Truth and Perspective

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Abstract

Several studies in experimental philosophy and semantics have shown that a substantial number of English speakers consider a statement true even if it does not align with the facts, as long as it is justified from the speaker's perspective. These findings challenge the prevailing view among philosophers that truth is uniformly based on a statement's correspondence to reality and suggest that for some speakers truth is sensitive to epistemic perspectives. In this study, we show that this behavior depends on how the critical question assessing the statement's truth is phrased. When participants were asked whether the proposition itself is true (e.g., "Is it true that [the uttered proposition]?"), almost everyone answered negatively. It is when the original speaker was mentioned in the question (e.g., "Is what [the speaker] said true?" or "Is [the speaker]'s answer true?") that around half of the participants answered positively. We explore four possible explanations for this behavior: (1) "true" might be ambiguous between a basic correspondence sense and a coherence sense, which may be activated in some people by the explicit mentioning of the speaker; (2) "true" could be a context-sensitive expression with an implicit perspective parameter such that some speakers shift to the speaker's perspective when prompted by the question; (3) those who select "true" might *ad hoc* relativize the term to the speaker's perspective; (4) those who select "true" might unconsciously substitute it with "truthful". In addition, we discuss the implications of the findings for other philosophical discussions concerning norms of assertion, sincerity, and the theory of reference.

Keywords: Truth · Lexical Ambiguity · Epistemic Perspective · Correspondence · Coherence · Relativism

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Author contributions

Both authors contributed to the study conception, design, and material preparation. Data collection and analysis were performed by Kevin Reuter. The first draft of the manuscript was written by Giuseppe Ricciardi and both authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

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1 Introduction

Mastering the ability to discern the truth or falsity of a given statement is an essential skill that we apply across various realms—be it everyday conversations, scientific pursuits, or legal deliberations. Within philosophy and linguistics, the formal semantics approach places significant importance on this ability, considering it pivotal in comprehending the meaning of sentences (e.g., Davidson, 1967; Lewis, 1972). Given truth and falsity's foundational role in human endeavors, a precise grasp of these concepts becomes paramount. While philosophers have largely been discussing questions such as "What is the nature of truth?", "What is the relationship between truth and meaning of linguistic expressions?", "What is the role of truth in knowledge?", this project focuses on the following issue: what is the relationship between perspective-taking and judging a statement to be true?

In the past decade, this question has started to be explored through various experimental studies (e.g., Knobe & Yalcin, 2014; Khoo, 2015; Beddor & Egan, 2018; Khoo & Phillips, 2019; Phillips & Mandelkern, 2020; Dinges & Zakkou, 2020; Reuter & Brun, 2021; Ricciardi & Martin, 2022; Kneer, 2022; Reuter, 2024). These studies employ tasks where participants take on the role of bystanders eavesdropping on fictional conversations. The participants are then prompted to evaluate the truth of a statement made by a character in the conversation, which is justified from the character's perspective but does not align with the facts. This setup establishes a contrast between two perspectives: that of the character making the statement, who holds a justified belief supporting the statement, and that of the bystander participant, who is aware of the facts contradicting the statement. Thus, this task enables researchers to compare divergent epistemic states and evaluate their influence on the attributions of truth and falsity to a statement. Let's refer to this task as the "mismatch task".

For example, in one of their experiments, Reuter & Brun (2021) presented participants with a vignette featuring a character, Maria, claiming to have a 1990 Rolex Submariner in her safe. This claim is justified based on Maria's evidence (she placed the watch there herself) but does not align with the facts (the watch was stolen without Maria's knowledge).

(1) Vignette used in one of Reuter & Brun's (2021) mismatch tasks

> Maria is a watch collector. She keeps all her watches in a safe and knows her collection really well. One day, her friend John asks her whether she has a 1990 Rolex Submariner in her safe and, if so, could show it to her. Maria answers that she has got a 1990 Rolex Submariner in her safe. After all, she had purchased that watch a few years ago. When Maria opens the safe a little later, she finds out that a burglar has stolen several watches, among them the 1990 Rolex Submariner.

After reading the story, participants were tasked with determining whether Maria's answer, "I have a 1990 Rolex Submariner in my safe", was true or false. From a philosophical standpoint, the answer to this question seems clear-cut: Maria's answer was false because the Rolex was not in her safe at the time of her statement. This answer rests on the idea that the truth of a statement depends solely on its correspondence to reality—a principle deeply ingrained in the so-called correspondence theory of truth. This theory, which traces its origins to Aristotle and has been further refined by influential figures in

analytic philosophy such as Moore, Russell, Wittgenstein, and Tarski (e.g. Moore, 1901; Russell, 1905; Wittgenstein, 1921; Tarski, 1935, 1944), serves as a fundamental framework in philosophical discourse. It postulates that only objective facts are relevant in assessing the truth of a statement, disregarding the epistemic state of the agent who made the statement or any other involved agents. The correspondence theory is widely assumed by philosophers to accurately reflect how the terms "true" and "false" are understood by non-philosophers—at least in the empirical domain. Consequently, philosophers would generally anticipate a consensus among participants in tasks like these, resulting in an unanimous "false" response.

Surprisingly, Reuter & Brun (2021) found that participants were divided in their responses, with about half selecting "True" and the other half selecting "False". This tendency has been replicated in mismatch tasks involving sentence types other than bare assertive sentences, such as those containing epistemic possibility modals like "might" (Knobe & Yalcin, 2014; Khoo, 2015; Beddor & Egan, 2018; Khoo & Phillips, 2019; Phillips & Mandelkern, 2020; Ricciardi & Martin, 2022) or predicates of personal taste (Dinges & Zakkou, 2020; Kneer, 2022), and in languages other than English, such as German and Mandarin (Reuter, 2024). Therefore, the question naturally arises: why do certain people judge a statement as true in mismatch tasks, contrary to the general expectation within the philosophical community that the statement would be unanimously judged as false? Two explanations have emerged in the literature.

Reuter & Brun (2021) propose that these speakers interpret the adjective "true" (along with its counterparts in German and Mandarin) according to another meaning associated with the term, which is related to another well-known philosophical analysis of truth, known as the coherence theory of truth. This theory suggests that a statement is true if it coheres with a given set of statements representing a specific system of beliefs or a perspective (e.g., Bradley, 1914; Blanshard, 1939; Rescher, 1973; Walker, 1989; Young, 2001; Thagard, 2007). Thus, assuming that the terms "true" and "false" are ambiguous between the correspondence and coherence sense, Reuter & Brun (2021) suggest that those who choose "true" adopt a version of the coherence sense, judging the coherence of the statement with the speaker's information state at the utterance time, while those who choose "false" adopt a correspondence sense, judging the statement as not corresponding with the facts.[1]

Ricciardi & Martin (2022) propose an explanation rooted in a relativistic theory of truth**,** a stance that has a long historical trajectory and has gained prominence in the past two decades under the label "New Relativism", especially among philosophers of language with an explicit interest in semantic questions (e.g. Kölbel, 2002, 2008; Lasersohn, 2005, 2009; Stephenson, 2007; Egan, 2007; MacFarlane, 2011, 2014; Wright, 2006; Glanzberg, 2007; Richard, 2008; Stanley, 2016). This relativist stance holds that a statement's truth should be conceived as "truth for X", where X represents any potential reference point used for evaluation. This analysis has been typically invoked to account for the meaning of several types of sentences including sentences expressing personal taste, such as "Roller coasters are fun", and sentences containing epistemic predicates, such as "Joe might be in Boston". Thus, assuming the availability of a "true for" concept, Ricciardi & Martin suggest that there is a single sense of the property "being true" aligned with the correspondence analysis and shared by both groups of participants in mismatch tasks. This sense can be paraphrased as "describing a fact", and what varies between the two groups is the perspective adopted for applying such a property to the statement. The people who judge the statement as "true" in mismatch studies do so by relativizing the correspondence sense to the speaker's

[1] Please note that most accounts of the coherence theory of truth require the relevant set of statements to be a more extensive body of propositions than just the set of statements known by a specific person.

perspective, judging whether the statement describes a fact based on what the speaker knew at the utterance time. Conversely, those who judge the statement as "false" relativize this sense to their own perspective, judging the statement as not describing a fact based on what they know at the time of their assessment.

However, before sharpening the interpretation of the data, it's essential to clarify the data themselves. Regardless of whether one adopts Reuter & Brun's (2021) or Ricciardi & Martin's (2022) account, it's undeniable that a shift to the speaker's perspective is crucial in explaining the behavior of participants who select "true" in mismatch tasks. It seems rather clear that these participants evaluate the statement by referencing the body of information possessed by the speaker at the time of the utterance. This study aims to investigate the specific features of mismatch tasks that prompt participants to make this shift to the speaker's perspective when evaluating the truth of statements, and to shed light on the mental mechanisms underlying this shift.

We hypothesize that the primary determinant lies in the degree of speaker-relativity within the critical question. Specifically, we speculate that in prior studies employing mismatch scenarios, a notable portion of participants were inclined to shift their perspective to that of the speaker (thus judging the statement as true) due to explicit reference to the speaker agent A in the critical question. For instance, Reuter & Brun (2021) framed the question as "Was A's answer true or false?", while Knobe & Yalcin (2014) and Phillips & Mandelkern (2020) used a format like: "Please tell us whether you agree or disagree with the following statement: 'What A said is false'?". Crucially, these formulations explicitly mention the speaker agent A. In contrast, Ricciardi & Martin (2022) departed from this approach, phrasing the question without mentioning the speaker, as in "Is the underlined statement true or false?". This formulation yielded a lower proportion of true choices compared to other studies, particularly for bare objective sentences, although still significant (approximately 25%). However, to date, no study has directly compared different formulations of the critical question within the same context.

In the study outlined below, our objective is to conduct a comprehensive comparison of six formulations of the critical question as listed in (2), each varying in the degree of emphasis on the speaker A's communicative act or the proposition P produced through that act.

(2) The six critical questions assessed in the study (A = speaker, S = sentence)

I. Did A speak in a true way about the subject matter?
II. Has A said the truth?
III. Is A's answer true?
IV. Is it true what A said?
V. Is the statement enclosed within quotation marks true?
VI. Is it true that P?

All these formulations are often regarded as being interchangeable. Researchers working with mismatch tasks typically assume that questioning the truth of phrases like "the way someone spoke", "what someone said", or "someone's answer" is equivalent to questioning the truth of the actual sentence S spoken by that individual. However, in the linguistic literature it has been often observed that the surrounding linguistic context can significantly influence the meaning of an expression, a phenomenon known by various terms such as "coercion", "type shifting", "accommodation", or "implicit conversion" (for a detailed review, see Lauwers & Willems, 2011). This phenomenon is often illustrated by the example of "book" in sentences

like "I finished the book". While "book" typically refers to an individual type of entity, in this context it cannot be interpreted in its usual sense because the verb "finish" necessitates an event-type entity. Thus, the noun "book" is coerced by the verb's requirements to take on an event reading (i.e., the event of reading). Furthermore, insights from the lexical modulation approach suggest that the meaning conveyed by a linguistic expression can be subject to conceptual modulation based on the specific communicative context (e.g., Carston 2002, 2015, 2024; Wilson & Carston, 2007).

Given these well-established phenomena, it is reasonable to speculate that when interpreting "true" in conjunction with phrases like "someone's answer", some speakers might adopt a different interpretation of the term than the commonly assumed correspondence-to-reality view. Specifically, we hypothesize that when "true" is used to evaluate a proposition P with no reference to its speaker ("It is true that [P]") individuals naturally tend to assess whether P aligns with the facts (as perceived by those individuals themselves), a notion philosophers refer to as the correspondence sense. However, when "true" is applied to evaluate the same proposition P as someone's answer (or what someone said, the way someone spoke, etc.), an additional associated meaning may be activated in certain individuals expressing an inclination towards assessing whether the speaker has made a valid communicative move by asserting P based on their (the speaker's) information state.

Our main goal in this study is to demonstrate a clear link in mismatch tasks between the proportion of participants who respond positively to the truth question and the extent to which the critical phrase in the question highlights the proposition in relation to the speaker's assertive act rather than the proposition itself. Referring back to the six question formulations in (2), we predict that formulations I-II, which strongly emphasize the speaker's assertive act, will elicit predominantly "true" responses. Formulations III-IV, with a balanced focus on the act and its output, are anticipated to result in a relatively even split of "true" and "false" responses. Conversely, formulations V-VI, which strongly highlight the output of the assertive act, are likely to yield predominantly "false" responses. Additionally, we aim to evaluate the extent to which participants' perspective-taking and considerations about the speaker's honesty correlate with their responses to the truth question. We then discuss how these findings relate to the meaning of the adjective "true" by offering four proposals that attempt to capture speakers' behavior in these tasks. Lastly, we describe how these findings can shed light on various issues in philosophy and linguistics, including norms of assertion, sincere communication, and the reference of proper names.

More broadly, through our studies, we aim to contribute to the understanding of how participants interpret certain terminology in experimental philosophy and semantics tasks. These investigations are crucial for uncovering potential task-related factors influencing semantic disagreements on the interpretation of theoretically relevant words and represent a fundamental preliminary step for potential conceptual engineering discussions, evaluating the conceptual variation linked to such semantic disagreement. Without these terminological clarifications, accurate philosophical examinations of the diverse conceptual repertoire that individuals employ when using and interpreting theoretically sensitive words would be unattainable.

The paper is organized as follows. Section 2 presents the results of an experiment conducted with English speakers, comparing the effects of the six types of critical questions listed above across two contexts. Section 3 provides a comprehensive discussion of these findings, offering three alternative explanations (Section 3.1) and exploring how they can enhance our understanding of other concepts in philosophical and linguistic theorizing, such as assertion, sincerity, reference, and felicity (Section 3.2). Finally, Section 4 provides concluding remarks that highlight the broader relevance of the findings reported in this study.

2 Experimental study: Assessing the impact of question formulations in mismatch tasks

In this study (pre-registered on OSF at this link), we aimed to compare six formulations of the critical question in mismatch tasks, prompting participants to assess the truth of an assertion of a character in the story. We hypothesized that formulations more focused on speaker A's act of asserting would elicit a higher proportion of positive responses to the critical question than formulations focused on the output proposition of such an act. Additionally, we assessed the extent to which perspective-taking and considerations about the speaker's honesty are correlated with participants' responses to the critical truth question. We expected that participants who answered positively to the critical question would be more likely to report adopting the speaker's perspective and considering the speaker's honesty when providing their answers.

Stimuli

We adapted two stories from previous works with the following common structure. Two agents, A and B, are introduced. B inquires about the whereabouts of a third agent, C. A provides their response, enclosed within quotation marks, asserting C's putative current location. Subsequently, it is revealed that A's answer is grounded in a reliable report conveyed to A by C before the current time. Finally, both A and B discover that C is not where A indicated, attributed to an abrupt change in C's plans. In this scenario, we anticipate participants to perceive A's response regarding C's location as justified, founded on a credible report from C, despite an unforeseen circumstance causing C not to be where they originally claimed, a detail unbeknownst to A.

(3) The two stories read by participants

> Story 1: Party
> Maria and Peter are students and meet up after dinner to go to a party. While they are walking there, Peter asks Maria whether Tom is at the party as well.
> Maria answers: "Tom is at the party". After all, Tom had told her that he would be at the party. When they arrive at the party, it turns out that Tom has changed his plans, and he is not at the party.
>
> Story 2: Boston
> Sally and George are meeting up in a cafe in Berkeley in the afternoon. George asks Sally if she knows where Joe is now.
> Sally answers: "Joe is in Boston". After all, last night Joe had told Sally that he would have a job interview in Boston in the afternoon today.
> Just then, they get a text message from Joe saying that the job interview was canceled and that he is still in Berkeley.

We devised six versions of the truth question, grouped into three categories: "Strongly-agent-focused", "Mixed-agent/sentence-focused", and "Strongly-sentence-focused", each containing two question tokens. The questions were designed to elicit binary "Yes-No" responses.

(4) The six truth questions

Question type	Label	Responses
Strongly-agent-focused		
Did A speak in a true way about the subject matter?	(True Way)	Yes-No
Has A said the truth?	(Said Truth)	Yes-No
Mixed-agent/sentence-focused		
Is A's answer true?	(A's Answer)	Yes-No
Is it true what A said?	(What A said)	Yes-No
Strongly-sentence-focused		
Is the statement enclosed within quotation marks true?	(Statement)	Yes-No
Is it true that P?	(Proposition)	Yes-No

We also created two additional questions designed to evaluate their reasoning in addressing the critical question. More precisely, these two questions aimed to assess which perspective participants adopted, either that of the speaker or their own ("perspective question"), and whether participants incorporated considerations about the speaker's honesty ("honesty question").

(5) Additional questions on perspective and honesty

Perspective question:

In answering the previous question, did you put yourself into Maria/Sally's shoes, or did you answer the question from your own perspective?

Response options:
Maria/Sally's perspective. Your own perspective

Honesty question:

How important was it for you to consider whether Maria/Sally is honest in making her claim?

Response options:
1- Not at all important 2. 3. 4. 5 - Extremely important

Lastly, we created three control questions to verify participants' attentiveness to the task and that their interpretation of the scenario aligns with our expectations. One question had a clear "Yes" answer, though unrelated to the truth of the character's response ("Control True Question"). Next, a question aimed to assess whether participants judged the character's assertion as justified ("Justification question"), and third, a question evaluated whether participants accurately recalled facts related to the character's answer ("Reality Question").

(6) Control questions

Control True Question (Simple Yes-question as an attention check):

Did Maria and Peter arrive at the party? / Did Sally and George meet in a cafe?
Response options: Yes No

Justification question (To ensure that the participant judges the speaker to be justified):

Is Maria/Sally's answer justified based on what she knew?
Response options: Yes No

Reality Question (To ensure that the participant gets the facts right):

Is Tom at the party? / Is Joe in Boston?
Response options: Yes No

The complete questionnaire can be accessed through this link.

Procedure and Predictions

We constructed a questionnaire using Qualtrics, employing a 2x6 design formed by crossing the two-level factor Story type, as detailed in (3), and the six-level factor Question type, as outlined in (4). Both factors were manipulated between subjects. The questionnaire was distributed via Prolific, and a total of 481 English native-speaker participants were recruited, each randomly assigned to one of the 12 experimental conditions.

Our investigation primarily focused on measuring the proportion of "Yes" choices for each of the six truth questions. We formulated four hypotheses concerning this variable. Specifically, we predicted that across the two stories:

- The percentage of "Yes" responses to strongly-agent-focused questions ("True way", "Said truth") will significantly exceed 50% (**Hypothesis 1**).
- The percentage of "Yes" responses to strongly-agent-focused questions ("True way", "Said truth") will be significantly higher than the percentage of "Yes" responses for mixed-agent/sentence-focused questions ("A's Answer", "What A said") (**Hypothesis 2**).
- The percentage of "Yes" responses for mixed-agent/sentence-focused questions ("A's Answer", "What A said") will be significantly higher than the percentage of "Yes" responses for strongly-sentence-focused questions ("Statement", "Proposition") (**Hypothesis 3**).
- The percentage of "Yes" responses for strongly-sentence-focused questions ("Statement", "Proposition") will be significantly lower than 50%, with "Proposition" numerically very close to 0% (**Hypothesis 4**).

We also measured the percentage of "Maria/Sally's perspective" responses to the Perspective question and the average rating of the Honesty Question. Pertaining to these variables, we defined two hypotheses. Specifically, we predicted that across the two stories:

- ➢ Participants answering "Yes" to the Truth question will significantly more frequently answer "Maria/Sally's perspective" to the Perspective question than those who answer "No" to the truth question (**Hypothesis 5**).
- ➢ For participants answering "Yes" to the Truth question, their average rating to the Honesty question will be significantly higher than the average rating of those who answer "No" to the truth question (**Hypothesis 6**).

Results

Of the 481 participants recruited, 46 had to be excluded because they did not pass one or more of the three control questions. Of the remaining 435 participants, 288 were female, 140 male and 7 other (non-binary, preferred not to say), with an average age of 39.27 years. The average ratings for all 12 conditions is depicted in Figure 1 below. For the following analysis, we merged the findings from both the Boston and Dinner scenarios.

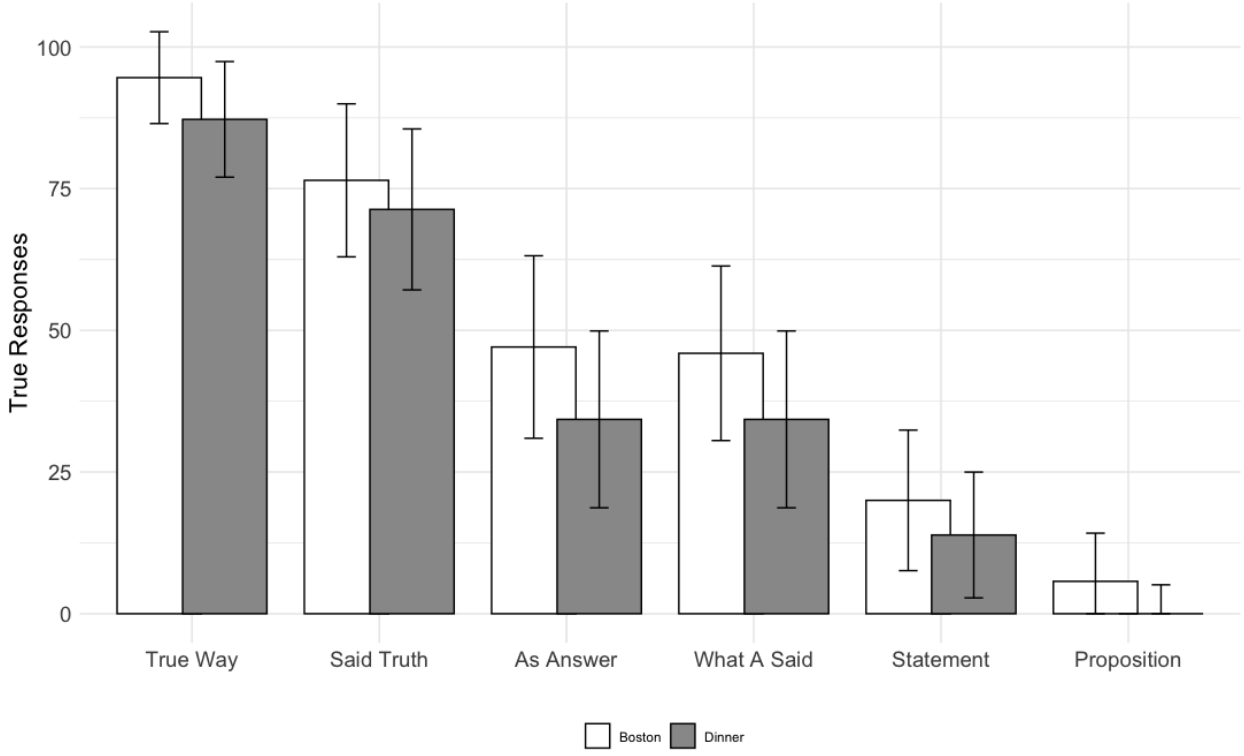

Figure 1 Percentage of True Responses for all 12 conditions. Error bars indicate confidence intervals

Strongly-Agent-Focused Conditions (in short Agent Conditions)

The analysis of the Agent conditions showed a significant preference for "Yes" responses. For *Said Truth*, the exact binomial test revealed that the proportion of "Yes" responses (73.91%) was

significantly higher than the expected 50% ($p < 0.001$; 95% CI: 0.638, 1.000). Similarly, *True Way* displayed an even higher proportion of affirmative responses (90.48%), which significantly exceeded the midpoint expectation ($p < 0.001$; 95% CI: 0.835, 1.000). These results strongly support Hypothesis 1.

Mixed-Agent/Sentence-Focused Conditions (in short Mixed Conditions)

While we did not formulate any hypothesis on whether the Mixed conditions (*A's Answer* and *What A Said*) were different from a 50%-50% distribution, we ran binomial tests for these conditions too. *A's Answer* showed a "Yes" response rate of 40.58%, which did not significantly differ from 50% ($p = 0.074$; 95% CI: 0.000, 0.512). *What A Said* also showed a similar trend with 40.28% "Yes" responses, again not significantly different from 50% ($p = 0.062$; 95% CI: 0.000, 0.507).

Strongly-Sentence-Focused Conditions (in short Sentence Conditions)

In contrast, responses to the Sentence conditions were significantly less affirmative, confirming Hypothesis 4. *Statement* had a "Yes" response proportion of only 16.90%, substantially below the expected 50% ($p < 0.001$; 95% CI: 0.000, 0.259). *Proposition* demonstrated an even lower proportion of 2.99%, markedly below 50% ($p < 0.001$; 95% CI: 0.000, 0.091). Fisher's Exact Test revealed that the *Proposition* condition had significantly fewer "Yes" responses compared to the *Statement* condition ($F = 9.88$, $p = 0.002$).

Comparative Analysis

A comparative analysis between Agent and Mixed conditions, using a 2x2 χ^2-test of independence, revealed a significant difference in the proportion of "Yes" responses, indicating that Agent conditions were significantly more effective in eliciting affirmative responses compared to Mixed conditions (providing strong support for Hypothesis 2). Specifically, the proportion of "Yes" responses was 83.01% for Agent conditions and 40.43% for Mixed conditions, with a statistically significant difference ($p < 0.001$; 95% CI: 0.318, 0.533). Further, when comparing Mixed and Sentence conditions, Mixed conditions were significantly more likely to receive "Yes" responses than Sentence conditions (thus confirming Hypothesis 3). The proportion of "Yes" responses was 40.43% for Mixed conditions compared to only 10.14% for Sentence conditions, also showing a significant difference ($p < 0.001$; 95% CI: 0.200, 0.405). These results underscore the differential impact of Agent, Mixed, and Sentence conditions on participant responses, highlighting a clear hierarchy in the way that they match with the correspondence sense of "true", with Sentence conditions align most closely with this sense, Agent conditions deviating the most, and Mixed conditions falling somewhere in between.

Truth condition compared to Perspective and Honesty conditions

We also investigated how participants' perspectives ("Agent" vs. "Self") varied depending on participants' responses ("Yes" vs. "No"). The χ^2-test showed a highly significant association between the type of response and the perspective adopted ($\chi^2 = 155.22$, $p < 0.001$), indicating that perspective choices were dependent on whether participants affirmed or denied a statement. Descriptive statistics revealed that 75.92% of "Yes" responses were from an "Agent" perspective, compared to only 15.98% for "No" responses. Conversely, "Self" responses dominated the "No" category at 84.02%, suggesting a clear preference for self-perspective when participants disagreed. These findings provide significant support for **Hypothesis 5** and highlight the significant role of perspective in influencing response tendencies in evaluative judgments. Importantly, these results are not driven merely by the Agent and Sentence

conditions, but apply just as much to the Mixed conditions. For the two mixed conditions we find that 75.4% of participants who answer "yes" to the truth question, answer that they took the agent's perspective. In contrast, only 11.9% of participants who gave a "no" answer, indicated that they evaluated the truth question from the agent's perspective.

Focusing on the honesty responses, our analysis revealed significant differences in ratings between the "Yes" and "No" response groups, supporting **Hypothesis 6**. The "No" group had an average rating of 2.81 (SE = 0.085), compared to 3.65 (SE = 0.108) for the "Yes" group. A Welch Two Sample t-test confirmed the difference to be statistically significant ($t = 6.1146$, $df = 300.25$, $p < 0.001$), with a 95% confidence interval for the mean difference ranging from 0.572 to 1.116. And again, similar average responses are found when we only consider the mixed conditions. The average honesty rating for "no" answers was 2.99, and the average honesty rating for "yes" responses was 3.70. The relation between judging the truth of a statement and judging the honesty of its speaker is not clear yet and requires further conceptual analysis. In section 3.2, we will explore some ideas regarding the possible connections between truth/falsity and sincerity/lying.

3 General Discussion

The study presented here provides evidence highlighting the crucial role of the critical question formulation in influencing participants' behavior in truth value judgment tasks with scenarios defining a contrast of perspectives between the original speaker and the participant. Specifically, our findings indicate that, when presented with an agent A asserting a proposition P justified from A's perspective but not aligned with facts, English speakers (i) overwhelmingly judge that A spoke in a true way and said the truth, (ii) split in judging whether A's answer or what A said is true, (iii) tend to judge the statement in quotation marks presented in the scenario as false, although a small yet significant portion of people judge it as true, (iv) almost unanimously judge that the proposition P itself is not true. Moreover, our findings indicate that participants who answered positively to the truth question were significantly more likely than participants who answered negatively to adopt the agent A's perspective and consider whether A was honest in their answer.

One key conclusion from our findings is that *the significant proportion of English speakers who responded positively to the critical question observed in previous studies adopting the mismatch task disappears when the question is framed as "Is it true that [P]?"*. Therefore, if participants are prompted to focus on the proposition itself, independently of any reference to the original speaker, almost everyone's behavior aligns perfectly with the default expectation among philosophers of language and formal semanticists that the question should be understood as "Does it correspond to reality that P?". In contrast, any of the other five question formulations we adopted in our task triggers a significant and variable number of people to respond positively, even though they were aware that the state of affairs described by the critical sentence does not correspond to reality, as confirmed by their responses to one of our control questions. Therefore, another key conclusion from our findings is that *a sizable portion of English speakers of varying degrees can simultaneously claim that the way A spoke/what A said/A's answer/the statement among quotation marks is true or that A said the truth while holding that it is not true that P*.

This behavior is surprising from the standpoint of most philosophers, who assume that all these alternative phrasings of the critical question should trigger an unanimous negative response, just like "Is it true that [P]?". They assume that in all these cases, participants' mental operation should consist of

focusing on the proposition asserted by A and checking the correspondence of its described state of affairs to reality. Specifically, when asked a question such as "Is what A said true?", speakers are expected to perform two mental operations: they equate "what A said" with "P" disregarding any reference to A and interpret "true" as "corresponding to reality", which makes the question "Is what A said true?" fully equivalent to "Is it true that P?". Similar considerations apply to the other formulations involving phrases like "A's answer", and "the statement among quotation marks". Regarding the phrases "has A said the truth", and "the way A spoke", this view predicts that participants would interpret it as "uttering a proposition that corresponds to reality", although admittedly, these phrases are also sometimes used in contexts in which the sincerity of the speaker takes center stage. Evidently, some of our participants deviated from this interpretive approach when interpreting "true" in conjunction with these phrases across each of the critical questions, except for the one explicitly focused on the proposition itself. So, how are those participants interpreting the questions instead? Here, we first present four potential solutions to this puzzle (Section 3.1). We then conclude with a discussion of how our findings may shed light on other philosophical topics (Section 3.2).

3.1 Accounting for the findings in our study

Account A: "true" is ambiguous between correspondence and coherence. One explanation, building upon suggestions by Reuter & Brun (2021) and Reuter (2024), accounts for the pattern observed in our experiment by postulating that the adjective "true" and the noun "truth" are inherently ambiguous between two readings each responsible for either a positive or negative answer.

One reading aligns perfectly with the correspondence theory, where "true" denotes the property of "corresponding with reality" and "truth" refers to a "proposition corresponding with reality". The other reading is related to another well-known competitor theory of truth, namely the coherence theory of truth, yielding the interpretation of "true" as denoting the property "coherent with an X set of propositions". The coherence theory comes in several versions depending on what counts as the relevant X set of propositions and how to define the coherence relation (e.g., Bradley, 1914; Blanshard, 1939; Rescher, 1973; Walker, 1989; Young, 2001; Thagard, 2007). In everyday discourse, it is reasonable to assume as the relevant propositions those defining an individual's epistemic state, namely the information about the world available to an epistemic agent A at a given time t. For example, in our scenarios we can identify two relevant information states: that of the character speaking in the story (Sally or Maria) at the time of speaking and that of the participant after reading the whole vignette.

Regarding the coherence relation, typically it is defined in terms of entailment or consistency between the proposition whose truth is at stake and the relevant reference set (see Young, 2018 for an overview). In our scenarios, the asserted proposition is neither entailed by nor merely consistent with the information available to the speaker. The main information available to the speaker in the stories is a trustworthy report of the form, "C told me that C would be in this place now". This report neither entails that C is in that place now nor is it merely consistent with the assertion that C is there. Instead, the unique aspect of this trustworthy report is that it provides sufficient evidence to justify making the assertion. Therefore, a more precise way to define coherence between the asserted proposition and the information in this context is in terms of the *evidentiary justification for asserting the proposition based on the information*. Specifically, this account proposes that some participants interpret formulations like "Is

Sally's answer true?" as prompting them to evaluate whether asserting the proposition is justified based on Sally's information state at the time of speaking. In other words, some people tend to interpret a question like "Is Sally's answer true?" as equivalent to our control question, "Is Sally's answer justified based on what she knew?", which we know they answered positively.

Assuming the existence of these two readings, this account explains our participants' behavior by suggesting that when responding negatively to our questions, participants choose the correspondence-with-reality reading—a concept that most philosophers consider the only legitimate truth concept at least in the empirical domain—whereas when responding positively, they opt for the coherence-with-information reading, intended as justification to assert a proposition based on someone's information state—a concept that a minority of philosophers regard as pertaining to truth. We refer to this explanation as the "lexical ambiguity account".

Account B: "true" is inherently sensitive to epistemic perspectives. Another explanation, consistent with the suggestions of Ricciardi and Martin (2022), proposes that the split response to the question "Is what Sally said true?" does not imply that "true" encodes two separate concepts—correspondence and coherence. Instead, it involves one of these concepts, with a perspective parameter responsible for the split. This account can be defined in two variants, depending on whether coherence or correspondence is considered the single concept at stake.

In one variant, the single concept associated with "true" in everyday conversation is the coherence concept involving the assertability of a proposition against an information state. This account argues that, in everyday conversation, when we judge a proposition to be true, we always assess its assertability based on some information state. Even when we seem to be assessing the correspondence of a proposition's meaning with reality, we are actually evaluating the proposition's assertability against the body of information available to us, which we assume accurately represents reality. Thus, in most cases of truth assessment, the relevance of a body of information is obscured because the information about the world that we possess is simply regarded as correctly depicting the world. However, when prompted by a task such as the mismatch task, some people might become aware of the implicit reference to a body of information and shift from the default setting (their own information at the time of assessment) to a new setting (e.g. the speaker's information state at the time of utterance). This account aligns with the epistemological argument for a coherentist notion of truth, postulating that while at a metaphysical level truth might be conceived as correspondence with reality, at an epistemological level, it can only be understood within a coherentist framework (e.g., Blanshard, 1939; Hempel, 1935; Young, 2001).

In another variant, the single concept associated with "true" in everyday conversation is the correspondence concept, which involves aligning the state of affairs described by a sentence with reality. Like the previous variant, this explanation assumes there is always an implicit parameter in our understanding of "true" that reflects variability in perspectives. What is this parameter? It is the notion of reality itself. Although philosophers typically assume that reality is an objective concept independent of any perspective, people in everyday discourse might instead consider someone's personal reality—what is regarded as the world based on an individual's information state—when determining what counts as reality. Thus, this variant differs from the previous one by proposing that the concept activated during the truth assessment of an asserted sentence in everyday conversation always involves evaluating the match between the state of affairs described by the proposition and reality, with this concept of reality being flexible enough to be relativized to different bodies of information.

Notice that this hypothesis in both variants proposes a generalization of ideas put forth by various philosophers of language and semanticists to address the evaluation of truth in proposition types inherently sensitive to perspective, such as those containing predicates of personal taste, e.g., "Chocolate is tasty" (e.g., Kölbel, 2002, 2008; Lasersohn, 2005, 2009; Stephenson, 2007; Egan, 2007; MacFarlane, 2011, 2014; Wright, 2006; Glanzberg, 2007; Richard, 2008; Stanley, 2016). Without entering into the specifics of each proposal, this perspective assumes that the concept of truth used to evaluate propositions with predicates of personal taste includes a judge parameter, meaning that such propositions are considered true relative to an individual's taste. They refer to this concept as "relativistic truth", but the relationship between this notion and the concepts of correspondence and coherence remains unclear. We propose that relativistic truth can be understood in terms of both correspondence and coherence theories. If we accept that a relativistic view of truth is necessary for propositions perceived as intuitively subjective, it is reasonable to assume that individuals might extend this framework to objective propositions as well.

In summary, this account crucially differs from the semantic ambiguity account by refraining from postulating that "true" has two distinct senses, which give rise to the split interpretation of the question "Is what Sally said true?". Instead, it attributes the two readings to different specifications of an implicit information state parameter, making the phenomenon observed in our study a case of context-sensitivity. Let's, thus, refer to it as the "context-sensitivity account".

Account C: "true" is ad hoc relativized to the speaker's perspective. A third explanation, in line with the suggestions of Domaneschi and Vignolo (2020) and Salvador Mascarehnas (p.c.), postulates, like the previous two accounts, that a reference to the speaker's body of information is crucial for explaining the behavior of those who answer, for example, "Yes, what Sally said is true". However, this explanation differs in that it assumes this body of information is not encoded in the semantics of "true", which only encodes a bare correspondence-to-reality meaning. Instead, some participants add a reference to the speaker's information *ad hoc* when "true" is applied to phrases like "what A said". Specifically, The proposal suggests that the adjective "true," which typically denotes an objective property, is coerced into a subjective one with the addition of a judge parameter when used in conjunction with phrases like "what A said," which invites consideration of A's perspective. This shift may occur in those people who wish to be charitable towards speakers who have been honest, thereby avoiding the ascription of falsity to them. In this view, some participants enrich their basic interpretation of "true" (corresponding to reality) in a question such as "Is what A said true?" by incorporating an additional layer of linguistic material, such as "based on the information available to A". This leads to a reading of the test question similar to the second variant of the context-sensitive account: "Does the sentence said by A correspond to A's reality?". Crucially, this view differs from the context-sensitivity account in that the relativization to the speaker's body of information is not an inherent feature of the term "true". Instead, it arises as an *ad hoc* adaptation, where the concept of truth is coerced into a relative notion due to the experimental setting prompting consideration of the speaker's perspective in some participants. Let's refer to it as the "pragmatic coercion account".

Account D: "true" is unconsciously substituted with "truthful". A fourth explanation assumes that participants may be influenced by the existence of the term "truthful" in English, which is frequently used to describe individuals in a manner akin to "sincere/honest" like, for example, in "I want a President who is truthful and has a backbone" or "At least I can be truthful with clients and potential clients". Therefore,

participants who answer positively to the critical question may be substituting the intended inquiry about the truth of the asserted proposition with a consideration of the truthfulness of the speaker. Let's refer to it as the "substitution account".

The four accounts described above differ in the types of mental mechanisms they postulate to explain the behavioral patterns observed in our task. According to the lexical ambiguity account, the pattern arises because participants split in accessing two distinct concepts associated with the adjective "true" and the noun "truth," each responsible for either a positive or negative answer. In contrast, the context-sensitivity account suggests that all participants access the same concept when they use "true" or "truth"—either the correspondence or the coherence concept—but split in their answers by varying their setting of the information state parameter inherently associated with those words, assuming either their own perspective or the speaker's. The pragmatic coercion account, like one variant of the relativistic account, suggests that all participants access the correspondence concept but some answer positively to the questions because they *ad hoc* enrich the interpretation of the question with a phrase that relativizes the correspondence assessment to A's perspective. Lastly, the substitution account characterizes the unexpected behavior in a mismatch task as a form of misbehavior resulting from some speakers' confusion between two similar-sounding terms. All four accounts have their theoretical merits and raise important issues.

The ambiguity account postulates the existence of two concepts of truth and being true, echoing established philosophical analyses of truth. However, this account falls short in distinguishing between two fundamentally different ways in which these senses might be connected to the same term: homonymy, where the senses are unrelated and coincidentally share the same linguistic form, and polysemy, where the senses are linked through semantic extension. Given the prevalence of polysemy in natural languages, it seems more plausible that polysemy would be at play here if their account is accurate. Thus, this proposal calls for refinement through a detailed analysis of the relationship between truth as correspondence with reality and truth as coherence with a given set of statements, with hypotheses on whether one generated the other. On the other hand, the context-sensitivity account is more economical and avoids postulating the conceptual distinction between correspondence and coherence by positing one of them as the only concept at stake and attributing variation to the perspective adopted. Moreover, if one concedes that a relativistic conception of truth is indeed required for certain categories of propositions, such as those incorporating predicates of personal taste and epistemics, then it is reasonable to assume that this conceptual framework exists and individuals could readily extend its application to objective propositions as well. However, as suggested by the pragmatic coercion account, it's not clear whether this relativistic nature of the truth assessment of objective propositions reflects natural uses of the words "true" and "truth" or is just an *ad hoc* move triggered only in the setup of the mismatch task. This raises issues regarding the ecological validity of this task. Furthermore, the substitution account argues that the observed pattern has no implications for the conceptual domain of truth because it reflects people's understanding of the phonologically similar term "truthful" rather than "true". However, if "truthful" is considered part of the linguistic terms associated with the conceptual domain of truth (after all it contains the word "truth"), then this argument would be invalid.

In any case, irrespective of the theoretical merits attributed to these four accounts, the paramount question remains: can they be empirically distinguished? To begin, let us examine what evidence would exclude the substitution account. One could investigate whether the behavior in the mismatch task arises in languages where no counterpart of "truthful" exists. Further doubts would be cast on the substitution

account if analogous readings surfaced in mismatch tasks employing other adjectives commonly used in semantic tasks to perform the correspondence-like evaluation of propositions, such as "correct" or "right", for which a potential substitution with a similar term is improbable. If ambiguity were to manifest for these terms as well, it would imply that the availability of a justification-like interpretation is a universal characteristic of any word used to evaluate propositions' factual accuracy. Preliminary findings from one of Reuter & Brun's 2021 studies regarding "correct" in mismatch tasks indeed support the existence of a justification-like interpretation for this word as well.

When discerning between the other three accounts, the situation is more intricate for at least two reasons. First of all, although the literature on lexical semantics often mentions the distinctions between lexical ambiguity (multiple meanings either related or not), context-sensitivity (one meaning with variability of a component of this meaning), and pragmatic extension in explaining different readings of an expression, clear empirical criteria for distinguishing between these mechanisms are lacking. For instance, the competition between ambiguity and context-sensitive interpretations is evident in many expressions with multiple readings, such as modals (e.g., Kratzer, 1981; Viebahn & Vetter, 2016) and terms like 'books' (e.g., Liebesman & Magidor, 2017; Viebahn, 2022), where the debate remains ongoing. Second, empirically distinguishing these accounts necessitates a preliminary clarification of the conceptual distinctions between correspondence, coherence, and relativistic truth as well as between someone's reality and someone's information state. Therefore, before attempting to empirically differentiate between the three accounts, it is crucial to conduct a thorough conceptual analysis further clarifying the conceptual distinctions inherent in these approaches.

3.2 Relevance of our findings for other philosophical and linguistic topics

The findings reported in this work are significant not only for theories of truth but also for shedding light on several other issues in philosophy and linguistics.

Truth and Assertion. First, our findings are relevant to the debate on the norms of assertion (Williamson, 1996, 2002; DeRose, 2002; Douven, 2006; Turri, 2013, 2021; Reuter & Brössel, 2019; Marsili & Wiegmann, 2021; Kneer, 2018, 2021). The critical question in this debate is: when is a speaker entitled to assert a proposition P? Our findings provide further support for the justified belief hypothesis, which holds that a speaker is entitled to assert a proposition if they have a certain type of evidence meeting a licensing threshold for the utterance of P even when P does not correspond to reality (e.g., Douven, 2006; Reuter & Brössel, 2019; Marsili & Wiegmann, 2021; Kneer, 2021). Indeed, most of our participants judged the answers provided in the two scenarios as justified because they were based on a trustworthy report, despite being aware that the answers incorrectly depict reality. Furthermore, the finding that some people made their truth evaluations in a manner similar to assertability evaluations further highlights the interdependence between theories of truth and theories of assertion.

Truth and Sincerity/Lying. Second, our findings contribute to the literature on the concepts of sincerity and lying (e.g., Adler, 1997; Carson, 2010; Saul, 2012; Turri & Turri, 2015, 2021; Wiegmann & al., 2016; Stokke, 2018; Marsili, 2021, 2023; Viebahn, 2021; Wiegmann, 2023). Interestingly, we found that participants who answered positively to the truth question were significantly more likely than those who

answered negatively to consider whether A was honest in their response. This suggests that, for these participants, the conceptual domains of a claim's truth and the honesty (or sincerity) of its speaker might not be clearly distinguished, allowing both to be associated with the terms "true" and "truth". To put it more explicitly, arguably, these participants interpret questions like "Is A's answer true?" as if they were being asked, "Is A's answer honest/sincere?" and equate "someone saying the truth" with "someone being honest/sincere". It's also important to note that there is a clear parallelism between the behavior of our participants and whether the sincerity-like interpretation of "true" is viable. Specifically, in all our questions involving the term "true", where a substantial portion of participants answered positively, the adjective can be substituted with "honest" or "sincere" (e.g., "Did A speak in a honest/sincere way about the subject matter?", "Is what A said honest/sincere?", "Is A's answer honest/sincere?", "Is the statement in quotation marks honest/sincere?"). However, this substitution does not apply to the question focused solely on the sentence itself (*"Is it honest/sincere that S?"), which virtually everyone answered negatively. Additionally, we have already highlighted that the association between the conceptual domain of sincerity and truth-related terms is particularly evident in the case of "truthful", where a reading akin to "sincere" appears intuitively well established. To summarize, there appears to be a strong tendency for truth-related terms to be associated with the conceptual domain of sincerity.

What underlies this association? It is noteworthy that the notion of sincerity regarding an individual's claim closely resembles the notion of truth of an individual's claim when understood as coherence—justification—of the claim with that individual's information state. In this context, if one assumes, in line with the lexical ambiguity account and one variant of the context-sensitivity account, that truth-related terms are somewhat linked to the notion of coherence-with-information, the association between truth-related terms and sincerity becomes unsurprising: the sincerity-like and coherence-like senses become indistinguishable when evaluating a claim relative to the speaker's information state. This perspective opens new avenues for bridging the philosophical investigations of truth and sincerity, potentially extending the ongoing debate on the relationship between lying and making false statements (e.g., Turri, 2021; Wiegmann, 2023).

Truth and Theory of Reference. Third, our findings are relevant to the ongoing debate regarding the empirical assessment of theories of reference (e.g., Machery et al., 2004, 2009; Martí, 2009, 2020; Devitt, 2011, 2015; Sytsma and Livengood, 2011; Cohnitz and Haukioja, 2021; Devitt and Porot, 2018; Vignolo and Domaneschi, 2018; Domaneschi and Vignolo, 2020; Li, 2021, 2023). Two main theories have been proposed to explain how a proper name is linked to its referent object: (i) the descriptivist theory, which posits that the referent of a proper name is the individual that satisfies certain salient descriptions associated with the name by competent speakers; and (ii) the causal-historical theory, which asserts that the referent of a proper name is the individual originally dubbed with that name by its creator, with the name subsequently transmitted to other competent speakers through a causal chain of repeated uses. Truth value judgment tasks, among other methodologies, have been employed to differentiate between these two theories, starting with Machery et al. (2009). These tasks resemble the mismatch task, where a vignette introduces the name of an individual routinely associated with a particular description (e.g., the astronomer Tsu Ch'ung Chih) and later reveals that this description was incorrectly attributed to that individual. In the vignette, a character (e.g., Ivy) makes a claim that ascribes this erroneous property to the critical individual's name (e.g., "Tsu Ch'ung Chih was a great astronomer"). Crucially, the character making the statement is unaware that the description was falsely ascribed to that individual. Thus, the setup, similar to the mismatch task, creates a contrast between the information state of the character and

that of the participants. Participants are then asked to judge whether the character's claim is true or false in a form such as, "When Ivy says, "Tsu Ch'ung Chih was a great astronomer", do you think her claim is: (A) true or (B) false?". Assuming that participants adopt their own perspective, this test can distinguish between the two theories of reference: choosing "true" suggests that the participant is willing to use the proper name in association with its relevant description, as predicted by the descriptivist theory, while choosing "false" suggests that the proper name refers to the individual originally dubbed with that name, as predicted by the causal-historical theory. Notably, Machery et al. (2009) found variation in responses, with 33% to 44% of participants across four countries answering "true," aligning with the descriptivist theory.

However, some philosophers have argued that these participants answering "true" might have adopted the character's perspective, which could render their responses irrelevant for assessing the two theories in question and challenge the reliability of truth value judgment tasks as a tool for evaluating theories of reference (cf. Sytsma et al., 2011; Domaneschi & Vignolo, 2020; Li, 2021). Furthermore, Domaneschi et al. (ms) compared participant behavior in a truth value judgment task and in an eye-tracking experiment and found a significant discrepancy between the two methodologies. In the truth value judgment task, a significant portion of participants behaved according to the descriptivist theory, while in the eye-tracking task, all participants behaved according to the causal-historical theory. We believe our findings offer valuable insights into the debate on the reliability of truth value judgments. First, we agree that participants who answered "true" in the truth value judgments likely adopted the character's perspective. Additionally, we hypothesize that this shift was prompted by the question format, which systematically invited participants to evaluate the truth of someone's claim (e.g., "Is Ivy's claim true or false?"). We predict that if the question were phrased to focus on the sentence itself (e.g., "Is it true that Tsu Ch'ung Chih was a great astronomer?"), most participants would converge on the answer "false", as predicted by the causal-historical theory. Devitt & Porot (2018), in an effort to contribute to this discussion, re-engaged with Machery et al. (2009) by designing a task that did not mention a character and prompted participants to focus solely on the sentence itself when making their truth value judgment. Consistent with our prediction, they found that 95% of participants selected "false". Therefore, when the test question focuses on the sentence itself, it ensures that participants respond from their own perspective, thereby making truth value judgment tasks a valid assessment of reference theories.

Truth and Felicity. Lastly, our findings provide valuable insights into a debate among linguists regarding whether naive speakers can distinguish between truth and felicity judgments. This distinction is often illustrated through cases of scalar implicature. For example, if someone says, "Some of the students in the class got an A", when in fact all the students received an A, the statement, while factually true because "all" is encompassed by "some", would be considered inappropriate or infelicitous in that context because typically the use of "some" implies "not all". Some formal semanticists (e.g., Heim & Kratzer, 1998; von Fintel, 2004) suggest that individuals without theoretical training may not differentiate between these two types of judgments. However, our findings present a more nuanced perspective. We discovered that some people do use terms like "true" and "truth" to make what a linguist would consider a sort of felicity judgment, but only when the question format encourages them to focus on the speaker's perspective. Thus, our research offers important guidance on how to phrase test questions when aiming to elicit intuitions about correspondence-with-reality evaluations from non-linguistically trained speakers.

4 Conclusion

The findings presented in this study provide compelling evidence that opens new avenues for exploring the concept of truth in everyday discourse. They suggest that English speakers adjust their interpretation of truth-related terms based on how critical questions are phrased. When questions focus solely on the uttered proposition, participants generally interpret truth in line with the correspondence theory, as is commonly assumed in the philosophical community. However, when questions include phrases that encourage consideration of the speaker's perspective such as someone's answer, this uniformity tends to diminish, with a significant subset of participants shifting to an assessment resembling a judgment of whether the speaker was justified in asserting the proposition. Those who interpret truth in this way also report considering the speaker's perspective and honesty.

We explored four potential explanations for this behavior: (1) that truth-related terms may be lexically ambiguous, encoding both correspondence-to-reality and coherence-with-information senses; (2) that these terms might function as context-sensitive expressions, with a perspective parameter driving the variation observed in our study; (3) that in some speakers, these terms may undergo unconscious *ad hoc* relativization to the speaker's perspective during the mismatch task, raising questions about the ecological validity of this phenomenon; (4) that in some speakers, these terms may be unconsciously substituted with the similar-sounding term "truthful". To empirically distinguish these accounts, we emphasized the need to better understand the criteria that differentiate lexical ambiguity from context-sensitivity and ad hoc pragmatic enrichment. Additionally, we stressed the importance of refining the concepts involved in these accounts, particularly by clarifying the overlap between coherence, correspondence, and relativistic notions of truth.

Overall, this inquiry prompts a fundamental re-examination of truth theories and could significantly enhance our understanding of related philosophical concepts, such as assertion, sincere communication, and the referential mechanisms of expressions. Moreover, it suggests improvements to methodologies in experimental semantics, recommending that test questions be phrased in a sentence-focused manner when seeking to elicit intuitions about correspondence-with-reality evaluations from non-linguistically trained speakers.

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