Temporal externalism doesn't work in practice

Temporal externalism is the claim that the meaning of an utterance of a term can be (partly) determined by things which happen after that utterance is made.[1] The idea is that our uses of terms are elements of socially and temporally ongoing practices, that the features of these practices are what determine the meanings of the utterances, and that for some utterances and some determining features, the utterance comes before the feature (or before the facts which determine that feature). Proponents of this view take themselves to be extending the notion of 'externalism' from thinkers like Kripke (1980, externalism about the past), Putnam (1973, 1975, about the physical environment) and Burge (1979, about social practices) to the future. Like Putnam and Burge, proponents of temporal externalism have focused on uses of kind terms like 'zebra' and 'gold' (Jackman 1998, 1999, 2020, 2005; Tanesini 2006) though similar views have also been developed for proper names (Sainsbury 2003, 2005, chapter 3; deRosset 2020; Haukioja 2020, §5; Michaelson 2023).

In this paper I present a novel and general argument against temporal externalism. It has been assumed in the temporal externalist literature that whenever future facts about a practice are *sufficient* to settle the meaning of some utterance, they actually *do* settle that meaning. But none of the temporal externalist literature has considered cases where several different patterns of future usage are each separately sufficient to determine the meaning of the utterance in question in different ways. In these cases, the assumption that any sufficient future facts *do* settle the meaning of the utterances entails that each of these patterns settles it, and the utterance thus has several meanings, perhaps contradicting each other.

In Section 1 I describe temporal externalism in more detail, and in terms which should help make my objection clear. In Section 2 I describe two kinds of case to demonstrate my concern, and in Section 3 sum up again the general problem.

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[1]This claim is sometimes formulated in terms of words and their *meanings at times*—I will write in terms of utterances, but there isn't an important difference.

1   Temporal externalism

Consider the following case, from Jackman (1999), derived originally from Wilson (1982). Edwin is a member of an isolated community of 'druids', who live on an island with a population of birds which can all fly. Nothing else on the island can fly, so from the druid's point of view, the classes of birds and of flying of things are coextensive. The druids have a long established practice of using the word 'ave' for all such things; they produce and assent to utterances like 'all aves can fly' and 'all aves are alive'. Take some one utterance of the term 'ave' from this practice and call it U_1, and the time at which it happens T_1. Then there are two ways history might develop from here.

First: sometime after T_1 Edwin sees a plane in the sky, watches it land, and realises it is not a bird. Since it flies, and he is in the habit of applying 'ave' to flying things, he calls it an 'ave'. At T_2 he thus produces and assents to utterances like 'not all aves are alive' and 'not all aves are birds'. If later at T_3 he encounters a flightless bird, he will withhold the term 'ave', on the basis that aves are united by flying, and it doesn't fly. He also judges that his and others' earlier utterances like 'all aves are alive' were false at the time they were uttered, and takes the plane to be further evidence that their earlier utterances like 'all aves can fly' were true at the time they were uttered. In virtue of all this, we are invited to share the intuition that the meaning of U_1 includes planes, and excludes flightless birds, even though U_1 occurred before the incident which 'settled' this question. Edwin himself would certainly say so.

Second: sometime after T_1, Edwin sees a bird, observes its feathers and beak, but realises it is of a species which cannot fly. Since it is a bird, and he is in the habit of applying 'ave' to birds, he calls it an 'ave'. At T_2 he thus produces and assents to utterances like 'not all aves can fly'. If later at T_3 he encounters a plane, he will withhold the term 'ave', on the basis that aves are united by birdhood, and it isn't a bird. He also judges that his and others' earlier utterances like 'all aves can fly' were false at the time they were uttered, and takes the bird to be further evidence that their earlier utterances like 'all aves are alive' were true at the time they were uttered. In virtue of all this, we are invited to share the intuition that the meaning of U_1 includes flightless birds, and excludes planes, even though U_1 occurred before the incident which 'settled' this question. Edwin himself would certainly say so.

The argument for temporal externalism goes like this. U_1 is part of a temporally-extended practice of using the term 'ave', and it is features of this practice which fix the meaning of U_1 and any other utterances (in particular, which fix their extension). It is uncontroversial that utterances in this practice and in U_1's past can play a part in determining these features and thus fixing U_1's meaning. But

the practice extends into U_1's future too. If utterances in U_1's *past* can do this, why not utterances within the practice and in U_1's *future* too? At the very least, utterances in the practice and in U_1's future can count in fixing aspects of U_1's meaning which are not already fixed by those in its past.

Whichever way history goes, there are two groups of utterances in the druid's practice of using 'ave': those up until the time T_2 (including U_1 at T_1), and those afterward. The behaviour, applications, beliefs, intentions etc. surrounding the utterances in the first group are not sufficient to fix whether U_1 applies to planes or not, or whether it applies to flightless birds or not. The facts about the utterances in both groups together *are* sufficient, because Edwin's utterances at and after T_2 are enough to 'settle' the question. The temporal externalist claims that, since U_1 is part of the same practice as these later utterances, that determination applies to U_1 as well, even though the utterances which 'do' the determining come after U_1.

This is a surprising claim, and it comes with important caveats. The meaning eventually determined for U_1 by the later utterances must be 'accessible' from what is determined by the practice up until those utterances. Roughly, this means that the determining effect of the utterances after T_1 can only be to make the meaning more specific than that determined by all the utterances thus far, or to settle so-far-undecided questions of applicability. Jackman for example says:

> We can call [a more precise meaning] 'accessible' if it both preserves a sufficient number of entrenched beliefs and applications, and has no competitor that preserves significantly more. (Jackman 1999, p. 160)

Tanesini (2006) says similarly that her view is not applicable to words which 'have undergone dramatic changes in their meanings'. For example, though 'objective' is now used with a meaning implying mind-independence, we should not ascribe this meaning to long-past uses, which implied mind-dependence; the modern uses entail a meaning which is a not an accessible 'settling', but a different meaning altogether.

2   My objection

In this section I demonstrate my objection. I present two different cases where multiple different sets of future facts are each sufficient to determine the meaning of an utterance, but in different ways. In Section 2.1 one set follows the other; the case is 'iterative'. I consider how two different interpretations of temporal externalism would interpret this case, and show that both deliver counterintuitive conclusions. In Section 2.2 the two futures happen in parallel; the case 'branches'. I show that temporal externalism is committed to the utterance's

having an incoherent meaning, though the bare facts of the case don't suggest this.

2.1 Iteration

Consider the following case. Edwin is a druid on the island, just as above. Take some one utterance of the term 'ave' from the druid's practice and call it U_1, and the time at which it happens T_1. Sometime after T_1 Edwin sees a plane in the sky, watches it land, and realises it is not a bird. Since it flies, and he is in the habit of applying 'ave' to flying things, he calls it an 'ave'. At T_2 he thus produces and assents to utterances like 'not all aves are alive' and 'not all aves are birds'. All this is as in the first 'way history could go' in Section 1. Over the next weeks more planes fly over the island, some land, and following Edwin, the druids consistently and comfortably call them 'aves'. They judge that their earlier utterances like 'all aves are alive' were false at the time they were uttered, and take the planes to be further evidence that their earlier utterances like 'all aves can fly' were true at the time they were uttered. One of the planes brings some breeding pairs of a flightless bird, which populates the island and the druids withhold uses of 'ave' from these birds until T_3. At this point however, the druid's head philosopher considers deeply and for reasons unknown declares that the term 'ave' should never have been applied to planes, and should instead have been applied to all and only birds, including the flightless ones which now populate the island. The druids respect the recommendation, and adopt the new pattern of usage: they apply 'ave' to all birds and withhold it from planes. They judge that their earlier utterances like 'all aves are alive' were true at the time they were uttered, and that their earlier utterances like 'all aves can fly' were false at the time they were uttered (these judgements include those before and after the sighting of the first plane). Ever after, the druids continue applying 'ave' to all birds, and withholding it from planes.

The cases which originally motivated temporal externalism included two groups of utterances: those before a 'settling' incident and those after. This case includes three groups: those before an initial settling incident (up to T_2, including U_1 at T_1), those between this and a later 'resettling' incident at T_3 and those after T_3. Hence the title of the section—what happens once in the original case happens twice in this one. It would be straightforward to construct cases with more iterations, though the stories would become more tenuous. Nevertheless, my case is clearly of the same kind as the original: before T_2 it is indeterminate whether U_1 applies to planes or flightless birds; after T_2 it is determinate.

But it is not immediately clear how this determination will work. Are there

two determinations, for the two settled ways of using the term, or just one? If one, which one? Temporal externalism as described so far is not equipped to answer these questions. There are two further theses which could be added to temporal externalism so that it is:

Graduality. *At a time T, the only utterances which count in determining the semantics of some utterance in question are those made up until T.*

Determinacy. *At a time T, all utterances ever, including those made after T, count in determining the semantics of some utterance in question.*

In the rest of this section, I demonstrate that both Gradualist and Determinist versions of temporal externalism deliver unsatisfying analyses of the iterative case I present.

2.1.1   Graduality

Graduality says that at any time, only the utterances made up until that time count in determining the semantics of some utterance (in the case at hand, the utterance U_1 is one made well before that time). The events and utterances whose features determine whether U_1 applies to planes or flightless birds only occur from T_2 onwards. So according to temporal externalism with Graduality, at the time U_1 is made, it is indeterminate whether it applies to planes or flightless birds. This is in keeping with the general spirit of a lot of temporal externalist writing, and thus not a hard pill to swallow.

Once T_2 has passed, U_1's meaning is determinate. The utterances made after T_2, but before T_3, are sufficient to settle the practice as one which includes planes, and excludes flightless birds. At any time until T_3, *only* such utterances will be relevant, because later utterances are ruled out by Graduality.

So at any time between T_2 and T_3 it is true that the practice of using 'ave', of which U_1 is a part, has settled on a pattern of use which includes planes and excludes flightless birds. Thus at T_2, and any time until T_3, U_1's meaning includes planes and excludes flightless birds.

So U_1's status changes retrospectively as the time of assessment changes: at T_2 U_1's meaning goes from being indeterminate to determinately including planes and excluding flightless birds. This too is in the spirit of temporal externalism.

This is reflected in the truth of the judgements the druids make. Between T_2 and T_3 the druids judge that their own pre-T_2 utterances of 'all aves can fly' were true, and that those of 'all aves are alive' were false. And as they make them, these judgements are correct—at T_2-T_3 it is the case that U_1 applied to planes (and not flightless birds) and so at T_2-T_3 those pre-T_2 utterances *were* true and false respectively. Again, this is very much in the spirit of temporal externalism.

Finally, the utterances made after T_3 are also sufficient to settle the practice: at this point as one which excludes planes, and includes flightless birds. At any point at or after T_3, Graduality admits all the utterances up to that point as 'counting' in settling the practice's status.

So at any time after T_3 it is true that the practice of using 'ave', of which U_1 is a part, has settled on a pattern of use which excludes planes and includes flightless birds. Thus at any time after T_3, U_1's meaning excludes planes and includes flightless birds.

So U_1's status changes retrospectively *again* as the time of assessment changes further: at T_3 U_1's meaning goes from being determinate in one way (including planes, excluding flightless birds, as it was before T_3) to determinately another way (excluding planes, including flightless birds, after T_3). This too is reflected in the druid's judgements. After T_3 the druids will judge that their pre-T_2 judgements of 'all aves can fly' were false. And these post-T_3 judgements are *also* true at the time they are made. After T_3, it is the case that U_1 applied to flightless birds (and not planes), and so after T_3 those pre-T_2 utterances *were* false.

The problem for temporal externalism with Graduality is that changes of this latter kind are implausible: at T_3 U_1 goes from having one (retrospectively determined) determinate meaning to another, different (retrospectively determined) determinate meaning. I claim that this doesn't happen, temporal externalism with Graduality is wrong.

We could put all this in the language of assessment sensitivity (as in e.g. MacFarlane 2003). Graduality entails that the meaning of an utterance can depend on the time of its assessment, because at different times of assessment, different utterances will be in the set which count in determining the meaning of the utterance in question. In the case I describe, this means that: when assessed from any time until T_2 (including T_1) it is indeterminate whether U_1's meaning includes planes or flightless birds; when assessed from any time between T_2 and T_3 it determinately includes planes and excludes flightless birds; when assessed from any time after T_3 it determinately excludes planes and includes flightless birds. The difference between the first and second ranges is perhaps surprising, but defensible. I object to the difference between the second and third ranges.

It seems very unlikely to me that the meaning of an utterance can change in this way. Such changes have the bizarre consequence that any property or state of affairs which depends upon the meaning of the utterance will also be assessment sensitive, and also change in this way. For example, between T_2 and T_3 the druids make judgements that their earlier (pre-T_2) utterances of 'all aves can fly' were true. Call one of these judgements J. At the time it is made, J is a correct judgement. At that time, the practice of which U_1 is a part has settled on including planes and excluding flightless birds, so U_1 had such a meaning,

so the utterances in question are true (when assessed from the time of J), so J is correct at the time it is made. But when assessed from any time after T_3, U_1 has a different meaning, according to which J is an incorrect judgement. So at any time after T_3, J is an incorrect judgement. But surely this is wrong—the druids judged correctly at the time; their behaviour as if this was the case was justified. On temporal externalism with Graduality J *becomes* false, and their behaviour unjustified, as T_3 passes (even though by this time, J is well in the past). Surely not.

2.1.2   Determinacy

Now for the alternative. Determinacy says that at any time, every utterance which has been or will be made counts in determining the semantics of any utterance. The problematic retrospective changes in meaning on the Gradualist account were a consequence of variations in which utterances counted at which time. Determinacy admits no such variations, so such worries are avoided entirely.

The analysis of the iteration case is much simpler for temporal externalism with Determinacy than it was with Graduality. At all times, it is determinate that the practice to which U_1 belongs settles (eventually) into one which includes flightless birds, and excludes planes. Therefore, at all times, the meaning of U_1 includes flightless birds and excludes planes.

But this has worrying epistemic consequences. Recall that between T_2 and T_3 the druids make judgements that their previous utterances like 'all aves can fly' were true at the time they were uttered, and also judgements that those like 'all aves are alive' were false. All these judgements between T_2 and T_3 will be incorrect (whenever they are evaluated), because the meaning of utterances like U_1 is determined at all times to include flightless birds and exclude planes.

This is problematic. Between T_2 and T_3 the information available to the druids is exactly identical with what would be available to them in a situation where the meaning of U_1 is ultimately settled after T_2, as including planes and excluding flightless birds. In other words: from the perspective of the druids, the case is exactly as in the first 'way history could go' in Section 1.

In both cases, the druids behave exactly as they 'should' given all the available information. This behaviour is systematic and consistent over time, and pervades the whole community. Nevertheless, in the iterative case all the druids are systematically mistaken in their uses (and judgements about uses) of 'ave' over this period, though they are correct in the subjectively indistinguishable original case. Worse, the druids have no way of knowing this—it is not just that the druids *do not* know the meaning of utterances like U_1, but that they *cannot* know.

This seems unlikely to me. Surely it is not possible that an entire community behave systematically and consistently as they 'should', given all available in-

formation, and are nevertheless systematically wrong for the duration of that behaviour? Especially given that in a very similar case, only differing in facts about the future, this behaviour would be systematically correct for all the reasons we would usually expect.

An analogy: on temporal externalism with Determinacy, it is possible that in the future we discover that *all along*, our utterances of the word 'gold' have actually meant the thing we thought we referred to as 'mercury'—not because we discover new scientific facts about these substances, but just because we were previously ignorant of the way these terms would eventually be used in (what is now) the future. Surely all this is wrong, and temporal externalism with Determinacy should be rejected too.

2.2   Branching

Consider now another variant on the original case. Edwin is an old, frail druid, living on the island. Take one of Edwin's utterances of 'ave' and call it U_1, and the time at which it happens T_1. Edwin dies soon after T_1 and is thus removed from the linguistic community, though his utterance U_1 is still a historical element of the practice of using 'ave', which continues. Some time after this, the druidic community splits evenly in two over some matter of druidic law and each group goes to live on a separate part of the island. Call these groups A and B. At T_2 an A-druid sees a plane in the sky, watches it land, and realises it is not a bird. Since it flies, and he is in the habit of applying 'ave' to flying things, he calls it an 'ave'. At T_2 he thus produces and assents to utterances like 'not all aves are alive' and 'not all aves are birds'. He shows the plane to the other A-druids, and by T_3 they have all taken on the new, more specific usage of 'ave'. No B-druids see the plane.[2] Simultaneously at T_2 a B-druid sees a bird, observes its feathers and beak, but realises it is of a species which cannot fly. Since it is a bird, and he is in the habit of applying 'ave' to birds, he calls it an 'ave'. At T_2 he thus produces and assents to utterances like 'not all aves can fly'. He shows the bird to the other B-druids, and by T_3 they have all taken on the new, more specific usage of 'ave'. No A-druids see the bird.[3]

Eventually at T_4 the A and B-druids learn of each other's discoveries, though their earlier animosity leads them to reject each other's linguistic developments. Thus after T_4 the A-druids will make and judge true utterances like 'all aves can fly', and withhold or judge false those like 'all aves are alive', while the B-druids will assent and judge true to 'all aves are alive' and withhold or judge false 'all aves can fly'.

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[2]Perhaps the B-druids all live in caves, or avert their eyes from the sky for religious reasons, or live behind tall mountains, etc.

[3]Probably because the birds only live on the B-part of the island.

These judgements extend to past utterances as well. That is, at times after T_4, the A-druids will judge that utterances before T_2 like 'all aves can fly' were true at the time they were uttered and those like 'all aves are alive' were false at the time they were uttered. By the lights of temporal externalism the A-druids are right: these utterances of 'ave', including Edwin's U_1 are part of an ongoing practice of which their own utterances are also part. Their own utterances are sufficient to settle that this practice includes planes, and excludes flightless birds (and they have had cause and opportunity to 'decide' on both these issues). Since the practice settles this fact, and U_1 is part of the practice, U_1's meaning includes planes and excludes flightless birds. According to temporal externalism the A-druids' judgements about the meaning of pre-T_2 utterances of 'ave', and of the truth of pre-T_2 assertions using 'ave' are all correct.

Exactly parallel reasoning will apply to the B-druids. That is, at times after T_4, the B-druids will judge that utterances before T_2 like 'all aves are alive' were true at the time they were uttered and those like 'all aves can fly' were false at the time they were uttered. By the lights of temporal externalism the B-druids are right: these utterances of 'ave', including Edwin's U_1 are part of an ongoing practice of which their own utterances are also part. Their own utterances are sufficient to settle that this practice excludes planes, and includes flightless birds (and they have had cause and opportunity to 'decide' on both these issues). Since the practice settles this fact, and U_1 is part of the practice, U_1's meaning excludes planes and includes flightless birds. According to temporal externalism the B-druids' judgements about the meaning of pre-T_2 utterances of 'ave', and of the truth of pre-T_2 assertions using 'ave' are all correct.

The cases which originally motivated temporal externalism included two sequential groups of utterances: those before the settling incident and then those after. This case includes three groups, two of which happen in parallel: those before an initial settling incident (up to T_2, including U_1 at T_1), those after T_2 among the A-druids, and those after T_2 among the B-druids. Hence the name 'branching': the practice separates in two as do the druids. Nevertheless, this case is of the same kind as the original: before T_2 it is indeterminate whether U_1 applies to planes or flightless birds; after T_2 it is determinate.

The problem should be clear. This is just the kind of case which temporal externalism is proposed to handle, but it seems temporal externalism entails that U_1's meaning both includes and excludes planes, and both includes and excludes flightless birds, in virtue of its relations with various later events.[4] But

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[4]Or equivalently: that later judgements to both the former and the latter effect are all true. The distinction between Graduality and Determinacy makes little difference here. On temporal externalism with Graduality, the semantic effect I object to only occurs after T_4; on temporal externalism with Determinacy it occurs at all times. This shouldn't make much of a difference to my point.

surely this cannot be the case. This is the second form of my objection.

Note two important things about my argument. First that neither branch of the practice after T_2 is in any way privileged in determining the meaning of U_1. If the A-druids' usage eventually came to be accepted by the B-druids, or if it got going earlier, or if Edwin was a member of A, then we might reasonably think that the A-druids' usage alone determines the meaning of U_1 (and conversely for B *mutatis mutants*). But the case is constructed to avoid this: nothing makes the A or B practice a better candidate for determining U_1's meaning. Second, that temporal externalism is applicable here. Surely U_1 is part of an ongoing practice which continues after T_1. Since neither A or B is privileged, we cannot say that this practice continues in A but not in B; it continues in both. The utterances until T_1 are not sufficient to fix U_1's meaning but the later utterances are, so temporal externalism applies here if it applies anywhere.

The concern is this. Since the case is of the kind treated by temporal externalism, U_1's meaning will be fixed by events after U_1, if there are such events sufficient to determine the meaning. And there *are* such events. In fact, there are two distinct branches of the practice U_1 leads to. Since neither is privileged, both of them 'count' in determining U_1's meaning. But if both count, U_1 will have a meaning determined in accord with both, and in this case such a meaning is contradictory. Such situations surely do not obtain. There is nothing strange or overly contrived about the facts of the case itself, so the problem must be with the theory; temporal externalism should be rejected.

3 Conclusion

Iteration and branching are really two instances of the same problem. Both cases involve more than one separate pattern of post-T_1 behaviour, where each such pattern is independently sufficient to settle otherwise undetermined questions of U_1's meaning. None of these determinations alone would be problematic; the problem is that temporal externalism includes no way to 'choose' which is the right one and so they interact in counterintuitive ways. In the first instance (temporal externalism with Graduality) the meaning of a single utterance at a single time changes as more future utterances become present and relevant, and the utterance itself passes further into the past. In the second (temporal externalism with Determinacy) the meaning of an utterance was epistemically inaccessible in an unexpected way. And in the third, the meaning of a single utterance is over-determined in contradictory ways by its relations which multiple incompatibly-determining future patterns of behaviour which happen in parallel. There may well be other cases of a similar structure.

In reality none of this happens. Our utterances' meanings do not change

significantly post-fact,[5] are not unreasonably unknowable, and are not internally contradictory. Temporal externalism is at fault, and should be rejected.

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[5]Note again the earlier distinction between post-fact meaning changes from indeterminate to determinate (surprising but defensible) and those from determinate one way to determinate another, different way (very unlikely). I only object to the latter consequence of temporal externalism.

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