Temporal Word Meaning Changes Amidst Belief Contrast

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Abstract: Temporal externalism posits that the meanings of words inherently incorporate properties closely tied to future usage and aims to develop models for the evolution of word meanings within normative-like frameworks. However, these models face significant challenges due to an unwavering focus on how specific words change across diverse practices. A more suitable strategy entails examining the relationship between specific practices and different words, allowing us to naturally replace shifts in agent beliefs for changes in word meanings over time, which may lead to certain contradictions if they insist on asserting changes in word meanings from an external perspective.

Keywords: temporal externalism, specific practice, belief contrast, meaning changes

1.

One perspective in the field of philosophy of language, specifically within externalism, contends that the meaning of words is intricately linked to their usage. In essence, it has become a widely accepted view that a word’s meaning is ascribed based on how the word is used. In recent years, there has been a growing examination of the process of meaning ascription from a temporal view, which includes exploring the relationship between a word’s meaning and its historical usage, as well

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†It is essential to highlight that the tenets of temporal externalism and the exploration of the relationship between meaning and practice are intrinsically intertwined, as articulated by Rouse (2014): “Appeals to linguistic practice(s) are gestures toward spelling out what the relevant sense of ‘use’ ought to be.” I extend my gratitude to Rouse in the same paper for providing a critical review of the interplay between word meaning and practices. Similarly, the original claims advanced in this paper I proposed also unfold within the perspective of examining the relationship between word meaning and the practices it encounters.
as its connection to future utilization. Nonetheless, some philosophers question how the meaning of a word can encompass properties related to future use, as they believe it runs counter to common intuition.

The claim of temporal externalism is frequently expounded through the two thought experiment below: The term “Grant’s zebra” was first used around 1820 to refer to a zebra species that is native to Kenya. Several years later, the term “Chapman’s zebra” was introduced to describe a different type of zebra found in the Zimbabwean region, characterized by unique morphological features. However, as the field of biological taxonomy evolved through subsequent research, researchers made a fascinating discovery – these two zebra species could interbreed in the vicinity of the Zambezi River. This led to significant changes in their morphological characteristics, making it challenging to clearly distinguish between these different forms. This finding suggests that when these two zebra species were initially named, people did not take into account the details related to the Zambezi River. They simply based the names on how the zebras looked in Kenya and Zimbabwe, without understanding the significance of the Zambezi River. Next, let’s explore a hypothetical scenario: consider if early biologists had considered the Zambezi River region when naming these zebras. Specifically, imagine a scenario where they discovered transitional subspecies in the Zambezi River area after coining the term “Grant’s zebra,” but before identifying and naming “Chapman’s zebra” in Zimbabwe. In this new context, would the meaning of the term “Grant’s zebra” undergo a profound transformation? One might intuitively speculate that they might use the term “Grant’s zebra” to encompass the entire zebra population, spanning across the three distinct zebra species discovered in these three regions, including the transitional subspecies between them. Temporal externalists argue that perhaps the initial naming of “Grant’s zebra” was a contingent outcome, oblivious to potential future developments in the field of nomenclature.

We can also consider another case where an isolated island, completely cut off from the outside world, is inhabited by a tribe known as the Druids. These inhabitants, hereafter also referred to as the Druids, have a language and conceptual framework limited to their natural environment and daily life on the island, without any knowledge or vocabulary extending beyond it. Since the island has never been exposed to modern technology, they have no awareness of the terms associated with it.
For instance, they would have no concept of an airplane as it exists in our modern society. Now, let’s imagine a specific moment, denoted as $T_1$. At $T_1$, a modern airplane suddenly flies over the island’s airspace, and the Druids witness this entirely novel phenomenon for the first time. According to temporal externalists, the Druids would naturally employ the word “Ave” to label this unfamiliar behemoth. However, considering that there is still some difference between an airplane and what the Druids previously denoted with “Ave” the extension of the term “Ave” undergoes a transformation as they engage in the current practice of encountering an airplane. Continuing with the same timeframe, if the Druids were to witness not a flying airplane but a crashed one on the ground, they might similarly instinctively label it as a “House.” As with the experience of the term “Ave,” the extension of the term “House” also evolves in meaning due to its use in the context of their practical encounters. The two cases seemingly suggest that the meaning of words may be inherently mutable, evolving in accordance with shifts in subsequent practices (Ebbs, 2000; Jackman, 1999).

Based on the explanation of the case above, temporal externalists assert that the meaning of a word is not fixed when it is first or next used but rather changes with future practices that the word encounters, it presupposes that our future usage of a word can resolve its reference at that future time. Perhaps there might be an equilibrium range within which the meaning of a word is perceived as resistant to change through ongoing usage, yet this range could be subject to disruption (Jackman, 1999, 2020), and there may exist certain determinate or even indeterminate norms guiding the alterations in word meaning or usage (Rouse, 2014; Tanesini, 2014). However, for a specific word, finding a more intuitively satisfying model to guide its meaning over time always involves an open-ended problem, which arises from future practices exhibiting a high degree of contingency or randomness ‡. Although not particularly abundant, there are indeed some other references (Brown, 2000; Haukioja, 2020; Reinikainen, 2022) discussing this aspect, however, the intention of this paper is not to explore the reasonableness of normative-like models. Instead, it is proposed that the focus on these models presents a mistaken approach to the relationship between practice and word meaning. The passive remedies to address open-ended problems can be avoided by adopting an alternative approach while

‡ In fact, the model proposed by Rouse (2014), which I refer to as the model of dynamic normativity, aims to guide the word usage in an attempt to circumvent open-ended problems. Regardless of the merits advocated by this model, the perspective itself still does not provide any substantive standards. In this paper, I do not intend to evaluate the relevant stuff; rather, my aim is to introduce a new approach to sidestep open-ended problems in the subsequent discussion.
examining the relationship.

2.

Since the formal introduction of temporal externalism, supporters, although taking various approaches, often seem to default to a particular perspective, which involves examining the narratives that occur between *specific words* and different *ongoing future practices*. For instance, in the case mentioned earlier, regarding the first or last usage of the word "Ave," they consistently argue that the word’s meaning in the future will develop differently based on the varied practices it encounters. These kinds of approaches give rise to open-ended problems, as finding a reliable model to address the task of potentially infinite future practices is a daunting challenge. A more constructive perspective will be introduced to refrain from presupposing an examination of a specific word and instead initiate the inquiry from a *particular actual practice* to understand what transpires between practice and word meaning. By focusing on specific actual practice, we can potentially navigate around the open-ended problems associated with future practices and gain a totally different understanding of the dynamics between language and the evolution of meaning.

In the case of the Druid, consider Richard, who one morning sees an airplane flying in the sky without any prior experience or information about such a giant stuff. It is reasonable to postulate that Richard, akin to anyone confronted with a novel situation, would resort to an analogical mode of reasoning. Initially, when faced with the enormous being in the sky, Richard would develop certain beliefs, such as "capable of flight," "possesses wings," "likely emits sound," "wings cannot flap," and so forth. Subsequently, his beliefs regarding the relevant features of this airplane would guide him to search his mental repertoire for an appropriate word to describe it. In this process, we can assume that the beliefs associated with the word "Ave" in Richard’s mind, such as “capable of flight,” "possesses wings,” "likely emits sound,” and "wings can flap,” closely resemble his beliefs about the airplane when he sees it. Based on this similarity, Richard would utilize the term "Ave" to describe

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§ Although Jackman (1999); Rouse (2014); Tanesini (2014) was among the early scholars to employ the term "belief" in discussing the change of word meanings, a detailed exposition of the relationship between belief and word meaning has been somewhat lacking. In this paper, I have not delved deeply into this relationship either. However, I operate on a presupposition, namely, that following the creation of a word, its meaning is contingent upon the beliefs held by its users, rendering it inherently relative and private.
the airplane.

Where do relevant beliefs originate, and how are they compared? In the case mentioned earlier, what is the source of Richard’s belief regarding the term “Ave”? It is safe to say it originates from the last place where his belief was shared. As for the Druids, this belief is rooted in ancestral transmission, possibly through instruction by teachers or acquisition through reading. What factors influence the formation of beliefs about airplanes? Perhaps it is influenced by external environmental factors, or experiences and memories et al. The process of comparison can be hypothesized as a process of judging whether a threshold is reached. When the similarity between the belief in a certain word in one’s mind and the belief generated from new practices reaches a certain threshold, that word is selected to carry out the responsibility of the current practice (describing an airplane flying in the sky). Similarly, the judgment of the threshold presents individual variations, perhaps influenced by the community in which one is situated or personal experiences, among other factors. If, during the comparison of the two, even if the threshold is met, Richard still has beliefs about the plane that are not present in his traditional beliefs about “Ave,” such as the belief that “wings cannot flap,” at time $T_1$, Richard’s belief about the term “Ave” is enriched with the aforementioned elements. The next time Richard encounters a new practice, he will still undergo a similar process of belief comparison, this time pertaining to the current situation he faces. For Richard, in order to facilitate the next practice, he may opt for, or choose not to use, the same word as he did last time. For instance, when Richard sees the plane landing, he will continue to form beliefs about the landing plane, which will include some content like “not a living being” and “can accommodate people” et al. In one scenario, new belief content may be compared in the mind, and “Ave” is still chosen to address the current practice, thus adding new content or experiencing updates to his belief about “Ave.” In another scenario, during the comparison in the mind, it may be found that “Ave” does not meet the threshold as well as other words, such as “House.” Therefore, Richard may choose the latter one to complete the current practical activity.

In contrast to earlier inquiries into how the meaning of the word “Ave” might change over a

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9In this context, it is worth noting that Jackman (1999) introduced the concept of what is referred to as the “an equilibria.” According to this perspective, after undergoing the kind of contrast I mentioned, Richard will naturally undergo a belief update. This update involves simultaneously removing the two elements from the traditional Ave: “wings can flap” and the belief generated in the face of an airplane, “wings cannot flap.” This process aims to achieve a state of equilibrium.
so-called ongoing practice, we no longer need to seek legislative answers. As mentioned before, any attempt to find a paradigm within legislative meaning that incorporates the development of word meaning into entirely contingent future practices is futile, given that the chasm of practical contingency is challenging to bridge. However, if we begin our examination from the vantage point of the particular/specific, actual practice faced by the agent, without preconceiving an examination of a particular word, we entirely circumvent the so-called open-ended problems, which is quite natural. After all, legislative attempts themselves are merely a compromise of temporal externalism and do not possess inherent necessity.

In summary, as the agent of practice confronts a new practical situation, the process of completing the practice involves the following steps: Firstly, the agent develops beliefs about the practice at hand; Secondly, the agent searches their mental lexicon for words or concepts that closely resemble these beliefs. There exists a certain threshold; if the similarity between the agent’s pre-existing lexicon-based beliefs and the newly formed beliefs about the practice exceeds this threshold, the agent employs the pre-existing lexicon-based words or concepts to complete the practice. Simultaneously, the agent’s beliefs regarding these pre-existing lexicon-based words or concepts may undergo modification. If the similarity threshold is not met, the agent will either create a new word or concept to complete the practice or may be unable to complete the practice.

3.

If the similarity threshold is met, can we say that the meaning of the word has changed over time? Based on the aforementioned scheme, we can easily understand that, in the case of the word “Ave,” what occurs is a shift in beliefs, and this shift in beliefs is relatively specific to agents. Why emphasize that it is a specific one? This is because, from a more external perspective, the process and results of belief comparison exhibit a wide range of diversity. In most cases, belief comparison is conducted from an individual standpoint, and it is challenging to conduct a comprehensive global assessment. For different agents, even when faced with the same practice, the beliefs they generate may vary due to external factors, we seemingly cannot establish legislative standards to evaluate the stories.

\[^1\]The reason for using the term “agent” in this paper is that word users may be independent individuals or relatively distinct specific groups.
that different agents undergo during the comparison stage and afterward from a relatively external view. For a specific practice, at a specific moment, different agents may go through different belief comparisons and results, which may be similar or different. We cannot legislate from an external perspective what beliefs different agents should adopt to meet their requirements.

Let me analyze this in conjunction with a case study. Assume that the biologist John first encounters a zebra in the Kenyan region, and after describing it using the term ‘Grant’s zebra,’ he shares the relevant beliefs with the members of his community. However, it is important to note that there is a possibility that we cannot ensure that all members of this community share the same beliefs they received from John, even though the use of the term ‘Grant’s zebra’ and the associated beliefs have been legislatively defined by local authorities. Suppose Jane later encounters a zebra in the Zimbabwean region. Given that he has inherited almost entirely the beliefs about the use of the term ‘Grant’s zebra’ from John, despite the significant differences between the two situations, after a belief comparison, Jane will not use the term ‘Grant’s zebra’ to describe the zebra he encountered in Zimbabwe. However, if another biologist, Sarah, for various reasons (corresponding to the various influencing factors we mentioned earlier), did not fully share their beliefs with John regarding the term ‘Grant’s zebra’ but only shared a portion of them, coincidentally, the shared portion of beliefs aligns closely with the beliefs he formed when encountering the zebra in the Zimbabwean region. At this point, we can naturally assume that Sarah will make a different decision compared to Jane. Based on the above, we can say that, for the same practice, even individuals within the same community cannot make the same choices to complete that practice due to the comparison and variation of beliefs mentioned earlier. In light of the story that has unfolded with respect to the beliefs we discussed, we must emphasize that the degree of change in these beliefs is relative to the individuals involved and does not have a universally applicable answer.

4.

Then, for a given agent, if the beliefs they hold in their mind about a word satisfy the commitments made by the word’s creator at the time of its initial creation, and after going through a stage of belief comparison, the agent’s beliefs about the word have indeed changed at time $T_1$, can we say that the
meaning of the word has changed up to $T_1$? I will argue that if the meaning of the word is considered to have changed, it will manifest certain contradictions.

Let’s begin by assuming that the term “Ave” was created at time $T_0$, and its meaning was relatively fixed, with all Druids holding beliefs about “Ave” that were the same at that time and fulfilled all the commitments made when the term was first created. Secondly, it is reasonable to imagine that Druid Richard at time $T_1$, when facing an airplane, changed his beliefs about “Ave,” while others, for various reasons (e.g., not having seen the airplane), did not go through Richard’s process of belief change regarding “Ave.” Therefore, relative to $T_0$, Richard and the other Druids at $T_1$ actually have (at least) two different beliefs about “Ave.” Suppose at $T_1$, Druid Alexander also forms a set of beliefs about airplanes after seeing one, but these beliefs may not be entirely the same as Richard’s due to differences in their past experiences (even small differences are worth examining). For instance, Alexander might include “are made of stainless steel” in his beliefs about airplanes, while Richard includes “are made of iron”. So even if, after comparison, Alexander chooses to use the term “Ave” to complete the current practice, just like Richard, at $T_1$, there exist three different beliefs about “Ave,” namely, “Ave_{Richard},” “Ave_{Alexander},” and “Ave_{Others(original)}.” Can it be proven that the meaning of “Ave” has changed at $T_1$ relative to its meaning at creation($T_0$)? If provided with a positive response, we would encounter a scenario where, at the same moment ($T_1$), when facing the same specific practice, the meaning of “Ave” has splintered into at least three. What’s even more remarkable is that at this juncture, some Druids, due to their lack of sight regarding the airplane, still adhere to “Ave_{original},” much like it was at $T_0$, implying that, for “Ave,” its meaning has simultaneously evolved and remained unaltered within the same moment, which presents a clear and apparent contradiction. Nevertheless, when we posit that beliefs about “Ave” have experienced both change and constancy concurrently, this predicament dissipates. A compelling argument can be made, suggesting that when an agent encounters a new practice at time $T_1$, they tend to develop a more extensive array of beliefs, each bearing personalized characteristics, which deviate from the unified ones that were initially shared among individuals when the term “Ave” was coined at $T_0$. This divergence becomes evident in the diverse beliefs displayed by different individuals when they confront novel practices, and it’s crucial to note that this doesn’t necessarily signify a shift in the term’s meaning at
unless there are compelling explanations for how the term reconciles the apparent contradictions. However, once an agent solidifies their beliefs about ‘Ave’ and perceives a change in meaning, albeit on a personal level, when facing the next practice where the term is needed or selected, attempting to assert this change in meaning from a broader, external perspective is likely to prove futile, while recognizing the evolution of the agent’s beliefs provides a more dependable explanation.

Temporal externalists appear inclined to employ situations where the meaning of a word is uncertain or the word’s creator lacks a definitive belief about its meaning at time $T_0$, as illustrative examples for elaborating on why a word inherently seems to exhibit properties associated with future usage. When an agent encounters a specific practice at time $T_1$, a particular type of well-defined belief about a previously ambiguous word has already formed in their mind. As this belief, marked by subjectivity, becomes more specific and firmly entrenched in the agent’s mind, the uncertain word can then take on a more prominent role in future practices. It’s essential to recognize that we cannot assert that the meaning of a word becomes clearer with repeated use; quite different, when confronted with a specific practice, the agent develops a belief about the uncertain word that, to some extent, becomes even more distinct. From this perspective, the narrative continues to center around the belief contrasts.

I would like to reiterate that in this paper, I have not attempted to evaluate the legislative work that proponents of temporal externalism have passionately pursued over the past two decades, which aims to uncover the evolving legislative aspects of the meaning of a particular word through ongoing future practices. After introducing the relevant cases, I find such legislation unnecessary, and instead, I propose an alternative approach to exploring the relationship between word meaning and practice, which focuses on specific, actual practices. I advocate an external perspective in which change occurs solely at the level of the agent’s beliefs when they are confronted with specific practices, implying that it is the beliefs themselves that change, not the word’s meaning. This evolution demonstrates agent diversity, still does not require legislative scrutiny, and, at the same time, equating changes in beliefs with meaning may lead to the emergence of contradictions.
References


