

## OCCURRENCES

Aim of this segment:

- Explore ontological issues about occurrences
- Assess an argument that consciousness involves occurrences of a certain sort

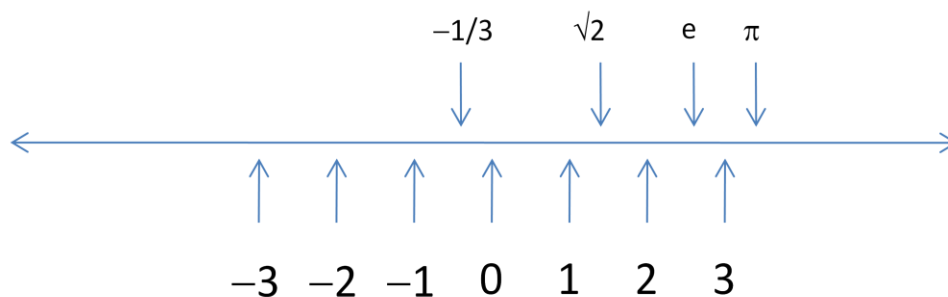
### I. The topology of time

Occurrences are *temporalia*, entities primarily “pinned down” in time: when we think about them, we foreground temporal concepts like succession, development, progression, continuation and the like.

By contrast, *objects* are “spatialia”, entities primarily “pinned down” in space: when we think about them, we foreground spatial concepts like shape, arrangement, location, distance, motion and the like.

Accordingly it will be helpful to get a small amount of mathematics useful for modeling the structure of time on the table.

Time behaves, we often think, like the *real numbers* or *real line*, the abstract structure depicted in the following familiar way:



What does this picture *mean*, though?

### A. The real line

The real line is understood by mathematicians as being representable by any structure which is a *complete, ordered field*: what we want mathematically out of the real numbers is an ontology adequate to doing calculus, and nothing of interest to calculus hangs on any difference among such structures.

It will be useful to work with these concepts a bit, because a few sessions back people’s minds got blown when I started talking about open intervals.

- To make a **field**, we collect together a bunch of things by putting in enough stuff for the following (maybe more!):
  - Two things we think of as ZERO and ONE are in there;
  - An operation we think of as ADDITION never gives us something out of the collection;
    - || ADDITION and MULTIPLICATION are thought of highly abstractly, as any binary functions such that: for ADDITIONS, grouping and ordering don’t matter; same for MULTIPLICATIONS;

MULTIPLICATION distributes over ADDITION; ADDITION of ZERO to  $x$  gets you  $x$ ; MULTIPLICATION of ONE by  $x$  always gets you  $x$ .

(at this point we might—but need not, as we will see below—have gotten a system that looks like  $0, 1, 2, 3, \dots$ : the *natural numbers*)

- NEGATION never gives us something out of the collection; (if so now at least  $\dots, -2, -1, 0, 1, 2, \dots$ : the *integers*)
- MULTIPLICATION never takes us out of the collection; (this wouldn't get us anything extra ...)
- INVERSION never takes us out of the collection. (but this sure would: now we have the *rational numbers* including  $1/9, -15/17$ , etc)
- These instructions are compatible with the following being a field:  $\{0, 1\}$ , where ADDITION and MULTIPLICATION are defined so that  $0=1+1=0+0=0*0=0*1=1*0$  and  $1=1+0=0+1=1*1$ .

To get rid of this sort of option, we make our field **ordered**:

- It partitions exhaustively into three distinct sets, ZERO, the POSITIVE entities, and their NEGATIONS, such that:
- ADDITION or MULTIPLICATION of two POSITIVE entities always yields a POSITIVE entity (Accordingly it's impossible to get a case where ADDITION “wraps back around”, as above.)

This also gets rid of certain cases where there's *more* than just the rational numbers: for instance,  $\langle A, B \rangle$  where  $A$  and  $B$  are rational. Why? Well, it depends on how we define ADDITION and MULTIPLICATION, but just for an example assume they go by adding/multiplying positions in the pair. (That would give us a field.) In that case the second half requires the POSITIVE elements to be exactly the “upper right quadrant”, but the first half is incompatible with this (since their NEGATIONS are only the lower left quadrant, leaving the off-diagonal elements unaccounted for).

- Just as there are lots of fields, there are lots of ordered fields: the rational numbers are one of them. Distinguishing the reals from them requires *completeness*.

Note that our requirement that our field be ordered allows us to define an *ordering*: a relation of EXCEEDING where  $A$  EXCEEDS  $B$  just if the result of ADDING  $A$  to the NEGATION of  $B$  is still POSITIVE.

Suppose we have a collection  $C$  drawn from our field. Then an entity drawn from our field is an *upper bound* of  $C$  just if no member of  $C$  EXCEEDS it;  $C$  is *bounded* just if it has some upper bound. (Not every collection is:  $\{1, 2, 3, \dots\}$  is not bounded.)

Supposing that  $C$  is bounded, let us say that an entity drawn from our field is a *least upper bound* of  $C$  just if it EXCEEDS no upper bound of  $C$ .

*Example*: focusing on the rationals:  $\{0, 1/2, 1/4, 2\}$  is bounded: 3 is rational and EXCEEDS all its members; 2 is rational and no member EXCEEDS it. But while 3 is an upper bound, 2 is the least upper bound: it EXCEEDS no upper bound (it is EXCEEDED by 3 and doesn't EXCEED itself).

Idea: the rationals are *dense*, in the sense that for any pair of distinct rationals, some rational EXCEEDS the smaller one and the larger one EXCEEDS it. Why is this? Suppose I have  $A/B < C/D$ ; I can take their *average*,  $V$ :  $A/B < V < C/D$ , and  $V$  is rational because the rationals are a field and averaging is just application of ADDITION and MULTIPLICATION to rationals.

*Example*: focusing still on the rationals:  $\{1/2, 2/3, 3/4, 4/5, 5/6, \dots\}$  is bounded: 3 is rational and EXCEEDS all its members; 1 is rational and no member EXCEEDS it. Note here that our collection does not *contain* its least upper bound, unlike the previous case. 1 is *not* in the collection: for no value of  $n$  is  $n/(n+1) = 1$ !!!

Does every bounded set of rationals have a rational least upper bound?

*Example:* focusing still on the rationals: {all those rationals less than  $\pi$ } is bounded: 4 is rational and EXCEEDS it. But it *has no least upper bound* (in the rationals!). What would it be?

- 32/10? No, 315/100 is rational and an upper bound and less.
- 315/100? No, 3142/1000 is rational and an upper bound and less.
- 3142/1000? No, 31416 /10000 is rational and an upper bound and less.
- ...

So not every set of rationals has a least upper bound which is rational. So let us say that an ordered field  $F$  is **complete** just if for every bounded set in  $F$ , it has a least upper bound in  $F$ .

Basically, we get the reals by taking the rationals and then packing in all the elements that are problematic from the point of view of completeness, with “each addition” packing in enough further stuff that we don’t break the fact that it is a field.

Note that the rationals are dense “in the reals” as well: for any pair of distinct real numbers, some rational number is between them:

Let’s say that a *cut* of the rationals is a bounded set of rationals which, if it contains a certain rational, contains every rational less than it. The cuts can easily be shown to be a complete ordered field (given suitable explanations of what it would mean to “add” or “multiply” two such entities), hence can stand in for the reals: a real can be “identified” with the least upper bound of a cut.

So suppose we have two distinct cuts: then one of them, BIG, contains all of the members of the other, SMALL, (otherwise BIG would not contain *every* rational less than each rational it contains), and some other material as well (because BIG and SMALL are distinct).

The “other material” in BIG contains at least three rationals. The first, John, is larger than any member of SMALL. John is guaranteed to exist by the distinctness of BIG and SMALL. The second, Paul, is smaller than John but bigger than any member of SMALL. Paul is guaranteed to exist by the density of the rationals. The third, Ringo, is between John and Paul, and is guaranteed to exist by the density of the rationals.

But now note that Ringo is a rational smaller than the least upper bound of BIG but bigger than the least upper bound of SMALL. These are our arbitrarily chosen distinct real numbers, so QED.

Since rationals are reals it follows that the reals are dense (there’s a real between any pair of reals).

A final question: how much does adding in the reals clutter things up? Answer: *a lot*, for reasons we won’t go into.

## B. Time and the reals

OK, does this seem like a good way of thinking about time? More specifically: are there important structural similarities between the real line and the flow of time?

(One might have qualms about regarding time as infinite forward and backward: if so, take a chunk of the real line and use it as a model of time.)

- It can seem as if we can pick an arbitrary ZERO (the instant of the birth of Jesus is a popular such choice around here these days, or we could pick the present moment) and an arbitrary ONE (the

instant exactly a day after ZERO). We can then start summing (two days after the birth of Jesus, three days after ...); negating (one day before the birth of Jesus ...); taking scalar multiples (four score days after the birth of Jesus); and inverting (half a day after the birth of Jesus,  $1/3$  of a day after the birth of Jesus, ...): all without going outside of time. So the instants of time are a field.

- They also seem to be an ordered field: let all the instants after the birth of Jesus be the POSITIVE instants. Adding up such temporal distances or taking scalar multiples of them never takes us back before the birth of Jesus.
- Are they a *complete* ordered field? Here is a little argument for thinking so.

- The following scenario is possible:

A ball is tossed against a wall from one meter away at exactly the birth of Jesus and move with velocity  $1/\pi$  m/s (so that the time of collision is  $\pi$  seconds after the birth of Jesus). It then rebounds with a “perfectly elastic” collision (namely after a contact of only an instant).

However, if the times were not complete, the instant of collision would be outside of time: the ball would never have contacted the wall [that doesn’t really follow, but ...];

- Assuming that the collision was an essential part of the cause of the rebound, the ball would then not have been caused to rebound;
- Assuming the ball would not have rebounded without being caused to do so, it would then not have rebounded.

So it is possible that time is complete.

- Assuming that time has its structure necessarily, time is necessarily complete, hence *actually* complete.

That argument is pretty rickety!!!

### C. Open and closed intervals

Recall the difference between  $\{0, 1/2, 1/4, 2\}$  and  $\{1/2, 2/3, 3/4, 4/5, 5/6, \dots\}$ : the former contains its least upper bound whereas the latter does not. (Distinguish a set containing *its own* least upper bound, discussed here, and a set *being chosen from a field containing that least upper bound*, as discussed under the notion of completeness.)

Let us say that a set containing its least upper bound is *closed above*, while a set that does not is *open above*.

We can define the notion of a *greatest lower bound* in parallel to that of a least upper bound; then say that a set containing its greatest lower bound is *closed below*, while one that does not is *open below*.

Let us say that the *interval between A and B* is the set of all points between A and B.

This is crucially vague: does it contain A and B as well? This is left open. In fact, all four possibilities are available:

- $[A, B]$  is the *closed* interval between A and B: the set containing all points less than B and greater than A and which is closed above and below;
- $(A, B)$  is the *open* interval between A and B: the set containing all points less than B and greater than A and which is *open* above and below;
- $[A, B)$  is the *upper half-open* (or lower half-closed) interval between A and B;
- $(A, B]$  is the *lower half-open* (or upper half-closed) interval between A and B.

Notational decision: if  $A = B$ ,  $[A, B] = A = B$ , while  $(A, B)$  does not exist.

*Question:* suppose Bill is sweeping at exactly the moments in  $(0, 1)$ . Is there a last moment at which he is sweeping? No.

First, he is not sweeping at moment 1 or any moment after it.

Second, if we suggest that some real number less than 1 marks the last moment of his sweeping, we can ask what number that is. Let it be  $M$ . But  $M$  is a real less than 1. Since the reals are dense, there is some real  $R$  between  $M$  and 1, and Bill was sweeping at **every** moment less than 1. So it follows that Bill was sweeping at  $R$  as well, so  $M$  wasn't the last moment of sweeping after all. Contradiction!

So there can't be a last moment of his sweeping (tho there is a first moment of his not sweeping—namely moment 1).

Putting it another way, for every moment at which Bill is sweeping, there is a later moment at which he is still sweeping—despite the fact that he doesn't go on sweeping forever.

## II. Varieties of occurrence

Some examples of occurrences:

Brutus's stabbing Caesar; John's buttering of toast; Anne's writing the great Canadian novella; Socrates's being in the marketplace; the falling of tree  $t$ ; the crying of Lot 49; Tenzing's climbing of Everest; Bruce's flash of anger; Jesus's arrival in Eboli; the hurricane's descent upon central Florida; Zoltan's noticing a counterexample to his theory; Malene's seeing George; the scaffold's tottering in the wind.

Some issues about occurrences:

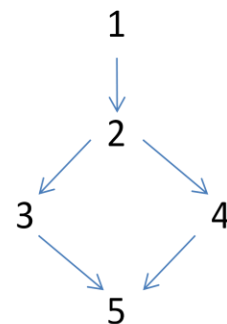
- Why think there are any?
- What varieties do they come in?
- Are there other interesting general features linking occurrences to one another?

### A. Believing in occurrences

Why believe in occurrences? Why not think that what we have here *really* are Brutus, Caesar, Bill, his toast, Anne, Socrates, the marketplace, tree  $t$ , Lot 49, Tenzing, Everest, and various properties of and relations among these substantial particulars?

The Diamond (Davidson 1967):

1. John buttered toast  $t$  hastily in the bathroom
2. John buttered toast  $t$  hastily and John buttered toast  $t$  in the bathroom
3. John buttered toast  $t$  hastily
4. John buttered toast  $t$  in the bathroom
5. John buttered toast  $t$



The entailments flow downward: that is clear. (In the sense that necessarily, if 1 then 2; and so forth.) What is less clear (but crucial) is that they fail to flow upward: in particular, that the entailment from 2 to 1 **fails to flow upward**.

*Example:* John's left half is in the bathroom, right half in the hall, buttering away leisurely with his left hand and hastily with his right hand. Here we have (5), (4), (3), and (2), **but not (1)**.

Davidson's explanation for this: just as NP (noun phrases) bring particulars under discussion ('John' refers to John), VP (verb phrases) do so as well. A verb like 'buttered' is not a simple predicate of John, but rather brings a certain sort of occurrence under discussion: a *buttering*.

A bit more precisely, now, we have the following explications of the "logical forms" of the situations above:

- 1L.  $\exists e$  [buttering(e)  $\wedge$  Patient(toast t, e)  $\wedge$  hasty(e)  $\wedge$  Agent(John, e)  $\wedge$  Located(e, the bathroom)]
- 2L.  $\exists e$  [buttering(e)  $\wedge$  Patient(toast t, e)  $\wedge$  hasty(e)  $\wedge$  Agent(John, e)]  $\wedge$   
 $\exists e'$  [buttering(e')  $\wedge$  Patient(toast t, e)  $\wedge$  Agent(John, e')  $\wedge$  Located(e', the bathroom)]
- 3L.  $\exists e$  [buttering(e)  $\wedge$  Patient(toast t, e)  $\wedge$  hasty(e)  $\wedge$  Agent(John, e)]
- 4L.  $\exists e$  [buttering(e)  $\wedge$  Patient(toast t, e)  $\wedge$  Agent(John, e)  $\wedge$  Located(e, the bathroom)]
- 5L.  $\exists e$  [buttering(e)  $\wedge$  Patient(toast t, e)  $\wedge$  Agent(John, e)]

Patterns of necessitation stem from mere loss of specificity in the scenarios under discussion; patterns of non-necessitation stem from gaining of specificity: in the crucial failure to get (1) from (2), we can see that the point left unspecific is **whether the butterings quantified over in the conjuncts of (2L) are distinct**. In the absence of entities for which this question could remain open, it is exceedingly difficult to see what could be left unspecific in (2) which is specific in (1). (It's not whether the *toast* is the same!)

*Geeky sidebar:* actually it's exceedingly easy to see how this could work. As is well known, Quine's 1960 paper 'Variables explained away' describes a nonquantificational system which mimics quantification via the formation of intricately complexly qualified simple propositions. Metaphysicians spent most of the period between 1980 and 2003 bickering about where we should think ontology appears on the scene and where we should think structure appears on the scene. The result of this discussion was an array of tools for sloshing quantificational burdens over into structure or elsewhere, a rich set of translation manuals for re-expressing doctrines exploiting one set of tools as doctrines exploiting another, and a growing sense of consternation about the merits of trying to find out the truth here.

My sense of the moral of the story is that we should all feel free to use whatever tools we like to express our theories, as long as we are explicit and consistent about the system we are using. Accordingly, my practice will be to just ignore bickery questions about ontology and boldly state claims using my preferred system.

Just to assure you that this attitude does not wreck my own program, my criticism of the phenomenal state conception is not that it fails by light of this or that contentious metaphysician's desideratum, but that it does not make any sense.

Indefinite intricacy\*\*\*

Perceptibility\*\*\*

Direct reference to events \*\*\*

B. Vendler

Vendler distinguishes four types of occurrence:

- Accomplishments: roughly, long-lived goal-oriented activities  
*Examples:* climbing Everest, writing the great Canadian novella, descending on Florida
- Activities: roughly, long-lived aimless activities  
*Examples:* falling, tottering in the wind, stabbing Caesar, buttering toast, crying Lot 49
- Achievements: roughly, instantaneous flips in state  
*Examples:* arriving in Paris, flashing with anger, noticing a counterexample, spotting Joan
- States: roughly, conditions without interesting temporal structure  
*Examples:* being in the marketplace, seeing George, owning a dog, being red

(Exercise: see if you can run the Davidson argument for all of these.)

Vendler thinks the taxonomy is a matter of a 2x2 matrix of on-off flipping “features”, and a lot of linguists follow him in this (Rothstein, Krifka). I don’t like this idea for reasons I won’t go into.

*Geeky sidebar:* basically the problem is that they have to put states and accomplishments on the on-diagonal, activities and achievements on the off-diagonal. States and accomplishments thus have to each be a bit achievement-like and a bit activity-like but in polar ways. It is fairly clear that what accomplishments and activities have in common is being mandatorily ongoing.

But then two problems: (1) although this is not the case of states or achievements, the way in which it is not the case is very very very different: achievements must *not* be ongoing while states can be either way. (2) what the heck else do achievements and accomplishments have in common? According to Rothstein and many linguists it is “telicity”. Intuitively, this is bizarre: *climbing Everest* has an aim but what is the aim of *spotting Joan*??? She follows Dowty in analyzing this in terms of parthood, but (a) the linguist’s notion of parthood is very nebulously developed and more importantly (b) we will see below that this analysis flames out even for accomplishments. This is why I am with Bach in taking the taxonomy to involve a “partial ordering” or tree.

Rothstein’s case against Bach is partly that there are  $2^n$  classes, nicely explained featurally (not super-compelling for four, maybe more so for eight or sixteen; also she has to scramble a bit to banish “semelfactives”, a candidate fifth category); and partly that it is easier to get statives to read like achievements or activities than accomplishments (I’m not in a position to evaluate this data but I wonder whether it is easier to get activities to read like accomplishments, or even achievements, than like states; also whether featuralism is really a better explanation even if she’s right).

My take on the taxonomy: states are off in their own corner; accomplishments and activities differ only in ways of little interest for our purposes; activities are an “intermediate” category. Here’s the tree:

- Occurrences: dynamic?
  - No: **states**
  - Yes: extended?
    - No: **achievements**
    - Yes: teleological?
      - No: **activities**
      - Yes: **accomplishments**

We want to know what *dynamism*, *extension*, and *teleologicality* are.

First on *dynamism*.

Let’s say first that an occurrence *o* is *cozy at t* if there is some open interval around *t* such that *o* exists throughout *t*. (It is cozy in the sense of being “insulated” by its parts at other times).

Now let's say that an occurrence is *always cozy* just if at every time it occurs, it is cozy; *never cozy* just if at no time it occurs, it is cozy; and *just sometimes cozy* otherwise.

What would something that is always/never/just sometimes cozy be like? I'm going to make a pretty standard assumption here, namely that occurrences are *temporally continuous* in the following sense: if *o* occurs at *t* and at *t'*, and *t\** is between *t* and *t'*, then *o* occurs at *t\**. Accordingly, we can always think of the times at which an occurrence occurs as an interval.

- Something always cozy would exist throughout some open interval  
By temporal continuity, the alternative is existing at an at least partly closed interval. But then consider a point that closes the interval off: the occurrence is not cozy here because it doesn't exist at any point outside of this point, hence not cozy everywhere.
- Something never cozy would exist just at a point  
By temporal continuity, if it existed at more than one point, it would exist at least at the closed interval containing those points, hence would be some open interval in that closed interval throughout which it exists, cozy at some point in that open interval.
- Something just sometimes cozy would exist through an at least partly closed interval of positive size  
That's the alternative (the noncozy part would be the closing-off points, the cozy part would be everywhere else).

Let's say that the *Ks* are *uninsulated* just if necessarily, every *K* is never cozy; *insulated* just if necessarily, no *K* is never cozy.

Lets say that a kind of occurrence *K* *takes a stand on insulation* just if either the *Ks* are insulated or they are uninsulated; otherwise, *indifferent about insulation*.

Then our idea is that **for an occurrence to be dynamic is for its kind to take a stand on insulation**; otherwise, static.

We could also speak of *dynamic/static kinds* instead of kinds that do/don't take a stand on insulation.

Does this check out intuitively on the "no" side? Let's think about the kind *seeing something red\**, a maximally specific shade of red. Intuitively, this is a kind of state, so it should be indifferent to insulation. Clearly it is: we can imagine someone seeing something red\* throughout an open interval, or only for an instant (if he sees something whose red color is continuously changing through red\*). So yes.

Second on *extension*.

Let's say that a dynamic occurrence is *momentary* just if its kind are uninsulated; extended otherwise.

Does this check out intuitively on the "no" side? People speak of achievements as "being over as soon as they have begun": as being momentary. So if we think about a case of arriving in Paris, presumably this is "over as soon as it starts" thanks to being an achievement of this kind. Uninsulated occurrences are points, so that sounds about right. Conversely, it doesn't seem to make sense to think of an activity or

accomplishment going on for only a moment: activities are throughout their existence in progress, while accomplishments at least progress for a while.

Third on *teleology*.

*Progress and perfection*

- Distinguish the “progressive” and the “perfective”. These are semantic categories applied to full sentences:
  1. Joan is skating
  2. Joan is skating the length of the rink
  - 1F. Joan skated
  - 2F. Joan skated the length of the rink(1) and (2) are in the progressive, in the sense that they say that the occurrence under consideration is ongoing, whereas (1F) and (2F) are in the perfective, in the sense that they say that the occurrence under consideration is finished.
- Patterns of entailment and compatibility
  - a) (1F) is compatible with  $\neg(1)$ : Joan might have finished skating
  - b) (1) entails (1F): as soon as Joan has started skating, she has skated
  - c) (2F) entails  $\neg(2)$ , relative to every context (although by shifting contexts, a single person could utter each truly at a time: e.g. by altering the “perspective time” assumed in the conversation)
  - d) the truth of (2) in *some* context is compatible with the falsity of (2F) in *every* context: suppose Joan is skating the length of the rink, when she gets to the blue line the ice suddenly melts and she never finishes the journey
- These are known as categories of “aspect”, having to do with the perspective one takes on an occurrence: is one regarding it as wrapped up or as ongoing? (the remark under (c) makes this label especially apposite.)
- Note that achievements can be spoken of in the progressive:
  - i. Joan is arriving in Paris
  - ii. Joan is noticing Khalid (slo-mo reading)
    - Whether this shows that achievements can be ongoing (hence often like fast accomplishments) is a nice question. If not we would (i) want to loosen up our taxonomy, regarding the contrast as being between occurrences which must continue and occurrences which might not: relevant notion would be “insulation from the future”; (ii) figure out where to push the ontology behind achievement speech
- Note that states can’t be spoken of in the progressive:
  - \* Joan is seeing the Eiffel Tower (not the ‘visiting’ reading)
  - \* Bill is owning a cat
  - \* Omar is weighing 14 stone

*Culmination*

- Cases like (2) are associated with (nontrivial) “culmination conditions”, circumstances that have to be met in order to make it true to speak in the perfective (and are not automatically met in virtue of the truth of the progressive claim): (2F) is not true unless Joan *is across the rink*. Plausibly the culmination condition is somehow essentially tied

to the nature of the progressive categorization: Joan's skating across the rink could not be completed by her nose becoming cold.

- A nontrivial culmination condition is a sort of goal or "telos". We can think of the telos as imposing an internal norm on the occurrence: o is bad for an F unless its telos is met.

### *What is an accomplishment?*

- Shall we regard the kinds of ongoing events as *solely* under the progressive (or as under some aspect-neutral category) or under *both* the progressive and the perfective? This will impact what we say about activities and accomplishments.
  - On the two-kinds view:
    - An ongoing activity leaves behind a continuous infinity of its partial completions;
    - An ongoing accomplishment leaves nothing else behind until it culminates.
  - On the one-kind view:
    - An ongoing activity just gets longer as it goes on;
    - An ongoing accomplishment leaves nothing behind when it culminates.
- There is a certain pleasing economy to the one-kind view, and we will speak as if it is correct. It has the following consequences:
  - **Culminatedness is an inessential property of any occurrence;**
  - Linguists often assert that accomplishment-status and teleology can be understood in terms of parthood: they say things like "to be an accomplishment/a telic event is to be an event not all of whose proper parts are of the same kind: only the proper parts that share a concluding segment are of the same kind" (Vendler, Krifka, Rothstein). **This is incorrect: every temporal segment of a telic K occurrence is a K.** Example: every segment of Joan's skating across the rink is a skating across the rink. They are all *bad* skatings-across-the-rink, but belong to that kind nonetheless.
- Accordingly, an accomplishment is just like an activity in being an ongoing occurrence; its only respect of difference is its being bound to a nontrivial norm of culmination.

### *Is culminatedness extrinsic?*

- We have seen that it is inessential.
- Tenzing is climbing Everest, and gets to the top, at t. *After* t, the accomplishment is over. Does the accomplishment have a part at t? If not, culmination occurs after the accomplishment is over, so that culminatedness does not consist in any goings-on "inside" the accomplishment.

*Argument otherwise:* the accomplishment is of a progressive kind *climbing Everest*, and progressive events are everywhere cozy; if t were in the time of the accomplishment, it would occur just at a closed-above interval; the accomplishment would thus be just sometimes cozy.

*Rebuttal:* why assume the accomplishment is of a progressive kind? The argument forgets the alternative that the kinds of extended events are *neutral* on perfectedness-status: the kind is more like *climb Everest* or *skate*, as seen in constructions like "John was watching Tenzing climb Everest".

- Inclined to accept the rebuttal. Accordingly we can accept that culminatedness is intrinsic.
- This has the nice consequence that we can make sense of occurrences that are just sometimes cozy, thereby ratifying our taxonomy. We can then say that for K to be an achievement kind is for necessarily, all the Ks to be always cozy; while for K to be an accomplishment kind is for necessarily, none of the Ks to be never cozy.

Other questions about these things:

- States are often thought to have no nontrivial parts (parts that are not mere intersections of spatiotemporal regions with states), whereas dynamic occurrences are thought to have nontrivial parts (part of teaching is preparing lectures).
- There seems to be a sense in which states do not have substantial immanent causal relations among temporal parts: the only sense in which this slice of a state continues that slice of a state is that its possessor has not varied in underlying features between them. By contrast, when a process continues this is somehow grounded in its past.
- So: can we make sense of these ideas? are any of them true? how are they related to what has gone before?

### III. The stream of consciousness

It can seem as if the kinds of experience are sometimes “temporally loaded”:

A *whooshbang* is a whoosh followed a second later by a bang. Clearly there is a difference in what it is like to “experience as of” having just listened to a whooshbang and what it is like to “experience as of” having just listened to a solo bang.

So as our example of such a temporally loaded kind of experience, take W = experiencing as of listening to a whooshbang.

- *Question:* what kind of a property is W? What must an occurrence be like in order to instantiate W?

Ian Phillips on “Strong PSA” (principle of simultaneous awareness):

Irreducibly temporal facts have *no* place in our explanation of [the nature of W]. Present tense psychological facts are necessary and sufficient to explain [its nature].

Let’s rephrase this:

**Strong PSA**      W is an “achievementive” property in the sense that an experience of kind W is extensionless/W is a “stative” property in the sense that an experience of kind W might be extensionless

An example of a Strong PSA endorsing theory:

**SPT-DR**      To be W at t is to be an achievement/state, occurring at t, of acquaintance with a temporally extended whooshbang.

On this direct realist “specious present theory”, one’s instantaneous power of acquaintance beams back into the multiple points of the past, bringing one a sense of progression.

Another example of a Strong PSA endorsing theory:

**SPT-Int** To be W at t is to be an achievement/state, occurring at t, of representing that a temporally extended whooshbang had occurred.

On this intentionalist SPT, one is at an instant in a position to represent an extended interval of the past; it is this which brings one a sense of progression.

Ian’s problem for Strong PSA: suppose we have e, an experience of kind W, occurring normally

**Transparency\*** If, having e, a whooshbang seems to last a second, then e seems to last a second

**Weak Rev** In the normal “good case”, if an experience seems F it is F

**—Strong PSA** e lasts a second (hence is not extensionless)

In particular, against direct realist SPT, my instantaneous state/achievement of acquaintance is one in which a whooshbang seems to last a second; by transparency\*, it must seem to last a second; by weak revelation, it does last a second.

Against intentionalist SPT, my instantaneous representational state/achievement represents a whooshbang as lasting a second and thus the whooshbang seems to last a second; by transparency\*, so does the state/achievement; by weak revelation, it does last a second.

Another illustration:

Suppose at t I experience a whooshbang and then at t’ slightly later I continue to do so. Then (if experiences are read as achievements), I experience the whooshbang twice. But I only seem to experience it once! That’s in conflict with weak revelation.

The argument is valid, let’s take a look at the premises.

*Weak revelation:* this principle is fairly plausible, it’s just a general antiskeptical doctrine about our access to the internal world. Anyone who takes phenomenology at all seriously had better endorse this. It is also common ground between direct realists and representationalists (the latter believe an even stronger unqualified claim).

*Transparency\*:* Ian leaves off the star but I put it on because this is a special principle; what we want is something general.

Experience has its own temporal structure. However, when one attends to that structure (that is: reflects upon its nature) it is rational to judge that one’s experience is temporally determined in some way (restricting one’s reflection to that experience alone) only by taking its temporal structure to mirror the apparent temporal structure of the world experienced, i.e. by making a judgment concerning (and typically perceptually attending to) the apparent temporal structure of the world experienced, and then taking the experience to have that same temporal structure

The basic thought behind the first claim here is that the temporal aspects of our experience are transparent. We can spell this out as follows. Experience itself has a temporal structure—it consists of events and processes which persist through time and occur before and after each other. Thus, time is a common medium to experience and its objects. Yet one's only way of making rational judgments about the temporal structure of experience itself, at least through reflection on one's experience alone, is by taking the temporal structure of the experience to map the temporal structure of the world as it is experienced as being. Thus, if one has an experience as of a tone lasting a second (where one hears every temporal part of the tone), one will also take one's experience to last a second. If one hears an E following on from a C, one will take one's experience of the E to occur after one's experience of the C. Transparency is not established by theorizing about how perception must be but rather by reflection on our own experience.

The general idea behind a transparency principle is like this: my most basic concepts of things are of externalia; I only understand experiences by reference to externalia. So for example I understand the sort of experience I have when looking at something red using my concept of red: it is just an experience of *looking at something red!* Insofar as it has any distinctive independent nature, this is beyond my grasp. (Harman 1990 on the tree is a recent classic locus of this idea.)

Similarly, I understand the temporal aspect of the sort of experience I have when listening to something that lasts a second by reference to my normal perceptual concept of the second that the thing lasted. My only understanding of the temporal nature of my experience is as an experience of listening to this thing *for the same second that it seemed to have lasted*. Insofar as it has some independent temporal structure, this is beyond my grasp.

What an excellent argument this is! It seems to dust off the phenomenal state conception and also to predict my theory.