



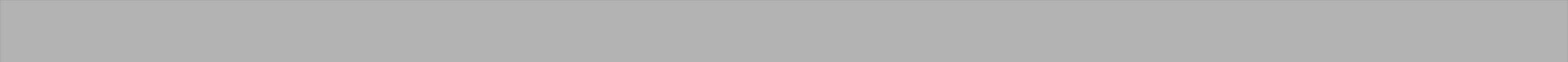
Are Heracliteans and Parmenideans both right?

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“Human beings are condemned to choice and action. Maybe you think you can avoid it, by resolutely standing still, refusing to act, refusing to move. But it’s no use, for that will be something you have chosen to do, and then you will have acted after all. Choosing not to act makes not acting a kind of action, makes it something that you do.”

(C. Korsgaard, *Self-Constitution: Agency, Identity, and Integrity*)



“Absolute Becoming”: the *coming into existence* of events that exist only in potential until they are experienced.

Parmenidean view (B-theory, block universe view, eternalism, tenseless view):
Time excludes Absolute Becoming/dynamicity/temporal passage.

Heraclitean view (A-theory, presentism/growing block theory/branching universe view, tensed view):

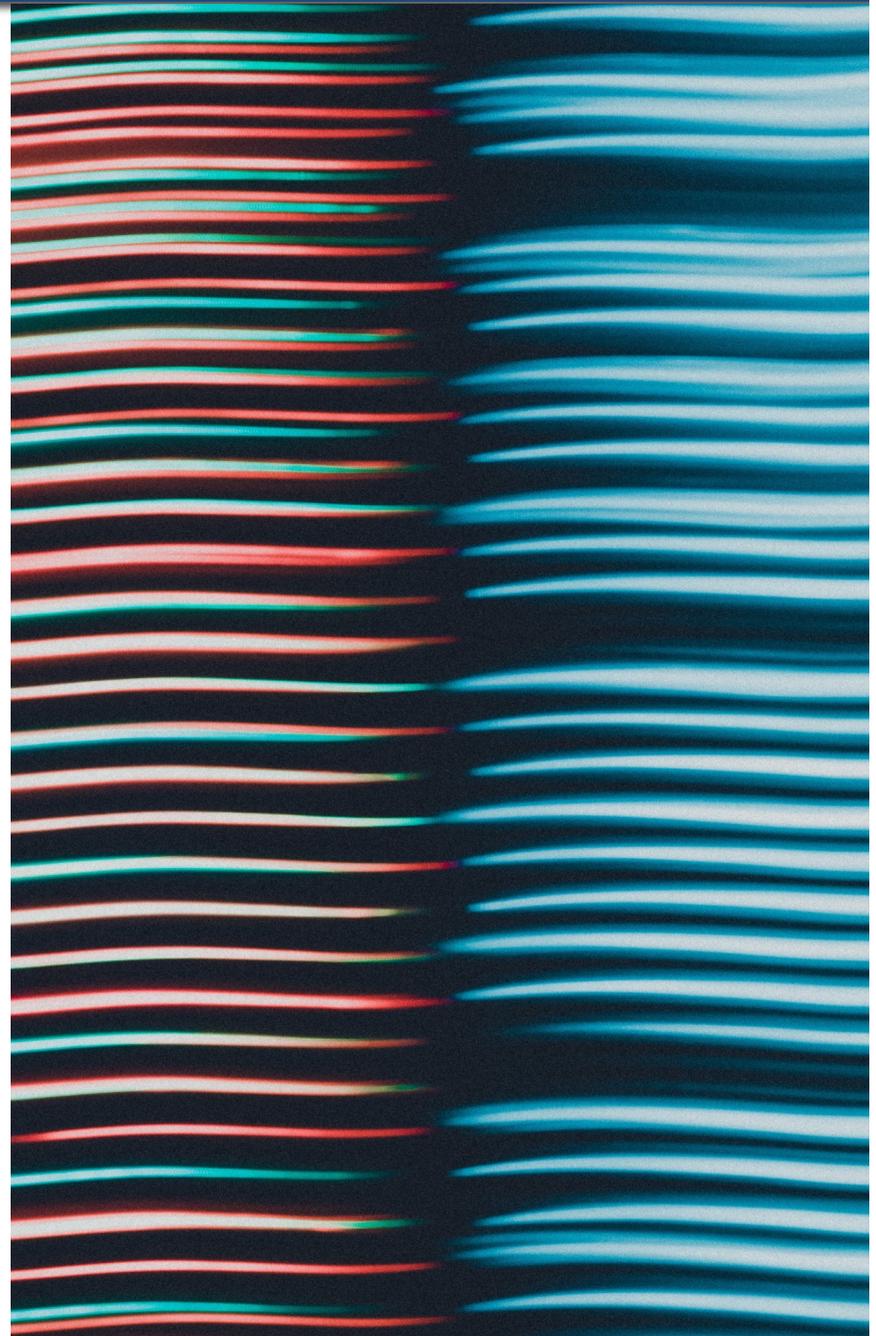
Time includes Absolute Becoming/dynamicity/temporal passage.

THE QUESTION OF DYNAMICITY: Does time include Absolute Becoming?

“The Parmenideans ally themselves with physics and cleave to the physicist’s image of a static universe extended in time. The Heracliteans ally themselves with the experience of time and claim that we have direct experience of a universe in process. [...]

My own view is that they are both right. Parmenideans are right about the view of time as it appears *sub specie aeternitatis*, but the Heracliteans come closer to capturing the content of the first person experience of time.”

(J. Ismael, ‘Decision and the Open Future’)



Plan

- 1 Interpreting Ismael.
- 2 The key idea: finding dynamicity within the block universe ('Tenseless Passage (TP)').
- 3 A proposal for *how* to endorse TP: time as ineffable.
- 4 Putting ineffability to work.

Ismael on the open future

- (i) Asymmetry; (ii) Flow; (iii) Passage; (iv) Openness.
- Last three arise through the shift from a view of history (of time sub specie aeternitatis) to the view of an embedded, embodied *participant* in history, and through the transformations between temporal perspectives had by that participant.
- Conversely, the view of history *just is* the view that makes the perspectival structure invariant under transformations between temporal perspectives. Cf maps.
- At each time, the participant has epistemic uncertainty about aspects of the past, but the uncertainty about their own future choices is different: it can be resolved through those choices. Thus, the future is represented as *unrealized potential, as not set in stone until the choice is made.*

“We’re not wrong to think that the past is fixed and the future is open, that our own actions resolve facts that are genuinely indeterminate until the moment of choice. Nor is physics wrong not to recognize any form of Absolute Becoming. **The mistake that philosophers who defend an Absolute Becoming make is to reify features of the embedded point of view and regard them as aspects of time itself. But there is an equal and opposite mistake on the other side, which is to dismiss features of the embedded perspective as intellectual confusions.** They are not confusions; they are real features of how time appears from the practical perspective of participants in history.”

(J. Ismael, ‘Decision and the Open Future’)

Which (and whose) mistake?

- What is this second mistake (dismissing features of the embedded perspective as intellectual confusions), and who makes it?
Parmenideans have often pointed to ways in which being in B-time is different from thinking about it.
- Is it simply to under-describe temporal perspectives (which Ismael's view would remedy)? That would make her view a Parmenidean view.
- Or is it to dismiss (i.e. not acknowledge) *other* (purported) features of the embedded perspective, namely precisely those features (if any) whose content involves reifying temporal perspectives? But then it would affect any account that doesn't attribute A-theoretic (perceptual or cognitive) content to subjects.

Two sides of the same coin?

- At root, Ismael identifies a single (“master”) mistake: thinking Heracliteans and Parmenideans offer competing visions.
- Not understanding that the attempt to reify temporal perspective has to fail, in that it has to fail to give literal content to ‘openness’ (etc.).
- But Ismael also stresses that one shouldn’t regard openness (or ‘openness’) as nonsense, any more than as illusion.
- And this is important to the account. The (purportedly non-existent) literal content of ‘openness’ guides the choice of which literal content to give ‘openness’ instead. “[T]here is a notion of potential that arises from the practical perspective that is needed to give some literal content to the idea that the future is open”.

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The key idea: Tenseless Passage

- “Perspectival structure is recovered in the view of time sub specie aeternitatis as explicitly relational, on precise analogy with the spatial case. No structure is lost. Passage, flow and openness remain as real as the difference between nearby and far away, the distinction between up and down. The lesson is not that Parmenideans win and Heracliteans lose. It is that there is no genuine conflict.” (Ismael)
- Tenseless Passage (TP): finding dynamicity (& openness) within the block universe, by (somehow) identifying passage/becoming with succession (or similar).
- (Ismael, 2016), (Savitt, 2002), (Dieks, 2005), (Dorato, 2006), (Maudlin, 2007), (Harrington, 2009), (Deng, 2013), (Oaklander, 2015), (Mothershead, 2015), (Fazekas, 2016), (Arthur, 2019), (Rovelli, 2019), (Saudek, 2020); (Leininger, 2021).

A closer look at TP

- “Perspectival structure is recovered in the view of time sub specie aeternitatis as explicitly relational, on precise analogy with the spatial case. No structure is lost. Passage, flow and openness remain as real as the difference between nearby and far away [...]” This seems to suggest that passage *just is* temporally perspectival structure.
- But how to interpret ‘passage’ and ‘temporal perspective’ here?
- (a) Interpret both in a Heraclitean/Parmenidean way. You get a trivial truth. (b) Interpret them in opposite ways. You get a trivial falsehood.
- More generally, the TP slogan (‘passage *just is* succession’) needs interpreting, and, supposing one takes ‘succession’ to denote something unproblematically part of the block universe, there seem to be only two bad options for ‘passage’.

Interlude on ‘Parmenidean’

- Not Spinoza’s view.
- Parmenidean view: the view that temporal reality is such that it does not contain Absolute Becoming; the denial of the Heraclitean view.
- A different, unofficial (‘skeptical’) stance says that ‘Absolute Becoming’ (‘passage’, ‘non-existent’, ‘openness’, ‘metaphysical privilege’, ‘tensed fact’, etc.) does not refer, and/or is semantically defective, nonsensical, incoherent, and/or for some reason cannot be used to delineate a substantial disagreement.
- This is **incompatible** with the (official) Parmenidean view.
- And with TP.

Desiderata

- What TP intends is to outline a genuine alternative (in a certain sense), but **while taking the QUESTION OF DYNAMICITY seriously.**
- Worthy aim - also for methodological reasons.
- Already, this is a contradiction in terms. If one takes the question seriously, there are only two exhaustive options for how to answer: time passes or it does not.
- Need to embrace this contradiction at the root of TP and use it stop the analysis, in a philosophically principled way. Need a metaphysical view of time with an anti-metaphysical upshot.

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A proposal

- *Time's nature with respect to THE QUESTION OF DYNAMICITY is ineffable, or beyond the conceptual grasp.*
- Think of the QUESTION OF DYNAMICITY as a kind of conceptual veil beyond which we as enquirers (philosophers, physicists, or philosophising ordinary folk) cannot look, except to hypothesize that there *is* something beyond.
- Cf Kantian transcendental idealism; here, the noumenon is *time as it is in itself, apart from any A- or B-theoretic nature*, and the phenomenon is time as it presents itself in enquiry (as either A or B).
- The ineffability view constitutes a genuine alternative, but not a third answer (there can be none); instead it constitutes a *reaction* that declines to give an answer, because an accurate answer is beyond the conceptual grasp. Time outstrips the theoretical resources in terms of which the question is posed.

TP with Ineffability

- The TP slogan (‘passage just is succession’) should now be understood holistically, as a way of expressing the insight that metaphysical theorising reaches its limits when it comes to time’s nature with respect to this question.
- Talk of succession becomes a placeholder – a reminder of the limits of temporal sense-making.

TP with Ineffability

- Not all aspects of all TP views sit well with ineffability. E.g. the view that passage is a local phenomenon, namely a succession of local presents constituted by particular causal diamonds along any timelike curve (Savitt, Arthur). Post-ineffability, the causal diamonds look unmotivated, since one is no longer answering the question ‘if passage is succession, what is it (in relativity) a succession of?’.
- Rovelli too argues that there is local becoming, understood as the unfolding of events along timelike curves. These unfoldings are “weaved to one another by the structure described by the four-dimensional pseudo-Riemannian geometry of general relativity”. (“Present” has merely pragmatic significance.) This leads back into TP’s problems, which ineffability solves.

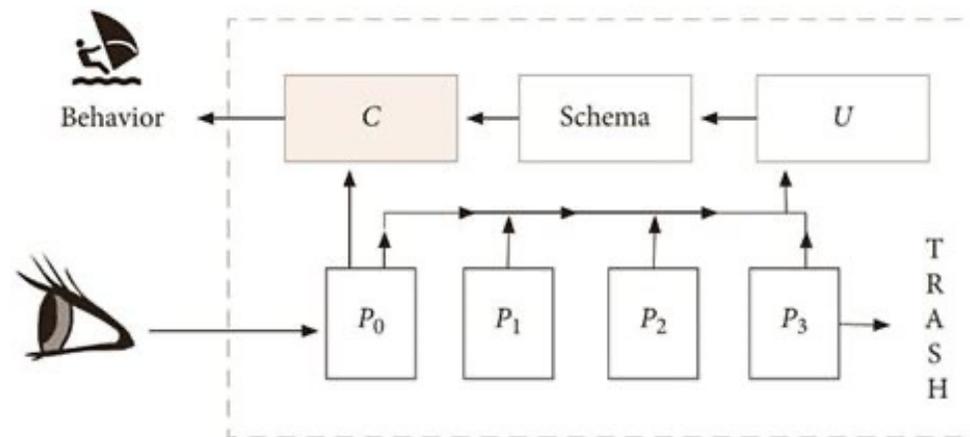
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IGUS

Consider Jim Hartle's idea of an IGUS (Information Gathering and Utilizing System), developed further by Craig Callender.

An IGUS updates its perceptions of the world at regular time intervals, builds models of the world based on memories, and makes decisions based on new perceptions and those models.



IGUS

Suppose that we understand why, at successive points on its timelike worldline, IGUS...

- ...operates with the notion of a ‘global present’;
- ...thinks it shares its ‘present’ with others;
- ...feels ‘stuck’ in time;
- ...has perceptions and memories that are only ever of events within the past, not the future lightcone;
- ... information only ever gets replaced by later information;
- ...how IGUS has an experienced present that represents succession
- ...

IGUS

Suppose that we fully understand why, at *successive* points on its timelike worldline, IGUS...

- ...operates with the notion of a ‘global present’;
- ...thinks it shares its ‘present’ with others;
- ...feels ‘stuck’ in time;
- ...has perceptions and memories that are only ever of events within the past, not the future lightcone;
- ... information only ever gets replaced by later information;
- ...how IGUS has an experienced present that represents *succession*;
- ...

“[I]t will be complained that we don’t have movement yet, the *whoosh* and the *whiz*. Nothing seems to “crawl up” IGUS’s worldline, thereby making time flow. I think that there is something to this criticism. [...] The memory asymmetry doesn’t provide us with our desired feature of *something moving through time*.”

(Callender, *What makes time special?*)

Conclusions

- The key idea in positions like Ismael's is that of Tenseless Passage, finding dynamicity within the block universe, by effecting a kind of Gestalt shift.
- There is a contradiction at the heart of TP, so a philosophically radical foundation is needed for it.
- Ineffability can supply that foundation. The TP slogan ('passage *just is* succession') becomes a compressed way of expressing the insight that metaphysical theorizing reaches its limits when it comes to *time's nature with respect to dynamicity*. Talk of temporal succession is as close as language can get to capturing it.
- With TP+ineffability, the story of IGUS's place in the physical world no longer appears incomplete (at least not for these reasons).

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The person on the Clapham omnibus

- This person likely “carries around a picture in their head of a universe unfolding as they experience it”, but they only make the *A*-theoretic mistake once we get them to philosophize. “The *pre-philosophical* phase of temporal thought is fine.” (Ismael)
- This is plausible, insofar as that person merely has *dispositions* to answer philosophical questions about time in an *A*-theoretic way.
- The rapidly growing experimental philosophy of time literature (much of which concludes that a majority of subjects ‘have a tacit dynamic model of time’) can be interpreted similarly.
- Again, on this interpretation of the second mistake, it would affect any account that doesn’t attribute *A*-theoretic (perceptual or cognitive) content to subjects.