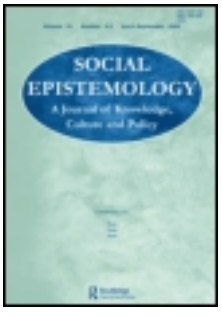

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Dwight Holbrook[a]
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Is Present Time a Precondition for the Existence of the Material and Public World?

Dwight Holbrook*

Proposing that all there ever is in the material and public world depends on, and arises out of, there being a present time, this paper sets out by describing two approaches to the NOW, or present time, these being an everyday understanding approach and a counter-intuitive approach. The former is distinguished and positioned in terms of Heidegger's "ordinary understanding of time", insofar as that relates to present time. We then take up this first approach, discussing five of its fundamentals or axiom-like features postulated as both self-evident and immutable relative to knowledge's changing perspective. In the course of the discussion of both approaches a distinction is drawn between, on the one hand, the "knowing" that is incumbent upon the first approach and, on the other hand, the knowledge paradigm upon which the second approach to the NOW is premised. The aim of the paper is to show that the second approach fails, and that it is only by means of the immediacy of the NOW (as given to everyday understanding) that a material universe arises which stands as other, and in autonomy to, the subjectivity or psychological processes of the observer.

Keywords: Presentism; Now; Time; Present Time; Temporal Present

> On the scale of cosmic events——one black hole swallowing another——how could the now, the momentary present, possibly matter? (Holbrook)

Dwight Holbrook has served both as contract professor and senior lecturer in the English Department of Adam Mickiewicz University, Poznan, Poland, since 1996. His published articles focus on the issue of knowing by acquaintance and the tension between the experiential now and conceptions of measured time. His book "*The Wickham Claim*" involved a legal controversy over an island (Robins Island) that had been confiscated from a British loyalist during the American Revolution. Correspondence to: Dwight Holbrook, School of English, Collegium Novum, Adam Mickiewicz University, Al. Niepodległości 4, Poznan 61-874, Poland. hdwight10021@yahoo.com

> The length of time of a human life, compared to the range of cosmic time-spans, appears insignificant, whereas it is the very place from which every question of significance arises. (Ricoeur 1990b, III, 90)

What we call present time has been cryptically described as——"the darkest in the whole series" of past, present and future (Bricklin 2007, 65; citing James 1950, 341), a "big problem for a modern day theory of consciousness" (Metzinger 2010, 34), the "significance" of which gets "covered up" (Heidegger 1962, 474 [422]), analytically gridlocked by a "multiplication of aporias" (Ricoeur 1990b, III, 241). Inscrutable as it is sometimes taken to be——and oddly in contrast to such attributions——this so-called present time or the "NOW"[1] is given to immediate understanding when bandied about in everyday colloquialisms like "this very moment", "this just in", "as I'm speaking", "live from Burbank, California". The strange bipolarity of this swiftly grasped/yet ungraspable NOW has been repeatedly noted, especially in the context of Augustine's oft quoted aphorism about the elusiveness of time.[2]

With the above in mind, we adopt a dual approach to this NOW——what Ricoeur terms "the lived experience of time in its immediacy" (Ricoeur 1990b, III, 241). As a first approach, we will direct our attention to that face or aspect of the NOW given to everyday understanding. By "everyday" we mean swiftly grasped, consensually based, while yet being as well the type of understanding and knowing that comes "by acquaintance", as Russell and others have used that phrase.[3] Included in that discussion will be certain reasoned implications that arise from this everyday understanding. These become pivotal as we reach our later conclusions. In short, "everyday", as used in this essay, is not to be confused with "superficial", "naïve" or "uniformed". Following this first approach, we turn to the second side of this Janus-faced Now. Here, understanding will be weighed in terms of the covert and hidden. That is, for insight into the NOW, we will adopt counter-intuitive strategies highlighting the role of interpretation and cognitive schemata as fish hooks to the recondite. By these twin means (the first and second approaches), it will be the purpose of this paper to demonstrate that what we label "NOW" or "present time", far from being a mere gimmick of conversation or mere phenomenal property of consciousness, is in fact determinative of nature and the material universe as a whole. Note that we mean by "material world" that paradigm of external reality presupposed when one undertakes empirical testing and measuring from a third-person perspective. We shall have more to say on that later.

The Everyday Understanding of the NOW

The everyday understanding of the NOW can be compared, as a starting point, to Heidegger's "ordinary understanding of time" in *Being and Time* insofar as the "time" he speaks about there pertains to present time in particular.[4] What he has to say about this constituent of common understanding is, first, that it "consists,

among other things, precisely in the fact that it is a pure sequence of 'nows', without beginning and without end …". (1962, 377 [329]) "Thus for the ordinary understanding of time, time shows itself as a sequence of 'nows' which are constantly 'present-at-hand', simultaneously passing away and coming along" (474 [422]). These nows are fluid, borderless: "Every 'now', moreover, is already either a 'just-now' or a 'forthwith'" (476 [424]). And yet, "[n]o matter how 'far' we proceed in 'dividing up' the 'now', it is always now".[5] (475 [423]) Furthermore, it is something "'that we understand without further ado', and 'quite naturally' bring to expression" (459 [407]). And finally as to what is pertinent here, Heidegger draws a close connection, one he does not spell out in detail, between the "sequence of Experiences 'in time'" and the commonly understood nows. "[I]n this sequence of Experiences, what is 'really' 'actual' is, in each case, just that Experience which is present-at-hand "in the current 'now'"" (425 [373]). "[O]nly the Experience one is having 'right now' is 'actual', . ." (426 [374]).

It should be emphasized that this picture of the ordinary understanding of time (as it relates to the Now) is what Heidegger deems inauthentic, unvisioned, shorn of the hidden and primordial, including that disclosure which comes by way of Dasein.[6] But it is this very upfrontness, this "'immediately' intelligible and recognizable" time (460 [408]) that Heidegger denigrates, which we will take as our point of embarkation along a course of understanding stigmatized as "the *naïvete* of a haphazard, 'immediate' and unreflective 'beholding'" (61[37]). [italics his]

And so we proceed on this first approach to the NOW by asking how everyday understanding in terms of the immediately intelligible, an immediate and unreflective beholding, can serve as a pathway to knowing on the subject of our investigation. Is this, in fact, possible? Is not this kind of beholding merely impressionistic, something that almost inevitably gets corrected by the mediation of thought and reflection? Such a query, of course, challenges the very legitimacy of our first approach.

Let us answer by positing some fundamentals of the NOW's upfrontness, showing on what ground level they manifest and how in each case a counter-hypothesis denying the fundamental leads to a self-contradiction.

Fundamental 1: Knowing Takes Place Only in Present Time

The radical constructivist Ernst von Glasersfeld writes:

> [I]t is impossible to compare our image of reality with a reality outside […] because in order to check whether our representation is a 'true' picture of reality we should have to have access not only to our representation but also to that outside reality *before* we get to know it. (Glasersfeld 1981, 89 [italics his])

Whatever support this quotation might give to radical constructivism, it in any case *is* an affirmation of knowing's place in time, and, by obvious implication, of knowing's place in an immediate present time. Glasersfeld describes this knowing in terms of the mind's image or representation making of external reality. What is

important here is that he describes it as a temporal event, an activity in time, features made salient by the "before" and by the "get to know" verb formation that stresses the occurring of an action rather than a static condition (Cp. the static "He knows these facts"). What this translates into, from an everyday perspective, is that there is no view from no when (What that "when" implies in terms other than measured time we take up elsewhere).

Try knowing anything before or outside the moment when you come to know or acquire knowledge of it. Whatever it is you have come to know, however much thought or reflection you may have put into knowing it correctly, there is no possibility——no conceivable way——of it being something you know unless this act of apprehension occurs in the first place. While that might strike as a truism, it nevertheless leads us to this important question: is the implication we have drawn above correct? Is this occurring of knowing——the construction of it as a temporal act——tantamount to saying that knowing takes place only in present time?

At first glance, the question would seem to answer itself. What can an occurrence be, as a temporal act, if not something that takes place in a present time, whenever that present time might be? The underlying issue, however, is where this temporal act, this occurring we call NOW, is taking place. Do we situate it in the mind or outside? Within our cognitive faculties or outside? Such questions have by some schools of thought been reconstituted in the form of a language debate——do the tenses point outward to the nature and ontology of external reality or merely inward and indexically to the speaker using such tenses? Hence, the opposing sides of that debate, the tense and tenseless (McTaggert's A and B time) theorists. In seeking answers to the where and the when of the everyday NOW, this paper does not move in the language issue direction but does engage it tangentially below and later in Fundamental 3 and in the postscript.

Taking up the everyday perspective as we do here, it can be seen as a commonplace that one cannot step into the same river twice. What this really means is not just that the course of the river changes moment by moment but also that present time cannot be repeated in the exact same way. One NOW of that river is never the same as the next NOW. The question is who or what chooses these NOWs? If it is the job of the conscious mind to do so, how does it go about deciding which one to pick? Why not the NOW of the river yesterday? Why cannot I step into the same river twice? Hence, there must be something about present time that is independent of the provenance of the conscious mind. In that respect, what we have been calling here the everyday perspective accords with the position of time A proponents, the tense defenders. Present time, in the linguistically tensed manner by which language expresses it, implies something outside of the purview of the judgement making capabilities of our mental faculties, and that something——being separate——is of an ontologically separate category. This would explain why our knowing is constricted and delimited by the NOW. The NOW is not of our own making. It would also shed light on why it is so problematic to describe present time without engaging in circular reasoning. The NOW's conduit is immediate,

before judgement and reasoning have managed to get hold of it and reflect upon it. Present time comes by way of knowing, not by way of knowledge capabilities, a point we will return to later. What we can initially do here is pose a different paradigm, namely a version of A instead of B:

	THE SELF'S DOMAIN	EMPIRICAL NATURE'S DOMAIN
Paradigm (A)	COMING-TO-KNOW (apprehended as happening now)	THAT-WHICH-COMES TO-BE-KNOWN NOW
Instead of (B)	COMING-TO-KNOW (judgementally constructed as happening now)	BRUTE TIMELESS EVENT

Finally, we have borrowed Ricoeur's somewhat tautological designation of the now as "lived experience of time in its immediacy". What exactly does that mean and how does it relate to knowing? Treating for our purposes an equivalence in signification between "knowing" and "experience", it becomes obvious that, just as in the case of knowing, a lived experience (of someone awake) comes only in the modality of a present time, or in other words of time in its immediacy. Moving from there, how then shall we understand Ricoeur's phrase in full, the "lived experience of time in its immediacy"? Inevitably, given our take on "experience", the reading must be that it lies within our power of knowing——the knowing that comes by way of experience——to have as its object the NOW itself, this immediacy of time. That may seem disputable. We have spoken above of the NOW of knowing. But can it be said that the converse is equally valid——that there is a knowing of the NOW? How are we to suppose it to be the case that lived experience could bring about such awareness?

I look up at a distant star in the sky. The speck of light is there in my field of vision. But in fact in terms of measured time the source of that light may no longer be there. The star may be extinct. I look at my hand. But in fact am I seeing the hand that is now or the hand that has already slipped into memory? In terms of sensory/neural response time, it is probable that everything in my field of vision is already a not now at the instant I think I see it. Where then is my experience of this present time? Where is it to be found? The proposed answer here is to reconsider where we are looking. Rather than seeking the answer in the content of what we observe, in the discrete objects that capture our attention, another possibility is to direct our attention to the phenomenon of their very coming-to-be-known as we observe them, taking that as indicator of a present time intrinsic as much to the outside world as it is to a property of one's mind.

But the quandary of supposing an empirical now is not so easily dispelled. From relativity physics and the effects of near light speed, another conundrum arises. A conceivable situation can be posited, based on relativity, whereby cosmic traveller B finds himself at a point in his travels where he is "co-situated"[7] with future events relative to person A on Earth, while being likewise co-situated with whizzing space voyager C, who just happens to be equally co-situated with Earth resident A. (cited in During 2008, 21) One might wonder in such a scenario where

to establish the real NOW or, as we have posited it, this coming-to-be-known that marks the present time. Do we locate it in the events which are future relative to voyager B but which are co-situated with Earth resident A? Or do we establish the contemporaneous NOW in events which are co-situated with voyager B but future with respect to earth-residing person A? And where in our plotting of the real NOW does the time frame of C belong? Given the perplexities raised here, would we not suppose it nonsensical to speak of the NOW in any absolute sense, or as anything other than a mere phenomenal property of consciousness? The question, however, is misleading in that it limits ourselves to these alternatives. Understanding the mistake in this requires that we take a closer look at the NOW that is being contemplated in this, our first approach to present time.

The everyday perspective reveals a consensus by lack of consensus: the "NOW" it speaks about has no agreed-upon time frame, no measurable specificity, whether that be in terms of simultaneity or separation between events. (see Fundamental 2, below) Instead, its "NOW" calls forth a world, a mind-matter world where mind and matter are not so clearly distinguished. (Cp. Velmans 2012) An expression like "living in the non-present world" rings of an oxymoron or possibly a reference to mental illness. On the other hand, its opposite—"living in the present world"—points to the very setting that answers to this mind-matter configuration. Let us start with two trivial truths: one cannot know something before one knows it, nor can something come to be known before it comes to be known. These two components, "coming to know" and "what comes to be known" are obviously interrelated epistemically, and yet there is a shift in emphasis in the second of the two. The latter has as its focus the "what", namely the otherness of the outside world, something that is not merely epistemic centered, not merely an extension, product or epiphenomenon of our own knowing. If that were not the case, if the latter referred to nothing more than the former, both notions would lose signification altogether. Furthermore, invariably a part of and understood in the meaning of these two components is their mutual contemporaneity. We use "comes to" and the present progressive "coming to" in describing them so as to elicit the fact of that contemporaneity, something that does no more than echo the trivial truths above. Noteworthy is the fact that the contemporaneity designated here refers neither to measurement nor to a privatized or mere phenomenal feature of mind.

Let us proceed to show how this notion of the NOW, this elicited contemporaneity, diverges from measured time. We shall then take up the question of how it diverges as well from a mere phenomenal property of consciousness.

Fundamental 2: The NOW is not a Measurement or Objectified Configuration

As for the first task, a brief illustration of Einstein's famous twin paradox is instructive. A voyager in outer space, after travelling near light speed, discovers upon his return to Earth that his twin brother on this planet is chronologically older than he is, perhaps already an old man. Time had slowed for the voyager

travelling near light speed, but had remained constant for his twin, according to the latter's inertial frame. Meeting back on Earth, the two discover they do not share the same position point of the present with respect to the measured time that has elapsed, the period of the voyager's sojourn in outer space. Perhaps, however, most startling about their reunion will be the fact that despite their age difference——despite their *measured* time difference——the coordinates of their NOWs will still match——assuming that such a thought experiment could be empirically tested.[8] Note that by "coordinates" we do not imply measurement specifications, anymore than everyday usage elicits measurement specifications for present time. What the above paradox does implicate that is relevant here is that despite their discrepant chronologies, despite their observer-dependent asymmetries resulting from the voyage, the twins turn out to experience a temporal fit, a mutual present time upon the occasion of their reuniting. Having that as common ground they find themselves in a position to compare measurement readings, reach conclusions about observer-dependent clocks, etc. In fact, it is that common ground which provides the means by which to make sense out of notions of synchronicity and asynchronicity, including the notion of "measurement" itself, a point we get back to below.

While the twin paradox gives us a way to differentiate the NOW from measurement, we need not go there to find this NOW-to-NOW temporal fit about which we are speaking. The same phenomenon is right in front of us. A phone call from Poland to the USA is six hours apart, Polish and US time, yet despite the measured time difference, we find the NOW between speakers prevailing nonetheless, occurring in the normal setting of an overseas conversation. But we need hardly limit ourselves to its discrepancy with measurement. Look anywhere and the temporal fit is there. We find ourselves conjoined to what we see about us, conjoined by this NOW to our contemporaneous world. The star I am gazing at, whatever the light's origin billions of years ago, does not suddenly pull me out of my present perception of it. It remains fixed as a present-time manifestation, just as does the river I step into. (Cp. McInerney 1991, 231[9]) The temporal fit is always manifest as one connected to a present-time, a contemporaneous setting. Were it otherwise, were a disjuncture from present time possible, there would be nothing to stop someone's empirical findings of today from suddenly skewing into those of a century ago. Einstein's theories could have foundered on data that was no longer contemporary with his own research. Would he, in fact, have been the same person? In fact, had it turned out that the NOW of his world had been observer dependent or inconstant, one would have to ask oneself what kind of meaning he would have found in observer-dependent measurements. Upon whose NOW and what NOW would that depend?

This is not to dispute the theoretical possibility of acquiring, by maneuverings at near light speed, a temporal fit with a world no longer contemporaneous (in terms of clock time) with the world one has started out with. It is only to say that such an achievement would have to rest on the foundation of some contemporaneous world the astronaut was coming from, including the contemporaneous

rocket the person was flying in. A change of clock time measurements does not entail a change of NOWS.

Having tackled the measurement issue, let us turn to our second task announced above, one which we have already anticipated to some extent. Why is it the NOW is not a mere phenomenal property of consciousness?

Fundamental 3: The Now is not a Mere Phenomenal Property of Consciousness

In his article "The Common Now", Craig Callender echoes the opinion of Butterfield in describing as a "compelling intuition", the everyday sense of present time as extending beyond our own private psychology. "We tend to think of ourselves as sharing a common mind-independent now but aren't tempted by such a claim of the here". At the same time, he finds students having a shock reaction to relativity's "conflict with the idea of a special common now" (Callender 2008, 7). But is there, in fact, such a conflict? From what we have shown above, it can be seen that relativity's conflict is not with a common NOW but with the notion of a universal, observer-independent simultaneity based on measurement. The common NOW we are taking up here does not invoke simultaneity/measurement criteria but points to something quite different: an everyday sense of contemporaneity created out of knowing's conjunction with the known. What would seem incredible from that perspective would be the empirical non-existence of present time and a hypothesized world of observer-dependent NOWS.

Earlier we introduced the term "mind-matter", intimating by doing so that the ontological assumptions of this paper were at variance with the traditional mind/body schema of Cartesian dualism. The framework adopted in this paper takes into consideration some of the milestone changes of outlook toward nature resulting from quantum physics. It is a shift that in its most basic enunciation speaks of things——the basic particles of nature——not as isolates defined by extension and measurement along a scale of units but as "psychophysical events" having an observer-determined and observer-affected character. (Stapp 2010, 203, citing Heisenberg and Von Neumann; see also Stapp [D.O.A. 2012, 6, 18, 31]) The observer is thus no longer outside of nature's picture. Instead of the Cartesian breakdown into a window-to-world spectator/scientist on one side of the divide and nature's exposed truth on the other, the observer's coming-to-know or "intervention" (Stapp citing Von Neumann [D.O.A. 2012, 6]) is integral to what the empirical findings will be.

> Thus the observing equipment in the here and the now, according to our last-minute decision whether to put in the second half-silvered mirror or take it out, has an irretrievable consequence for what we have the right to say about a photon that was given out long before there was any life in the universe. (Wheeler 1982, 14)

What we see here is a conceptual framework in which nature's "truth" is held in a kind of innate abeyance or uncertainty until the experimental procedure, the moment of observing, occurs. In other words, the psychophysical events that are

ascribed to nature, in quantum physics, cannot properly be said to be there, in nature, until the experience of an observation in this or that present time occurs. Given these ontological premises, the NOW takes on a significance far greater than that of a figment or phenomenal property of consciousness. It becomes the temporal variable in the equation that decides what the face of empirical nature is to be. Inasmuch as empirical nature presupposes the centrality of an observation, the observation presupposes the centrality of a NOW of knowing.

But let us dwell a bit, before turning to our next fundamental, on this phrase "mere phenomenal property of consciousness". We define it as a subjective representation or impression of the mind. The word "mere" signifies that this property lacks truth-claim correspondence to any aspect of nature (insofar as nature is understood as separate and other than one's mind). Still, a hermeneutics of that phrase turns up a number of possible readings as to what this now of subjective representation implies. One theory has it that the phenomenal representation performs as a useful tool, a mental gadgetry serving an evolutionary purpose but in no way indicative of social or material reality. (Metzinger 2010, 35; Waterworth et al. 2010, 170, 185) Another view would conceive of the phenomenal present time as a blurred composite of the now and not-now, evident in how memory affects our perception of motion and one's listening to a melody. Still another approach would treat the phenomenal now as constituting a mere false belief, the illusion that the indexical "now" describes a feature of the world or nature (Callender 2008, 6). As for the meaning we wish to elicit from "mere phenomenal property", it can be exemplified as follows. Imagine two people playing tennis, Bob and Tom. Bob's gaze catches sight of the approaching ball and knows it is time to hit it. Tom's gaze catches sight of the ball at the same moment and knows it is not time to hit it but instead to wait and see in which direction Bob will hit the ball over the net. We can pause here and simply wonder at this striking coincidence of two people who happen to share the same NOW, the same instantaneity of this game, of this world, in its coming-to-be-known. One proposal is to explain this co-occurrence as coming about from "temporal integration mechanisms" in our brains (Callender 2008, 11).[10] But is this plausible? It is one thing to attribute consciousness to the mechanisms of the brain. It is quite another to propose that a temporal mechanism in the brain could account for why Tom, Bob, the spectators in the bleachers, the community and beyond, all share one NOW, one co-occurrence, irrespective of infancy or age, or whenever one wakes up in the morning. Far more likely, it would seem, is that a discrepancy would occur——especially if present time were nothing more than an evolution-based faculty of individual brains——a discrepancy perhaps of minutes, days or even light years between Tom's NOW and Bob's NOW.

Let us suppose only a slight discrepancy. Bob sees the approaching ball and swings at it. Tom, however, is in a different NOW zone. The situation we confront here is not one where Tom has re-landed in a present-time world no longer synchronous with the one he grew up in, as was the case with the twin paradox. The situation would be altogether different. Tom would find himself attempting to

play tennis from outside Bob's NOW world. Such a feat presupposes the very concept it purports to negate——a common NOW. In fact, there could be no tennis game in such a set up, no mutuality between lived experiences, no interaction at all between the two players anymore than that between a TV viewer and a player performing in a filmed event from sometime in the past. Given the profundity of that disjuncture, we can propose the following generalization: the common NOW is an unfalsifiable notion when applied to two players, or even the social network of an entire population, or any sentient interaction whatever. For this reason, we will henceforth avoid such terms as "synchronicity" and "simultaneity" when referring to the nature of this temporal unison of the common NOW, for it seems evident that a case of asynchronous or non-simultaneous NOWS cannot be supposed on empirical grounds. I can move from one time zone to another, but not from one NOW to another.

A further complication arises when one contemplates a privatized notion of the now, this one illustrated by a variation on the "colorblind Mary" knowledge argument (Cp. Callender 2008, 5). We imagine that Mary, a brilliant scientist, is sleeping and has a dream. In this dream, she retains full cognitive powers, retains her scientific knowledge and intellectual creativity. Her only limitation is her lack of awareness of an ongoing contemporaneous world, such as we find when we wake up from a dream. But even with that lack of awareness, she has a presentiment, as occasionally happens in lucid dreams, that what she knows and does is only the product of her dream, and that all her empirical investigations are nothing but fantasies in a fantasy world. Then, as her oneiric narrative spins out, there comes a point when she suddenly hits upon a remarkable idea. She conceives of the possibility that there might be a world existing outside of her dream, a world autonomous and free of her fantasies. Obsessed by this intriguing idea, she wishes to test it out by experimental means. But how to do so? Despite all her knowledge, despite the technology and experimental know-how at her disposal, from where can she come up with the kind of temporal bivalve that will enable her to split from her world and connect to an autonomous one? To do so she will need to find time, a special time that is not merely the product of her dream. In other words, to find what she is looking for she will need to have it in the first place. It is not in her dream world. Or rather, in her dream world the NOW she needs has been rendered a mere phenomenal property of consciousness. And that is both the problem and the reason why the NOW we speak about must be other than a mere phenomenal property of consciousness. Science (at least its empirical practice) is not conducted in a head-restricted virtual landscape.

Fundamental 4: The NOW has no Past

One talks about past experiences but not about past NOWs.[11] Of course we can speak of "now" metaphorically to stress its closeness to the recent past——"He was here just now"——or imminent future——"Now is the time to get to work". But for

experiences and events not proximate to immediate present time, the use of NOW in such contexts rings of a malapropism. As pointed out earlier from Heidegger, "[n]o matter how 'far' we proceed in 'dividing up' the 'now', it is always now". We can therefore say that, at least as far as everyday literal usage and understanding are concerned, the NOW——even without defined and measured borders——is temporally rooted in being what it in fact is, "the lived experience of time in its immediacy".[12] This is not simply to state a tautology. What is implied by this is that the NOW cannot move to a not-NOW zone. Hence, knowing cannot move to a not-NOW zone.

What we are driving at is this: the NOW, being temporally immobile, has no past, no state of NOW in the past, no history in the past. Reflecting upon this statement, one might well wonder how there could be a real present time at all, how such a thing could exist, there being no trace of it, no derivation or explanation of it, from so much as a moment ago.

An analogy is helpful here, this one having to do with quantum world particles. According to one interpretation of quantum theory, the "existence" of such particles "may not be conceived of in any specific form available to our thinking, beginning with those attributes of (wave or particle) motion that define classical physics, but ultimately extending to all conceivable attributes. Accordingly, the term 'existence' or any other term referring to quantum objects ('quantum' and 'object' included) is ultimately inapplicable" (Plotnitsky 2004, 31). Nonetheless, evidence can be shown in the laboratory that these particles are at least something, something other than a mere phenomenal property of the conscious observer, who might be daydreaming or imagining things. That evidence comes in the form of particle tracings on detection screens, and it is the record of these quantum tracings that constitutes their narrative past, their having been. By contrast, the NOW lacks evidence even so much as that. No tracings. No measurement readings. No evidence of anything enduring in calculated time. As Aristotle and Augustine have pointed out, any attempt at tracking a duration for what is happening now ends up including portions of past and future on either side, with nothing to show in the middle.[13] And yet, even with nothing to show by way of recordable evidence, to suppose on that ground that the NOW is mere illusion is hardly conceivable given the fact that one's conceiving of that or anything else is rooted in one's doing it at this or that present time. In other words, it is rooted in a Now of knowing. One would be nonplussed in attempting to do it at an alternate time, in a not yet of tomorrow or an already has been of yesterday. Hence, one cannot so easily dispense with the NOW——even with its lack of detection on recording instruments——being at risk of presupposing it in any case.

Still, arguing from the other side of the playing field, one might contend that there is a past of the NOW and that it is found in memories, which after all are recollections of present-time experiences. Are they not proof of a predecessor NOW? The question steers us into phenomenological territory but can be simply answered. Memories retrieve much of what once occurred in a present time and play an equally vital role in our recognizing, and having psychological access to,

what is occurring in our immediate present-time surroundings, as the corrosive effects of Alzheimer's make clear. On the other hand, it stands as equally evident that whatever one remembers cannot be equated to the occurring that goes on in our immediate, present-time surroundings. Otherwise, we would be living in our memories, not in the world. Even if one defines memory as "lived experience", this is merely to switch labels. Whatever that "lived experience" might signify, it would be other than the embodied experience discussed in these pages, the kind of experience one wakes up to after a dream.[14] By way of underscoring our underlying theme here——this recalcitrance of the NOW to memory——it may be useful to quote an advisory about "non-indexical conditioning" taken from Neal (2006): "One should always condition on [*sic*] all evidence——not just on the fact that you are an intelligent observer, or that you are human, but on the fact that you are a human with a specific set of memories".

The NOW "is always now".

Let us conclude this section with a second look at that statement. While obviously tautological, we nevertheless discern a relevant significance here. Contemporaneity, the experiencing that comes with living in a social and material world concurrently with others, cannot be separated from itself. I cannot hold to this contemporaneity and, from that foothold, latch onto another present time in the past or future. Whenever I am, that is my contemporaneity, my NOW. Hence, the truism: having knowledge of the past or future is not the same as living (and knowing) in those times. Useful here is Ricoeur's distinction as to the kind of past that history studies have access to.

> For if this lived past were accessible to us, it would not be so as an object of knowledge. For, when it was present, this past was like our present, confused, multiform, and unintelligible. Instead, history aims at knowledge, an organized vision, established upon chains of causal or teleological relations, on the basis of meanings and values. (Ricoeur 1990, 99)

Putting it differently, we can say that history's past is not about the NOW, nor about lived or contemporaneous knowing. Rather, it belongs in an altogether different category, being an object of knowledge, of what the faculties of mind (including memory) bring to bear on the subject. In short, we should not be surprised if it has nothing to say about the phenomenon of the NOW.

That distant star whose glimmer in the sky, after innumerable light years, is only now reaching my eyes——how far back in history or pre-history shall I estimate its NOW? The very question implies a false premise. It implies that knowledge can do the trick of finding a present time other than my own.

Fundamental 5: The NOW is that which gives the Material Universe its Autonomy and Non-Solipsistic Character

Heidegger writes in *Being and Time*, "*Only as phenomenology, is ontology possible*" (Heidegger 1962, 60 [35]). [italics his] The everyday approach to the NOW,

however, tells a different story. The story it tells is not that of one knowledge field holding fleur-de-lis preeminence over another, but of the indispensability of another type of knowing altogether, without which all knowledge——even if it could be conceived as such——tailspins into a virtual exercise in a virtual world.

But the claim of Fundamental 5 is even more far reaching: deprived of the kind of knowing which the immediacy of the NOW is here proposed to give us, not only does knowledge tailspin into a virtual exercise but the material universe itself tailspins into a virtual fabrication. Its ontology becomes none other than one's own. In that case scenario, the notion of other observers obscures into abstraction; one observer sealed in her private, subjective world takes on the only intelligible manner of existence, the others having at most transformed into a theoretical construct not unlike that of parallel worlds.

How is this possible? How is it that the NOW should play such a pivotal role? And what is it about the NOW that it, in itself, could also be its *knowing*? Tackling the first two questions requires us to ponder a little further on the NOW's delineation, or more precisely its lack thereof, and to avoid the presumption that "knowledge"——i.e. that which gets transmitted through memory——can do the job of revealing the face of present time more than it has the capacity to do. Having done that, we can then turn to the last question.

We have said that "absence of present time" runs up against the contradiction of presupposing what is being denied. This constraint acts upon all human knowledge claims. To know necessarily implies the provision of a present time to know it in. One might be said to know about something inscrutable, in the quantum world, something far from oneself, in the distant past or future. Even so, however apart or abstractly differentiated from the observer, an object of knowledge teeters its existence on present time, however brief that may be. To conceive of knowledge otherwise, with present time removed, is only to be fooled into the contradiction. The same applies to classical notions of "observer-independent" nature and "observer-independent" material universe.[15] However observer independent they are, we cannot withdraw present time from our knowledge of what they are without rear-ending into solipsism and an observer-dependent NOW, a problem raised in our discussion of Fundamentals 2 and 3.

Nothing about this challenges the bedrock assumption upon which the empirical sciences——including quantum physicists and its investigation of the "transempirical" world——proceeds: namely, the assumption of nature's otherness, that the material universe is not simply a mirror image of ourselves, our thoughts and imaginings. What only threatens that assumption is when the NOW is deemed to belong inside the observer's head instead of outside of it. A universe of observer-dependent NOWs is not a universe at all in a separate sense but a virtual projection of someone's private world. Hence, there has to be something else to this NOW, something outside, a temporal alignment that enables coordinated responses, a distinction that enables us to recognize a dream, a third-person evolutionary cosmos that enables us to dispense with the NOW even as, *at the same time*, the cosmos' autonomy and non-solipsistic character rests on the very

foundation dispensed with. The autonomy of nature is the NOW's most glaring evidence of itself.

And what of that third question? How is it that the NOW both lies at the root of nature's otherness and is, by its very immediacy, a knowing, a recognition, that this is so?[16] How can such a mix of this sort——a con*fusion* of epistemology and ontology——be possible? To answer this, we should note that what confronts us here is a delineation issue, one involving traditionally separate categories of knowledge. When it comes to the NOW the big question is whether mutually exclusive delineations of this kind apply, including those of subject/object or feeling/knowledge (Callender 2008, 6). Heidegger writes, "*Understanding of Being is itself a definite characteristic of Dasein's Being*" (Heidegger 1962, 32 [12]) [italics his]. It is this type of rescinding of dichotomies that seems particular pertinent when staking out the territory of the undifferentiated NOW. "As for 'knowing': it suggests a distinction between the knowing subject and the thing constituted as object of knowledge by the act of knowing that I also reject as inapplicable to acquaintance-knowledge; perhaps one might better say 'the knowing is the being'" (Strawson 2006, 254).[17]

Behind all this, however, lies a far more fundamental issue, one that concerns the jurisdictional limits of analytically imputed questions where the answer is expected to be framed in terms of delineation and dichotomy. Such would be the question——What and why is there this NOW? Or, for example, why does the observed world exist? "[T]he word 'why" loses its meaning when it becomes logically impossible to go beyond what one is trying to explain' (Edwards D.O.A. 2011). However, when Dennett (1993, 205) rhetorically asks——"Where, then, is the Archimedean point from which you can deliver your benediction on science?"——and then answers——"There is none"——, we might dispute that jurisdictional limit, not on the basis of dichotomous reasoning, but on the basis of an everyday understanding of the NOW. It is that everyday understanding which recognizes a dream as "only" a dream, as much as it recognizes one's everyday surroundings, and nature as a whole, as standing apart from one's private thoughts and imaginings. And here we see how our first approach takes stock of nature's otherness. It does this by means of a knowing that comes out of our waking attunement to our surroundings——that comes out of our being conscious of such an attunement, one that both connects and separates us. That is where this approach finds its Archimedean point——not in a knowledge about nature founded on absolute objectivity, but in a knowing that arises out of the very condition of being in touch with one's moment-by-moment world.

Approach 2: The Counter-Intuitive Understanding of the NOW

But let us return for a moment to Dennett's comment above and take it to the full extent possible, even as regards knowledge *and* knowing. What are we to understand by the absence of an Archimedean point? The context of Dennett's discussion is the selective forces about which Richard Dawkins speaks——"the selective

forces that scrutinize scientific ideas". The issue raised in Dennett's gloss on Dawkins is to what extent these evolutionary selective forces that sift "good" from "bad" scientific ideas are to be understood as virus-like, determining how we think and how science proceeds.[18] What lurks by implication in the background is a further question close to the crux of this essay: namely, to what extent are we humans nothing but a product of these forces?——which translates as a variation on the solipsistic theme. Taking the absence of the Archimedean point at face value, it would seem we are again thrown into a specious version of "material universe" by implication, fabricated this time not by the constriction of an observer-dependent NOW but by the program or "ideology" of these selective forces unleashing their own virus path of instruction as to what we are to be molded into thinking nature is. As for nature itself and the material universe at large, anything about them other than what the program of the selective forces instructs gets lost in virtual mist.

All of which leads us to our final question of this essay. And it is this: as opposed to our first approach that would treat present time as the manifestation of nature's otherness and nature as the manifestation of present time, might there not be an alternative path of investigation, a counter-intuitive approach to the NOW that could *explain* present time without eviscerating the meaning of "material universe" and the empirical sciences that investigate it? Let us be clear what this second approach is about and how it is different from the first. We are not talking here about *another* knowledge approach to the NOW. We are talking here about a knowledge approach in the first instance, the notion of applying a knowledge (i.e. which gets transmitted through memory) to present time, as opposed to our first approach utilizing a "non-dichotomous"[19] way of knowing.

This second approach is what was briefly alluded to and marked out at the beginning of this essay. Broadly speaking, it offers us two categories of how to conceptualize the NOW as an object of knowledge. In the first, present time (the NOW) is conceived in the manner of a purely phenomenal object——or in other words, as an observer dependent NOW (Cp. Fundamental 3 above). The face of this NOW, whatever intentional content it can be said to have,[20] is not such as to expose or suggest an ontology and autonomy of the material world. Its world is, instead, ideational, one characterized by "temporal idealism" (McInerney 1991, 8). On the other hand, in the second of the two categories the NOW is objectified as a feature of the material world and universe. Here, it takes on a description according to third-person strategies of detection. In this respect, it becomes comparable to a configurable object of nature by virtue of its distancing from the purely subjective realm. In neither case, however, does our second approach as a whole, being counter-intuitive, give accommodation to the schema we have discussed above, that of a way of knowing that would give rise to both the otherness of a NOW-dependent universe as well as the non-otherness of a NOW-dependent observer.[21]

Apart from providing a few examples, no attempt will be made within the scope of this paper to engage in any but a brief discussion of these two knowledge

paths of the second approach or give an accounting of their architects in intellectual history. (For detailed analysis of the former, see McInerney 1991; Ricoeur 1990b, III, 12–96) Nor will it be within our scope to provide more than a cursory look at why each of these two paths fails to overcome its own inherent pitfall——either by weighing the scales in favor of a mind-first conceptual framework that vitiates nature's otherness——its autonomy as empirical testing ground——, or by weighing in a reverse direction, in favor of a NOW-incorporated nature, whereby the NOW becomes subservient to, and fitted neatly into, third-person delineations and theoretical constructs (which remain just that until we succeed one day in accomplishing the feat of getting to know "*before* we get to know it").[22]

Three examples will be the extent of our sketching out of the cul-de-sac in these knowledge paths to the NOW.

When Heidegger writes in *Being and Time* that "Dasein itself——and this means also its Being-in-the-world——gets its ontological understanding of itself in the first instance from those entities which it itself is *not* but which it encounters 'within' the world, and from the Being which they possess" (Heidegger 1962, 85 [58]) [italics his], we might suppose that he is ascribing an ontological otherness to those in-the-world entities which, as stated, Dasein "is *not*". However, that would be to shortchange the intended comprehensiveness of Heidegger's cognitive-based, hermeneutical Dasein. For he writes elsewhere: "And if the 'world' itself is something constitutive for Dasein, one must have an insight into Dasein's basic structures in order to treat the world-phenomenon conceptually" (77:52). And furthermore,

> If we inquire ontologically about the 'world', we by no means abandon the analytic of Dasein as a field for thematic study. Ontologically, 'world' is not a way of characterizing those entities which Dasein essentially is *not*; it is rather a characteristic of Dasein itself (92:64). [italics and single quotes in text]

In short, nature's otherness does not survive amidst the trestlework of Heidegger's abstract formulations in *Being and Time*, and his views on the authentic now, moving as they do away from direct experience, allow no basis upon which to alter that assessment.

With Kant as our second example of "temporal idealism", we rely here on a mere passage from his *Critique of Pure Reason* (1929, 78 [A35–36]). (For more on the aporia in Kant's temporality, see Ricoeur III, 44–59) In this passage, he makes explicit that time is without

> all claim to absolute reality … This, then, is what constitutes the *transcendental ideality* of time. What we mean by this phrase is that if we abstract from the subjective conditions of sensible intuition, time is nothing, and cannot be ascribed to the objects in themselves (apart from their relation to our intuition) in the way either of subsistence or of inherence

"In the case of time, such objective reality falls entirely away, save in so far as it is merely empirical, that is, save in so far as we regard the object itself merely as

appearance". What Kant, then, is saying is that in that presumed otherness (as we suppose it) of nature and the things of nature, time——including, of course, NOW time——is mere appearance. It gets relegated to the status of "nothing" when approached from a counterintuitive standpoint that analyses what lies behind the scenes of "the sensible conditions of sensible intuition". In such a scenario, what does it mean for an empirical scientist to investigate nature? Is there a bedrock NOW, a brute fact NOW, that is allowing her to do this, or is her whole endeavour——ultimately——an exercise in false notions and simulations of empirical truth?

Our last example points in the opposite direction, namely to that alternative category of the second approach. Here the NOW is likewise an object of knowledge but one deemed a constituent of nature, a notion that ties into panpsychism. The problem is that as soon as the NOW gets assigned to nature's realm and the universe at large, the tendency is to adopt a view from no-when, as if one could perch above the clouds and observe a brute NOW before one gets to know it. It is to presume an ontology of the NOW outside of the NOW of knowing, an issue that extends far beyond this paper. We mention here, only by way of example, that while Bergson and Whitehead are held to share a similar concern for what is simply given in sense awareness (at least as a starting point), and while Whitehead is held to have aimed to bridge the gap between abstract mathematical constructs and the realm of lived experience (During 2008, 3), for Whitehead it makes sense to ask "what is *now immediately happening* in regions beyond the cognisance of our sense". (Whitehead 1967, 124) [italics his] It is a question that presupposes the capability of knowledge to have its cake and eat it too——namely, to be both a knowledge of a not-now (from the outside spectator view) and a knowing of a now——*from the inside*! Similar reservations could be applied as well to his notions of "perspective", "prehension", and "occasion of experience", and to much of Bergson's extrapolations of the non-immediate from the immediacy of knowing.[23] In short, the red flag we raise here pertains to the ontological limitations (including my own) of third-person strategies that attempt too great a hold on, or too great a configurative and conceptual schema of, what comes only to the attention of knowing, or, for example, "reflexive" knowing (Velmans 2007).

The quantum physicist Niels Bohr writes: "In our description of nature the purpose is not to disclose the real essence of phenomena, but only to track down as far as possible relations between the multifold aspects of experiences." (quoted in Stapp [D.O.A. 2012, 2])

Commenting on the above, Stapp remarks:

> Due undoubtedly, at least in part, to the impact of Bohr's advice, most quantum physicists have been reluctant to try to construct an ontology——a conception of what really exists——compatible with the validity of the massively validated pragmatic quantum rules pertaining to the structure of human experience. (Stapp [D.O.A. 2012, 3])

Conclusion

What we have attempted in this paper is to reach behind the door. Where and what is this NOW that gets presupposed whenever someone measures what appears to be the NOW's duration or inserts the NOW into a delineated or linear cosmology? That presupposed NOW, we have tried to show, is available to some decipherment by means of the immediacy knowing of our first approach rather than by the knowledge paradigm of our second.

De Quincey strikes a participatory theme when he writes: "Bottom line: We can know the physical world because our knowing (consciousness) actively participates in creating it; and because the physical world inevitably and pervasively determines, shapes, and informs whatever we know." (de Quincey 2008: 101). The perspective of this paper has been somewhat different. Its bottom line runs as follows: We can know the otherness of the material world, and the world can be other than our knowing, because our knowing is, *ipso facto*, a NOW knowing——something that gives ourselves and the world an ontological apartness on the basis of which empirical study and exploration become possible and practicable.

To consider other avenues of NOW knowing——for example, in what way it may hold affinities to the acategorial state (Feil and Atmanspacher 2010) or how it may relate to Dogen's Buddhist doctrine of mujo, i.e. the notion of every moment being "absolutely without substratum" (Heine 1985, 90)——would take us beyond the scope of this paper. One thing we can say as the final word on our subject, and this in response to what David Cooper deplores as the modern-day tendency to "privilege" theory and scientific description over the folk truth of experience (Cooper 2002, 343), is that when it comes to the NOW there is no choice but to privilege the folk truth. Any attempt to do otherwise ends up with the inadequacies of the second approach.

Postscript: Toward a Definition of Present Time

In this postscript the task before us, as indicated by the above heading, rests on our presupposing (1) that a discussion of present time can be had without entailing concomitant analyses of past and future time, (2) that present time yields itself to semantic and analytical penetration, at least to the extent this paper requires, and related to that, (3) that differences in opinion about present time are not, at the core, rooted in differences of credo or, as Russell once put it, "one of those difficulties that occur constantly in philosophy, where you have two ultimate prejudices conflicting and where argument ceases." (Smith 1994, 207)

Before proposing a definition of present time, I would like to offer something of a brief basis for presuppositions (1) and (2), a basis the source of which comes almost entirely from David Zeilicovici's article "Temporal Becoming Minus the Moving Now" in *The New Theory of Time*. What basis I will provide for presupposition (3) will come at the end of this paper when I refer to Oaklander's response to Zeilicovici's article.

First off, do we need past and future time for an exploration of the meaning of present time? To state briefly Zeilicovici's "creationist" theory about moments (Zeilicovici 1994, 238), the McTaggart A series version of time (past–present–future) is, in Zeilicovici's schema, bounded (240), limited to existing, realized moments of time, with the future excluded. In consequence, as new moments come into being, the A series changes into a new A series and constantly does so. So here we have an instance of where present time is being focused on without, at least, the intrinsic role of the future. "[Our version] defines an A-series as that part of the B-series [i.e. before–after] which contains only existing moments." (240) [brackets mine] As for the extent to which he diminishes the past, it is enough for our purposes that he speaks of existing moments, moments being defined as "the equivalence sets of events under the relation of simultaneity." (237) We also note his antipathy to the concept of a moving now. (236) So much for our example of a delimiting perspective that attempts to segregate present time (or moments) from past[24] and future time infringement.

But what of our second presupposition, that present time yields itself to semantic and analytical penetration? Actually, what we propose is that it yields itself just to an extent, and that it is the failure to acknowledge that there are a metes and bounds to the purely analytical approach which leads to the obfuscation in meaning of present time, the result being that the very attempt at penetration becomes self-defeating. We see this when one attempts to conceive of time from the outsider view as opposed to from the inside. "Like Dummett's observer, who can be either in time, uncommunicatively aware of the dynamic process, or out of time, in principle able to master no more than temporal relations, [] the B-theorist, clearly the outsider, can only grasp A-theory in his *own* terms." (248) A classic example of this point is Zeilicovici's creationism of moments (i.e. they don't come from the future; they just come). Such a view makes sense from the insider perspective of a strict empiricist——after all, if there is a future, where is it? Where does *it* come from?——but not from a B-theorist point of view which sees the whole picture (past, present, future) inferentially from a before-and-after scenario or in static terms.[25] The lesson here, for any success in this matter, is to take both inside and outside seriously.

Let us move on to the thrust of this epilogue. Proceeding deductively, the meaning of present time that I would like to propose in this paper is as follows: the conjunction of a person's coming-to-know (apprehended as happening now) with that-which-comes-to-be-known.

The substance of the remainder of this postscript will consist of explaining and clarifying this proposed definition as a way of arguing in defense of it.

Let us scrutinize the above definition part by part, starting in reverse order. "That-which-comes-to-be-known" is deliberately phrased so as to erase the category distinction between the what or thing coming to be known and the observing and knowing act itself. The reason for this is that what we are faced with here is not an empirical distinction in fact. No one has observed in the everyday world a separation or cleavage between an observation that consists of what is seen and an

observation that entails the observing itself. In short, what this part of my definition is referring to is a symbiosis of nature and the observing act, knowledge insofar as it instantiates knowing. We note here also the use of the present tense and the construction "comes-to-be" to emphasize (as with the aorist tense in some languages) the beginning of an action, the beginning of an acquisition of sensory and meaningful data. Of course, we are not talking of a first beginning but rather of a constant transition from one beginning to the next.

The above part of the definition implicates as much the external world as it does observers. That-which-comes-to-be-known is, moreover, widespread. It happens before an audience of observers and sentient beings, presenting itself to them all at the same time. It is, therefore, a synchronous and shared state of affairs. We can speak of this as the common now, the contemporaneous world, "absolutely momentary affairs" (248), "the state of affairs in the whole physical world of which *E* [an event] is only a minute part." (244) [brackets mine]. The point being made here is that present time refers not to a particular object, not to a what, but to this expansively shared synchonicity of the observed as it exposes itself to a wide range of observers. (Cp. "unanalyzable temporal particular"——i.e. Zeilicovici's "moment") (242).

Fundamental 2 in the main section of this paper has described present time as unconfigurable. The idea intended to be conveyed was that the NOW manifests no specifiable boundaries or object-like delineation. Hence, it does not exist as a characterizing or quantifying feature——part/whole, property/event, moving/now——nor in terms of measurement. Some would claim that the NOW exists as a point or a mathematical symbol, or that its utterance as a word is objectifiable in terms of the time of utterance or indexically in terms of the speaker's utterance of the word. But in all these cases what is really happening is the application of analysis from an outsider viewpoint of something that can only be witnessed from the inside. From the outsider view (the B theorist perspective) it is problematic to conceive of present time's existence for the reasons above. However, lack of configurability and lack of existence on that basis——that kind of intangibility does preclude existence and standing with respect to nature from an insider perspective. (Cp. Zeilicovici's "transient aspect of time" as "an objective physical phenomenon" 246).

The next phrase to consider in our definition is the parenthetical one, ("apprehended as happening now"). What we mean by this is that present time is not something that is invented or judgementally selected by a mechanism of the brain because of its evolutionary survival value. Rather, it is given from outside of us, much as the sensory stimuli that constantly bombard our waking consciousness. (Cp. "knowledge by acquaintance") (237). So much for the word "apprehended" in the parentheses above, but what about "as happening now"? Are we not engaging in circularity to include in our definition of present time "as happening now"? Evolution has given us, and primates close to our stage of development, the capacity not only to live and experience shared moments but to live and experience expectations and memories. We do not, as a rule, confuse these expectations and

memories with our contemporaneous, moment by moment, living. One major reason is because the latter is, in fact, contemporaneous. It involves a public venue, other people and their contemporaneous moments shared with ours. So all that is meant by the parenthetical expression is that the apprehending is not that of a memory or imagined future but of an immediate present situation or event.

We now come to the words "coming-to-know" in our definition. They too emphasize the aorist beginning of an action, transition or change. This phrase, however, points to ourselves in contradistinction to the external world. From the insider view at least, we are not simply captive stimulus-response creatures that tie us into a causal closure with the external world. We confront what we take to be a world independent of our own existence, and as part of this encounter we exercise reason, express the capability of understanding and choose alternate paths to knowledge. In short, we live by the presumption (and insider view) that reason, understanding, and knowledge are very real concepts and not part of a matrix of delusion. If there is anything to that presumption, our coming-to-know must entail an otherness from that-which-comes-to-be-known, a causal gap or separation, and yet nonetheless a moment-by-moment bridge to the external world, otherwise reason, understanding, and knowledge would fall into the category of solipsism. So much for that final word in the definition, "conjunction".

Our final question here is the credo question, are A and B theorists simply engaging in two unbridgeable acts of faith? A brief attempt here will be made to answer this question by offering a few words about B-theorist Oaklander's short response to Zeilicovici's article, the former's response entitled "Zeilicovici on Temporal Becoming".

On the one hand, Oaklander provides the following by way of summary of the other's position, which the critic characterizes as "intriguing" (Oaklander 1994, 253): "there do not exist (tenselessly) absolute moments when events come into existence (or are created), but rather, what comes into existence are moments relationally understood——that is, sets of simultaneous events.[]" (253) What Oaklander then proceeds to do is question the author's consistency in maintaining this position, pointing out that the latter is willing to espouse the B-theorist's *earlier than* designation as "an [un]analyzable temporal relation" even though "it ranges over the unanalyzable temporal particulars known as moments[]". (253) (brackets and insertion mine[26]) Here Oaklander points out, first of all, that "unanalyzable temporal particulars known as moments" is unacceptable nomenclature for a relationist, which in any case seems to beg the question of what can be and what cannot be analysable. He then argues that *t'* as an empty placeholder on the time axis is tantamount to t' existing as a term in the B-series even if no event (or substance) comes to occupy it, which in turn is tantamount to a commitment to absolute time. (254) But this again begs the question——namely that of the inferential and the future, the significance of "placeholder" and Zeilicovici's phrase "a mere predicted shadow of a moment" (240), and what they imply. Oaklander ends his critique by posing two alternatives: Either "the B-series is composed of absolute moments "waiting" to be occupied, …" Or "the B-series is composed of moments

construed as sets of simultaneous events, and future moments do not *exist* as members of the B-series." (256) [italics his] The problem seems to revolve around moments as preexisting or not, the confusion over a change in time as opposed to a change of time, and how this ramifies as far as the B-series is concerned and the notion of a moving now.

Analysable vs. unanalysable, a change of time vs. a change in time, the now as moving or not, the absolute vs. the inferential or "predicted shadow"——such distinctions elicit an underlying question, one that has preoccupied much of this paper: How to describe present time? Is it an *in* time, comparable to the notion of water in a bathtub? Is it an *of* time, comparable to a scoop of ice cream? Is it analysable or not? Do we move up close or take an armchair view of it, as something we could shake off and examine at a comfortable distance? Failure to tackle such preliminary questions as these undoubtedly contributes to credoism and faith in hidden premises. Recognizing this as part of the problem may lead to part of the resolution of the time/timeless debate.

Notes

[1] Capitalized when highlighting it as the focus of our investigation, not capitalized when quoted from other sources. Along with treating the NOW and present time interchangeably, we might have added as synonymous with the NOW expressions such as "nowness" and "the temporal present" were the latter two not already, in some instances, precoloured by usages where their meaning falls under the purview of conscious attention and measurement criteria (Atmanspacher and Franck D.O.A. 2012). The NOW we have in mind is that which allows the ontological possibility of any human measurement [or failure of measurement] to be rendered in the first place.

[2] "What, then, is time? I know well enough what it is, provided that nobody asks me; but if I am asked what it is and try to explain, I am baffled" (Augustine 1961, II, 14, 17). Yet "[w]e certainly understand what is meant by the word both when we use it ourselves and when we hear it used by others" (14:15). See also Ricoeur 1990a, I, 7; and specifically as regards present time, see Metzinger 2010, 34; Heidegger 1962, 459 [407], 463 [411].

[3] Our preference for the term "knowing" by acquaintance, instead of the usual designation "knowledge" by acquaintance, will be explained as to its importance as the paper proceeds. Butler (2011, 134–5) gives an overview of definers of "knowledge by acquaintance". We adopt the following description of his as our working model, with reservations only about the word "phenomenal": "[I]t [Butler"s model] explicitly refrains from characterizing the kind of knowledge in question in terms of the knowing subject obtaining an epistemic relation with a distinguishable known object. In the case of phenomenal knowledge, the knower and the known are one and the same, …'. (137) [brackets mine] He notes that Tye's phenomenal externalism proposes that such acquaintance encompasses external properties of physical objects out in the world (n. 2, 135–6). Proceeding on our first approach, we steer toward that externalism in our treating of knowing (by acquaintance) of the NOW. That knowing, as we postulate it, is not merely phenomenal but, on the contrary, is essentially external from one's mental state.

[4] In fact, in two instances Heidegger identifies the now as time: "The 'now' is time" (459 [407]); "[I]n other words, that which has been interpreted and is addressed in the 'now' – is what we call 'time'" (460 [408]).

[5] Cp. Aristotle *(Physics*, Bk. IV: 9 (10)): "But of time some parts have been, while others have to be and no part *is*, though it is divisible. For what is 'now' is not a part: a part is a measure of the whole, which must be made up of parts. Time, on the other hand, is not held to be made up of 'nows'". [italics his]

[6] Heidegger 377 [329]; 460 [408]; 426 [374]; 462–3 [409–410]. On the other hand, Heidegger qualifies his negative assessment of the ordinary representation of time as a sequence of "nows" with this comment: "This interpretation of time loses its exclusive and pre-eminent justification only if it claims to convey the 'true' conception of time and to be able to prescribe the sole possible horizon within which time is to be Interpreted" (Heidegger 478 [426]).

[7] "Co-situated" is used here and not "present" or Whitehead's term "co-present" for the reason that these co-situations do not signify flesh-and-blood encounters, in the sense of the twin paradox. Capek quotes Whitehead's definition of co-presence: "I call two event-particles which on some or other system of measurement are in the same instantaneous space 'co-present'" event particles. Then it is possible that a and b may be co-present, and that a and c may be co-present, but that b and c may not be co-present.' (cited in Capek 1957,79) Capek alerts us to the ambiguity of "co-presence" when he states: "Essential is that there are two distinct observers and that their corresponding present moments remain distinct physical events, …" (Capek 82) [italics his] Hence we can say the relativity scenario above does nothing to impeach the everyday understanding of the NOW as described in our first approach.

[8] We need not take up the Einstein-Bergson dispute over what, in fact, the twins would discover after the voyage in terms of their respective chronologies and histories. Our direction of interest is on the twins' very face-to-face re-encounter, the fact that it is posited to occur at all. That is the NOW we are addrssing. For a summary of the above dispute and its issues concerning measurement, see (Canales 2005, 1171; During 2008, 19).

[9] On the question of seeing into the past when we see a stellar event, McInerney writes (231), "The complications are twofold. First, commonsense perception does not portray the entities as temporally distant from us. We understand that the entities are temporally distant, but we do not perceive this temporal distance in the way that we perceive spatial distance. Second, in the case of very distant occurrences, such as stellar events, we would 'see into' a past before our own births." (see also 276, notes 2, 8)

[10] By "co-occurrence" we are not referring here to something in the order of non-linear behaviour *in* nature, such as the synchronous flight patterns of birds (Scott 2010), for which explanations are given in terms of causal closure, but of that continental divide or causal gap (cp. Stapp [D.O.A. 2012, 22]) *between* the otherness of nature and the non-otherness of our coming-to-know. Note the italicized words. That a brain mechanism could explain the NOW——understood as a back-and-forth co-occurrence of awarenesses between people——would, as Georg Franck puts it, amount to a "miracle" (Franck 2011, 11; see also Franck 2008, 125).

[11] In this respect, knowing the NOW by acquaintance diverges from knowledge by acquaintance of such things as a smell, a sneeze, a pain, a visual experience of colour. All the latter are capable of being remembered. However, regarding the last-mentioned quale, Raffman draws the interesting distinction between the fine grained differentiations humans can make between colour shades, even though lacking the resource of memory to do so, and humans' more limited power to recognize and identify less subtle color shades in themselves. The distinction here is between making differentiations without memory and the recognizing and identifying that requires memory (Raffman 1995, 295).

[12] While it appears as little more than a tautology to say, in effect, that the NOW is temporally rooted to its nowness, there is a catch here, something else implied: the Now cannot be distanced from. Its immediacy defies the kind of re-presentation accessible with

intentional objects and configurable data. This links to the problem of the NOW not being logically obvious, not easily graspable in conceptual terms——i.e. as something not easily re-presentable by language and thought in terms of part/whole or configural distinctions. That incapacity, in turn, sheds light on why the NOW cannot be found in memory or remembered experiences.

[13] For Aristotle on this point, see n. 5. Augustine poses the question of how the present could exist when one considers that the future and past do not, as they are part of either the not yet or the no more. What residuum of the present could exist that is only the present itself and that has not already become past or is still about to be? "In fact the only time that can be called present is an instant, if we can conceive of such, that cannot be divided even into the most minute fractions" (Augustine, Bk. XI/15:20). And he asks, "How can we say that even the present is, when the reason why it is [is] that it is not to be?" (14:15)

[14] So, for example, Capek's "Immediate and Mediate Memory" (Capek 1977, 90–6) is not the immediacy of the everyday NOW.

[15] We refer here to nature and the material universe's non-solipsistic character, the fact that they are not a mirror image of the observer and that person's thoughts. The notion of observer dependence in quantum physics is a different issue, having to do with the "participatory" feature of quantum experiment results.

[16] Piaget attempted to explain scientific knowledge by using a past-to-present methodology that treats scientific knowledge in terms of "its history, its sociogenesis, and especially the psychological origins of the notions and operations upon which it is based." (Jean Piaget, *Genetic Epistemology*, lecture 1, opening sentence) While Piaget views the use of psychological data "indispensable" when considering the nature of knowledge (para. 12), the ultimate effect of it is reductive. Nature's otherness, about which empirical scientists presume to be directing their research, becomes not an otherness in fact, but the outgrowth of scientists' psychology, cultural heritage, child development, and so on. The causal closure that arises out of this undercuts both knowledge and what it means to know, including what it means to speak of the validity of scientific knowledge of the empirical world (and that includes Piaget's).

[17] See also Butler 2011, 136–7. This non-dichotomous knowing dovetails with another species of direct acquaintance, "the capacity to perceptually experience aspects of the other's subjective life——feelings——which secures this kind of acquaintance" (Seemann 2010, 173). See also, for example, Reddy's *How Infants Know Minds*, and Gallagher (2009, 293). That species, however, is such that its acquaintance can be remembered.

[18] The paradox, in the case of the missing Archimedian point, of applying an evaluation other than virus-like to evolution and how it has shaped our thinking is epitomized in the following footnote from Schwindt: "It is sometimes argued that our conclusions (concerning the laws of nature) are very likely correct in most cases, since natural selection forced us to develop correct thinking. Otherwise we would not have survived. This argument is, however, intrinsically wrong, since our theory of natural selection is itself a result of our conclusions." (Schwindt 2008, 6 n. 1)

[19] See Butler 136–7, and n. 3 above.

[20] Cp. "It [the present moment of consciousness] may feel its own existence——we have all along admitted the possibility of this, hard as it is by direct introspection to ascertain the fact——but nothing can be known *about* it till it be dead and gone." (James 1950, 341) [italics his]

[21] One might query how the universe can be autonomous and yet NOW-dependent. We mean autonomous with respect to the observer doing her empirical research, who in turn is only capable of doing her research in a NOW framework of time. She herself is NOW-dependent in the sense that she can't exchange her NOW for another one, let us say from yesterday or tomorrow. We can contrast this schema with the self-reference argument pos-

ited by the Anthropic Principle, according to which primacy is given to the observer. In the latter case, the observer acts as an "arbiter" for the existence of everything else. (Barrow and Tipler 1986, 108) In our schema, it is the NOW that does so. (see n. 12 above)

[22] Note Ricoeur (1990b, III, 91): "This epistemological hiatus is, in turn, but the symptom of a discontinuity … of the time of the phenomena considered. Just as it seemed impossible to generate the time of nature on the basis of phenomenological time, so too it now seems impossible to proceed in the opposite direction and to include phenomenological time in the time of nature, whether it is a question of quantum time, thermodynamic time, the time of galactic transformations, or that of the evolution of species".

[23] In *Matter and Memory*, for example, he moves from the suggestion of an everyday approach to the now to his emphasis on duration: "My present is that which interests me, which lives for me, and, in a word, that which summons me to action, whereas my past is essentially powerless … but the real, concrete, live present–that which I speak when I speak of my present perception——that present necessarily implies a duration … the psychical state, then, that I call 'my present," must be both a perception of the immediate past and a determination of the immediate future … more generally, in the continuity of becoming which is reality itself, the present moment is constituted by the quasi-instantaneous section effected by our perception in the flowing mass.' (1913, 176–8) Despite his remark regarding matter "as a present which is always beginning again" (178), Bergson is not subscribing to the notion of the present, or the NOW, as having the significance of an epistemic/ontic event such as we are intimating in our first approach, but rather is abstracting from the NOW to his concepts of duration and becoming. Although, like our concept of the NOW , his concept of duration does not allow for measurement, it nonetheless belongs within the domain of consciousness rather than being *not merely* in that domain, as in the case of our notion of present time (Bergson 1999, 33).

[24] Admittedly, he cites Russell in supporting "that (recent) remembered events belong, together with perceived events, to our sensory data". (237) But it would seem difficult, nonetheless, to conflate "existing moment" with that which is remembered, for then we would have the problem of which "equivalence sets of events"——contemporary or non-contemporary, (whether existing or nonexisting)——the existing moment was referring to. And in that respect I agree with Oaklander's footnote (256, n. 1): If each new A-series is instantaneous "and contains members that are both past and present, then how can what is created be a moment——a set of *simultaneous* events?" (Oaklander 1994, 256) [italics his]

[25] On the other hand, as Zeilicovici himself points out, the future may turn out not to be an exclusively inferential domain in the B-theorist category, if precognition testimonials should one day be authenticated. (237, n. 13) One such report appeared in an earlier draft of my paper. We should keep in mind, however, that regardless of any weight given to precognition, an ontological difference between present and future would persist simply on the basis that "nonexistent particulars are powerless to act" (Schlesinger 280), and that the exercise of free will in the temporal present (including the causal gap) is nullified by a future already determined as existing in some sense.

[26] The Zeilicovici quote from Oaklander is "unanalyzable temporal relation" (242), which however Oaklander quotes as "analyzable temporal relation". (253)

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