**In Defense of Temporal Passage**

**Notes toward a Theory of Time**

In recent decades, we have witnessed a great deal of fascinating and increasingly subtle discussion concerning the nature of space and time among philosophers, much of it new and original while at the same time hearkening back to the great idealist systems of the late nineteenth and early twentieth centuries. In particular, McTaggart’s argument against the existence of time has received new articulation and support among a number of contemporary philosophers who in no way share his Idealist commitments.[[1]](#footnote-1) Indeed, most philosophers who look positively on McTaggart’s proof are materialists who are more likely to think of themselves as developing the philosophical implications of modern physics, especially relativity theory, without perhaps recognizing the profound influence of idealist philosophy on the development of that theory. At any rate, there are large number of options available to modern philosophers to consider concerning the nature of space and time.

 Particular views can be developed by selecting among various opposed pairs and combining them into a full-blown account. One chooses between Presentism and Eternalism, the A-theory and B-theory, Endurantism and Perdurantism, block-universe and expanding block universe, and so on. Currently, the two most popular views are Three-Dimensionalism (a combination of Eternalism and Endurantism) and Four-Dimensionalism (a combination of Eternalism and Perdurantism). The main difference between the two views is that Four-Dimensionalism affirms the existence of temporal parts and treats things (like tables, chairs, and persons) as the mereological sum of those parts, which in some versions are a set of successive point-instants constituting a space-time “worm” or set of connected momentary continuant stages identical with a region of 4D “space-time.” Three-Dimensionalists are distinguished from Four-Dimensionalists primarily by their rejection of the notion of “temporal parts” and refusal to identify things with space-time worms or regions, insisting somewhat vaguely that things are “fully present” at every moment that they exist as a way of denying the existence of “temporal parts.”

 In this paper, I propose to present a somewhat old-fashioned account of time that combines Presentism with the A-theory of time. According to Presentism, only the present exists, while the past and future do not. According to the A-theory of time, what is future at one time is present at another and past at yet another, so that the use of tensed expressions reflects the objective facts of temporal “flow.” On this view, things do not exist sempiternally in some tenseness fashion; instead, they come into existence, persist for a while, and then go out of existence. The physical universe is not a block, but an ongoing process involving existing material things and occurring in space and time in which temporal passage is an essential and ineliminable part. Such a view can perhaps be called the “Common-Sense” view of the nature of time and this seems to be true concerning our natural intuitions concerning the nature of time, at least until we are exposed to McTaggart’s Proof or study contemporary analytic metaphysics. Like most “Common-Sense” views, the Common-Sense View of Time is likely to be given short shrift nowadays. To call any view the “Common-Sense” view nowadays suggests to many the mere consensus of unreflective, uneducated prejudice. Many would consider the Common Sense view of time as a vestige of the pre-scientific worldview of “folk physics” that modern science refutes and supersedes. Indeed, it is this sort of conviction that generally leads philosophers to the sorts of extravagant views currently on offer in the philosophy of space and time and to suppose those views to be plausible because they are in some loose way based on or are “in the spirit of” current science. So, then, I suppose that my first task is to address this conviction and lay the ghost to rest if I can. Then I may proceed to more substantive matters.

 **The “Scientific” Challenge to Presentism and Temporal Passage**

 The Common-Sense view of time (i.e. Presentism plus real temporal passage – hereafter CSVT) seems obvious from everyday experience and, on reflection, incapable of being seriously questioned. In the end, I think this is right but the challenge to CSVT obviously needs to be addressed, if only to create the possibility of a serious and unbiased consideration of its merits. In essence, the scientific challenge to CSVT focuses on Presentism’s denial that the past and the future exist, or are real, or are real in the same way as the present. According to critics of Presentism, that doctrine is inconsistent in some way with Relativity Theory. The main point seems to be this: since there is no concept of absolute simultaneity definable in Special Relativity Theory (STR), there is in that theory no way to treat tense as an objective feature of events or to divide time into three realms, i.e. past, present, and future. Rather, in relativity theory no such distinctions are drawn and this is taken to imply that past, present, and future all exist together indifferently in a single four-dimensional space-time continuum. Lawrence Sklar goes so far as to claim that this feature of relativity theory actually *refutes* Presentism.[[2]](#footnote-2) According to this view, apparently, Special Relativity gives us the same reasons for supposing that past and future are real as it does for supposing that the present is, so it seems to imply that past, present, and future ontologically considered are all on a par.

 The term “inconsistency” can be used in a number of different ways, not all of which represent a serious philosophical challenge to the propriety of holding two disparate views at the same time. In the strictest sense, to say that two views are inconsistent is to say that a logical contradiction can be derived from their conjunction. So far as I know, no one has claimed such a thing in the case of Presentism and Special Relativity, nor am I aware that there are any samples of such a derivation on offer. Quite to the contrary, William Lane Craig claims to have an interpretation of relativity theory that manages to sneak absolute simultaneity back into Special Relativity, thereby allowing an in-principle distinction between past, present, and future within that theory.[[3]](#footnote-3) I am certainly not competent to judge whether Craig is right about this, or even whether his view is even so much as coherent. If it is, however, then it is logically possible for Presentism and Special Relativity both to be true. In that case, there will be no *logical* inconsistency in holding both views simultaneously.

 Further, as Ned Markosian notes in an important paper, we need to distinguish between STR considered as a physical theory on the one hand from its philosophical, i.e. metaphysical, interpretation.[[4]](#footnote-4) Given that there is no logical inconsistency between STR and Presentism, we can distinguish stronger and weaker versions of STR – stronger being those that exclude Presentism, weaker being those that that are compatible with Presentism. With regard to the empirical evidence, both will be equally well-grounded and neither more credible than the other. As such, a Presentist can simply reject stronger versions of STR in favor a weaker one (like Craig’s) according to which absolute simultaneity is not ruled out, even if we have no way or incorporating this notion into our mathematical physics. This will especially be the case if, as I shall argue in this paper and elsewhere, there are substantial, non-scientific reasons for so doing.

 Presentism commits no logical impropriety, then, at least in lieu of a much stronger argument than has been offered up to now. Still, one might say, to hold out for the tensed (A-) *theory* of time when the great consensus among scientists and philosophers favors the tenseless (“B”-) theory of time seems to mark one out as a crank, or at any rate out of step with the reigning scientific consensus, or at least less enthusiastic for scientific triumphalism than we ought to be given the success of modern science. Taking this view, we might say that solid, responsible philosophizing ought always to base its reasoning on what science tells us rather than common sense intuitions no matter how entrenched or seemingly obvious they are. When common sense and science clash, science always wins – that is at any rate a common opinion in our time, at least among intellectuals. In this sense, one might suppose that to endorse a philosophical theory of time possessing a strong commitment to Presentism, even if logically permissible, is nevertheless to choose what is almost certainly bound to turn out to be false, in which case one is betting on a likely loser.

 I don’t have the space here to deal with these misgivings in detail, so I will just make two comments. First, given the kind of theory relativity theory is, we ought not to be very sanguine about its metaphysical implications. Second, we have good reasons for supposing that, like other past scientific theories about which virtual hegemony has been reached only to collapse in a scientific revolution, Special Relativity will prove not to be the last word on the nature of space and time, so that to build a philosophical account of time that presupposes the truth of that theory may well be to build on sand. Let me briefly elaborate on these points.

 Minkowski spacetime is a theoretical construct, in particular, a mathematical model for space and time as noumenal realities transcending perceptual experience. Since it is a mathematical model consisting of a set of equations whose parameters take various numerical values, the relations it models are essentially relations between these mathematical values. Since the noumenal world presumably is not a mathematical construct considered in itself, Minkowski spacetime can at best be an analogue of noumenal space and time, in some sense structurally isomorphic to the transcendent realities it represents to us in a manner intelligible to our limited intellects. Further, given that Minkowski spacetime is an abstract, idealized mathematical model of something concrete and physical, we have no guarantee that Minkowski spacetime is not merely an incomplete or only partially adequate account of the noumenal realities it represents and thus something other than a *literal* description of noumenal space and time. For my part, I am persuaded that much of the impetus for the claim that Presentism is inconsistent with Special Relativity arise from the fact that there is a strong tendency for proponents of tenseless theories of time to talk about Minkowski spacetime as though they were talking, not abstractly and ideally about a mathematical construct, but concretely and literally about noumenal space and time themselves. However, that is a gratuitous assumption and one that, given we have no way of confirming by a direct comparison of Special Relativity with the noumenal reality we suppose it to describe, we have no way of showing to be true. Thus, from the mere fact that within the perspective of Minkowski spacetime we have no way of making sense of the notion of absolute simultaneity, this does not entail that no such thing can exist in reality. If we have credible non-scientific grounds for believing that Presentism is true, this may simply imply that Special Relativity is limited or inadequate in some respects to the description of the reality to which it purports to give us insight, rather than being the complete and literal truth – the last word – on the topic of space and time. In that case, even though physics does not have room for a notion of absolute simultaneity and does not even need such a notion for theoretical purposes, it does not follow that there is no such thing in fact. Again, if we have good, extra-scientific reasons for supposing this to be the case, then nothing that science tells us can rule out our recognition of that reality as somehow irrational.

 Moving to the second point, candid observers of the current state of scientific theorizing know that there are good reasons for supposing that Relativity Theory is very likely not to be the last word, even in physics itself, concerning the nature of space and time. First of all, there are numerous paradoxes (the paradox of the twins being the most well-known example), i.e. apparent contradictions, that result from taking Special Relativity to be the complete and literal truth about space and time. These counter-intuitive consequences are handled by philosophers of physics in the same way that the contradictions involved in the Cantorian account of infinity are handled by philosophers of mathematics – they are simply accepted as the logical consequences of the theory and justified on the grounds that, when talking about spacetime or infinite sets we are simply dealing with notions that exceed, and thus are not bound by, our ordinary notions of what properties are logically compatible or what states-of-affairs are logically impossible. No one, least of all scientists, ought to be satisfied with this sort of evasion. While there is a healthy conservatism that keeps us from being too easily dissatisfied with reigning ideas, this can often be confused with a complacency that creates hostility to the possibility of new ideas, especially when current ideas are not only so familiar to have become “second nature” to us and also seem to reinforce other extra-scientific opinions and values to which people may find themselves committed to at a particular time.

 Of even greater import is the apparent inconsistency involved in affirming General Relativity and Quantum Theory at the same time, which in turn is beleaguered by a number of well-known paradoxes. Even Einstein, the father of relativity theory, was dissatisfied with the uneasy alliance between these two theories and spent the last years of his life attempting to devise a Grand Unified Theory that would resolve and remove these inconsistencies and paradoxes from the very heart of physics. Other physicists have continued down to the present time to pursue a “theory of everything” of this kind, though as yet without success. However, there is no reason to suppose that a better theory cannot be found and will not be found, in which case any philosophical speculations grounded on current theory may well be shown to be superseded in such a way as to have, as Descartes’ physics has, no more than historical interest for future generations. Given this, philosophers need to take our current scientific theories seriously and treat them respectfully; at the same time, however, they cannot allow physicists or anyone else to put limits on what counts as legitimate theoretical inquiry.

 It is often argued that the success, progress, and tendency of the hard sciences to produce consensus among sincere inquirers are marks of its superiority to philosophy. However, this consensus is only of interest to philosophers if the kind of success, progress, and consensus thereby produced represents the acquisition of the actual truth about the nature of things. A case can be made for this in some sciences more strongly than others. In physics the case is surely the weakest. Aristotelian physics was useful, and so was Newtonian mechanics, at least as far as they went, so by that standard were largely true even though we now reject them. More than this, there is rarely any direct relation between the development of technology or invention and developments in theoretical science; quite commonly the former precedes and inspires the latter or is only the accidental byproduct of pure inquiry untrammeled by practical concerns. Nor is there any proof that continued adherence to Aristotelian physics, say, would have prevented the invention of the airplane. Indeed, the kind of genius evinced by a Franklin or an Edison is of an entirely different order from that evinced by a Newton or an Einstein.

Further, it is difficult to find a greater consensus among the learned than was enjoyed by Aristotelian physics in 1450 or Newtonian mechanics in 1880. Yet in both cases, each was overthrown by a scientific revolution beginning within a few years of those dates. There is no reason that the same cannot happen to the theories we accept now despite the impressive concurrence of opinion among the learned based on the examination of the relevant empirical evidence. Of course, we currently have no better theories than those we have here been discussing, and really no idea of what the shape of what better theories along these lines might be – necessarily so, since to have such an idea would be already to envisage and so possess such theories, at least in embryo. Yet, even if better theories are not in the offing and are never found, this does not entail that the theories we possess now are even likely to be true, let alone the final truth about nature, even if they prove to be the last words that *we* can say about these matters. It is equally possible that the finite human intellect has simply reached the limits of its ability to understand the noumenal realm and explore its mysteries and we must be content with that.[[5]](#footnote-5)

 Given these circumstances, it is not wise for philosophers to take science as either the touchstone or the foundation for philosophical theorizing. Philosophers’ highest allegiance is to the truth, from whatever source it may come – they must not allow themselves to be dragooned or browbeaten by the proponents of scientism or any other dogma into accepting handmaid status or the notion that there are substantive views that they may not call into question for good and sufficient reasons. Indeed, the increasing use of legal means in order to foreclose what questions may be academically debated, what opinions can be publically stated and propagated from the lectern and the pulpit, and to override objection to participation in various forms of legally sanctioned but morally questionable practices on grounds of conscience ought to be opposed by anyone who has truly imbibed the spirit of philosophy and free inquiry. Instead, philosophy is often nowadays regarded with suspicion because it is always a potential a threat to reigning orthodoxies and forms of life – so it was in the time of Socrates as well. Some things never change, and philosophers must simply accept that this goes with the territory.

Despite all I have said, one might still suppose that since Special Relativity is a well-entrenched part of contemporary science, it nevertheless has greater likelihood of being true than our common-sense intuitions about space and time. As such, it is still irresponsible or at any rate “cranky” to commit oneself to a theory of time that treats Special Relativity as somehow dispensable in order to retain a treasured ordinary belief. However, as I shall go on to argue, temporal passage is not a myth, an illusion, or a merely dispensable, pre-reflective “intuition,” but instead a feature of lived experience that I apprehend with the same extrinsic certainty that I apprehend the fact of my own existence or my nature as a self-conscious rational subject and thus is something about which I cannot be deceived, mistaken or in error. Before I can turn to that argument, however, I need to consider exactly what it is that our experience of time amounts to.

 **The Experience of Time**

 Let us begin our consideration of the nature of time by considering the way that we actually encounter it as part of lived experience. Let us further suppose that such a consideration is not wholly irrelevant to our understanding of what space and time really are. To my mind, the lived experience of time has, at least for our purposes here, the following three elements: duration, passage or flow, and anisotropy. Let us briefly consider each one of these in turn and its contribution to the lived experience of time.

**Duration** Considered as a primary form of awareness, and thus as the “form of inner sense,” time as experienced has as its most fundamental feature that it is something continuous and ongoing, i.e. something persistent. The traditional name for this is *duration*, taken from the Latin verb *durare*, which means to remain, continue, last, or persist. Things endure by being *in* time and persisting *through* time as an ongoing, self-identical subject of predication. Time, however, is not in time and thus is said to possess duration rather than to endure. Time is that which remains, continues, lasts, or persists *simpliciter*. As that which primarily endures, time has to be seen as inseparable from space, “the form of outer sense,” and complementary to it, a kind of field-phenomenon of or ordering-relation for experiential contents as they appear and proceed through the intentional field of consciousness in a manner that does not require motion, i.e. change of place in space. More specifically, the perceptual field is in this sense a space-time manifold of sorts with time apparently the junior partner in the enterprise. Certainly, the temporal *duree* seems unimaginable apart from the experience of space, whereas it at least seems conceivable that space as experienced could exist without the experience of time. Seeing how this is wrong, however, puts us on the right track with regard to understanding the difference between duration and the flow of time.

 Even if I just stare at the uniform expanse of an empty white wall where nothing is changing or moving, I am still aware of that wall as something that remains, endures, persists, lasts, or continues to exist through time, and thus as something that endures in time. My experience of temporal duration and of time as that in which enduring things endure is present even in such a case. It is sometimes said that it is impossible for us to imagine that nothing exists, since even if we evacuate our perceptual field of all discrete objects there still remains empty space. It has never been noted to my knowledge that the same is true of time as *duree*, which accompanies even the imaginative episode of focusing on empty space, which is itself perceived as something that remains, endures, persists, and continues to exist for as long as that imaginative episode lasts. So, then, just as space as the form of outer sense can remain even without contents, so too does time as the form of inner sense remain as well in that condition. Indeed, it may be possible to be aware of the temporal *duree* even apart from an apprehension of empty space, in the form of the “eternal now” of the mystic, who has reduced consciousness to an awareness of a dimensionless point of pure *duree*. There appears to be no comparable experience of empty space without time.

**Temporal Passage** Even thinkers like Bergson, Husserl, and McTaggart who are famous for their investigation of time as lived experience have tended to treat temporal passage as the same thing as duration, or at best an aspect of duration.[[6]](#footnote-6) Duration is certainly a necessary condition for temporal passage and is in that sense the phenomenological foundation for the full-blown lived experience of time, but temporal passage can be distinguished from duration in at least two ways. First, duration is static, continuous, and self-identical. It is remaining, lasting, and existing continuously *as such*, possessing intrinsically neither length, breadth, nor direction. It thus has no internal metric and so neither does time-as-experienced considered as nothing more than duration. Nevertheless, time as experienced does possess measurable length, breadth, and direction and thus is not static. To the contrary, taken in relation to space as the form of outer sense as jointly constituting the field of perceptual experience in which representative mental contents appear, has a regular, steady, and unalterable flow governing the passage of those contents, both mobile and immobile, through consciousness. This passage or flow can be conventionally measured using devices that exist in time and are subject to temporal passage – there is no other way to measure time or to assign dates and times to events conceived of as things capable of being dated, timed, or confined within temporal boundaries, such as a party (February 29th), a lecture (9:30am), or the life of a man (1949-2013). Further, this temporal passage or flow is objective, irreversible, and unalterable by any mode of psychological interference.

Not so where duration is concerned. I get deep in thought ruminating over the nature of time and “lose track of time” while doing so, only to “come to” and realize that two hours have passed and that I have failed to show up for my lecture…again. “Where did the time go?” I wonder, while being only too acutely aware that it has gone. Again, I am listening to a boring seminar paper that just drags on and on and that I desperately wish would finish. The paper seems to take forever and I am more focused on the fact that it continues than I am on what the speaker is saying. When I last looked at my watch it was twenty past and that seems a dog’s age ago. When I look again, however, I discover that only five minutes have elapsed since that time and the speaker’s allotted time is half-an-hour more. I groan inwardly.

 While I can psychologically control neither the direction of time, its rate of passage or flow as measured by clocks and other devices that are themselves “in time,” or what the perceptual contents that form that temporal order will be so long as I am perceiving, how long a given period of time takes to pass for me does seem to be psychologically affectible for me. If I am focused on the duration of a given period of time then it seems to flow much more slowly; if I am focused on something else, I may simply cease to take any note of the passage of time at all. However, the rate of passage that I report in such instances in no way corresponds to the actual amount of elapsed time in such cases as measured by objects, themselves in time, which will be shorter than experienced in the first instance and longer than experienced in the second. The passage of time as measured in this way is always constant, uniform, unidirectional, and related to a series of contents/events that “go on without me,” i.e. occur or happen even if I happen not to be aware of them occurring or happening. Duration, then, is something subjective, in the sense that it is the subject’s contribution to the lived experience of time, and so correlated with the focus of my attention on my mental contents, which in and of itself has no bearing either on the order or progress of events occurring in time on most occasions. This strongly suggests that the experience of time has two equally significant but separable elements: duration, which is subjective, the contribution of the conscious subject to the experience of time, and temporal passage or flow, which is objective in the sense that it is constituted independently of my awareness of duration and thus contributed to my experience of time from an outside source.[[7]](#footnote-7)

**Anisotropy** As just noted, the experience of temporal flow, being continuous but not static, is characterized by a succession of qualitatively discrete contents that are both ordered and irreversible in experience (though not in the imagination). Time as experienced thus has a specific direction in which those contents enter and pass through consciousness, and (up to now anyway) always the same direction at that. In this, time differs from space, which is said to be isotropic or multidimensional and the same in all directions. Like temporal passage or flow, this is an objective feature of time experience, not alterable by any psychological means and so not plausibly thought to have been contributed by the conscious mind to our experience of time. It bids fair, then, to be the contribution of some extramental source of or influence on conscious experience. It is just this sort of claim that will be the focus of the next section of this essay.

 **The Myth of the Myth of Passage**

A common thesis, one that I myself accepted until recently, is that temporal passage is an illusion.[[8]](#footnote-8) What does this mean? Apparently, even for the idealists it does not mean that there is no such thing as temporal experience, that our ordinary belief that time flows is somehow a delusion to which nothing at all corresponds, even in conscious experience. So far as I know, there are no “eliminitavists” about temporal experience beyond those who deny the occurrence of conscious experience altogether. Indeed, even McTaggart, who supposes that time is unreal, admits that the passage of time exists as a feature of lived experience. The thesis that time is unreal (in this sense perhaps first attributable to Augustine of Hippo) has generally meant that temporal passage is merely a feature of human psychology rather than of nature as it exists in itself. The passage of time is merely a subjective feature of human consciousness that does not correspond to anything objectively real existing apart from or outside of conscious awareness. Thus, while it seems to us that time flows and that things are in time and pass through time and change in time, this is mere appearance. By constrast extramental reality, we are told, is in these senses is immobile, timeless, changeless, entirely complete in such a manner that the future is as real as the present and unalterable as the past.[[9]](#footnote-9)

Could temporal passage be an illusion, in the sense of something that is wholly and merely psychological in such a way as to not require us to admit the existence of time in any sense? It does not seem so, since as Peter Geach pointed out many years ago, mental events are also events, and must occur in time in order for the “illusion of temporal passage” to be even so much as possible.[[10]](#footnote-10) Time is thus real *so far forth* and thus the “illusion” of temporal passage is not an illusion, but instead a veridical introspective perception of an essential feature of conscious experience as lived.[[11]](#footnote-11) Further, since we are immediately and incorrigibly aware of temporal passage as a feature of conscious experience, this is not something about which we could be mistaken or deceived, any more than we could be mistaken or deceived in thinking that we exist or exist each of us as a *res* *cogitans*, i.e. as a self-conscious rational subject. More than this, this introspective perception bids fair to be the apprehension of an objective feature of consciousness, one that is constituted independently of my will and thus a feature of consciousness given from without.

Having distinguished duration from temporal passage, we are now in a position to note that temporal passage is a feature, not of the experience of duration (which is subjective) but instead of the contents of consciousness as we encounter them in as ordered in both inner and outer sense. Mental contents spontaneously appear in consciousness in serial order, persist there for a while, and then pass out of consciousness in such a way as to be recoverable for us only by memory. The contents of consciousness change over time, constantly superseding and replacing one another as they progress through the intentional field of awareness we call consciousness, a process that continues in every waking moment and which finds final surcease only in death. Although one might appeal to Kantian synthesis to account for this ubiquitous phenomenon, such a view has few takers today, and in any event as we shall see this will not really evade the problem here. That problem is this. These mental contents are given to consciousness *in time* and, as such, it is simply inconceivable that the causes responsible for the presence of these contents in consciousness not be in time as well.

Realists in metaphysics have always contended that our mental contents are caused by allthe external world. Even dualists like Descartes and Locke believed this and, since I am a dualist of their stripe I believe it too. As such, the fact that I am experiencing a particular mental content at a particular time will be due to the fact that some particular extramental reality is at the very least a causally necessary condition for my experiencing that content at that time. Ordinarily, we suppose that the proximate cause of our mental contents is some state our bodies, such as sensory stimulation of the body in one of the sense-organs resulting in a particular brain-state being formed, which in turn makes possible my apprehension of a perceptual content that informs me about how the world is in some respect. However, if some state of my body is to produce a perceptual content in time, even “psychological” time, then it appears that it has to be in time in order to do so. At any rate, there seems no ready answer to the question as to how something entirely timeless and unchanging could bring about a change in time without somehow entering into time to do so, i.e. without becoming temporal. I would go so far as to say that such a thing was inconceivable.

The problem is greatly exacerbated if one is a materialist. Materialists deny the existence of an immaterial soul and generally refuse to allow any independent status to consciousness altogether, treating consciousness as at best supervenient on matter and as lacking any irreducible causal powers. Many materialists go farther than this and reduce/identify mental states with physical states of the body, most commonly states of the brain. Mental events, however, are in time; so if mental events are nothing but or are (in some sense that has never been made tolerably clear) identical to brain states, then by Leibniz’s Law, brain states must be in time as well. So too, then, must be the brain, the thing of which those brain states are states. In a like manner, if the brain is in time, then so too must be the body, since our brain-states have their origins in other states of the body, so that if they are to affect the brain in time, those bodily states, and thus the body whose states they are, must also be in time, and thus temporal in nature. In turn, the states of the body have their origin in interactions of that body with other, external bodies. Given that the body is temporal, it seems that those external bodies must be temporal as well, in order that it may be possible for them to interact with our body in such a way as to be productive of our conscious experience of the external world. In that case, we have good reason to suppose that the entire external world is in time as a necessary condition for the possibility of the existence of the “psychological time” that is supposedly constitutive of the myth of passage.

In the same way, it appears that a consistent materialist cannot be a Four-Dimensionalist or embrace Special Relativity as a literal description of space and time considered as noumenal realities. Four-dimensionalism requires both Eternalism and the tenseless theory of time in order that there may be a changeless “block universe.” Yet, as I have just shown, from the very fact that there is such a thing as the experience of the passage of time, time as so experienced must exist, and if realism is true, must be a feature of the external world conceived of as in some way causally involved in the production of my mental contents, their order, and their progress through consciousness from their first appearance there until they cease to be recoverable as perceptual contents. Further, to the extent that the reality of temporal passage is incompatible with adherence to Special Relativity as literally true about space and time, materialists are also disbarred from embracing SR as anything more than an analogical mathematical model of space and time. In that case, the materialist’s plight is identical to that of the Presentist who affirms the reality of temporal passage as more than merely “psychological” and so denies the Myth of Passage. Given this, the lonely Presentist may be heartened by the fact that he or she has gained so much unexpected company.

Of course, this argument (inspired in large part by Kant’s “Refutation of Idealism”) will not impress skeptics like Hume or Idealists like Berkeley or McTaggart, who doubt or reject the existence of an external material world and thus deny that our mental states need have external material causes. What does seem to follow is that one cannot affirm, all at the same time, the lived experience of time, materialism, and the 4D worldview (with or without SR). This seems to leave us with three options:

1. Deny temporal passage, even of consciousness as lived experience
2. Affirm Realism, reject 4D and reject SR as a literal description of noumenal space and time.
3. Reject Realism (including materialism) and embrace Skepticism or Idealism.

The first of the alternatives, which we might call Eliminativism about temporal passage can, I think, simply be dismissed as obviously false on the ground that, given that the “illusion” of time requires temporal passage for that illusion to occur, I am extrinsically certain that temporal passage belongs to lived experience and therefore that temporal passage really occurs. Since I know this with a certainty that equals that of my knowledge of my own existence and of my existence as a self-conscious rational subject, nothing that science or skeptical philosophy tells me could possibly show me otherwise, since nothing that science or philosophy could tell me would even be conceivable for me if that claim were false. The second view is essentially the view that has been defended here, i.e. Presentism, according to which temporal passage is a feature of reality as it exists in itself, there is no block universe, and there is an open future that can be causally affected from the present. To concede this view would be, in essence, to throw in the towel but those who find themselves committed more deeply to materialism than they are to 4D or the literal truth of SR may still be inclined to accept it. Those more strongly committed to 4D or the literal truth of SR than they are to Realism may well find Idealism, which is in fact the philosophy that both inspired and is most consonant with Relativity Theory and Quantum Mechanics, the preferred option. I leave this choice to the reader to ponder; my own should be evidently clear from what I have said. Of course, if Eternalism is true, then there can be no past, present, or future because we live in a block universe that excludes the possibility of time or change in the senses that the Presentist attaches to these terms; everything always exists and all times are eternal-simultaneous.[[12]](#footnote-12) However, whether or not Eternalism is true crucially depends on whether or not temporal passage actually exists/occurs. If it does, then Eternalism is false, so it will not do to argue from the truth of Eternalism to the impossibility of temporal passage. Therefore, given that we do in fact have incorrigible proof for the existence/occurrence of temporal passage as part of lived experience we can safely put aside McTaggart’s *a priori* proof to the contrary as fallacious.

1. Michael Dummett is perhaps most well-known of these; see “A Defense of McTaggart's Proof of the Unreality of Time,” *The Philosophical Review*, Vol. 69, No. 4. (Oct., 1960), pp. 497-504 and “The Reality of the Past,” in *Truth and Other Enigmas*, Cambridge, MA, Harvard University Press, 1978, 358-374. More recent proponents of the argument include D. H. Mellor (see below). [↑](#footnote-ref-1)
2. See *Space, Time, and Spacetime,* Los Angeles, CA, University of California Press, 1976, 276. However, he immediately goes on to retract this claim – see page 277. His counterexample to Presentism supposes that there could be two individuals, existing at the same time in different reference frames, for whom events future to one are present to the other. The difficulty with this, as he himself points out without grasping its full import, is that there is no sense to be made of the notion of two individuals existing at the same time in different reference frames apart from the very notion of absolute simultaneity that has no foothold in relativity theory. At best, we would have to specify this from a third reference frame and an observer capable of judging this, and there is no need for accede in this supposition. Indeed, it simply raises the same problem all over again. [↑](#footnote-ref-2)
3. See W. L. Craig, *The Tenseless Theory of Time*, Dordrecht, ND, Kluwer Academic Library, 2000. [↑](#footnote-ref-3)
4. Ned Markosian, “A Defense of Presentism,” in Dean Zimmerman, ed., *Oxford Studies in Metaphysics*, Vol. I, Oxford, Oxford University Press, 2004, 47-82. Markosian discusses many other objections to Presentism, most of which concern how to understand the truth-conditions for statements about non-existent things, and is well worth reading on that score. For my part, I have no interest in this topic. [↑](#footnote-ref-4)
5. Being a Cartesian theist, I am optimistic that better theories will someday be discovered. Atheistic materialists, by contrast, have no reason to suppose that any theories are true. See my “Descartes Refutation of Atheism: A Defense,” also on this website and my book *The Proof of the External World,* Eugene, OR, Wipf and Stock, 2008. [↑](#footnote-ref-5)
6. See Henri Bergson, *Time and Free Will*, New York, Dover Publications, 2001 (originally published 1889), Edmund Husserl, *On The Phenomenology of the Internal Consciousness of Time (1893-1917)*, John Barnett Brough, trans., Dordrecht, Kluwer Academic, 1991, and J.M.E. McTaggart, *The Nature of Existence*, 2 volumes, Cambridge, Cambridge University Press, (Vol. I) 1921, (Vol. II) 1927. [↑](#footnote-ref-6)
7. I have discussed the details of this in terms of the relation of the soul to the body on Dualist principles elsewhere; see my “Mind, Body, Space, and Time,” also on this website. [↑](#footnote-ref-7)
8. For a stout defense of this thesis, argued with force and acuity, see Robert C. Coburn, “The Passage of Time,” in *The Strangeness of the Ordinary*, Lanham, MD, Rowman and Littlefield, 1992, 91-119. My only defense against Coburn’s devastating critique of the doctrine of temporal passage is the one given here: it is impossible to make sense of the experience of temporal passage without supposing that temporal passage is objectively real. The question cannot be decided solely on the basis of abstract philosophical argument. [↑](#footnote-ref-8)
9. Growing block theorists, like C. D. Broad and Michael Tooley, are exceptions to this, but I do not propose to take up their view here. [↑](#footnote-ref-9)
10. Peter Geach, *Truth, Love, and Immortality,* Berkeley, CA, University of California Press, 1979, 102-103. See also his essay, “Some Problems about Time,” in P. T. Geach, Logic Matters, Berkeley, CA, University of California Press, 1972, 302-318, especially 304-308. Geach rejects Cartesian dualism, I embrace it – otherwise, we agree about the nature of time, at least in this context. [↑](#footnote-ref-10)
11. As Geach (op.cit., 305 and references) points out, McTaggart had used a similar argument to prove that pain, error, and pleasure cannot be merely illusory and so here is hoist on his own petard. [↑](#footnote-ref-11)
12. For the notion of e-simultaneity, see Norman Kretzmann and Eleanor Stump, “Eternity**,”** *Journal of Philosophy,* 78 (8):429-458 (1981) [↑](#footnote-ref-12)