizing, respiration, metabolizing, and repairing organic tissue. For each of these activities, we can imagine a living thing that does not perform that activity but is alive, even if for only a brief period longer. The clearest case is to consider that I am a living being that does not photosynthesize. Hence, either photosynthesis does not have any "making significance" to being alive or it is a lower-level maker. Most of us believe photosynthesis can make or be part of what

makes something alive—at least to the extent that we would agree that the relation between performing photosynthesis and being alive is crucially different from the relation between being oblong and being alive. Hence, it is most plausibly considered a lower-level maker.

In another example, I can consider that there is at least one animal that does not perform respiration—it is called the Salmincola. Hence either respiration is not a biological function or it is a lower-level maker of being alive. I assume we don't want to discount respiration as a biological function that makes for being alive. Hence, we should accept that it is a lower-level maker of being alive. In a last example, I can imagine a living thing that has stopped breaking down and delivering energy to cells. But the cessation of that one activity *alone* would not be enough to extinguish a life right then and there. It may be true that, given the dependence of many other biological functions on metabolic functioning, that an organism which ceases to perform it will often soon perish when its cessation causes the rest of its biological functions to cease. But the cessation of that activity alone would not be enough to stop us from saying there is still a life present. Hence, it would seem that either that activity does not make or is not part of what makes that thing alive or it is a lower-level maker of being alive. If anything is uncontroversial for the Animalist, it is that metabolic functioning has "making significance" to being alive in the sense they care about. Hence, it is best considered a lower-level maker rather than not a maker at all.

Running this test for psychological functioning, we see that, if it is to be a maker of being alive at all, it would also be a lower-level maker—and why would we expect otherwise? Why would we expect it be any different than metabolism, respiration, or photosynthesis? There are, of course, many living things that do not perform psychological functions. But again, showing that psychological functions cannot stand as the highest-level maker of being alive is not enough.

Up to this point, we have been considering the idea that L1 is motivated by its being an instance of a more general principle, G1. However, one might think that L1 is motivated in some

other way. If so, then the fact that G1 is false does not tell against the truth of L1. Of course, the obvious question is this: If it is not motivated by a more general principle, G1, what is L1 supported by? But even bracketing this question, L1 faces another problem. If an activity can make, or be part of what makes, something alive only if it is performed by all living things, then many functions that we currently believe are biological functions are excluded from being biological functions, and we end up with a very rigid and implausible concept of biological functioning. We can motivate this point by considering just how hard it is to find any function at all, such that it is shared by all things that are alive. For any biological function, it seems we can consider a living thing that does not perform that function. Consider what would happen if I stopped respiring. I would not immediately cease to be alive. I may perish at a later date. But the cessation of this activity alone is not enough to extinguish my life at that moment. Thus, if L1 is true, this argument is sound:

1. An activity, *x*, can make, or be part of what makes, this particular thing, alive, only if *x* is performed by all living things. (L1).
2. There is a living thing that does not respire but is still alive.

C. Respiration is not a function that makes or is part of what makes a living thing alive.

But the conclusion of this argument is false. We can rinse and repeat the pattern for practically any function we believe antecedently to be a biological function. Consider other variants:

1. An activity, *x*, can make, or be part of what makes, this particular thing, alive, only if *x* is performed by all living things. (L1).
2. There is a living thing that does not repair tissue.

C. Tissue repair is not a function that makes or is part of what makes a living thing alive.

It may be true for any of these examples that something that fails to perform the function specified will perish at some later time. But what matters is that it does not perish right away. So long as that is true, L1 leads us to reject the function in question as a biological one. Repeating this experiment enough times, it would appear that we were wrong to believe that all of those functions which we previously thought made, or were part of what made, a thing alive, did so. That cannot be.

1.1.2

But perhaps we were wrong to read the connection suggested by Olson the way that we did in the previous section. Instead of supposing that the thought is that we can evaluate whether something is biological activity or function by considering whether or not all living beings share it, perhaps it is that we can evaluate whether a property or activity is life-relevant by examining its relation to certain statements which are called "generics." The advocate of ET might note, for example, that we believe in a wide set of generic statements about living things. Living things metabolize. Living things reproduce. Living things grow. These judgments are immune to counterexamples—it is true that living things grow even if a particular living thing doesn't grow just as it is true that dogs have four legs even if a particular dog does not have four legs. The proponent of ET might then claim:

> M1 An activity or property, *x*, can make or be part of what makes some particular thing F only if it is true that F things have x (or perform x), where the claim that F things have x (or perform x) is read as a generic.

The thought is that, when we are trying to figure out what it is that makes something F, we must draw from the pool of predicates or activities for which there is a true generic statement of the form, "F is (that predicate) [or performs that activity]." Of course, if this is true, it is only true as a necessary condition. It may be that the proposition, "dogs have four legs" is true as a generic. But it does not then follow that having four legs is what makes or is part of what makes something a dog. M1 leaves that question open. It only says that, if something, *x*, can be a maker of F, it must follow that the generic "F things are *x* (or perform *x*)" is true.

Accepting M1, the proponent of ET then reasons as follows:

1. An activity or property, *x*, can make or be part of what makes some particular thing F only if the generic statement that says F things have *x* (or perform *x*) is true (M1).
2. The generic statement that says living things perform psychological functioning is false.

C. No psychological functions can make or be part of what makes a living thing alive.

I am happy to accept the second premise. But M1 needs to be refined. In its current formulation, it is false in a similar way that L1 is false. If *x* stands to being F in the relation that a lower-level maker stands to being F, then it does not follow that the generic statement that says F things are *x* (or perform *x*) is true. But *x* would nonetheless make or be part of what makes a particular thing F. Consider, for example, that having the property of being scarlet makes a thing red in at least a lower level sense. But the generic statement that says red things are scarlet is false. What this shows is that if M1 has application to lower-level makers, it is false. We should revise the thesis to the following,

> M2 An activity or property, *x*, can be the highest-level maker or part of what makes some particular thing F at the highest-level only if it is true that F things are *x* (or perform *x*), where the claim that F things are *x* (or perform *x*) is read as a generic.

But this revision does not secure ET. Once again, we see that if psychological functioning stands as a lower-level maker in the same way that being scarlet is a lower-level maker of being red or having a pH of 2 is a lower-level maker of being acidic, M2 has no application. And as we have already seen, it would be puzzling to suppose that psychological functioning would be anything *but* a lower-level maker, if it is to be a maker at all.

1.3

The proponent of the claim that brain-based psychological functions aren't biological functions may say that what motivates their position has nothing to do with the two arguments in the previous sections. I can imagine them giving a third kind of argument. They might say,

> When I am considering whether a function is a biological function, what I am doing is starting with a set of functions I believe are uncontroversially so and another set of functions I believe are uncontroversially not so. I then ask, for any further function, whether that function seems more like the former or the latter. Doing this with psychological functioning, I find that I am inclined to sort it with the non-biological set. I believe it has more in common with this set of functions than with the biological set of functions.

Certain functions like respiration, metabolism, or the repairing of tissue, are uncontroversially biological functions. Other functions are uncontroversially not. These might include toasting, or flying, or tumbling down a hill. When we are considering whether a function is a biological function

or not, we need only consider which set it resembles more closely. The proponent of ET might claim that brain-based psychological functions have more in common with the uncontroversially non-biological set. As a result, they should not be considered biological functions.

What I am puzzled by here is why we would insist that psychological functions have more in common with tumbling down a hill rather than metabolism or respiration. At face value, psychological functions have a lot in common with other members of the biological set—at least in their actual instantiation within living creatures that we know of. For example, respiration, the repairing of tissue, and the breaking down of nutrients, at least insofar as they happen in the lifeforms we know about, happen directly by way of advanced cellular effort and organization. However, so does psychological functioning.

Can a connection instead be drawn with the non-biological set and brain-based psychological functioning? I can imagine a similarity being found between non-biological functions and psychological functioning broadly construed. For if one has a theory of mind where psychological functioning can manifest in ways other than the organic ways that they manifest in a terrestrial organism, then things that we do not believe are alive, like machines, can manifest psychological functioning, just as they can tumble down hills. That makes it look very much like psychological functioning is not biological functions, at least if it is true that machines are not alive.

First, this outcome would depend on a certain theory of mind being true. It is controversial to say that mechanical objects can perform psychological functions. Second, it doesn't matter even if they do perform psychological functions. My claim need not be that any kind of psychological functioning is biological functioning. It can be only the more modest claim that organic brain-based psychological functioning is biological functioning. Even if non-living things perform psychological functions, they are not then automatically performing biological functions.

If the second argument is to be successful, my interlocutor must be able to explain what guides our sorting of the biological functions such that we put them in the same box while excluding functions like tumbling down a hill and performing brain-based psychological functioning. They must be able to give us some answer to the question of why the latter functioning resembles the members of the non-biological set more closely than the biological set. As I have said, one contender that seems to me to unify the biological functions such as respiration, photosynthesis, and digestion is that they happen through advanced cellular effort and organization. But this explanation would also count brain-based psychological functions as biological functions. These psychological functions also happen through advanced cellular effort and organization.[19]

III. Theoretical Virtues of Inclusivity

Up to this point, we've considered and rejected reasons for accepting the Exclusionary Thesis. But that is not enough to show that psychological functioning matters for our persistence or that it counts as biological functioning. In this section, we'll consider positive reasons for my position.

1.2.1

First, my view enjoys the benefit of dissolving a long-standing tension between two sensible claims in the literature on personal identity. First is the Animalist identity claim that we are each a human animal—a distinctively biological entity. Second is the Parfitian claim that psychological functioning is sufficient for persistence. Adherence to the former thesis often leads to rejection of the latter, and adherence to the latter leads to a rejection of the former.

We shouldn't want to reject either claim. As Rory Madden puts it:

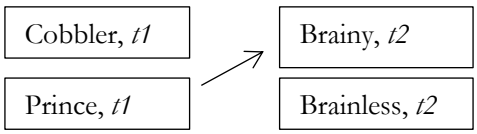
[19] Now it may be said that I should not be asking for a further set of criteria that explains our practice of sorting. What if life was a cluster-concept consisting of a highly disjunctive set of non-necessary functional properties disparate from one another which all have an intimate "making" relationship to being alive but which are not otherwise related. Respiration makes for living. Metabolism makes for living. But there is no connection between the two. Well I suppose I would find it peculiar how we can stand assured of our judgements that these are then both life-functions.

> The thesis that we are fundamentally biological organisms of a certain kind … has been presupposed by the various sciences of human nature — biology, anthropology, sociology, psychology — for well over a century, and can reasonably be said to form part of our scientifically informed common sense.[20]

Likewise, the idea that our identity and persistence is divorced entirely from our psychological functioning is hard to believe. There is a robust pre-theoretical intuition which suggests that our psychological functioning is intimately connected to our identity over time.[21] We can feel this intuition in cases such as Olson's adaptation of Locke's story of the Prince and the Cobbler:

> There was once a prince called "Prince" and a cobbler named "Cobbler". One evening, Prince's cerebrum was cut out of his head and implanted into the head of Cobbler, whose own cerebrum had been removed and destroyed. Two human beings resulted: "Brainy" who has Cobblers body but Prince's cerebrum, and "Brainless", which has all of Prince's parts except for his missing cerebrum. [22]

The awareness that the cerebrum is responsible for a significant amount of our psychological functioning leads many to conclude that Prince persists as Brainy.[23] Brainy, in virtue of having Prince's cerebrum, is assumed to continue much of the psychological functioning that we saw in Prince.



But Animalism as construed by Olson cannot accommodate the thesis that Brainy is Prince. Olson's view entails that Brainy is not Prince because Brainy does not continue the metabolic functioning of

---

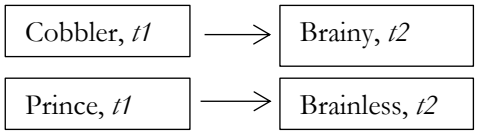
[20] Madden, Rory. "Human Persistence," P. 2.

[21] For empirical evidence pertaining to the robust nature of intuitions pertaining to the importance of psychological continuity for persistence, see: Shaun Nichols, "Intuitions about Personal Identity: An Empirical Study". Excerpt: "Open-ended, abstract questions about what is required for survival tend to elicit responses that appeal to the importance of psychological characteristics. This emphasis on psychological characteristics is largely preserved even when participants are exposed to a concrete case that yields conflicting intuitions over whether memory must be preserved in order for a person to persist. Insofar as our philosophical theory of identity should be based on intuitions, the results provide some support for the view that psychological characteristics are critical for persistence of self."

[22] Olson, Eric. *The Human Animal* p. 42-43.

[23] The cerebral cortex, which is composed of four lobes consisting of the frontal lobe, parietal lobe, temporal lobe, and occipital lobe, controls at least the following psychological features: prospective memory, semantic memory, recognition memory, episodic memory, recollection, personality characteristics, emotions, decision making, speech and language, spatial recognition, learning, sensorimotor planning, sound recognition, semantic retrieval, visual perception, motor planning action, continuity in thought process (See: Jawabri, Khalid. Shrama, Sandeep. "Physiology, Cerebral Cortex Functions"; Ackerman, Sandra. *Discovering the Brain,* Chapter 2: "Major Structures and Functions of the Brian").

Prince. Functions such as breathing and digesting are directed and controlled by the brainstem rather than the cerebrum, and they depend on a complex of ancillary human animal organs to be successfully carried out. Having all of Cobbler's parts, including his brain stem but excluding only his cerebrum, Brainy continues the vital functioning (and the relevant capacities) of Cobbler. Animalism of the Olsonion variety therefore entails that Brainy is Cobbler.



I take it that is generally an explanatory virtue of an analysis of a metaphysical concept that coheres with our strongest and most pervasive intuitions. The intuition that Prince persists as Brainy is hard to deny—even Animalists like Eric Olson admit to having it. If Animalists cannot accommodate the intuition, it counts as a point against their view.

Beyond being unable to resolve this tension, the Animalist who denies that psychological functioning as biological functioning that is sufficient for our persistence faces substantial problems that can be ameliorated by instead accepting my position. Besides giving up a sensible pre-theoretic intuition that certain psychological activities matter to persistence (an intuition that has, by itself, motivated entire movement in the personal identity literature), their account also cannot give a satisfying answer to what happens in circumstances in which a human animal undergoes permanent loss of non-psychological biological functioning. Consider a case presented by Parfit:

> My cerebrum [is removed and] then kept functioning by an artificial support system. The resulting entity is conscious, as the neurophysiological evidence shows. There is also some device that enables this conscious being to communicate with the outside world, since the brain activity involved in certain voluntary mental acts enables this being to spell out the words of messages to us, and some other device enables us to send replies. In this way you have conversations with this conscious being, who claims to be me, seems to have all my memories, and starts to dictate the rest of my unfinished book.[24]

[24] Parfit, Derek. "We Are Not Human Beings", in *Animalism: New Essays on Persons, Animals, and Identity*, p. 36.

In the literature on personal identity, entities like this are called "remnant persons."[25] Animalists like Olson have to say that Parfit does not persist as the remnant person. The cerebrum continues almost none of the conventional biological functions that the human animal previously performed. It does not breathe, nor does it digest, nor does it repair tissue, and so on. Moreover, the bare cerebrum is not a human animal—it is only *part* of a human animal, a single piece of the larger system. Animalists, who believe we are *essentially* animals cannot say Parfit persists as the cerebrum.

This raises a curious question. If the pared-down cerebrum is not Parfit, what (or who) is it? It is not easy to see what the answer could be. A first pass answer may be to suggest that Parfit has gone out of existence when he was pared down to the cerebrum. But that doesn't seem very promising. After all, there is certainly something here that continues to meet all traditional criteria of personhood.[26] Following even John Locke, it is "a thinking intelligent being that has reason and reflection and can consider itself as itself, the same thinking thing in different times and places."[27]

Another potential answer is that it is a new person that comes into being when the animal is pared down. There is reason to be skeptical of this answer. Mark Johnston puts it as follows:

> Now here is a general conviction that many will share, one which organizes some of our thinking about persons and physical reality: You can't bring a person into being simply by removing tissue from something, and then destroying that tissue unless that tissue was functioning to suppress mental life or the capacity for mental life. [28]

Johnston notes that the destruction of tissue might sometimes bring a new person into existence, but only if doing so resolves an impediment that was previously hampering mental functioning. A developing fetus, for example, could have a tumor in its brain, which suppresses its mental life (or its capacity for mental life). Removing the tumor, says Johnston, could allow a person in Locke's sense

---

[25] Johnston, Mark. "Human Beings Revisited: My Body is Not an Animal", in *Oxford Studies in Metaphysics v. 3*, p.45.
[26] It is worth noting that Animalists are generally happy to allow for Lockean definitions of persons. Their primary claim is only that, as it turns out, we are animals, not persons.
[27] Locke, John. *An Essay Concerning Human Understanding*, Book II, Chapter XXVI, Section 9.
[28] Johnston, Mark. "Human Beings Revisited: My Body is Not an Animal", in *Oxford Studies in Metaphysics v. 3*, p.46-47.

to emerge for the first time. But the paring down of an already psychologically functioning animal to its already functioning psychological part is not an instance of this. Hence, we appear to be in a bind. On the one hand, the Animalist cannot accept that the bare cerebrum is Parfit, since the bare cerebrum continues none of the conventional biological functions of the human animal and, moreover, cannot itself be considered an animal, but only a part of an animal. On the other hand, it is not at all clear what the bare cerebrum could be if not Parfit.

Accepting that psychological functioning of the human animal is biological functioning lays the groundwork for solving this problem. The first concern, which is that the bare cerebrum cannot be Parfit because it continues none of the classic metabolic functions of the human animal, can be addressed if psychological functioning is understood as biological functioning on a par with other functions like metabolism and respiration. If the psychological functioning that happens by way of the cerebrum can make something biologically alive, in the same sense as metabolism can, then despite being maimed to a bare cerebrum, one can say that Parfit continues enough biological functioning such that he persists as the bare cerebrum.

But what about the second problem? While it might be plausible that Parfit persists in remnant cases, it would seem wrong-headed for the Animalist to believe that Parfit does so as a human animal. Johnston and Parfit each give reasons why the Animalist should not say that the bare cerebrum is a human animal. I agree with their conclusion that the bare cerebrum is not an animal, but not for the reasons they suggest. First, Parfit argues that the Animalist who claims that the cerebrum is an animal collapses their position into a Neo-Lockean account that says that psychological continuity is all that matters for identity and persistence. He writes:

> If Animalists made this claim, their view would cease to be an alternative to Lockean views. On the Lockean Brain-Based Psychological Criterion, some future person would be me if this person would be uniquely psychologically continuous with me because he would have enough of my brain. […] When Animalists entered this debate, their main claim was that such psychological criteria of identity are seriously mistaken because we are human animals so that our criterion of identity must be biological. If these Animalists now claimed that…

> the conscious rational being would be a living animal… these people would be claiming that the true criterion of identity for human animals is of this Lockean psychological kind. [29]

Parfit is right to point out that a move like this may threaten to blur the neatly drawn boundaries between Neo-Lockeanism and Animalism. But he is too quick to claim that Animalism would then cease to be an alternative to the Neo-Lockean position, for two reasons. First, there is a crucial difference between the relation of psychological continuity and the relation of biological functional continuity, in that the two appear to diverge in the relata that they admit. Traditionally, the relata of psychological continuity are psychological states. But plausibly enough, having a state ascribed to you need not entail that there be an event or process happening, nor can a state seemingly be reduced to an event or process. It can be true that my advisor has a memory of his childhood even though he is not thinking about his childhood at that moment, just as one can believe that the sky is blue without considering the proposition at the time in which it is said that they believe it. But the same cannot be said about the relata of functional continuity. The account we had in mind was one in which the matter of animal persistence depended on what the organism is doing from moment to moment. Is it oxygenating blood? Is it digesting food? Is it repairing damaged tissue? These are events or processes, not states.

Second, and more importantly, the Neo-Lockean holds that one persists if and only if one maintains psychological continuity. But the Animalist does not have to accept that psychological continuity is necessary for persistence. They might believe—as I do—that it is only sufficient. We may persist in cases where our psychological functioning is stripped away from us—as brain dead animals that still continue vital functions like breathing, digesting, and the like.

Johnston, meanwhile, claims that it is implausible to believe the cerebrum is a human animal because "an animal is wholly constituted by an organism, something with the power of self-

[29] Parfit, Derek. "We Are Not Human Beings", p. 37.

maintenance in the natural environment in which the animal's species developed."[30] Since the bare cerebrum does not have the power of self-maintenance in the natural environment in which it was developed, Johnston claims it cannot count as an animal. But this is not a plausible constraint on animal persistence. Animals can and do persist despite losing the power to self-maintain in the environment in which their species developed. Consider a human being who must rely on machines to facilitate their breathing, or on a pacemaker to regulate their heartbeat. Like the bare cerebrum, they must rely on extrinsic, artificial means, to maintain themselves in their natural environment. However, it is far from obvious that they have ceased to be an animal.

A better path to defending the claim that the bare cerebrum is not an animal is to insist that there is still a crucially relevant difference between someone with a pacemaker or respiratory assistance machine and a pared-down cerebrum. In the former case, there remains a wide number of metabolic functions being performed, even if one or two of these functions, such as breathing or heart-functioning, is impeded. But the pared-down cerebrum does not perform any non-psychological biological functioning at all. Because of this, it cannot be said to persist as an animal by way of an appeal to the fact that someone with a pacemaker persists as an animal.

In the end, this conclusion is one I am happy to accept. Admitting that the bare cerebrum is not an animal might seem like a rather devastating problem for the Animalist. But I do not think it actually is. Accepting this claim, as even Johnston admits, does not mean that we must give up the thesis that we are human animals. At worst, it only means that we must give up the strong identity thesis that we are essentially human animals. I don't think we need to resist this move. The kind of Animalism I accept is one that insists first and foremost on the crucial idea that one persists if and only if one continues their biological life. Animalists like Olson already accept this account. It is just that they have gone on to also falsely suppose that if a human animal continues its biological life, it

[30] Johnston, Mark. "Human Beings Revisited: My Body is Not an Animal", in *Oxford Studies in Metaphysics v. 3*, p 45

continues as a human animal. But the case of the remnant person shows us that this is wrong. That is a case where there is persistence despite the persistent no longer being a human animal. It shows us that one can continue their biological life without continuing as the same kind of organism that they once were. Parfit was once an animal, and now is something other than an animal. But this isn't particularly alarming. It does not lead to saying we are fundamentally different in kind than other biologically living things. It only shows that we cannot restrict our identity to a specific *kind* of living thing such as the human animal.

1.2.2

I think the answer to the question "What is Parfit?" or "What are we?" requires disambiguation of the taxonomy between organisms on the one hand, and specific kinds of organisms like human animals on the other hand. It is my proposal that we are essentially organisms—plainly and broadly defined as biologically living things. Being an organism does not preclude one from being a human animal. You can be both. But what exactly is the relationship between being a human animal and being an organism?

A view first view might rely on distinction made by David Wiggins, following Aristotle, between substance sortals and phase sortals.[31] Roughly, for a concept to be a substance sortal is to be something which, if you fall under it, you cannot cease to be without ceasing to exist. A phase sortal, on the other hand, is a concept you can fall under, cease to fall under, and yet still exist. Consider for example, that you may have once been a student. But when you stopped being a student, you did not go out of existence. Similarly, a dog may have once been a puppy. But it can cease to be a puppy and continue to exist. That is because "student" and "puppy" are phase sortal concepts rather than substance sortals concepts. Animalists often believe that "human animal" is a substance sortal and "person" is a phase sortal. They think that animals can be persons, but they can

[31] See: Wiggins. 2001. *Sameness and Substance Renewed.*

also cease to be persons without going out of existence. I think the Animalist is right to think of "person" as a phase sortal. But, unlike the Animalist, I think "human animal" is a phase sortal too. What is a substance sortal is the concept "organism." Just as one can cease to be a student and persist, or cease to be a person and persist, one can cease to be an animal and persist. That is, so long as one continues to be an organism and other conditions of persistence are met.

But I believe there is a better view available to cache out the relationship of "human animal" to "organism." The trouble with classifying the first as merely a phase-sortal concept and the second a substance sortal concept is that it does not robustly capture the entailment between the two. Being an animal entails being an organism; being a plant entails being an organism. But in a good number of cases, falling under a phase-concept kind does not entail falling under a substance-sortal kind. Being a student does not say anything about your essence, for example. For these reasons, it may be better to consider the former kind "animal" as a determinate and the latter "organism" as a determinable, much like scarlet and red. This view gets us the results we seem to want. Given the view, there are many ways to be an organism. One way is to be an animal, or more particularly, a certain kind of an animal such as a human animal. But strictly speaking, an organism that is an animal at one moment, can cease to be an animal at the next and still be an organism.

There are other cases to consider which support the thought that being an organism can be realized in many ways and persist through changes in the kind of organism it is. A caterpillar weaves itself into a cocoon and then emerges as a butterfly. There is a very natural way we might insist that the caterpillar persists as the butterfly. But it is reasonable to think that the kind of organism the caterpillar was and the kind of organism it became are of different sorts. My position accommodates this thought straight-forwardly. Although the biological life of a caterpillar is notably different from the biological life of the butterfly, they are identical because they are both organisms that are

connected in the right way, although they are just different manifestations of an organism, that is, different manifestations of biological life.

Of course, we could instead deny this explanation and say that, actually, the kind of organism the caterpillar is *just happens to be* a kind of organism that has two radically different presentations. But what motivates our saying this? Why believe, in the case of the pared down cerebrum, that the cerebrum did not continue as the same kind of organism (a human animal), but in the case of the caterpillar and butterfly, it does? I am not sure there is good reason to say this.

IV. Persistence as a Kidney?

Rarely in philosophical discourse does a positive view come without complications. The position I advocate for in this paper is no exception. Here I spell out one crucial question that my account raises and a few potential answers to it. I do not take these answers to be decisive. Rather, my aim is to bring out the issues and map out territory for how one might begin to adjudicate them.

This question presents as a worry about the over-extension of my account. I have said that we may persist as a bare cerebrum because the bare cerebrum continues a sufficient degree of biological functioning such that one can say that the event of a biological life continues. But what about cases where we are pared down not to our cerebrum, but another organ? Consider that one might pare a human animal down to their kidney and keep, perhaps through artificial means, the kidney's function of excreting waste and fluid intact. In such a circumstance, it so happens that there is a degree of our biological functioning that persists through the kidney's continued functioning. But is that enough to suppose that we have persisted *as* the kidney? That seems like a harder claim to accept than the claim that we may persist as a bare cerebrum. But can we deny it? Both the cerebrum and the kidney are part of the animal system, and both the cerebrum and the kidney

appear to continue performing their biological functions. Are we not forced, then, to treat them both as cases where our persistence is evident, assuming we believe we can persist as a cerebrum?[32]

There are four responses worth pointing out. The first attempts to cushion the absurdity by appealing to adjacent cases where an event persists, even though much of what made up the event originally has fallen away. The second emphasizes a disanalogy between the degree of functioning performed by the pared down kidney relative to the pared down cerebrum. The third puts pressure on a condition of our persistence which has so far been underdeveloped—the notion of "appropriate functional continuity," and claims that the kidney could lack such continuity. The fourth is to deny that we persist as the kidney by denying that the kidney is in fact an organism.

Consider the first response. On the face of it, it is hard to accept that we can persist as a bare kidney. But some of this hesitation might be alleviated by considering how little it takes to persist in adjacent cases of event persistence. Why event persistence in particular? Because the Animalist view we are concerned with relies on the idea that we persist when our biological life persists, and its advocates have taken a biological life to be a kind of event—a sum of interdependent smaller events of biological activities like respiration and metabolism. Analogies can be made between our persistence and the persistence of other events like musical performances like that of an orchestra. There are a lot of small events that go into this larger event: that of the conductor's conducting, the brass performing, the string's performing, the woodwind's performing, and the percussion's performing. Now suppose we come upon a section of the orchestral event when all instrumental sections cease their performance except for the percussion section. Here we have, in a way, pared down the orchestra's performance to a fraction of its whole. Yet we would not be inclined to say that the orchestral event is over. So too, we may say, that although the kidney is a small portion of the event of a life, it's continuation of functioning is sufficient for the persistence of the life event. If

[32] Animalists say as much. See Snowdon 1990: 98, Snowdon 1991: 112–113, Olson 1997: 18, and Olson 2007: 42.

the reader finds the appeal to music controversial, perhaps they can consider that of a volcanic eruption. How much lava and gas must billow in order for a volcano to still be active when it starts its eruption? Isn't there some sense to the idea that even if much of it has ceased, the event continues so long as the activity that makes it up continues even to a relatively small degree?

A second response might instead emphasize the difference in degree between the biological functioning performed by the pared down kidney and the biological functioning performed by the pared down cerebrum. This point is made by Rory Madden, who has an account that, although different from my own, shares in its insistence that we are biological things that may nonetheless persist as the bare cerebrum. Madden points out that "the relatively simple kidney does not preserve anything like the diverse range of capacities for human organism activity preserved by the cosmically complex structure of the cerebrum."[33] He writes that the cerebrum is responsible for a wide degree of functions such as "color discrimination, grammatical string detection, social hierarchy navigation, duration sense at different temporal scales, vertical–horizontal line discrimination, face recognition, place recognition, practical know-how, auditory phoneme individuation, predictive naïve physics, story-telling, episodic memory."[34]

A third response may instead try to carve out space between the kidney and the cerebrum cases by emphasizing the kind of biological continuity present in such cases. In this chapter, we have said very little about what *kind* of continuity is paramount to the persistence of a biological life—and the notion itself has not been spelled out by any other Animalist else in the literature.[35] Broadly speaking, however, I think two forms of continuity matter. First, we care (for reasons of figuring out if a life is continuing) when an activity of a certain kind continues from moment to moment, as

---

[33] Madden, Rory. "Human Persistence," p. 9.
[34] *Ibid,* p. 7.
[35] I spell out this account in more detail in subsequent work. I am happy to send a draft to the search committee.

when we ask "is she still breathing?" Here we are concerned with the continuity of one kind of biological functioning. The pared down kidney's activities seem to have this continuity present.

However, we are not just a sum of independently operating functioning-types. Our various biological functionings are interconnected with one another in ways that unify them into a cohesive system. My digestion is dependent on my heart rate which is dependent on my respiration and so on. We may think that the preservation of this interdependence is crucial for the persistence of the organism—that is, that there needs to be a kind of continuity not only between biological functions of the same kind across time, but also, continuity between those function's dependence on other biological functions. The pared down kidney, however, does not preserve connections with the other parts of us. It is not connected to any other part of the organism it came from.

This sounds promising but the trouble will be spelling out why the cerebrum has the kind of continuity that we claim the kidney lacks. As far as I can tell, the best way to motivate that claim is to once again consider the many different functions that the cerebrum is tasked with. There is thinking, desiring, imagining, and all sorts of distinct activities that I wager should be considered instances of biological functioning. Even though there is only one organ performing these functions, there are enough different activities happening that are interdependent on one another such that we say there is in fact continuity of the requisite sort necessary for persistence. In the case of the kidney, however, there is a distinctive lack of such interconnected diversity.

A fourth response, and the response is to deny that the kidney is an organism altogether. Since we are essentially organisms, we could not persist as something that is not an organism. Hence, we do not persist as the bare kidney. The rationale for this would be that although the kidney performs functions characteristic of its kind, these functions are not biological functions when they are not performed in the context of the body of an organism which characteristically depends on them. When the kidney is in the human animal, its functioning is part of a larger digestive system

which supports the rest of the human animal's biological system in regeneration, growth, and more. That's what makes its functioning a form of biological activity. All alone, however, the kidney does no such thing. It processes food in the way that kidneys do, but with no greater end whatsoever. And it does nothing furthermore that would classify it as an organism—it does not repair tissue, or regulate its own activities, or anything else characteristically understood as vital to being an organism. Since it is not an organism, the kidney is not eligible for being something we persist as.

Conclusion

In this chapter, I have suggested that we accept a more inclusive account of biological functioning which holds that brain-based psychological functioning can make, or be part of what makes, something alive. I have pointed out that the arguments which motivate the denial of this thesis are not compelling, and I have noted a few theoretical virtues that it would have.

In closing, I will say only that the thesis I recommend is not as strange as it may appear. For when we think about the concept of life, including its usage in natural language and its employment in historical and contemporary scholarship, we see that it is used to pick out powers beyond non-psychological life functions. Even Aristotle famously distinguished between different manifestations of life. Although he noted a vegetative life of nutrition and reproduction, common to all plants and animals, he also distinguished animals as being alive in a further sense, with a set of powers of perception and sensation, accompanied by imagination, pleasure, pain, desire, movement, and local action. A third level, distinctive of human beings, he described as consisting in rational activity.[36]

'Life,' as we use the term in natural language, also appears to apply to activities beyond self-maintenance. Consider the story of George Pickering II, a father in Houston who, after finding out his comatose son was to be taken off life support, barricaded himself in his hospital room, dedicated to stopping authorities from permitting the cessation of this support. After a prolonged standoff

[36] Aristotle. *On the Soul* 2–3. See also NE 1.7 1097b32–1098a5. OS 2.2 413b22–24

with police, Pickering was successful. Sometime later, his son exhibited what was called "life activity" by way of squeezing his father's hand. Importantly, this activity was not one of the conventional metabolic functions. It was an intentional action—a psychologically-dependent activity.

Chapter 2: Functional Continuity and You

In the last chapter, I did two things. First, I argued for the claim that brain-based psychological functioning counts as biological functioning. Second, I suggested that the Animalist should accept the claim that we are essentially organisms and that we are only an "animal" and a "person" contingently. By accepting the first claim, I noted that we could combine the intuitively plausible thesis that we are human animals with the popular Neo-Lockean claim that psychological functioning matters to persistence—at least, insofar as we accept an account of persistence which centers on the continuation of biological functions, as many Animalists are inclined to do. By going on to also accept the second claim, we could also account for the problem of the remnant person.

In this chapter, I move further to questions surrounding the diachronic matter of persistence. I focus closely on the question of how an organism at one moment persists at another moment. John Locke famously advocated for an account in which a certain kind of animal persists from one moment to another if and only if it continues its biological life.[37]

AP If x is an animal at t_1 and y exists at t_2, $x = y$ iff y at $t2$ has the same life as x at $t1$.

AP above stands for "Animal Persistence." For reasons that were pointed out in the previous chapter, however, *y* need not persists *as an animal* when the right-hand condition of AP is met. The pared down cerebrum continues the biological life of the animal that it once was, but the pared down cerebrum is not an animal. To avoid confusion, I prefer the following substitution:

OP If x is an organism at t_1 and y exists at t_2, $x = y$ iff y at $t2$ has the same life as x at $t1$.

OP stands for "Organism Persistence."

---

[37] About something similar, plants, he says: "Thus, something is one plant if it has an organization of parts in one cohering body partaking of one common life, and it continues to be the same plant as long as it partakes of the same life, even if that life is passed along to new particles of matter vitally united to the living plant, in a similar continued organization suitable for that sort of plants. This organization is at any one instant in some one collection of matter, which distinguishes it from all others at that instant; and what has the identity that makes the same plant is that individual life, existing constantly from that moment forwards and backwards, in the same continuity of imperceptibly succeeding parts united to the living body of the plant" (From: Locke, John. Essay II, xxvii, s. 4)

We are trying to understand this kind of thesis, as Locke did, by appeal to the continuity of a biological life. But what exactly does it mean to continue a life? Locke waved his hands around. He wrote that life could be "communicated to different particles of matter as they are successively united to [the] organized living body."[38] But as to the matter of how, he did not say.

A primary objective in this chapter is to offer an answer. First, I consider whether a parallel can be drawn between the Neo-Lockean relation of psychological continuity and the relation of continuity that may matter for the persistence of life. I claim that the two diverge in at least one salient respect, which is that the continuity of biological life concerns the relation of events rather than relation of states. I go on to advocate for an account of "functional continuity" which consists in what I call the "intra-functional continuity" relation and the "inter-functional continuity" relation. The former relation consists of chains of causal dependence between token instances of the performance of the same function-type. The latter relation consists of chains of causal dependence between token instances of the performances of distinct function-types. I suggest that the matter of the persistence of biological life depends on a sufficient degree of these kinds of continuity between biological activities. Given OP, organism persistence will also therefore depend on this continuity.

A second objective in this chapter is to consider the limits of organism persistence—as we did at the end of the last chapter—but with a renewed understanding of how organism persistence happens. Where exactly is the line of organism persistence? Can we persist as mechanical cerebrums? How about as a severed arm that still performs certain local functions like tissue repair or respiration? We will consider these questions, as well as a few other complications that may arise from my account of organism identity and persistence.

[38] Locke, John. Essay II, xxvii, s. 8

I. Event Persistence and Object Persistence

Before beginning, there are a few points I think is important to make about the kind of account I am here defending. First, I want to make a more general schematic point about the way in which we consider questions of persistence. In order to do that, I ask the reader to consider the persistence conditions of objects falling in the artifact class. Of course, the ontological status of artifacts is controversial.[39] The central thesis of this chapter will not rest on any controversial commitments about them. But I do find cases which involve them helpful in clarifying my position as it extends to biological organisms. With this in mind, I ask the following:

Q. What conditions are sufficient for my smartphone to persist at a later time?

There are different strategies for answering this question. For example, we might appeal to the qualitative properties of the smartphone, or the particular parts that compose it, and claim that at least one way the smartphone persists is when it continues having these qualitative properties or when its' particular parts remain sufficiently unchanged. For all I know, there is a plausible sufficient condition for smartphone persistence along these lines. But there is at least one other way that I think a smartphone can persist. We can begin by asking the Sortalist question, following David Wiggins, of what kind of thing the object is.[40] In the case of artifacts, this involves giving an account of its functions. Toasters are things which toast, after all. That's part of what it is to be a toaster.

We might point out that smartphones have kind-characteristic functioning that includes calling, texting, geographic navigating, internet connecting, and media storing. Being of a kind smartphone generally involves having a capacity to perform these kinds of functions. A sufficient condition for persistence can be generated on the basis of these functions. Here is a proposal:

> *Smartphone Persistence:* The smartphone at *t1* persists at a later time *t2* if there is appropriate continuation of least a low threshold of the functioning of the smartphone kind at *t2*.

[39] Van Inwagen (1990) and Merricks (2001)
[40] Wiggins, David. "Identity, Individuation, and Substance", p. 8.

I mean this as a sufficient condition for smartphone persistence, not a necessary one. Such devices may be able to survive a complete loss of characteristic functionality. The only positive claim I offer is that one way in which a smartphone can persist is by continuing kind-characteristic functioning.

To motivate my claim, consider cases where there is low-threshold continuity.

> *Cliffside Fall:* In a desperate attempt to take an incredible selfie for my dating profile, I position myself at the edge of the Cliffs of Moher. Tragically, I drop my device. The waves of the ocean shatter it, destroying its physical form. I recover what is left and notice it can do almost nothing it used to do. In the evening, however, I find out my wife can still call.

The smartphone appears to barely survive this event, despite its lack of physical resemblance to a conventional smartphone of its kind, and despite its almost complete functional incapacitation. If I were asked of the device's status in the world, I wouldn't say it had ceased to exist—not strictly speaking. The device is still with us, barely hanging on, by a thread, insofar as it can still perform its calling function. If what I recover from the ocean lost even this final function, I would say instead that there is no device here at all. The sea has taken it and returned only rubble.

If that is right, then functional continuation can matter for persistence, in at least the sense that a low threshold of functional continuity can be sufficient for the persistence of certain kinds of objects such as those falling under the artifact class. We can generalize this insight.

> *Survival by Functional Persistence* (SFP)*:* For at least some kinds *K*, instances of that kind *K* persist if they continue to be able to perform a low threshold of the characteristic functions of *K*.

All of this may lead us to believe we should offer a similar proposal for the persistence of the biological organism. While this is tempting, I am hesitant to agree. Crucially, the account I pursue will differ from accounts about the persistence of artifacts. In the case of artifacts, what matters is not the continuation of an event, but rather the preservation of capabilities—the ability to perform functions. This makes for a substantive and important difference. My view requires a continuation of the performance of biological functions, not just a capability to perform those functions.

I endorse this performance-focused position because it seems to me that retaining capabilities does not require anything to *happen*. But continuing a biological life does. A toaster may never toast; a smartphone may never be used to text or call. Biological life, on the other hand, is an event predicated on certain happenings. We suppose it ends when the performance of certain biological functions end. Has she stopped breathing? Have the biological activities she performed previously ceased? That is what we want to know to determine if a life has persisted. It is therefore plausible to predicate our persistence on an event. It is natural enough to suppose that an organism ends and begins with the start and end of the event of its biological life—that when we say of our dear calico Izzy, who has passed away recently, that she "is gone" or "no longer with us," we really mean it quite literally. She has stopped doing the things that make for being alive.

But I admit the view is in some sense rather peculiar. We usually take an organism to be an object and a life to be an event. The position under consideration here says that an organism persists when it continues its biological life. We are therefore making the claim that an event, such as a life, has bearing on the identity of the thing or object which performs the event, such as the organism.

We do not usually consider object persistence to be subordinate to event persistence. Consider other examples. We do not think that a clarinet needs to perform anything whatsoever in order to persist, nor do we think that a toaster needs to toast anything at all in order to persist either. What is so special, then, about organisms such that event persistence matters to their persistence in a way that it doesn't for other things? Of course, it might be true that certain objects like clarinets or toasters must retain certain capacities or abilities to perform functions in order to persist. But that is not a claim that is analogous to what the present suggestion is. The suggestion instead says that we must always be performing biological functions in order to persist. But if the actual performance of the functions of so many other objects is superfluous to their persistence, doesn't the same go for

organisms or animals? Is it not theoretically possible for the human animal or organism to exist to whether or not its engaged in the performance of a life? The skeptics argument says:

1. No objects require the performance of particular activities to persist.
2. Organisms are objects.
3. No organisms require the performance of particular activities to persists.

If we want to maintain that the continuation of biological life is crucial for our persistence, there are two ways we could respond. We could deny the first premise. Despite initial appearances, we may note that there are certain objects that do derive their identity and existence conditions from the events they perform. One might think this is true of rivers and tornadoes. We do often talk of tornados and rivers as objects—and like other objects, they have physical locations, physical properties, abilities, and dispositions. But crucial to the existence of something like a tornado is the continuation of something it does—such as move across the land in a certain style and with a certain rotational wind speed. At a certain point, when and if it ceases to do this to an appropriate degree, there ceases to be a tornado in existence altogether. So too with rivers. A river that does not have flowing water is arguably no river at all. We may think of organisms and animals in a similar way. We may think that that there is a kinship between what a river or tornado is and what an organism or animal is in that they derive their persistence conditions by the continuation of paradigm activities.

Alternatively, we could put pressure on the second premise. It might be suggested that organisms are not objects. Perhaps neither are tornadoes or rivers. We may say things like "the river is west of the Mississippi," but perhaps what we really mean when we say this is that "there is an event of flowing water west of the Mississippi." Suppose we accept that. Then, if animals and rivers share an ontic kinship, so too will animals merely be events. When we say there is a racoon outside, what we will mean is "there is an event of a biological life of a certain style we call raccoon outside." If that were true, all it would mean to me is that the account, OP, will be even less informative than previously thought. It will say that a life persists from one moment to the next if and only if a life

persists from one moment to the next. Then, even more urgently, we will need an account of the persistence of biological life.

I prefer denying the first premise over the second. It is not clear to me that the events which correspond to tornados or rivers bear the same properties as tornados or rivers, and hence it is not clear that the second strategy is plausible. We say, for example, the river is blue or a tornado is brown. Can an event be blue or brown? If there are differences in the properties of the tornado and the event that forms it, then the two cannot be the same. I think it best to subscribe to the view that organisms are not events, but that the event of biological life shares a special relationship to the organism: the same relationship that the event of a flowing river has to the persistence of the river.

II. Biological Life Persistence and Organism Persistence

In this section examine how an organism persists through time. As we have seen, Eric Olson thinks that the persistence of biological life, specifically, depends on the appropriate causal continuation of a complex and regulated system of biological functioning, where such functioning refers to metabolic activity directed by the brainstem and not the cerebrum, including (but not limited to) respiration, digestion, temperature control, and immune response. The idea of appealing to causal dependence is promising. But when it comes to explaining what it means to have an appropriate causal continuation of a functioning, Olson avoids the question. He writes:

> Which causal connections are "appropriate" is a moot point… Just about any theory about the persistence of concrete objects will have to face an analogous question [of what it means to be causally related in the right way]. According to the Psychological Approach, for example, my current psychological features must be causally related in some appropriate way to those that I have at every other time at which I exist. Phrases like 'psychological continuity' or 'biological continuity' only cover up this problem.[41]

Olson may be correct to say that the question of appropriate continuity will be faced by just about any account of persistence. But that does not mean the Animalist should not endeavor to answer it.

---

[41] Olson, Eric. *The Human Animal*. Ch 5, S VII. p. 136.

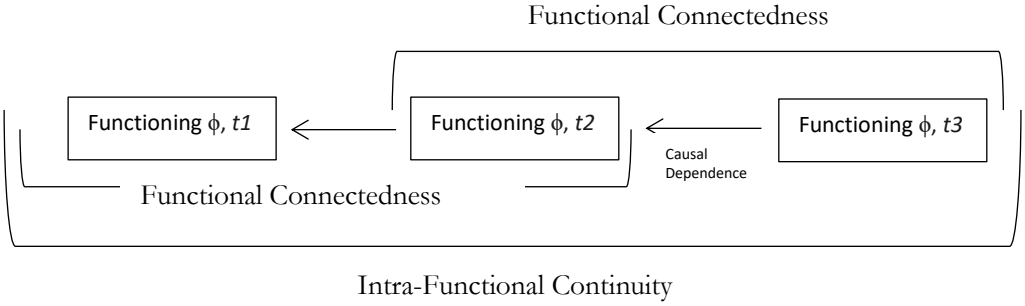
For one thing, without an idea of what it means to "continue" a biological functioning in the relevant way, it is difficult to really evaluate the theory that is being offered. Second, the kinds of answers that are available for the Animalist account may turn out to differ in important ways from the kinds of answers that we would accept on opposing theories of personal identity and persistence. Consider, for example, what it is that the proponents of the competing psychological accounts of personal identity and persistence say about the matter. Adherents of this account believe that the matter of our persistence has to do with psychological continuity. But the relata of psychological continuity differs from the relata of functional continuity. The relata of psychological continuity are psychological states similar to one another. But plausibly enough, having a state ascribed to you need not entail that there be an event happening, nor can a state seemingly be reduced to an event. It can be true that my advisor has a memory of his childhood even though he is not thinking about his childhood at that moment, just as one can believe that the sky is blue without considering the proposition at the time in which it is said that they believe it. But the same cannot be said about the relata of functional continuity. The account we had in mind was one in which the matter of animal persistence depended on what the organism is doing from moment to moment. Is it oxygenating blood? Is it digesting food? Is it repairing damaged tissue? These are events. To say that there is life-functional continuity, then, we must be relating together events rather than states. That marks an important difference that demands attention.

It seems sensible to me that there are two ways the "functional continuity" relation can obtain such that it matters for biological life persistence. First, we care (for reasons of figuring out if a life is continuing) when a function of a certain specific kind continues from moment to moment, as when we ask "is she still breathing?" Let us call this first relation *intra-functional continuity*.

> *Intra-functional continuity*: *y*'s functioning ϕ at *t2* is intra-functionally continuous with *x*'s functioning of the same type ϕ at *t1* iff there is a chain of causally dependent instances of functioning between ϕ at *t1* and ϕ at *t2* (call each pair in this chain "functionally connected")

Intra-functional continuity relies on the notion of "functional connectedness," where such a relation has to do with the performance of a function one time and the performance of a function at another time. If I actively recall an event, at *t1*, of my stealing a bar of soap, and then I recall that event again at *t2,* my recalling of those events is functionally connected with one another if differences in the recollection at *t1* would make differences to the recollection at *t2*. If my recollection at *t1* was a recollection of a blue bar of soap, the recollection I would have had at *t2* would be different than if it was a red bar of soap. Similarly, if I'm dancing at *t1,* then a subsequent dancing at *t2* would be appropriately causally dependent on the previous dancing if a change to the dancing at *t1* would make a difference to the dancing at *t2*.

This way of thinking about connectedness is similar to how proponents of the psychological criterion of identity conceive of psychological connectedness in relation to states like memories and beliefs. On the Animalist version, a similar phenomenon would be said to hold for non-cognitive functioning, such as metabolic and respiratory functioning. Perhaps my digesting at twelve o'clock noon causally depends, in at least some sense, on my digesting at the time immediately preceding it. Had I eaten noodles at the former time rather than eating fondue, my digestive functioning would be different at that time, and so be different at the subsequent time too. Intra-functional continuity can be seen as the transitive closure of the functional connectedness relation between type-identical functions. If there is functional connectedness between each adjacent performance of the same type-identical function, then there is intra-functional continuity between those functions.



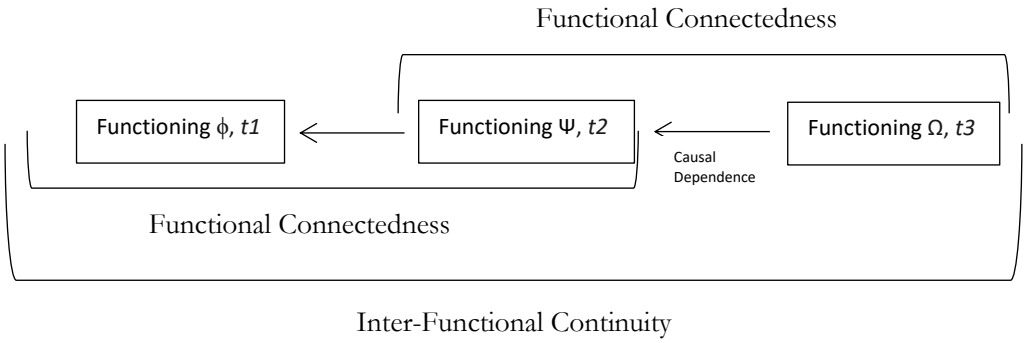
Consider the metabolic process of digestion. Although the state of one's digestive functioning in April may not be causally dependent on their digestion in January, it may be that there is a chain of intermediate digestive functioning between those times, each instance of which is causally dependent on the preceding one. Similarly, one's heart-rate at one moment has causal relevance to their heart-rate at another. A difference in heart-rate earlier can make a difference to the heart-rate at the next moment. By bridging these connections, one can relate a heart-rate that occurred weeks earlier to a heart-rate weeks later. This chaining similarly goes for other biological activities.

That is one instance of continuity we care about. But we also care about when a biological function of a certain kind influences a biological function of a different kind. As animals, we are not just a sum of independently operating functioning-types. Our various functionings mingle with one another in ways that unify them into a cohesive system. The preservation of this mingling is crucial for the persistence of the animal. A second instance of functional continuity admits therefore relata of different function-types. We can call this the *inter-functional continuity* relation.

> *Inter-functional continuity: y*'s functioning ϕ at *t2* is *inter-functionally continuous* with *x*'s functioning of a different type Ψ at *t1* iff there is a chain of causally dependent instances of functioning between Ψ at *t1* and ϕ at *t2*.

Inter-functional continuity relies on the notion of a functional connection, as did the concept of inter-functional continuity. Just as my digestion at one time may be functionally continuous with my digestion at another time, so too can my digestion at one time be functionally continuous with other functions at another time. For example, one factor that impacts my digestion is the amount of oxygen my cells receive. A difference in my respiration at one time may therefore impact my digestion at another time. Likewise, the state of my digestion is connected to a myriad of functions which depend on nutrient intake, such as tissue and muscle repair.

Intra-functional continuity can be seen as the transitive closure of the functional connectedness relation between type-distinct. If there is functional connectedness between each adjacent performance of different function, then there is inter-functional continuity between them.



How does the general idea of appealing to causal connections fare on adjacent cases of event persistence? Consider two symmetric planets with qualitatively identical tornado-events.

Planet 1: There is a tornado that looks qualitatively identical to the tornado from Planet 2.

Planet 2: There is a tornado that looks qualitatively identical to the tornado from Planet 1.

At *t1* both tornados are whirring in their respective planet. At *t2* they instantly switch places and continue forward. Now we ask, is the tornado (or tornado-event) at Planet 1 at *t2*, which used to be in Planet 2, the same tornado (or tornado-event) as the one at Planet 1 at *t1*. I think intuitions point to the idea that they are not numerically identical. Appealing to previous causal dependence makes sense of this. The tornado in Planet 1 at *t2* is not causally connected with the tornado in Planet 1 at *t1*. The tornado that is at Planet 2 at *t2* is not causally connected with the tornado in Planet 2 at *t1*.

There is still a question, however, about whether we ought to limit the kinds of causal dependence that can be relevant for the persistence of a life (and therefore, an organism). A common formulation of the psychological account of persistence will say that psychological continuity consists in overlapping chains of causally connected mental states that are also caused *in the appropriate way*. Standardly, there are three ways to understand what it means to be caused in the

appropriate way—Parfit, for example, noted that we might think an appropriate cause can be *narrow*, *wide,* or the *widest*. The first demands that the mental state be caused in the "normal way". The second demands that the mental state be caused in a "reliable way". The third says that the mental state be caused in any way whatsoever.

What is the motivation for this further condition? Well—imagine a case:

> *The Clone:* Mr. Original steps into a machine that scans his body and creates an exact duplicate in another room, Mr. Clone.

To put the issue in terms amenable to the psychological reductionist: There is psychological continuity between Mr. Original and Mr. Clone. They have all the same memories, beliefs, character dispositions. But Mr. Original is not Mr. Clone. Hence, psychological continuity on its own is insufficient to secure identity over time. This issue can also be put in terms amenable to the position I am advocating, for there is also functional continuity between the biological activities of Mr. Original and the biological activities Mr. Clone. For example, what Mr. Clone is digesting depends on what Mr. Original was digesting, and what his respiration is like depends on what Mr. Original's respiration was like. Nonetheless, Mr. Clone is a clone, not Mr. Original. Again, this shows that functional continuity, on its own, is not enough to secure identity over time of an organism.

One way we might address this issue is to look at proposals given by the psychological account of appropriate continuity who solve similar problems and see if we can borrow their answers. There are two such proposals I'll consider. Neither of them, I think, are satisfactory.

The first proposal appeals to the idea of "normality" to constrain functional continuity.

> *Continuity by Normality* (C_N): *y*'s functioning at *t2* is appropriately intra-functionally or inter-functionally continuous with *x*'s functioning at *t1* iff (1) there is a chain of causally dependent instances of functioning between the functioning at *t1* and the functioning at *t2* (call each pair in this chain 'functionally connected') and (2) each instance of functioning is causally dependent on the previous instance of functioning in the "normal" way.

The second clause of C_N, "in the normal way", is meant to suggest that not just any form of causal dependence between functioning that is sufficient for continuity. This thought is borrowed from the Neo-Lockean proponents of psychological continuity. However, there is not much elaboration given by proponents of psychological continuity on what exactly "normal" denotes. The following example might give the reader a general sense: If I tell John at *t1* about my red soap bar stealing, he may believe I have stolen the red soap at *t2*. Furthermore, it may be true that if I believed I stole a blue soap bar instead, then I would have told John that the bar was blue instead of red, and so John would then believe something slightly different at *t2*. Then, there would be causal dependence between my belief at *t1* and John at *t2*. However, this dependence is not arrived at in the right way. It is somehow corrupted; "mediated through talk", no longer a normal dependence.

There are examples of the violation of the normality clause when it comes to biological functioning. Suppose, for example, that I am looking at a heart-rate monitor linked to my colleague's heart. He is one floor below me, investigating the presence of werewolves in a dark corridor. Suddenly, I see a spike in his heart-rate. This spikes my own heart rate. It is now true that there is functional connectedness between the beating of his heart and the beating of mine. But this causal dependence is not arrived at in the right way. It is corrupted; "mediated through machines", no longer a normal dependence. There is some sense in which we seem to be able to track this idea.

Still, the condition of normality is obscure and evades further specification. What really determines what it is to be causally related in a "normal" way, and why does it matter for identity? The matter has not been addressed. We know what is not—it is not *statistical normality*. For the matter of what is statistically normal is subject to contingency in a way that identity seems not to be. If the kinds of connections that happen in the cloning process were to become entirely widespread, then they could well become normal in a statistical sense, for instance. But the problem presented by the cloning example would remain. But so what else is it? Without a principled account of what "the

normal way" is, I fear we are engaging in nothing more than pragmatic obscurantism—muddying the waters with notions that carve up the world how we like, but whose content and relationship to personal identity are otherwise mysterious or intractable.

There is another way that we might consider formulating our concept of appropriate functional continuity, at least for the *intra-functional continuity* relation.

> *Continuity by Instrument-Identity* (C_I): *y*'s functioning ϕ at *t2* is appropriately intra-functionally continuous with *x*'s functioning at *t1* iff (1) there is a chain of causally dependent instances of functioning between the functioning at *t1* and the functioning at *t2* (call each pair in this chain 'functionally connected') and (2) the part of *x* that regulates each of these instances between ϕ at *t1* and ϕ at *t2* remains numerically identical.

My perceiving at *t1* is intra-functionally continuous in the appropriate way with my perceiving at *t2* if and only if there is a chain of functional connectedness in the perceiving, and the perceiving is regulated, in this case, by the same organic structure, *e.g.* my brain. Similarly, my digestion at *t1* stands in the appropriate causal continuity relation with my digestion at *t2* only if both are regulated by the same parts of the digestive system. Like the previous proposal C_N, C_I successfully excludes many inappropriate functionally connected candidates from counting for numerical identification. For example, the regulator of another's functioning is not the regulator of my own functioning. My brainstem is numerically distinct from another's brainstem, as is my cerebrum from their cerebrum, and my digestive tract from their digestive tract. Seeing my colleagues heart spike may well cause to spike. But my heart is not his heart, and so there is not appropriate functional continuity between his heart beating and mind, although there is causal dependence between them.

However, there are two problems with this proposal. First, C_I pushes the question of identity further back. It answers the question of organism persistence partially by appealing to the persistence of the parts of the organism that regulate its kind-characteristic functions. But this is not the end of the world—many account of personal identity appeal to part identity in some way.

Second, however, it is not clear how we would spell it out so that it makes sense of appropriate *inter-functional continuity*. In the case of *intra-functionally continuity,* the suggestion was to appeal to the stability of the identity of the organ responsible for the function. But by our definition, *inter-functional continuity* can hold between functions of different organs, as when my heart rate impacts my metabolism, or my desire for sweets impact my metabolism (assuming I then eat the sweets that I crave).

What should be done? In my view, we should pause and look again at what we have here been trying to do. We started with the lofty ambition of trying to explain organism persistence. We tried to fulfill this ambition by appealing to the idea of the continuity of biological life and we gave a causal account of the persistence of biological life. Then, we struggled to constrain our account of life persistence in an appropriate way so as to avoid counterexamples having to do with personal identity and persistence, such as those issues of cloning.

It is helpful, however, to keep in mind that our account treats a biological life as something that is distinct from an organism. Though the persistence of former is intimately tied to the persistence of the latter, they are not the same thing. There is a very sensible choice, then, to consider whether we ought to constrain the identity conditions for organisms rather than the identity conditions for biological life. We could restrict the former instead.

> **Restricted Organism Persistence:** An organism X at t1 persists as Y at t2 if and only if the biological activities of X at t1 participate in the same biological life as the biological activities of Y at t2, and the parts of Y that perform biological activities at t2 are sufficiently numerically identical to the parts of X that perform biological activities at t1.

We are here not worried about constraining the notion of functional continuity. Thereby we are not worried about constraining the persistence of biological life. What we have done instead is put a constraint on organism persistence. It is not sufficient for an organism to persist, to have its biological life continue. It must also be that the parts that constitute the organism remain sufficiently numerically identical over time. What will this mean for the cloning case? In short: we do not need

to deny that the biological functioning of Mr. Original is functionally continuous with the biological functioning of Mr. Clone in order to say that they are not numerically identical to one another. Mr. Clone does not have numerically identical parts to Mr. Original. Hence, they are distinct.

III. **The Museum of Human Organisms**

At this juncture, it will be helpful to revisit the question of the limits of organism persistence.

Suppose that you walk into a museum dedicated to the preservation and study of maimed organisms. There are a number of vats surrounding you. Each of them has what is presumed to be a organism, performing what is said to be biological functions. The first, for reference, houses a human animal that is not maimed. Your tour guide notes that it continues to digest food, believe propositions, and desires to form a friendship with the human animal in the next vat over. The second organism is also a human animal, except that it is missing a finger. The tour guide gleefully notes that the finger is being preserved in a vat in an adjacent room. This trend continues, and some dozens of vats later you come across what is called an organism, but which strikes you only as an arm hooked up to fancy looking machines that whirr and buzz. Close by is also a bare cerebrum in a vat, supported by other fancy looking machines that whirr and buzz.

You appear confused.

"Excuse me, I thought this was a museum dedicated to the study and preservation of maimed organisms. But this arm is surely not any organism at all!"

However, the tour guide assures you that the arm does continue to persist as the organism which it was pared down from. He cites a golden plaque on the wall, which has inscribed on it the very view defended in this project. He notes that the arm continues biological functioning it once did in the right causal way. Specifically, t continues to perform tissue repair and it continues to perspire when warm. He notes, furthermore, that if you believe the bare cerebrum persists as an organism, surely you must think the arm does as well. What is the difference?

You wonder whether he has lost his marbles. He offers you a form entitled "Petition to Exclude a Specimen from the Archive". It asks for justification. What reasons do you cite?

In the first chapter, we considered replies to the idea that we could persist as a pared down kidney. Could similar reasons apply here? One attractive reply for denying that we could persist as a kidney was by denying that the kidney, in the absence of the human organism it was once part of, performs biological functions at all. This reply was predicated on the idea that the kidney did not, in isolation, perform functions that aimed for its own preservation and good, and perhaps it is only those functions with those aims that are biological functions. If that is right and the kidney does not perform biological functions, then it is not an organism. If it is not an organism, we cannot persist as the kidney, since we are essentially organisms.

The detached arm, however, is quite different. It perspires to cool itself down and it regenerates its own tissue when it is damaged. It is much less clear why it should not eligible to be an organism—and therefore, it is also less clear why we cannot persist as the pared down arm after all.

There are other replies that one can make. You could, for example, appeal to the threshold degree of its biological functioning. I think we collectively are much more willing to say that organic entities exhibiting conscious mental activity are alive than we are to say that entities that are only able to repair muscle tissue are alive, and one reason for this might be that we think the activities of the mind are more complex and numerous than the activities of tissue repair.[42] Perhaps the fact that the arm continues appropriate tissue repair functioning counts in favor of it being considered alive. But that continuation is not enough; the arm doesn't meet the threshold for being alive.[43]

That's one response. But I don't believe it is right. Looking at the vast array of organisms in the world, I see many that are incredibly simple—just as simple, if not simpler, than the pared down

[42] Consider everything the mind does: thinking, believing, imagining, perceiving, wishing, desiring, feeling, and more.
[43] Madden invokes this form of defense seriously (Madden, Rory. "Human Persistence", p. 7). For my part, I register that this may be a stubborn issue for BTA, given its permissiveness, and that more consideration should be paid to it.

arm is. I am therefore willing to say that the pared down arm can, on its own, have a biological life and therefore count as an organism. If it really does have the intrinsic power to maintain its structure through activities like tissue-repair—and it exercises such powers—then I think it should be treated as any other simple organism in the world. It strikes me as similar to a kind of plant or cactus.

But does it persist as the organism that it once was? There were replies we considered previously in the first chapter that may well have application here. Perhaps the arm does not have enough inter-functional continuity, or enough threshold functioning, of the previous organism.

Perhaps, instead, we ought to bite the bullet and say that the arm can be a persistent of the organism it once was attached to. We could motivate the claim, as we did previously, by noting that biological life may not need much activity to continue in order to persist. Here we could again make analogies to the fact that the continuation of other events like musical performance do not depend on a lot of continued activity. Alternatively, we might contend, as some philosophers do, that existence is vague in a deep metaphysical sense.[44] According to this thesis, existence comes in a matter of degrees. There are certainly edge cases for persistence that might motivate such a thesis. It would not be the wildest thing to suppose that the arm persists to a small degree. As it is pared down, it exists less and less—and now, as an arm, it barely exists at all relative to how much it existed prior.

You continue the tour. You walk into a room and see a mechanical cerebrum. The tour guide notes that this organism was maimed to its cerebrum, and then slowly, each piece of its cerebrum was replaced by a mechanical part. Eventually, over the course of sixteen years, the cerebrum became entirely mechanical. He insists that the mechanical cerebrum is functionally continuous with the previous human animal and performs a threshold degree of its life functions.

---

[44] See, for example: Hawley, Katherine. "Vagueness and Existence." (2002).

Here you again feel puzzled. You are skeptical that the mechanical cerebrum counts as a human animal. You ask for another exclusion form and receive it. What is your justification for not including the mechanical cerebrum as a persistent?

I would say that the bare cerebrum was already at the limits of what could plausibly be considered a living organism. In previously motivating the case, I suggested the cerebrum was hanging on by a thread, as an organism in virtue of the continuity of its biological functioning. The mechanical cerebrum, whatever it is, is surely less of a contender for being an organism than the organic cerebrum. It does not continue its functioning by way of its advanced cellular composition, and the claim that it continues an actual mental life, like the bare cerebrum does, is controversial. Although it may behave like the organic cerebrum, it is contentious to say it is really performing all of the same activities. Even if it thinks, does it feel emotion, recall memories, believe propositions, and perform other psychological functions? This will all plausibly rely on a substantive about the philosophy of mind.

IV. Complications and Further Questions

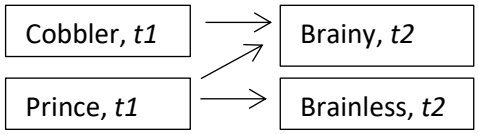
Endorsing my account of organism persistence raises other questions that demand our attention. For example, the account makes fission cases more common than competing accounts of personal identity would. Consider the Olsonion version of the Prince and the Cobbler.

> There was once a prince called "Prince" and a cobbler named "Cobbler". One evening, Prince's cerebrum was cut out of his head and implanted into the head of Cobbler, whose own cerebrum had been removed and destroyed. Two human beings resulted: "Brainy" who has Cobblers body but Prince's cerebrum, and "Brainless", which has all of Prince's parts except for his missing cerebrum. [45]

In this case, my account seems to entail that Prince is Brainy, and also Brainless (in a permanent vegetative state). It also implies that Cobbler persists as Brainy. In both cases, there is functional continuity. Cobbler is functionally continuous with Brainy. Prince is functionally continuous with Brainy and Brainless. Moreover, Prince's cerebrum is identical to Brainy's cerebrum and Prince's body

[45] Olson, Eric. *The Human Animal* p. 42-43.

is identical to the body of Brainless and Cobbler's body is identical to Brainy's body. Hence, it appears that Cobbler is Brainy and Prince is Brainy and Brainless.



This cannot be. By the transitivity of identity, we have the conclusion that, since Cobbler is Brainy, and Brainy is Prince, and Prince is Brainless, it must also be that Cobbler is Prince, and Cobbler is Brainless. That seems ludicrous.[46] What do we do? Many proposals to deal with fission have been put forward.[47] I will use the space here to discuss only proposals that I do not think work.

A first strategy would be to invoke a non-branching condition (a uniqueness clause). My account could be revised to say that something persists at *t2* as the organism at *t1* if and only that something's biological functioning *uniquely* continuous with the organism at *t1*. In case this clause is not met, there is no persistence of the human animal whatsoever.

I do not find this plausible. First, I do not see how uniqueness matters for survival for any reason besides it having the convenient result that it solves fission cases. Moreover, it entails dismissing that persistence is intrinsic in nature, a constraint on identity that is independently plausible. Other philosophers, such as Bernard Williams, have defended the idea that the identity of a being cannot depend on the existence or non-existence of a different being. [48] But the uniqueness clause makes it so, in order to know whether *y* persists as *x*, you have to know exists in the world besides *y*.

---

[46] This complication raises further issues about ethical questions including moral responsibility, as well as the attribution of action. For an interesting discussion of action attribution and the relation of responsibility to reductive accounts of personal identity, see: Shoemaker, David. 2015, "Ecumenical Attributability," in Randolph Clarke, Michael McKenna, and Angela Smith (eds.), *The Nature of Moral Responsibility*, Oxford: Oxford University Press, pp. 115–140. Also: Shoemaker, David. 2016, "The Stony Metaphysical Heart of Animalism," in Blatti and Snowdon (2016), p 303–327.

[47] See: Lewis, David, 1976, "Survival and Identity," in *Rorty* (1976), pp. 17–40. Sider, Theodore, 2001a, *Four-Dimensionalism*, Oxford: Oxford University Press. Noonan, Harold, 1989, *Personal Identity,* London: Routledge.

[48] See: Williams, Bernard. "The Self and the Future"; Nozick, Robert. *Philosophical Explanations*, p. 44-45.

General complaints against uniqueness aside, even if we allow for extrinsicality in identity, I think we should not endorse a uniqueness clause in this case. The strategy in question solves fission only at the expense of the transplant intuition. We wanted an account of organism that entailed Prince continues as Brainy. But now, assuming a uniqueness clause, it seems as though Prince does not survive at all! For there are two functionally continuous descendants of Prince—Brainless *and* Brainy.

Another solution to fission is to claim that fission cases are asymmetric in the right way so as to allow for Prince to continue as Brainy. Rory Madden has such an account. He invokes a dominance condition that can be stated as follows:

> *Dominance condition*: In order to persist as *x*, you must have the most kind-characteristic function continuity with *x* out of all eligible continuants of *x*.[49]

Madden claims that the cerebrum performs more of the characteristic functions of the human animal than the rest of the animal. That means that (1) Prince is not Brainless, (2) Cobbler is not Brainy, (3) Prince is Brainy. Although Brainless continues Prince-functioning, he does not continue *more* Prince-functioning than Brainy does. Similarly, although Brainy continues Cobbler-functioning, he does not continue *more* of this kind of functioning than it continues Prince functioning.[50]

Unfortunately, this account also relies on assumptions about the extrinsicality of identity. Those who are on the fence about accepting extrinsicality for matters of identity should consider that Madden's account faces serious counterexamples. Consider the following two cases:

> *Sudden Destruction*: *x*'s cerebrum is destroyed at *t1*, leaving a being in a vegetative state.

> *Delayed Destruction: x*'s cerebrum is removed at *t1*, leaving behind a being in a vegetative state. A few seconds later, at *t2*, the cerebrum is destroyed.

---

[49] Madden, Rory. "Human Persistence", p. 15.

[50] Alternatively, can we give a *hierarchized* account of human animal kind-characteristic activity which can privilege cognitive functions over non-cognitive vital functions? Importantly, unlike Madden, such an account would not rely on *counting* the functions to determine which way one would survive in fission cases. It would instead appeal to the idea that cognitive functions are more characteristic of our kind than other functions, and so matters *more* for our persistence. Peter van Inwagen seems to gesture at a view like this [See: *Material Beings* (1990)]. Even if such a hierarchized proposal was successful, however, it would not solve fission adequately. It would face similar issues pointed out for Madden's account, which have to do with extrinsicality.

The only difference between these cases is whether the cerebrum is removed shortly prior to its destruction. That doesn't seem to be something that matters for our persistence. But Madden's proposal implies that we survive in the first case but not the second. In the second case, at *t1* we persist only as the cerebrum, since it continues more functioning than the rest of the body. But then the cerebrum is destroyed at *t2*, and with it, we also cease to persist. That seems puzzling.[51]

Another objection to Madden is that his proposal makes persistence in transplant cases contingent on an under-motivated claim about the number of functions of the cerebrum.[52] Resting the claim that we persist by way of our cerebrum on the thesis that the cerebrum performs a greater quantity of life functions than the rest of the animal invites contingency that is at odds with the strength of the transplant intuition. Tomorrow we might find out that there are *n*+ more processes that go into our digestion and metabolism. Suppose that is so. Then, on Madden's proposal, Prince is not Brainy. Prince is Brainless. But that doesn't seem right. The basis for the belief that Prince persists as Brainy comes from the understanding that there is an intimate connection between psychological functioning and identity. Even if the metabolic functions vastly outnumbered the psychological functions, proponents of the thesis would remain undeterred. The problem therefore remains.

Conclusion

I have here fleshed out a biological account of personal identity. I started by making a point about the relationship between biological life and the organism that has that life. I have then given an account of the persistence of biological life and the persistence of an organism. Lastly, I've considered

---

[51] Even Nozick noted that his account, similar in extrinsicality, struggles to answer this worry in a satisfactory way (Nozick, Robert. *Philosophical Explanations,* p. 59). It was suggested to me to consider mounting a defense by appeal to group membership. Consider a scenario where all officials in US government vanish. The nation, nonetheless, appears to persist. Contrast it with a second scenario, where the government flees to the moon. On the moon, they cancel the citizenship of the persons left behind on earth. The only citizens are those on the moon. Afterwards, they are also destroyed. The nation here then does not appear to persist. These two cases are roughly analogous to the immediate and delayed cerebrum destruction cases. But I am dubious about this analogy. A government is able to confer citizenship, but the cerebrum does not have a capacity to excise other parts of the animal from membership as part of the animal.

[52] Madden is himself transparent about the under-motivation of his claim (Madden, Rory. "Human Persistence", p. 17).

the limits of organism persistence given my account and I have tried to make headway on a number of issues that my account gives rise to. Although I have not answered all of the questions downstream of the account I have given, I believe that I have made progress.

Chapter 3: Partiality, Prudence, and the Extended Life

Imagine that you wake up one morning, make your coffee, and sit down to read the local paper. As you are reading, you glance at an article about a mugging that happened last night. The victim is in the ICU. How do you react? Reasonably, you may feel some degree of sympathy. You may hope that they recover quickly. But you may also soon forget about the incident. After all, a great deal of harm befalls innocent people every day. By the time we reach adulthood, we have heard countless stories no different from this one. We can recall details of very few of them.

Imagine, instead, that you recognize the victim in the paper. It is your close friend or family member. Your reaction would then be quite different. Perhaps your adrenaline would spike and your heart would feel as if has fallen into your stomach. You may feel an immediate urge to reach out to them and show them support. You may not cease to worry about the incident for quite a while.

None of this is surprising. It makes sense that you have a different reaction when your close friend or family member is harmed rather than a stranger. As it is said, our intimate relationships generate special reasons and standards. They make a difference to what we do, what we think we should do, and how we judge what others do.[53] We take these differences as normatively justified. Not only do we act as if we have special reasons to care about and help our friends and family members; we also think there is something right about our acting in this way, and that there is something wrong about failing to do so. We feel it would reflect poorly on our character to treat friends and family as if they were strangers and, likewise, we would judge another harshly if they treated their loved ones in this kind of way.

---

[53] Keller, Simon. *Partiality,* p. 12.

Call the relation that we stand in with our loved ones the relation of partiality. The relation of partiality has been taken to do at least two kinds of important work. The first is that standing in the relation can give you a reason for action.[54] If I am partial to my friend, and he asks me to give him a ride to the airport, I therefore have a reason to give him a ride to the airport. Second, standing in the relation can *tilt* the normative scales in situations where you must choose how to allocate benefits and harms. If you are partial to *x*, but not partial to *y*, then if *x* and *y* both require help, then, all else equal, you may well be permitted to help *x* over *y* or you may well even be obligated to help *x* over *y*.[55] It is normatively transformative.

The context one is in can determine the exact normative landscape associated with partiality. In one context, standing in the relation of partiality makes it permissible to be tilted towards *x*, but not obligatory to be tilted towards them. If I work at a cholate store and my manager gives me a choice about whether to give a chocolate treat to my friend or a stranger that I recently saw donate twenty dollars to a charity situated outside, it may make sense for me to prefer to give my friend the chocolate treat, but it is not in any sense demanded of me to do so, and nobody would blame me for giving it to the stranger instead. But partiality may instead make it permissible *and* obligatory to be tilted towards another. If there is a choice to be made between saving the life of your spouse, or saving a stranger's, then, assuming you are not subscribed to a very stringent and impartial view of ethics, it is not only permissible, but obligatory to save your spouse.

I am presently interested in two questions about partiality. First, I am interested in the question about the sources of partiality. Why do certain relationships give rise to that relation and

---

[54] Many might think that reasons for acting are properties of, or facts about, actions that count in their favor. (Raz, J. 1975. *Practical Reason and Norms*. P. 186; Scanlon, T. M. 1998. *What We Owe to Each Other*, p. 17; Parfit, Derek. 2011. *On What Matters*. S. 1.31). I don't think I need to take a stand for current purposes.

[55] It is tempting to think that the former feature of partiality is what explains the latter. The latter thesis about tilting is grounded in the fact that you have more reason to help x over y. I don't take a stand in this paper.

others do not? What is it about standing in the relation that family members do, or spouses do, or friends do, such that it grounds having special reason to care about their interests?

I think this matter is complicated because there are many answers to the question that hold merit. If we understand 'being partial' to another just as having a reason to be tilted and to act in accord with their interests, then partiality may well also come to us through other means, such as contractual or promissory considerations. I agree to be your husband and thereby, I accept that I will treat you with care and save you if you are drowning in a lake. The closest knights of a king take an oath to be partial to the king—to promote and be tilted towards him and his interests. Sometimes, these kinds of examples are vocally or linguistically codified. Other times, they are not. Sometimes, presumably, the obligations are grounded in the various personal and societal factors we embedded in. Those who consent to having a child may then have reason to care for and promote its interests regardless of any speech acts they make or any explicit vow to do so.

These are persuasive sources of the relation of partiality. But in this chapter, I set them aside. I am interested in advocating for the existence of another source of partiality—a source to add to the others—one that broadly occurs across all of our intimate relationships, and which does not stem from any contractual or promissory duty. Specifically, I motivate the claim that being biologically connected or continuous with another organism, in the way that I have previously spelled out, generates a relation of partiality to that organism.

Secondary to this, I am interested in the relationship between partiality and egoism, understood plainly as the thesis that you have reason to do only what is in your own interest. It may appear, at first glance, that egoism cannot take seriously enough the concept of partiality. Egoism says that we ought to care about only our own interest. Partiality is classically taken to be other-regarding. But this tension can be eased—at least to a degree—given a certain metaphysics about biological life. Although I do not defend egoism on its whole, I do propose that recognizing the

relevance of biological connectedness and continuity for grounding partiality makes egoism extensionally more accommodating to the needs, hopes, aspirations, and well-being of others. It clarifies the extensional consequences of that kind of ethical theory.

I. From Personal Identity to Partiality

To start, what is it about our intimate relationships such that they generate the relation of being partial? There ought to be answers, for we can stand in many kinds of relations with other people, but it is only in a subset of these relations that we seem to also stand in the relation of partiality. We do not take ourselves to be partial to others (or at the least, we do not take such partiality to be justified) on the basis of their having the same blood type as us, or standing three rows behind us on the bus, or having the same colored hat. But we do take ourselves to be partial (and take our being partial as justified) when we love someone, or have them as family, or as close friends. We have explored in the preceding paragraphs a number of features which may carve away those of the first category—those superfluous relations—with those of the second category—the ones which really seem to matter. Here, I propose yet another answer—but one that appeals to personal identity.

Functional Partiality — A rational organism, *x*, is partial towards an organism, *y,* if *x*'s biological activities are non-negatively functionally connected to, or continuous with, *y*'s activities.

There are three things that I would like to emphasize. First, not all organisms have the reasons associated with partiality. Plants do not have reasons associated with partiality. To be partial involves having certain mental capacities—the kinds of capacities I take most of us have as rational beings. Second, my thesis leaves room for there being many other ways that organisms can come to be partial to one another. In my view, *one* of these ways involves being functionally connected and continuous with another organism. But again, that need not mean that this is the *only* way. As we have seen, there are many other sources—especially those involving contractual or promissory duty.

Third, functional connectedness and continuity must not be negatively valanced if it is to ground partiality. As Niko Kolodny notes, negative relationships do not give rise to these kinds of reasons:

> "Internally negative relationships, such as those between master and slave, or enemy and enemy, are shared histories of encounters in which one relative wrongs the other relative… Internally negative relationships don't provide reason for partiality."[56]

In this paper, I will take negatively valenced instances of functional connectedness to be those relations of which the relata *a* that is the cause of the relata *b* detracts from the goodness of the life that relata *b* is part. It is reasonable, for example, to say that we ought to take measures to protect and preserve our life, and take measures to distance ourselves from those who negatively impact our life. Consider a snake that bites me. I may well have functional connectedness to this snake. But I do not thereby have extra or special reason to advance its interests further than I did before the connection by way of the bite. The connection my biological activities have to its own are negative.[57]

A reader might worry that this condition is too off-the-cuff. But once the reader has a clearer sense of the overall picture of my account, I think this worry will be obviated. As I will detail later, I think that the ultimate end we are each looking for is a good biological life. It makes a lot of sense that we not have reasons to advance the interests of those organisms whose own biological events are detracting from our having a good biological life. In many ways, this account of the inclusion of such a criterion strikes me as less mysterious than other accounts in the vicinity. Kolodny's account is, for instance, predicated on the idea of shared histories of encounter (while mine is on biological connectedness and continuity). Kolodny notes that some histories of encounter are negative and therefore acting in the interest of those who stand in such a relationship with you would not *resonate* with those encounters. But the idea of resonance is itself strikingly mysterious.

---

[56] Kolodny, Niko. "Which Relationships Justify Partiality?" p. 54.

[57] Why have I said that the partiality afforded through biological connectedness is supposed to be non-negatively valenced rather than positively valenced? This will become clearer later on, as I will argue that prudential concern is a form of the concern of partiality. But having prudential concern does not depend on there being positively valenced connections between you and your future self. How could there be? Your future self does not benefit your past self. It is enough, then, that your future self be functionally connected in a non-negative way.

My own account has an Aristotelian flavor to it. Aristotle believed that there was a kinship between the relation we have to ourselves and the relation that we have to loved ones. He writes:

> For it is said that we must love most the friend who is most a friend; and one person is most a friend to another if he wishes goods to the other for the other's own sake, even if no one will know about it. But these are features most of all of one's relation to oneself; and so too are all the other defining features of a friend, since we have said that all of the features of friendship extend from oneself to others.[58]

And he furthermore writes that:

> The excellent person is related to his friend in the same way as he is related to himself, since a friend is another self; and therefore, just as his own being is choiceworthy for him, the friend's being is choiceworthy for him in the same or a similar way.[59]

Functional Partiality takes the idea of *other-selves* seriously. It says, broadly, that we really do stand in the same relation to friends as we do to ourselves, and that we should treat friends and others who are intimately connected to us as we treat ourselves.

I will provide two arguments in support of my position. The first is made from the basis of a transplant case.

> *Transplant* Half of Mr. Original's brain is taken out of his body and put into a robot, Cyborgo. The other half is destroyed.[60]

Many take it to be true that Mr. Original ought to care about the interests of Cyborgo in *Transplant*.[61] If Mr. Original can take efforts to benefit Cyborgo at no other expense, then he ought to do so. Pressed for a reason, the defender of this common view will say that this is because Mr. Original stands in the same relation to Cyborgo as one stands in relation to their future self. The exact relation you pick out will depend on what you believe about personal identity and persistence. I believe that the relevant theory is a biological one. The relation of interest is therefore the relation of

---

[58] Aristole. *Nicomachean Ethics*. 1168b2-6
[59] *Ibid,* 1170b6-9
[60] In chapter one, we noted that paring an organism down to a cerebrum is sufficient to permit to persist, *as* an organism. I take the same to be true here. The half of Mr. Original that is put into Cyborgo survives as an organism.
[61] See: Derek. *Reasons and Persons,* p. 261 – 266., Brink, Rational Egoism and the Separateness of Persons, p. 124 – 125. Johansson, Jens. 2010. "Parfit on Fission," *Philosophical Studies*, 150: 21–35.

functional connectedness and continuity between biological activities. But if that is the explanation of why Mr. Original ought to care about Cyborgo, then, presumably, Mr. Original ought to care about the interests of any organism he stands in a functional connectedness or continuity relation with. For example, Mr. Original should care about his descendants in a fission case.

> *Fission* Half of Mr. Original's brain is taken out of his body and put into a robot, Cybergo, and the other half is taken out of his body and put into another robot, Cyberga.

Mr. Original stands in the same relation to Cybergo/Cyberga he does Cyborgo in *Transplant*. This is so, even though Mr. Original is not identical to Cybergo/Cyberga. As has been said many times in personal identity literature, there is no discernible difference between beings like this to justify identity being preserved in only one of their cases specifically. Furthermore, believing Mr. Original is identical to both makes for conceptual trouble. Not only is the idea that identity can be one-many hard to swallow, but Mr. Original being identical to Cybergo and Cyberga means, by transitivity, that Cybergo is Cyberga.

The argument I am making goes as follows:

1. Mr. Original, a rational organism, is partial to Cyborgo in *Transplant*.
2. The grounds of (1) is that the biological activities of Mr. Original are non-negatively functionally connected to or continuous with the biological activities of Cyborgo.

Therefore: Any rational organism, *x*, is partial to another organism, *y,* if *x*'s biological activities are non-negatively functionally connected to, or continuous with, *y*'s activities.

Here I rely on the implicit thought that if *x* grounds *y,* then, generally speaking, anytime *x* holds, *y* holds too. If something is scarlet, it is red, and the latter fact is grounded in the former. Anytime something is scarlet, then, it is red. Similarly, I say, if the grounds of why Mr. Original is partial to Cyborgo is the relation of functional connectedness and continuity, then partiality will be found in other cases where there is also functional connectedness or continuity between organisms.

There are a few things to say here. First, it may be objected that I should have characterized Mr. Original's reason of concern as one of prudence instead partiality. The objector may also say that prudence is fundamentally different in kind than partiality. If so, moving from one to the other appears rather unpersuasive. I agree that Mr. Original has prudential concern for Cyborgo in *Transplant*. But I deny this should be understood as fundamentally different than partiality. There is a striking similarity between the two notions. What does partiality entail? Plainly, it entails that you have a reason to be biased towards something in particular; to be concerned for its welfare in particular. What does prudence entail? It entails that you have a reason to be biased towards something in particular (yourself); to be concerned for its welfare (your welfare). The latter relation does not entail a different *kind* of reason to the former. If anything, having a prudential reason means having a reason of partiality—one that is directed at yourself.

A response to my suggestion about the similarity of partiality and prudence appeals to a difference-maker between reasons of *morality* and reasons of prudence. If you cut your finger, that is a reason for me to put a band-aid on it. If I cut my finger, that's also a reason for me to put a band-aid on it. But the former is a reason of morality, the latter is of prudence. This, the objector says, is because we have identity in one case and not in the other. If identity is enough of a difference-maker to make for treating moral reasons differently than prudential reasons, then it is not good motivation for my view to say that prudence and partiality are of the same ilk because the only difference between them is identity. That sort of difference could well be sufficient to draw the line.

I don't think this objection is persuasive. First, because I don't think it is true that reasons of morality need to be other-regarding, and so I don't think that identity is the relevant difference maker between cases of morality and prudence. A number of philosophers believe there are such

things as self-regarding duties.[62] There may also be moral reasons that do not point to anyone at all, such as moral reasons not to destroy things that are beautiful or to destroy natural environments:[63] Second, it seems prudence and morality seem relevantly different than prudence and partiality. Prudence and partiality have more kinship than partiality and morality and so there is more reason to think of them similarly. Consider that both are often taken to be at odds with morality.

We can further emphasize and garner support for the thesis that the reasons given by way of prudence just are forms of reasons given by partiality by referring to our standard account of partiality from the beginning of the chapter. There we said that being partial does at least two things.

> First, it gives you a reason for action. If I am partial to my friend, and he asks me to give him a ride to the airport, I therefore have a reason to give him a ride to the airport. Second, it provides reasons which can *tilt* the normative scales in situations where you must choose how to allocate assistance or a benefit. If you are partial to *x*, but not partial to *y*, then if *x* and *y* both require help, then, all else equal, you may well be permitted to help *x* over *y,*or you may well even be obligated to help *x* over *y*.

If we pay close attention, though, we see that prudence accomplish the exact same thing. It gives you reason to act—if I have prudential concern, and I need a ride to the airport, I have reason to give myself a ride to the airport. It also gives you a degree of tilt. In other words, prudence gives you reason to care about your own interest over a stranger, all else equal, and makes it permissible in many instances to prefer your own interests over a stranger as well.

The heart of my overall thesis is that the grounds of prudential concern is also one of the grounds of other-regarding partiality. What makes it true that an organism has a reason of prudence (a reason of partiality to themselves) is the same as what can make it true that an organism has a reason of partiality to other organisms; namely—that there is biological functional connectedness and continuity between them. There can, as a matter of fact, be biological continuity and

---

[62] See: Kant, I. 2002. *Groundwork of the Metaphysics of Morals*, trans. and ed. T. E. Hill and A. Zweig. Oxford: Oxford University Press. Hills, A. 2003. "Duties and Duties to the Self." *American Philosophical Quarterly* 40: 131–42.
[63] Baier, K. 1991. "Egoism." In P. Singer (ed.), *A Companion to Ethics*. P. 201-3

connectedness between distinct organisms. The state of my respiration might influence yours. Imagine, for example, that I stop breathing. When you notice, might your own breathing quicken? When these connections obtain between identical organisms, they generate the prudential concern. But the relation that undergirds prudence can also obtain between distinct organisms.

Objections may be made towards the second premise. Its support depends on the idea that no other alternative feature of the case grounds the feeling of concern that Mr. Original has, and ought to have, for Cyborgo. Psychological reductionists, who believe that personal identity and persistence can be reduced to a matter of the mind, will point to psychological connectedness and continuity as an alternative. David Brink, one such reductionist, even contends, as I do, that the fact that there can be psychological connectedness and continuity existing interpersonally that can account for the source of partiality. He has a position that parallels my own:

> I have reason to regard my (best) friends and family members as other-selves of mine, because they bear approximately the same relationship to me as my future self does to me, and this fact provides me with reason to care about them for their own sakes in much the same way that I have reason to care about my future self…[64]

In order to evaluate the standing of Brink's account, it is best to be particular about what the view is. Brink understands psychological connectedness and continuity in the following way:

> …A particular person consists of a series of psychologically continuous person stages. A series of person stages is psychologically continuous just in case contiguous members in this series are psychologically well connected. And a pair of person stages is psychologically connected just in case (a) they are psychologically similar in terms of such states as beliefs, desires, and intentions and (b) the psychological features of the later stage are causally dependent upon the earlier stage.[65]

Brink takes this understanding of psychological connectedness and continuity and uses it to give an account of partiality. According to Brink, the stronger and more numerous one's psychological connections are to another person, the stronger their reasons for being partial to them. I am only

---

[64] Brink, David. "Rational Egoism, Self, and Others," in Identity, Character, and Morality, p 350
[65] *Ibid,* p. 351

weakly psychologically connected to an acquaintance. I share only some things in common with them. My spouse, on the other hand, is deeply psychologically connected and continuous with me. We share many mental states between one another and many of these come from our causal interactions. According to Brink, these relations of psychological connectedness and continuity exhaustively explain how we come to be partial.

I do not support the Brinkian proposal about the grounds of partiality. There are at least four reasons to deny it. Starting with the one the reader will find the least surprising, I believe that we ought to deny the kind of psychological reductionism that Brink relies on. Apart from the arguments that Animalists give against it, I believe that the heart of the theory of psychological reductionism can be captured on my competing biological view. My account allows for the activities of the organic brain to count as kinds of biological events that help constitute biological life, and therefore matter for our persistence and identity. As we have seen, accepting my view gives one an attractive intermediary between biological reductionism and psychological reductionism. It allows us to keep our place as biological entities (organisms) and it also solves remnant persons issues.

But broader complaints about psychological reductionism aside, Brink's account runs into other problems. For one, the claim that psychological connectedness and continuity explain all instances partiality seems rather surprising. Looking at the world around me, it strikes me that there are a great many relations of partiality that cannot be captured by appealing to psychological continuity. There are a multitude of cases where, despite one's being partial to another, there is no psychological continuity or connectedness to be had between them. These relations of partiality are sometimes familial. For example, siblings that have never interacted with one another may still take themselves as having reasons to care about the other. Suppose that you discovered tomorrow that your previously unknown brother or sister's city is being heavily shelled. You have the ability to help them escape the conflict. Or, you could help a stranger escape instead. It is not unreasonable to feel

reason to prefer the former to the latter. You may well believe you have a reason to be partial to your sibling. But there is no psychological connectedness or continuity to explain it. You have never met your sibling; you only recently learned that they exist.

Of course, my own account will not fare much better in explaining this case. Your sibling's biological functions need not be functionally connected or continuous with you. But whereas Brink's claim is that all of partiality is explicable by psychological connectedness and continuity, my claim is only that at least one way that partiality is explicable is by way biological connectedness and continuity. Brink should restrict his own account in a similar fashion.

In another example, consider a daughter that loses much of her mental functioning so as to no longer be considered psychologically connected or continuous with her father. Yet, the father feels that they have reason to take care of her. The erasure of psychological connectedness and continuity does not entail the erasure of partiality. Brink's account cannot account for this, especially given its insistence of being the solitary source of partiality.

These counterexamples need not be familial, nor do they need to involve human organisms. For example, I am partial towards many non-human organisms that do not have much of a mental life at all. I care about my orchid's interests over the interests of the common shrub across the street. On the face of it, there is little reason to suppose this is not a genuine instance of partiality. Reasons of partiality are taken to be reasons having to do with the protection and advancement of the interests of another thing.[66] Many things do not have interests. Rocks do not have interests. But this is not so for organisms. My orchid has interests, and there are ways for me to advance and protect those interests. I feel a strong obligation to do so. This cannot be explained by appeal to psychological connectedness and continuity. Plants have no such features.

---

[66] For a good overview of accounts of partiality, see: Jeske, Diane, 2008a. *Rationality and Moral Theory: How Intimacy Generates Reasons*, New York: Routledge Publishing; Keller, Simon 2013. *Partiality*. Princeton University Press; 1998. "Families, Friends, and Special Obligations," Canadian Journal of Philosophy, 28: 527–556.

An objector may say that, since there are many plants I am weakly biologically connected to and which I do not have special obligations to help flourish, such as the weeds in my garden, biological connectedness or continuity cannot be the explainer of my special obligations to my houseplants, such as my orchid. My response is first to flag that we should reimagine the example, as weeds introduce a complication insofar as they often detract from the health of the other plants around them, thereby making for an issue of valence. But there are plenty of non-weeds that can make the point the objector is trying to make. Walking down the street, I become weakly biologically connected with many plants. But I do not therefore take measures to care for them. Hence, the objector says that the right explanation for why I care for plants is not biological connectedness.

I don't think the fact that there are many other plants that I am weakly biologically connected to, but which I do not aide, is a good reason to believe biological connectedness and continuity do not matter for giving you a reason to aide them. First of all, my connections to the stranger plants in question are very weak and fleeting. There is no reason to suppose that they would be strong enough to move me to action all things considered, given the limited resources I have. If helping every plant in the world did not expend me as it would, then perhaps well I should help them. Who wouldn't want to see the life around them flourish? But I don't think my account says you must. But my connections to my own houseplants are much stronger. I am much more connected to them, and therefore have much reasons to care about them.[67] And even beyond my own houseplants, I certainly have much more reason to care about the plants in my community yard I walk by every day than I do a random shrub I come across once or twice. If you were to walk by a wilting bush every day on your commute to work, would you not feel inclined, a little, to help?

[67] I do admit that my care for my houseplants is likely overdetermined. There are likely contractual reasons to care for my houseplants—i.e. that I have voluntarily assented to nurturing them by buying them from the houseplant store. But we can point to other examples that carve this feature away—such as cases of community shrubs or neighbor squirrels.

Doesn't my view say, though, that I stand in the relation of partiality even if I never notice the wilting bush? Can there be other ways I could come to be connected to it, and if so, doesn't it seem false that I would then have reason to help it? I think that the key here is to be clear that although my view says I have reason (in an objective sense) to aid the plant in such a case, it does not mean that I have a reason (in a subjective sense). A rattle-snake that has been defanged may not give me reason, in the objective sense, to avoid it. There is no danger. But if I am not aware of this fact, then I may well have reason, in the subjective sense, to avoid it. Likewise, I may fail to have reason to aid a wilting bush in this latter sense if I do not recognize that it is there and wilting.

It is reasonable to ask in any of these cases whether we really have stand in the partiality relation to the thing in question. We should not outright refuse to revise to our normative practices. An objector could try to bite the bullet in each of these cases. They could deny that we have reason to care about unknown siblings from distant lands or friends and family that suffer traumatic brain injuries, or organisms which do not have and have never had psychological functioning. But with each denial of an otherwise reasonable thought, the proposal on offer becomes less palatable. And there is a line to be drawn, I think, when we are asked to give up a great deal too many intuitions about cases we otherwise feel strongly about. I am afraid that Brink's proposal crosses that line.

My account fares better than Brink's in a number of ways. First, it looks extensionally quite different, in that it is far more inclusive. Having the events of your mind functionally continuous with the events of another's mind is one way to come to be partial. But so too will you come to be partial when there are causal connections between other biological functions. I can explain partiality for organisms that have lost their mental life or have no mental life whatsoever. Though a daughter may find themselves in a vegetative state, there are still many biological connections between her and her caregivers and parents. And though my orchid is not a thing that has mental activities, its biological functioning is causally linked to my own. I water it, I move it to the windowsill to get

more sun, and so on. So too, do some things about the orchid influence what happens biologically to me. If it is not doing so well, I will be stressed out. If it is doing well, I will be joyous. The state of the plant influences the state of my biological system. To be clear, it is not the positive emotional state that does the work here. It is the causal relationship between biological activities of the plant and the biological activities of myself.[68]

It may be worried that I have here relied on many counterexamples to Brink's theory that are intuitively plausible to the reader. But does my own account face similar counterexamples? Here is one such case: You see two persons drowning in a pond. One of the persons previously interacted with you in a minimal way such as to create a weak functional connection—perhaps they bumped into you once, and then apologized. But you do not know either person. Still, doesn't the fact that you interacted in a minimal way with one of the persons and not the other ground your preferring to save them on my account? That seems implausible. Hence, we have a counterexample.

I do not believe this is a plausible counterexample. Although I am happy to accept the intuition that we do not have sufficient reason to be partial to the person that bumped into us, I do not think this means we ought to reject my account. I think it only shows that small partiality "sweeteners" (e.g. the bumping into someone) are insufficient to tilt the scales over serious matters.

If two persons are drowning, and I am given a hundred dollars if I save the person on the left and not the right, I do not therefore have sufficient reason to prefer the person on the left. Similarly, having a small degree of functional connectedness with the person on the left would not give me sufficient reason to prefer saving their life over the person on the right. It might be thought that in the former case, there are incommensurable values at play. But so too are the values

[68] We will discuss in subsequent pages the idea that my account may therefore struggle to show why we should not be partial to those we are related to in a negative way. The summary is that reasons of partiality given by prudential concern are pro tanto reasons. They can be outweighed by other considerations.

incommensurable in the latter case. Acting for small reasons of partiality does not reduce to the same kind of value that may come with saving a drowning organism.

A response may be given that we can tilt the strength of reasons of partiality. Consider a case where you have sat with someone on the same train car as you every day for ten years. You've never met them formally, though you recognize them. There, an objector may think that you have strong functional connectedness and continuity. Then, on my theory, you have a strong degree of partiality as well. But I do not think that you do have strong functional connectedness and continuity in this case. The connection is *regular,* but *regularity* does not mean strongly connected, especially when it is a connection is so trivial—it has basically no impact on the events of your biological system.

Relatedly, if we find ourselves in a situation where, in the left pond is a woman you just fell in love with and have known for only a week, and in the right is the guy from the train, my view need not say that you have more functional continuity with him than with her, nor does it say that you therefore *ought* to save the person on the bus over her. Later in this chapter, we will go over a few ways that you can come to be functionally connected to someone *strongly*. But for now, I will only say that the woman in question has plausibly much more connectedness to you than the man on the bus. The woman's connections to you are vaster and more concentrated, despite the connections being new. What she does, and has done, has had massive effects on you: your emotions, your imaginings, your doings, your heart rate, your breathing rate.

A third reason to discount Brink's proposal is that the strength of partiality is not plausibly regarded as proportional to the density of psychological connections. We can have weak psychological connections with those we have much of a reason to be partial to. Consider a case:

Drift You grew up with John and have been friends for decades. You have influenced each other greatly over those decades. However, you have recently drifted a great deal from him in terms of psychological similarity. You are patient. He is hot-headed and quick to anger. You have an optimistic world-view and a set of beliefs that correspond to them. He has a pessimistic

> world-view and a set of beliefs that correspond to it. You do not enjoy the same things. He loves J. R. R. Tolkien. You don't see what the fuss is about.[69]

Psychological reductionists suggest that psychological connectedness obtains between mental states that are similar. I take this to mean similar in content. For example, a memory of my jumping into a pool is related with a memory of my jumping into a pool, a belief that God is real is related with a belief that God is real, and so on. But in this example, we do not have relata with the same content. You and John are significantly different in psychological content. Still, I take it that many of us will feel that we should not treat our oldest friends as strangers just because they have changed in ways that deviate from how we, ourselves, presently are.

My account does not face this problem. It is not predicated on a notion of psychological similarity which requires the relata of connectedness and continuity to involve the same state with the same content. On my view, you and John are biologically connected despite your difference in psychological profile. How John behaves influences your biological functions, and how you behave influences his biological functions. Often, that may itself lead to a similarity in a kind of content. If you suggest to John that you both eat Chinese food, and you do, then your digestive state may have a similar sort of content as his. But that is not crucial nor does it matter. The mere fact that there is causal influence between your biological system and his biological system is sufficient to preserve the fact that you remain partial to John even given psychological divergence.

There is a fourth reason to discount Brink's theory. The fact that psychological connectedness and continuity underlie the psychological reductionist's conception of personal identity might not be sufficient to explain why that relation matters for partiality. When we ask why it matters for reasons of prudential concern that a continuant of ours at a later time be psychologically continuous with us, we may reply (supposing we buy into the psychological

---

[69] There is also an issue for Brink insofar as one can have strong connections but low degrees of partiality. See: Arneson, Richard J., 2003. "Consequentialism vs. Special-Ties Partiality," *The Monist*, 86: 382–401.

reductionist theory) that this continuity makes true that they are us. Perhaps when that is not the case, as in fission, we should not believe we ought be partial towards a continuant of ours.

This problem also has application for my own account, as it has us deny premise two of my argument on different grounds. For all we know, it may well be that our having reason to act in the interest of another crucially depends on whether they are us—not just that they are continuous or connected with us in the relevant way. It matters whether Mr. Cyborgo is Mr. Original.

I have a few things to say. The first is to point to and bolster arguments given by Parfit and Brink, who have found it persuasive to think that we should care about our fission products, though they have agreed identity is lost in the fission case. Parfit's insistence that psychological continuity or connectedness is all that matters comes from the understanding that in the transplant case, it is possible to persist with half the brain *and* retain those relations of care associated with survival between, e.g., Mr. Original and Cyborgo. In the fission case, identity is lost. Identity is one-one, and transitivity worries arise if we insist on identity. But, intrinsically, the relation between the fission products and their ancestor is the same as the relation between the transplant and its ancestor in the singular transplant case. Hence, we retain those relations of care that are associated with survival.[70]

It may be objected the identity is itself an intrinsic relation. So, if identity is lost in the fission case, then the fission products do not stand in the same relation to their ancestor as the transplant stands to its ancestor in the singular case. To clarify, there are many things we might mean when we use the term intrinsic. A popular proposal is Lewisian in spirit: namely, that a thing has its intrinsic properties in virtue of the way that thing itself, and nothing else, is.[71]

I have three things to say. The first is that we can give an alternative explanation for why we ought to care about our fission products that does not depend on anything about the intrinsic

---

[70] Parfit, *Reasons and Persons*, p. 261.
See also: Pollock, Henry "Parfit's Fission Dilemma: Why Relation R Doesn't Matter," p. 2
[71] Lewis, David, "Extrinsic Properties", p. 197.

relation between the fission products. I have motivated, in this chapter, the view that prudential reasons are, in fact, instances of reasons of partiality. Partiality gives you reason to act and be tilted towards another. Prudence does the same exact thing. It is just that in the case of prudence, you happen to be the receiver (you have a reason of partiality to yourself). Now, we might think personal identity is one-one. But nobody thinks that partiality is one-one. Even if identity is lost due to branching, that doesn't mean that partiality is thereby also lost. We are partial to many organisms—not just organisms that happen to be ourselves—the branching is no threat to this relation.

Another response, which holds on to the original explanation from Parfit, is to insist that the fission products do stand in the same intrinsic relation given the conjunction of a kind of physical reductionism (or physical supervenience) and the actual physical properties that are present in the fission case. The strain of reductionism or supervenience here says that all of the properties that there are in any given case concerning *x, y*, or *x and y* either are grounded in or supervene on physical properties. Accepting this and then looking at the physical properties present in fission cases like the one here considered, it is difficult to see how to motivate that:

> Cyborgo in Transplant is intrinsically related with Mr. Original;
> Neither Cyberga/Cybergo in Fission are intrinsically related to Mr. Original.

If Cyborgo in Transplant has intrinsic properties about him that differ from Cyberga/Cybergo in Fission, then given the relevant kind of supervenience or reductionism, we must able to point to a physical property that differs between them. But we can only find a difference with one of them and not the other. One of Cybergo/Cyberga has the same exact half of brain as Cyborgo, and so on.

Relatedly, we may be tempted to give up the claim that identity is an intrinsic property. A number of philosophers have done this. We have seen this in the previous chapter. They have said, in some way or another, that we have to "look out" into the world, beyond the thing in itself, in order to see if identity is preserved. I do not blame them for thinking this. They have made this move in the face of difficult questions concerning fission. Instead of accepting that fission products

are identical with their ancestor, they have endorsed a uniqueness clause in their account of persistence. Such a condition says that personal identity is not preserved if there is more than one instance of the relevant form of continuity (e.g. psychological continuity, biological continuity). This is a way of accepting extrinsic conditions on identity. I don't think one should go this way. As we have seen in the second chapter, extrinsic conditions on identity lead to devastating problems.

I have made some responses to the objection here. But I am not finished. It will be good to explain further and for reasons of a very different kind why it can matter for partiality that another organism is functionally connected or continuous with us even when they are not identical to us. In the next section, I'll put forth a second argument for Functional Partiality and spell out an answer to why should we care about our fission continuants if they are not us.

II. Argument from the Extended Life

Recall that on my metaphysics, biological connectedness and continuity are what individuate and explain the persistence of a kind of event—a biological life. 'Biological Life' is a natural kind term—it is not a technical term that I have stipulated. It is an event which we all care deeply about. When our grandmother dies, we are grieving the end of their biological life. When we worry about whether our friend is breathing when find them collapsed in our hallway, we are concerned with their biological life—we are concerned whether their organs are doing the right kind of work and will continue to do that work in synchronicity. When the organs cease doing what they are doing, we grieve. A certain performance has ended—an event is over—that event of life. We all therefore have some grasp of what a biological life is—and many of us structure our entire lives around trying to enhance and preserve it—to make the event as excellent and long-lasting as we can.

It is important to remember that an event's participation in a biological life comes in degrees. There will be times that judging the degree of participation that something has to a particular biological life will be difficult to do. But when we think in terms of degrees, the question of the

participation of a particular activity to a biological life is easier to digest. We ask ourselves to provide some answer to the question "How much is this activity part of this life?" For some examples, we know outright that the activity does not participate to a high degree in the life. We know that the movement of the meteor ten million light years away from earth has no real degree of participation in my biological life. For other examples, we know outright that the degree of participation is high. We know that the activities of my lungs are central to my biological life. For the rest of the examples—those in-between cases—we can ask contrastive questions to get a better of sense of the degree of participation of an activity in a biological life. We can ask: "Is the degree to which this activity participates in life *x* greater than the degree to which this other activity participates in life *x*?" and use the answers to these questions to infer just how much connection there is.

It may be objected that it is perplexing to think parthood admits of degrees. Though, for one, I'm not sure there is any commitment here about parthood coming in degrees. The previous point was about answering questions about the degree of participation in a life. I don't think the idea that there can be different degrees of participation in an event is the same kind of claim, nor is it perplexing. When we look at events like an orchestra performance, we may very well say that the events which compose it have lesser or greater degrees of participation in the overall performance. The lead violin section has greater participation in the performance than the electric triangle. Second, even if I am committed to the claim that the matter of *x*'s being part of a life comes in degrees, I believe this may not be particularly implausible. Someone may say that, in the case of physical objects, we do not accept such an idea. "My hand is part of my body and I do not say that the matter of how much my hand is part of my body comes in degrees." But this is at least an open question. We may consider a case where you compare your left hand to your right. Your right hand

is almost completely severed, but it is hanging on. Then, it may actually make sense to say: "The degree to which my left hand is part of my body is higher than the degree that the right hand is."[72]

According to my metaphysics, the fact that inter-organism connectedness and continuity are possible supports an extended life thesis. When there is functional connectedness between the biological activities of your body and the biological activities of the other organism's body, your biological life spills past your material body to include activities of the other's body. Although organism persistence is restricted to certain spatial regions, the persistence of a life is gradable and expansive. This may seem hard to believe. A first inclination is to say that biological lives are contained in one physically non-dislocated object. But on reflection, it's clear that this is not the case. Consider, first, a fantastical case concerning a headless horseman: a figure who carries its head with it wherever it goes. There are two objects: the head and the rest of the body. They are physically dislocated. Nonetheless, there is a robust communication between the activities of the two. Mysteriously, what the head thinks, and sees, and intends, controls the torso and rest of the bodily movements. What happens to the torso impacts the activities in the head. Do the two have separate lives? The answer, we are inclined to think, is no. They have one life.[73] Supposing that there are causal connections between the head and the torso, we do not treat them as having two. The degree of communication between the activities of the two and the causal connections between them are sufficient to ground that there is one unified biological life rather than a multitude. There can be things that participate in the same life but which are not physically connected, but rather, physically disjointed.

---

[72] I am told by those who know more about vagueness that one thing we might mean when we say that *y* is part of *x* to degree other than 0 or 1 is that it is vague that *y* is part of *x*. If that is what vagueness is, I am happy to go along. My claim, however, should be distinguished from one concerning epistemic certainty. I do not intend to say that it is vague *whether y* is part of *x* where that means that we cannot rightly tell whether *y* is or is not part of *x*.

[73] There are, of course, also many living cells present in this case. I am speaking loosely in a w. The claim is just that the head and torso do not themselves have separate lives. That is consistent with there being many cells present too.

Consider next, a case (still mystical) where you come upon a room where each organ of William Howard Taft is in its own disparate container. Yet, things continue to happen. The heart still beats. Electrical signals still run through the brain. Someone drops in a slice of bread into a stomach and it gurgles, begins to respond to it, and digest it. In this case, almost all of the constituent components that would make up a conventional human life are present, and upon inspection, we notice that the usual causal connections between them are largely intact as well. When we poke and prod the brain, the rest of the organs in the room respond. A sticky note besides the brain tells us that, if we harm Taft's brain, the heart may stop beating, and the stomach may stop digesting, and so on and so forth. "Don't Make Taffy of Taft," it says, in slogan form.

This is a peculiar thought, of course. But in our boundless imagination, we can conceive of it without too much difficulty, and I believe that we are inclined to think that there is a unified life present, for much the same reason as the previous case. Biological activities continue to happen. They continue to have a strong degree of functional connectedness between them. It does not matter whether they are in the same bag of skin or not in the same bag of skin. And if we are willing to concede that the fact that, e.g., the brains activities being functionally connected with the heart despite the physical dislocation, grounds the idea that the two organs participate in the same life, then so too do we have reason to believe that inter-organism functional connectedness between their biological activities would indicate that they also participate in a shared biological life as well.

The case of the headless horseman and our dear Taft are both fantastical, of course. It is not clear, in our world, how, for example, the head of the horseman would communicate with the torso without a physical connection. We might want to consider a different example that is less wild. Perhaps, a first thought is of a woman is hooked up to a dialysis machine that cleanses her blood. The machine is controlled through WIFI signals, by a chip implanted in the arterial system of the woman. When her blood is sufficiently diluted with toxins, the chip signals to the dialysis machine to

begin the purifying process. In this case, the dialysis machine is taking over the role of the kidneys in filtering the blood. It is therefore performing a biological function for the woman. But the dialysis machine is a separate object from the woman. Nonetheless, the events of the arterial system of the woman are causally connected to the dialysis machine, and vice versa. There is functional continuity. It is reasonable enough that her biological life includes to some degree the activities of dialysis.

It may be objected, however, that the machine is not an organic structure and therefore is not eligible to have its activities be part of a biological life. I agree with this constraint. We can respond by imagining a similar case, where the function of dialysis is not performed by a machine, but by another organism. Suppose, by scientific ingenuity, my brother's biological system is hooked up to my kidneys, and they can therefore cleanse his blood of impurities. Where, in this case, is the boundary of my brother's biological life? Is it plausible enough that they should include the functioning of *my* kidneys. After all, they would have included the functioning of *his* kidneys were they working properly. It would be rather arbitrary to say that my kidneys, which do everything his kidneys would have done for him, do not count as part of his life. If my brother's kidney were functioning, its activities which are functionally continuous or connected to the rest of his biological system would count as part of his biological life. If my kidneys are functioning, and the activities of my kidneys are functionally connected and continuous with the rest of my brother's biological system in the way that his kidneys would be if they were functioning, then they too should therefore be considered activities of brother's biological life. My kidneys do everything his kidneys would do.

Just as the brain communicates with the activities of the torso in the headless horseman case, or the arterial system communicates with the dialysis machine or my brother's kidneys, my brain communicates with yours, and yours with mine, when we interact with each other. In each case, there are causal connections of the same kind. We should allow that biological life is a rather inclusive event—it can include, to degrees, the activities of other organism's biological systems.

We can envision one further non-biological example concerning digital bodies. David Chalmers proposes we ought to consider virtual beings as real things.[74] Consider my virtual body in the Matrix. We can call this being 'Matrix-Me'. It is distinct from myself in the real world. It is constituted by digital information, and there is no reason to believe that digital information needs to be stored in a single server. Perhaps what constitutes my digital avatar is diffuse, like a blockchain, across multiple servers which communicate with one another to constitute Matrix-Me. I am inclined to think that the parts of Matrix-Me constitute one thing. I do not think that there are many things here because the physical manifestation of the digital information is in different real life spatio-temporal locations. Similarly, the event of a biological life may be diffuse. It may well be that what constitutes my biological life is found in a multitude of spatio-temporal regions.

This thesis explains why the relation of partiality is generated by biological connectedness and continuity. We can care about organisms that we have biological connectedness and continuity with because they are part of our life. Consider a second argument for Functional Partiality.

> P1. Rational organisms have biological lives that include biological activities of other organisms—namely, activities that are non-negatively functionally connected or continuous to the biological activities of their body.
>
> P2. Rational organisms have reason to make their biological life go well.
>
> P3. Making a biological life go well involves making sure that, on balance, the biological activities that are included in that biological life are going well.
>
> **Thereby:** Rational organisms have reasons to make sure organisms that are included in their biological life have biological activities that, on balance, are going well with their own.

The argument as a whole is another way of grounding partiality (that special care you have for the interest of another) from the same source that grounds prudence (that special care you have for your own good). The reason that biological connectedness and continuity matters for grounding partiality is because it matters for biological lives. When I am biologically connected with you, my biological

[74] Chalmers, David J. (2017). The Virtual and the Real. *Disputatio* 9 (46):309-352.

life extends to include you to some degree. And when it includes you to some degree, I ought to care about you for the same reasons that I ought to care about the rest of my biological life. If I have reason to make sure my biological life goes well, I have reason to be partial to you. My biological life going well depends in part on yours going well because my biological life includes your own.

Are the premises defensible? The first premise is a consequence of my metaphysics of biological life, construed as an event with persistence conditions that rely on functional connectedness and continuity. That kind of connectedness has to do with causal dependence between *biological* events—which we can roughly understand as those events supported and performed by the organized cellular activity of organic structures like kidneys, lungs, and hearts. In order for an event to classify as a relata in the functional connectedness relation that matters for organism identity, this point about what *performs* the event is important—as there are a lot of events that our functioning may be, e.g. counterfactually causally dependent, on in some sense or another, such as the circulation of the oxygen in the room I am currently sitting in. However, these are not biological events, and therefore are not the kinds of events that make for the persistence and individuation of a biological life and thereby the organism.

Importantly, the extent to which an activity is part of a biological life may well come in degrees, since functional connectedness and continuity also comes in degrees. There are some things which we take very obviously to be part of our biological life. The activities of my lungs are clearly part of my biological life. Then, there are things that we obviously take to be irrelevant to my biological life. The colliding of a meteor with a celestial body in the outer reaches of the universe are not part of my biological life. Then, there are things that are somewhere in between. The cellular growth of a cob of corn that I harvest and eat seems less apart of my life than the activities of my lungs and more apart of my life than the colliding of a meteor with a celestial body at the edges of space. The question therefore might not be 'Are these things happening here part of my biological

life?' so much as it is 'How much are these things happening here part of my biological life?' There can be high degrees of connectedness, as may be the case with my romantic partner. There may be less degrees of connectedness, as may be with my acquaintance that shares my office space. When I speak of high degrees of functional connection or continuity, it seems to me that there are two kinds of things I am saying. The first concerns having a large quantity of connections.

Connections in Quantity *x* is highly connected or continuous with *y* if *x* has *many* functional connections or continuity with the biological activities of *y*'s body.

The second concerns having particularly strong connections:

Connections in Strength *x* is highly connected or continuous with *y* if *x* has *strong* functional connections or continuity with the biological activities of *y*'s body.

What does it mean for functional connections to be strong? It means, roughly, that the biological activities of *x* have much more causal sensitivity to the biological activities of *y* than they do an acquaintance like *z*. Being very causally sensitive means that the impact of biological activities of *y* over *x* is enormous. If *y* says a few misplaced words, like "I don't love you anymore," it devastates *x*'s entire biological system in ways that are not good for the biological life as a whole. If *z* says a few misplaced words, *x* only has a minor reaction. Perhaps a momentary instance of irritation or confusion about why *z* thinks this is an appropriate thing to say to an acquaintance.

This discussion brings up an important question about whether we've rightly been clear in characterizing the relation of functional connectedness and continuity. We should be explicit about whether we mean counterfactual dependence or actual causation. Are the biological events of me, the organism, connected to yours, just in case there has been a history of actual causal influence of one on the other, or just in case there is counterfactual dependence (regardless of whether it has come about?). I think counterfactual dependence is sufficient. If I have just fallen in love with someone at first sight, there is very little causal history between our biological systems. But I am

nonetheless highly connected to them because, counterfactually, I am very sensitive to their actions (as the case previously discussed with the women in the drowning pond brought out).

Looking at the first premise, it may be wondered whether functional connectedness or continuity is too weak. One might think that at least some activities are part of my life only if they are directed by my nervous or endocrine system. That's stricter than saying that biological activities are part of my life only if they are functionally connected or continuous with the biological activities of my body. But that stronger condition rests on a question about what it takes for an endocrine system to *direct* something, and I'm not sure I have a good handle on what that means. Consider the dialysis machine and the purification it does. In some sense, we might say that my body is directing the activities of the dialysis machine. But why say it goes this way rather than the other way around. Why does the dialysis machine not direct the purification of my blood? It is tempting to say that it is because the machine's activities are *triggered* or *caused* by my blood. But so does my blood trigger or cause my kidneys (or the system my kidneys are part of) to perform the activities of purification. Directing might naturally mean *leading*. But the question of what leads what is a complicated one.

There are a few things to note about the second premise. First, it can be read in a way that takes reasons of concern to be gradable based on the degree of participation in biological life. I ought to care more about the growing of the corn than I do about the meteor and I ought to care about my respiratory activities more than I do the growing of the corn. But I still ought to care. Second, although the matter of what it means to make biological life go well should be spelled out, I will not provide a detailed account here. I do take it that we care a great deal about many of the activities that constitute biological life going in a certain way. We care about having relatively low cortisol secretion; an abundance of positive emotions; low (but not too low) heart rates; efficient digestion; strong immune system; robust tissue generative functioning; efficient cognitive processing; and more. Moreover, for all I know, the ordering of these kinds of things could be as important as

having of them in your life. This might make the account seem better conducive with certain narrative-style theories of the good life on which we care a lot about the form and arc of our experiences rather than content taken in a vacuum.[75] If life is a kind of event, after all, we may look to evaluate life as we do other events and performances. Hence, we may not just care, for instance, that positive emotions happen—we may care when they happen, what they are preceded by, what comes after them, and so on. What makes for a good performance can in this way be a rather complicated affair. But this is all just conjecture—I am not here seriously defending any account answering the question of what makes for a good biological life.

Third, one might complain that, although we have tied partiality to prudence, we have not really explained what motivates prudential concern. Hence, there is no reason to accept the second premise. I do not think I can say much more to respond to this. All explanations end somewhere, and it strikes me that it is better to have one mystery (the mystery of why we ought to be prudentially concerned) rather than two (the mystery of why we ought to be prudentially concerned *and* the mystery of why we have special concern for those close to us). I am happy to rest on the claim that we do have prudential concern—that is rather difficult to deny.[76]

Fourth, someone may object that although it is intuitive that we ought to care about our biological life, credence in that claim drops the more expansive the notion of a biological life becomes. This objector claims that we really ought to only care about a subset of our biological life—the subset that includes only the activities that happen in spatial regions of the organism.

I worry that this claim about spatial demarcation about the part of life that matters is not so plausible given our understanding of biological activities relation to biological life as coming in degrees. Consider, again, the case where my brother's biological system is hooked up to my kidneys

---

[75] See, for example: Velleman, David. 2006. "Self as the Narrator."

[76] There are very few accounts of the grounds of prudential concern, in any case. Perhaps the closest I have seen is the account put forth by David Velleman in *Self to Self*. Even accounts such as this end up bottoming out *somewhere*.

in order to cleanse his blood of impurities. There, it is plausible enough that my brother's biological life includes the functioning of *my* kidneys to a degree. After all, they would have included the functioning of *his* kidneys were they working properly. It would be peculiar, though, to say that my brother ought to extend care to my kidneys differently than he would his own kidneys simply because they do not constitute activities that take place in the spatial regions of him as the organism. Similarly, it would be puzzling if the brain of our dislocated Taft extended its care for its other organs to a lesser degree because they happen to be in different containers. Reasons of care may track with degrees of participation in biological life—and demarcations of spatial boundaries may often track high or low degrees of participation in biological life—but spatial demarcations in themselves do not reasonably matter on their own so long as causal connections are preserved.

Could my brother caring about my kidneys functioning be understood as a form of instrumental caring? That is, does he care about my kidneys functioning only because of their causal relation to the more narrowly construed activities occupying the spatial region of his organism? I think it would be implausible to mark a difference like that between the importance of my kidney's functioning and the functioning of the rest of the activities of his body. Whatever would be the case about why he cares about his kidneys functioning (if they were they functioning) ought to be the same as why he cares about my kidneys functioning. They both do the same kind of biological work and relate to the rest of his body in the same way.

Suppose that you are a violinist who is part of an orchestral event. Now you say to yourself: I ought to care only about the parts of the performance going on right here, within the confines of me and my violin. This response strikes us narrow. A musical performer has reason to care about what they are doing because of the relation it has to making the larger event they are part of go well. Since they care about the larger musical performance first and foremost, it ought to follow that if they have an opportunity to help another contributor to the event do their discrete musical

performance in a way that is better for the overall event, they ought to do it. I suggest that the same goes in the case of a biological life. We care about the biological life we participate in. Someone that says they only care about the part that happens in their spatio-temporal region is not seeing things as a whole. If the musical performer acts to help the other members of the orchestra, the musical event they care about is improved and thereby they are given a benefit. If the organism acts to help the other members they are functionally connected or continuous with, the event of biological life that they care about is improved and thereby they are given a benefit too. In the musical case, it may be right to say that the performer ought to care about the performance of their bandmate for instrumental reasons. But these instrumental reasons do not have as their end their own (e.g. the violinist's) portion of the musical performance—their end is the good of the performance.

It may seem, then, that, in some sense, all biological activities are instrumentally valued, and moreover, it may be that I value the organism which has the biological life, not as a thing in itself, but as a thing that gives rise to what I value for its own sake. Importantly, this need not be construed as instrumental valuing. Langton offers conceptual groundwork for why this is so. She claims that here is room for extrinsic goodness not only in the way's things have value, but also in the ways we value things.[77] Rudolph, for example, values his wedding ring for the sake of its association with his marriage. In such a case he values his wedding ring "for the sake of something else", but he does not value it as a means or instrument. He does not value it for its effects or in itself. Similarly, we value an organism for the sake of its association with the biological life. But we do not value the organism instrumentally. The organism is like the wedding ring.

A last objection to the second premise insists that there is not sufficient reason to accept the premise over an alternative: "I have reason to do things that benefit *me*." I have two things to say about this. First, the alternative provided is not inconsistent with my premise, and I do not think we

[77] Langton, Rae. "Objective and Unconditioned Value," p. 6-7.

need to choose only one of them. It could well be that the proposition "I have reason to do things that benefit me" is true, as is the proposition "I have reason to make my biological life go well." Both of these propositions seem plausible.

Second, though, I wonder about the relation of the two propositions. Many of the ways, if not *all* of the ways, that we make your biological life go well, are ways that benefit you. I catch myself reading the two propositions as though they say the same thing. A clarification is found when we focus on the object of the proposition. "I have reason to do things that benefit **me**" is read as divorced from the idea of life going well, since, according to my metaphysics, your life is one matter and you, the organism, are another. We ought to read it as: "I have reason to do things that benefit **me (the organism**)." Crucially, this is not analyzed in terms of a life. It is not a reiteration of the last objection, which says that I have reason to make the life happening in the spatial region of my organism go well. It is about the idea of benefiting the organism, full stop. No appeal to life at all.

First, it is implausible to deny that one should care about their biological life. Think of all of the constitutive parts of the biological life that we clearly care about, all of the events like the way my heart beats, or the way my mind works, or the way my blood is dispersed throughout me, that we just clearly *do* care about. So, assuming the objector does not deny that there are benefits to the life as well, this objector seems to me to commits to the idea that there are two separate kinds of goods in the world: benefits to the self, and benefits to the life. This is logically consistent with my thesis. But for what it is worth, I am skeptical about why we ought to accept this distinction. Can we really find a benefit out there in the world which targets the organism, but does not have any impact on their biological life? Everything good that one might think is a benefit to the organism, seems to me to be a benefit to their life as well. Can we think of a case that shows this to be wrong?

The third premise of the argument amounts to the claim that the good of the parts of a biological life are part of what determines the good of the whole biological life. This seems

reasonable. An organism has a life that is going well when the discrete events that constitute that life are going well. When the organism is unhealthy, the source can be found by looking at the discrete events of the life that it has. Perhaps it has digestive issues and is malnourished. Perhaps it cannot create memories and think coherently. Perhaps its heart cannot pump blood effectively.

Another objection to the third premise is that there are cases, besides those of negative valence, where making the parts of our biological lives go well is not good for the life overall. Skin cell death is part of a life going well, but is not good for the part of that life constituted by the activities of those cells. There are two responses to make. First, I think the notion of "going well" here needs to be clarified. The matter of how to apprise whether an event goes well depends on the event it is, and there is a way in which skin cells dying are instances of a biological event going well. In the case of organic life, perhaps the sense is closest to what I want is that advocated for by Aristotle—"going well" means achieving certain natural aims. There are organisms that die upon reproduction. The need not mean that things are not going well when they do. Second, even if the death of the skin cell is not a market of "things going well," I'm not sure the third premise requires it to be. The death of the skin cell is part of a greater series of events important to the life—those of the integumentary system. Skin cell death is necessary for the activities of that sub-system to be going well. There is balancing to be done—we want to promote the good of the parts—assuming doing that does not hinder other parts. We care about the whole, after all. The third premise says: Making a biological life go well involves making sure the biological activities that are included in that biological life go well. But by acting in the interests of the skin cell, we are making the other parts of the life *not* go well. If we want to make the life go well, we do need to attend to the parts going well, but that means we have to consider the interests of all the parts, not just one of the parts alone.

Consider another case:

Kremlin Mr. Chef feeds Putin delicious meals. But Dr. Chef could feed Putin even more delicious and healthier meals than Mr. Chef.

If Putin sends Mr. Chef to the newly revived and renovated gulags, Mr. Chef will suffer. But won't Putin's biological life benefit? The answer is: likely not. Harming Mr. Chef still harms Putin's biological life—even if it comes with a sweetener like healthy meals from Dr. Chef. Since Mr. Chef's biological activities are part of Putin's biological life, Putin would be mistaken to think that sending Mr. Chef to the gulags wouldn't be bad for his life. It would. You could change the weight of the good that Putin gets such that it would be better for Putin's life overall to send Mr. Chef to the gulag—perhaps Dr. Chef makes meals that let Putin live an extra thousand years. But even then, Putin does not have sufficient reason to *harm* Mr. Chef by sending him to the gulags. The reasons may instead demand that he do what he can to make Mr. Chef's life go well, whilst replacing him. Here we once again consider the balance of the good of the parts participating in a life (Putin's).

It may be worried that my claim that to make a good life, one must make sure the sub-activities that comprise the life on balance go well, is not very informative. But I think it is informative. I think it is saying something that is substantive—which is that there is a relationship between the good of the parts of the life and the good of the whole of the life. When we consider related inquiries about the relations of parts and wholes, we see why saying something like this is helpful. The question, for instance, of whether objects are the sum of their parts or something over and beyond, is a lively one. It is similarly worthwhile to consider whether the good of the life is determined entirely by the good of the parts (or rather, events) that comprise it. The claim, to be clear, is that whenever there are two duplicate lives, *x* and *y*, we can make *x* a better life than *y* by improving how the biological events of *x*. We just need to be careful that, in improving one discrete event that comprises *x*'s life, we do not harm another discrete event of *x*'s life. For then we may have sabotaged are on goal—on balance, we might not have made *x's* life better, but worse.

Let's consider a number of other examples to get a feel for the position here offered.

Putnam There is a resource available. You can give it to Ryan, or you can give it to Putnam. They will make use of it in the same way and garner similar benefits. You and Ryan are friends. You and Putnam are not. You are partial to Ryan.

Scenario 1: Ryan gets the resource	**Scenario 2:** Putnam gets the resource.

Reasonably, you ought to prefer scenario 1 to scenario 2 (all else equal). But why? In my view, it is because your biological functions are connected with Ryan's biological functions.

> Claim 1: A biological life includes the set of biological functions functionally connected and continuous with the biological functions of an organism.
>
> Claim 2: Your biological functions are functionally connected and continuous with the biological functions of Ryan (the organism).
>
> Conclusion 1: The biological activities of Ryan (the organism) are part of your life.
>
> Claim 3: You have reason to prefer your own life going well over others, all else equal (and Ryan's getting the resource makes your life go better because his life is part of your life)
> Conclusion 2: You have reason to prefer that Ryan (the organism) gets the resource.

Partiality can also be asymmetric. Consider a second case.

Music An executive gives you the power to give an incredible record label deal to any artist of your choosing. You can give it to your favorite musician, Spike, or you can give it to another talented musician. They will benefit equally.

Scenario 1: Spike gets the deal.	**Scenario 2:** Another artist gets the deal.

Reasonably, you ought to prefer scenario 1 to scenario 2 (all else equal). But why? Again, I think it is because your biological activities are functionally connected with Spike's. But note that it is probable that this does not work the other way around. Spike has no idea who you are and has never knowingly interacted with you. There are no chains of functional connections going from you to him in the same way that there are functional connections going from him to you. He is part of your life. You are not part of his life. He is not partial to you; you are partial to him.

III. Egoism on the Cheap

My account has interesting consequences for the tolerability of ethical theories like egoism—roughly, the thesis that you ought to do *only* what is in your best interest. Let's consider a particular

version of this ethical theory called "Rational Egoism"—the view on which a person ought to do only what serves their interests, and that they should be neutral about when those benefits befall them. In this section, I won't defend Rational Egoism on the whole. But I will argue that it can capture more of our other-regarding feelings and practices than we initially might have thought.

I'll start with some history. Parfit advanced the thesis that Rational Egoism was, despite its name, not particularly rational. Among Parfit's complaints was the thought that the position occupied an uncomfortable space in its simultaneously being agent-biased and time-neutral. There was a tension, he thought, in not caring *when* benefits are given, but caring to *whom* they are given.

> I do not see why the axiom of Prudence [Rational Egoism] should not be questioned, when it conflicts with present inclination, on a ground similar to that on which Egoists refuse to admit the axiom of Rational Benevolence. If the Utilitarian [neutralist] has to answer the question, 'Why should I sacrifice my own happiness for the greater happiness of another?' it must surely be admissible to ask the Egoist. 'Why should I sacrifice a present pleasure for a greater one in the future? Why should I concern myself about my own future feelings any more than about the feelings of other persons? [78]

These considerations led Parfit to a position called 'Parity.'

> **PARITY** The same kinds of considerations that motivate one to be agent-biased should also motivate one to be time-biased, and vice versa.

According to Parfit, the better idea was to be fully agent-biased and time-biased in such a fashion so as to care most about your present self over your temporally distant self. But Parfit was not the only one who endorsed Parity. His contemporary, Thomas Nagel, endorsed it too. In the *Possibility of Altruism*, Nagel endorsed a fully agent-neutral and time-neutral view—motivating agent-neutrality by appealing to the rationality of time-neutrality, and therefore also relying on some version of Parity. According to Nagel, reasons did not essentially refer to anyone in particular. The fact that there is a pain is a reason to help, full stop. It does not matter to whom the pain is befalling, and that is in

[78] Parfit, Derek. *Reasons and Persons*. p. 418.

large part because it does not matter when the pain is happening either. There was said to be a symmetry between the rationality of time neutrality and the rationality of agent neutrality.

Those that deny Parity try to shore up motivation for treating the bias of identity to the bias of time. One strategy is to invoke compensation principles and considerations about the separateness of persons. Rational Egoism can be defended by noting that intrapersonal benefits offer automatic compensation. When I do something that benefits me in the future, I am automatically compensated for it. But the same does not go for interpersonal beneficence. When I provide aide to another, I am not automatically compensated for the benefit I give them. This provides motivation for Rational Egoism. It can be asked why one should care about to whom benefits befall but not when. But there is an answer. There is no point in caring about when benefits are given to you. So long as they are given to you, the compensation is the same. But there is a point to not sacrificing your own happiness for the happiness of another. There may be no compensation for you at all if you were to do that. The Egoist appeals to a thesis like the following.

COMPENSATION I ought to care for another only insofar as my caring for them is automatically compensated.

Suppose that you grant COMPENSATION. It is natural to think that the ethical theory you subscribe to will thereby look quite impoverished. But I want to suggest otherwise. Given our relation of partiality being grounded in reasons of prudential concern, it follows that many of the interpersonal benefits we bestow actually *do* come with automatic compensation.

If I am biologically connected to my partner in the way I have motivated, and I act in her interests, I am acting my own interests. Interpersonal compensation is widespread. Furthermore, biological connections can come rather cheap. A solitary interaction with a grocery store clerk is enough to generate at least a weak reason of partiality towards them because it is sufficient to create

at least a weak chain of biological connectedness.[79] The Rational Egoist, who believes that they ought to do what is in their best interest and only what is in their best interest, will therefore have at least pro tanto reasons to act in the interests of many of those around them. Their biological life extends beyond them to include the interests of others. It is constitutive of his or her own good to promote the good of these other organisms. Extensionally, the Egoist therefore has more in common with her agent-neutral rivals than might have been previously supposed.

This all motivates a different conception of agent-biased theory like Rational Egoism—one that is more inclusive of others interests. The Rational Egoist can say to Parfit that automatic compensation matters and that some interpersonal benefits do not provide automatic compensation. Therefore, there is grounds to deny *Parity*. Still, there is a great deal of automatic compensation interpersonally—so the view we end up with is far more inclusive than otherwise supposed.

The position provides an answer to a skeptical question asked by the egoist: why act in others interests when doing so seems to detract from my own? The answer is, often enough, that this question is confused. For many occasions where you act in the interests of others are occasions where you are acting in your own interests. Their biological connectedness and continuity to you makes it true that this is the case. Although we sometimes do not have reason to aide others at our own detriment. this is not as widespread as one may believe. This position therefore provides grounds for disputing an Egoist argument against morality. The argument goes as follows: [80]

1. An agent has reason to do *x* just insofar as *x* contributes to her interests.
2. An agent's interests can be specified independently of the interests of others.
3. Morality often requires agents to benefit others or refrain from harming them.
4. These patterns of benefit and restraint often fail to promote the agent's interests.
5. Hence, being moral often detracts from an agent's own interests.

Conclusion: Hence, agents often fail to have reason to be moral.

---

[79] Earlier, I said that these weak connections weren't strong enough to make a difference to what you ought to do to in high-stakes cases (e.g. a life for a life). One might worry I therefore cannot say that weak connection matter as I have said here. But the claim that, when the stakes are high, small reasons of partiality are not tie-breakers, does not entail that weak connections do not give any reason to act or can never make a difference to what we do generally.

[80] This is a very slight variation of how David Brink spells out the argument. See: Brink "Rational Egoism, Self, and Others," in Identity, Character, and Morality, p 340.

Many of us will be keen on denying the first premise. But the second and fourth premise are also assailable. An agent's interests cannot be specified entirely independently of the interests of others. Very often, the agent's interest will become entangled with the interests of others they are biologically connected and continuous with. And as far as the fourth premise goes, it is also very often the case that the patterns of benefit and restraint which morality demands *do* promote the agent's interests. When the agent is biologically connected and continuous with another, their interests include the interests of the other agent they are connected and continuous with.

Conclusion

In this chapter I have presented an argument that claims that partiality can have the same grounds as prudential concern. I gave a critique of a similar account of the source of partiality, given by David Brink, which appeals to psychological reductionism. Then, I proposed a second argument that capitalizes on the idea of extended biological lives in order to solve an explanatory challenge about identity. According to my thesis, those close to me are part of my biological life. I have reason to make my biological life go well. So, I have reason to care for and protect their interests. This is not an exhaustive and unilateral account of partiality. But it is one source of it. Lastly, I explored the consequences my view has for egoism—the thesis that you ought to do only what is in your own interest. I noted that my account makes the Egoist thesis far more inclusive and accommodating of the needs, interests, aspirations, and desires of other organisms.

Works Cited

Antony, Louise M. 2003 "Who's Afraid of Disjunctive Properties?" *Philosophical Issues*, 131: 1–21.

Aristotle, and Terence Irwin. 1985. *Nicomachean Ethics*. Hackett Publishing Company.

——, 1981. *Aristotle's On the Soul (De Anima)*. Grinnell, Iowa: Peripatetic Press.

Arneson, Richard J., 2003. "Consequentialism vs. Special-Ties Partiality," *The Monist*, 86: 382–401.

Baker, L. R.. 2000. *Persons and Bodies: A Constitution View*, Cambridge: Cambridge University Press.

Baier, K. 1991. "Egoism." In P. Singer (ed.), *A Companion to Ethics*, 197–204. Oxford: Blackwell.

Bigelow, John, and Robert Pargetter. 1990. *Science and Necessity*, Cambridge: Cambridge University Press.

Blatti, Stephan & Snowdon, Paul F. eds. 2016. *Animalism: New Essays on Persons, Animals, and Identity*. Oxford University Press UK.

Brink, David O. 1997. "Rational Egoism and the Separateness of Persons." In J. Dancy ed., *Reading Parfit*. Blackwell. pp. 96--134.

——, 1990. "Rational Egoism, Self, and Others," in *Identity, Character, and Morality,* Owen Flanagan and Amelie Oksenberg Rorty eds., Cambridge, MA: MIT Press.

——, 2001. "Impartiality and Associative Duties," Utilitas, 13: 152–172.

Chalmers, David J. 2017.. The Virtual and the Real. *Disputatio* 9 (46):309-352.

Chisholm, R.. 1976. *Person and Object*, La Salle, IL: Open Court.

Clapp, Lenny. 2001. "Disjunctive Properties: Multiple Realizations", *Journal of Philosophy*, 983: 111–36.

Cleland, Carol E, and Christopher F Chyba. 2002. "Defining 'life'". *Origins of Life and Evolution of the Biosphere : the Journal of the International Society for the Study of the Origin of Life.* 32 4: 387-93.

Dyson, Freeman J. 1985. *Origins of life*. Cambridge University Press.

Feinberg, Gerald, and Robert Shapiro. 1980. *Life beyond Earth: the Intelligent Earthling's Guide to Life in the Universe*. New York: Morro.

Fleischaker, Gail Raney. 1990. *Autopoiesis: System Logic and Origins of Life*. Ann Arbor, Mich: University Microfilms International.

Fine, Kit 2012. "Guide to Ground." In Fabrice Correia & Benjamin Schnieder eds., *Metaphysical Grounding*. Cambridge University Press. pp. 37--80.

Hawley, Katherine (2002). Vagueness and Existence. *Proceedings of the Aristotelian Society* 102 (1):125-140.

Hills, A. 2003. "Duties and Duties to the Self." *American Philosophical Quarterly* 40: 131–42.

Jeske, Diane, 2008a. *Rationality and Moral Theory: How Intimacy Generates Reasons*, New York: Routledge Publishing.

——, 1998. "Families, Friends, and Special Obligations," *Canadian Journal of Philosophy*, 28: 527–556.

Johansson, Jens, 2007, "Non-Reductionism and Special Concern," *Australasian Journal of Philosophy,* 85: 641–657.

——, 2007, "What is Animalism?" *Ratio*, 20: 194–205.

——, 2010, "Parfit on Fission," *Philosophical Studies*, 150: 21–35.

Johnston, Mark 1987. "Human Beings." *Journal of Philosophy* 84 2:59-83.

——, 2007. "Human beings Revisited: My Body is Not an Animal." *Oxford Studies in Metaphysics* 3:33-74.

Kant, I. 2002. *Groundwork of the Metaphysics of Morals*, trans. and ed. T. E. Hill and A. Zweig. Oxford: Oxford University Press.

Keller, Simon 2013. *Partiality*. Princeton University Press.

Koshland, Jr., Daniel E. 2002. "The Seven Pillars of Life". Science. 295 5563: 2215–16

Kolodny, Niko. 2010. "Which Relationships Justify Partiality? The Case of Parents and Children". *Philosophy & Public Affairs*. 38 1: 37-75.

Langton, Rae. 2007. Objective and unconditioned value. *Philosophical Review* 116 (2):157-185.

Lewis, David, 1971, "Counterparts of Persons and Their Bodies," *Journal of Philosophy*, 68: 203–11.

——, 1976, "Survival and Identity," in *Rorty* (1976), pp. 17–40.

——, 1983, "Extrinsic Properties", *Philosophical Studies*, 44: 197–200.

Locke, John 1689. *An Essay Concerning Human Understanding*. Oxford University Press.

Madden, Rory 2016. "Human Persistence." *Philosophers' Imprint* 16.

Massin, Olivier. 2013. "Determinables and Brute Similarities", in *Johanssonian Investigations: Essays in Honour of Ingvar Johansson on His Seventieth Birthday*, Christer Svennerlind, Jan Almäng, Rögnvaldur Ingthorsson eds, Heusenstamm: Ontos Verlag, pages 388–420.

McKay, Chris P. 2004. "What Is Life—and How Do We Search for It in Other Worlds?" *PLoS Biology*. 29.

McMahan, J. ; Campbell, T. ; Goodrich, J. & Ramakrishnan, K. eds. forthcoming. *Principles and Persons: The Legacy of Derek Parfit*. Oxford University Press.

Merricks, Trenton. 2001. *Objects and Persons*. Oxford: Oxford University Press.

Nagel, Thomas 1970. *The Possibility of Altruism*. Oxford Clarendon Press.

Noonan, Harold, 1989, *Personal Identity*, London: Routledge.

Nozick, Robert (1981). *Philosophical Explanations*. Harvard University Press.

Olson, Eric T. 1997. *The Human Animal: Personal Identity Without Psychology*. Oxford University Press.

——, Olson, Eric T. 2007. *What Are We?: A Study in Personal Ontology*. Oxford University Press.

Parfit, Derek. 1971. "Personal Identity", *Philosophical Review*, 801: 3–27.

——, 1984. *Reasons and Persons*, Oxford: Oxford University Press.

——, 2011. *On What Matters*, Oxford: Oxford University Press.

——, 2012. "We Are Not Human Beings", *Philosophy*, 871: 5–28. in Blatti and Snowdon eds. 2016: 31–49.

Perry, John 1972. "Can the Self Divide?" *Journal of Philosophy* 69 16:463.

Pollock, Henry. 2018. Parfit's Fission Dilemma: Why Relation R Doesn't Matter. *Theoria* 84 (4):284-294.

Raz, J. 1975. *Practical Reason and Norms*. London: Hutchinson.

Rodriguez-Pereyra, Gonzalo. 2002. *Resemblance Nominalism: A Solution to the Problem of Universals*, Oxford: Oxford University Press.

Rosen, Gideon, 2010, "Metaphysical Dependence: Grounding and Reduction", in *Modality: Metaphysics, Logic, and Epistemology*, B. Hale and A. Hoffmann eds, Oxford: Oxford University Press, 109–36.

Rizzotti, Martino. 1996. *Defining Life: The Central Problem in Theoretical Biology*. Padova: University of Padova.

Scanlon, T. M. 1998. *What We Owe to Each Other*. Cambridge, Mass.: Belknap Press.

Schaffer, Jonathan 2009. "On what Grounds What." In David Manley, David J. Chalmers & Ryan Wasserman eds., *Metametaphysics: New Essays on the Foundations of Ontology*. Oxford University Press. pp. 347-383.

Scheffler, Samuel, 1997. "Relationships and Responsibilities," *Philosophy and Public Affairs*, 26: 189–209.

Shoemaker, Sydney. 1963. *Self-Knowledge and Self-Identity*. Ithaca, NY: Cornell University Press.

——, 1970. "Persons and Their Pasts." *American Philosophical Quarterly* 7: 269–285.

Shoemaker, David. 2015, "Ecumenical Attributability," in Randolph Clarke, Michael McKenna, and Angela Smith (eds.), *The Nature of Moral Responsibility*, Oxford: Oxford University Press, pp. 115–140.

——, 2016, "The Stony Metaphysical Heart of Animalism," in Blatti and Snowdon (2016), p 303–327.

Sider, Theodore, 2001a, *Four-Dimensionalism*, Oxford: Oxford University Press.

Sidgwick, Henry 1901. *Methods of Ethics*. Kaplan.

Snowdon, Paul F. ed. 2014. *Persons, Animals, Ourselves*. Oxford University Press.

Swinburne, Richard, 1984, "Personal Identity: the Dualist Theory", in Shoemaker and Swinburne 1984: 1–66.

Van Inwagen, Peter. 1995. *Material beings*. Ithaca, N.Y.: Cornell University Press.

Velleman, James David. 2006. *Self to Self: Selected Essays*.

——, 2005. "The Self as Narrator." In Joel Anderson & John Christman (eds.), *Autonomy and the Challenges to Liberalism: New Essays*. Cambridge: Cambridge University Press.

Wiggins, David 2001. *Sameness and Substance Renewed*. Cambridge University Press.

——, 2012. "Identity, Individuation and Substance". *European Journal of Philosophy*. 20 1: 1-25.

Williams, Bernard. 1997. "The Self and the Future." *Philosophical Review* 79 (2):161-180.