

Is There a Commonsense Semantic Conception of Truth?

Abstract

Alfred Tarski's refinement of an account of truth into a formal system that turns on the acceptance of Convention-T has had a lasting impact on philosophical logic, especially work concerning truth, meaning, and other semantic notions. In a series of studies completed from the 1930s to the 1960s, Arne Næss collected and analysed intuitive responses from non-philosophers to questions concerning truth, synonymy, certainty, and probability. Among the formulations of truth studied by Næss were practical variants of expressions of the form "*p* is true if and only if *p*". This paper calls attention to a series of experimental results Næss overlooked in his original study. These data collectively suggest that acceptance of expressions of the form "*p* is true if and only if *p*" varies according to what kind of statement *p* is.

keywords: experimental philosophy; Arne Næss; deflationary accounts of truth

Alfred Tarski's refinement of the concept of truth into a formal system that turns on the acceptance of Convention-T has had a lasting impact on philosophical logic, especially work concerning truth, meaning, and other semantic notions. While many have tried to fully unpack the formal elements of Tarski's semantic theory of truth (Asay 2013; David 2008; Etchemendy 1988; Field 1972; Heck 1997; McGee 1993; Sher 1999; Vaught 1986), relatively few people have focused upon how he treats the features of the ordinary concept of truth and how it tends to operate in natural language (Barnard and Ulatowski 2013; Barnard and Ulatowski 2016). Of course, a reason for this omission has been articulated by Tarski himself: *natural language is too ambiguous for progress to be made with respect to an appreciation of the semantic conception of truth operating in ordinary discourse and natural language* (cf. Tarski 1936; Tarski 1944). But, if a theory of truth seeks to argue for a concept of truth that both should and does operate in natural language, then empirical evidence should inform the truth theorist's normative claims.

Despite the hardships associated with the ambiguities of natural language, a series of empirical studies due to Arne Næss raised a number of interesting questions about a practical

variant of Tarski's semantic conception. Arne Næss' contribution to the programme of 'empirical semantics' prefigures studies completed under the auspices of the contemporary movement known as 'Experimental Philosophy' (Alexander 2012; Knobe and Nichols 2008; Knobe and Nichols 2014; Sytsma and Livengood 2015). Næss collected and analysed intuitive responses from non-philosophers to questions concerning truth, synonymy, certainty, and probability in a series of studies carried out in the 1930s through 1950s (Næss 1938; 1938; 1953). Among the formulations of truth studied by Næss were practical variants on expressions of Tarski's Convention-T: " p is true if and only if p ".¹ Given that limitations on analyses of empirical data existed at the time of Næss' original study, he wasn't able to properly articulate an interesting feature of the empirical data. Fortunately, Næss published the descriptive data that allows us to return to it.

In this paper, I examine and re-analyse data from Næss' early empirical studies that suggest acceptance of informal renderings of the semantic conception of truth tends to vary according to the content of the expression, whether on account of participants' individual differences or contextual factors. When an expression is a straightforward matter of fact, a majority of people tend to agree that p and ' p is true' are synonymous, but that majoritarian view tends to be swamped by other factors if the expression is a more abstract theoretical statement substituted for p or if there is no expression substituted for p . Along the way, I address the methodological concern that the limited scope of Næss' population is a barrier to drawing any conclusion from the collected data and the more substantive philosophical worry that the questionnaire doesn't test for anything like Tarski's semantic conception. What I conclude from the empirical data is that people tend to resist accepting a partial semantic conception of truth in some cases but not in others. This conclusion could have a lasting effect upon theories of truth that suggest all

¹ For an explanation of the distinction between Convention-T and the T-Schema, see Putnam, Hilary 2015: 'Naturalism, Realism, and Normativity'. *Journal of the American Philosophical Association*, 1, pp. 312-28, Ulatowski, Joseph 2016: 'Ordinary Truth in Tarski and Næss'. In *Uncovering Facts and Values*. Kuzniar, Adrian and Odrowąż-Sypniewska, Joanna (eds) Brill, pp. 67-90.

competent speakers have underived inclination to accept non-paradoxical instances of the T-Schema (cf., Horwich 1990; Horwich 2001; Horwich 2010).

1. The Empirical in the Semantic Conception of Truth

Orthodox interpretations of Tarski's semantic theory of truth rarely consider the role ordinary non-philosopher's intuitive responses play in the formally correct and materially adequate conditions for truth. Because of this omission in the literature, in this section, the distinction between Tarski's Convention-T and T-Schema will be reviewed. It will be shown that a partial non-formal rendering of the T-Schema is a practical variant competent speaker should be capable of comprehending and deploying in natural language. What we will see later is that ordinary non-philosophers are sensitive to the proposition occurring in the T-Schema.

There is no doubt that Tarski's rigorous work on a formally correct notion of truth has had a lasting impact upon theories of truth, but what is less well understood is Tarski's appreciation of how truth operated in natural language. Think here of how Tarski's primary task in devising a theory of truth was to avoid semantic pitfalls, such as the liar paradox (cf., Tarski 1936; Tarski 1944). To discover whether a practical variant of the semantic conception operated in ordinary discourse, Tarski was open to the possibility that the ordinary notion of truth may be studied via empirical means, i.e., a "scientific survey questionnaire" (Tarski 1944, 360fn29).

Tarski's permissiveness toward the empirical data shouldn't be interpreted as an "anything goes" attitude; on the contrary, it seems that he believed the benefits of the studies were quite limited to an informal expression of the semantic conception. His appreciation of the formal correctness conditions of truth far outweighed the belief that the empirical studies were philosophically relevant to an appreciation of the use of the truth predicate in natural language. By looking at and considering the role these empirical studies play in theorising about truth, Tarski was never under the impression that these data supplant a formal semantic understanding of truth. Tarski ensured that the formally correct semantic theory of truth remains intact just so

long as (i) nothing about the ordinary person's use and conception of truth runs us so far afield that we have to reconsider the viability of the semantic conception or (ii) philosophers will have to explain away anomalous results in the empirical data.

Current interpretations of Tarski's semantic conception identify a formal and generalisable schema with a materially adequate condition for truth. The regimentation of the truth-concept is accomplished by specifying the structure of the languages for which truth is defined and by specifying a formal criterion of material adequacy in terms of whether all instances of the equivalence:

[T] X is true-in- L if, and only if p

follow from the proposed definition. Tarski's formal criterion of material adequacy allows for the analysis of sentences into sub-sentential constituents, and it dissolves correspondence relations into appropriate semantic components: names refer to or denote objects and predicates apply to or are satisfied by objects. ' X ' is the name or description of a sentence in L , an object language, and p is a translation of the object language sentence into meta-language. Call [T], 'Convention-T.' Convention-T imposes a condition on defined truth predicates that Tarski often talks about grasping the intuition behind the "classical," "old notion," or "Aristotelian conception" of truth (cf. Tarski 1936, 155; Tarski 1944, 342f). According to Tarski, any theory of truth must entail, for any sentence X in a given language, a sentence of the form Convention-T.

Tarski recognises the difficulties faced by attempts to clarify the truth-concept using only the resources of ordinary language because "like other words from our everyday language, [true] is certainly not unambiguous" (Tarski 1944, 342). The extension of Tarski's Convention-T is given by the axioms derived from the T-schema: "*snow is white*" is true, if and only if *snow is white*. The T-schema is used to give an inductive definition of truth which lies at the heart of any realisation of Tarski's semantic conception. For any instantiation of Tarski's T-schema, it would not suffice for

a general definition of truth because the instance could only cover whatever the schema's content is. For example, we could imagine an innumerable number of T-schema sentences:

“Kotukutuku is a deciduous plant” is true if and only if kotukutuku is a deciduous plant.

“The Western meadowlark is the state bird of Wyoming” is true if and only if the Western meadowlark is the state bird of Wyoming.

“Carl Yastrzemski connected for his three-thousandth hit on 12 September 1979” is true if and only if Carl Yastrzemski connected for his three-thousandth hit on 12 September 1979.

⋮

Listing an infinite number of examples of the T-schema doesn't yield a formal generalisation of a theory of truth. The two formal conditions: formal correctness and material adequacy allows Tarski's semantic conception of truth to generalise over all instances of the T-schema.

Convention-T is the logically formal definition of semantic truth, while instances of the T-schema represent a partial definition of truth accessible to those people who are capable of using natural language competently. Unlike Convention-T, ordinary language users need not have specialised knowledge or expertise in the workings of mathematical logic to understand the sentences of the T-Schema.² Instances of the T-Schema are intuitively accessible because their content is captured entirely by ordinary language.

² Some have argued for a strict interpretation of Tarski's semantic conception of truth whereby there doesn't seem to be any room for the informality instances of the T-Schema seemingly

If we return to Tarski's work, coming now with an ear toward recent work in experimental philosophy, then we notice a further vein of thought to be mined: *an attempt to describe the ordinary folk notion of truth*. In his early work, Tarski writes:

Every reader possesses in greater or less degree an intuitive knowledge of the concept of truth and he can find detailed discussions on it in works on the theory of knowledge.

(Tarski 1936, 153)

While we cannot use the above quotation to support the view that Tarski took the ordinary person's conception of truth seriously, we cannot limit Tarski's analysis to a conception of truth upheld only by those people who count as professional philosophers according to some categorisation of philosophic expertise. Tarski's view is not that everyone is capable of having an "intuitive" grasp of the formal concept of truth, but this doesn't rule out that they may have a partial grasp of an informal rendering of it. In a sense, the formal interpretation, Convention-T, is distinguishable from a less formal, more practical one.

There is a reasonable amount of evidence supporting the view that Tarski conceived of the ordinary notion of the semantic conception of truth in a certain manner which is independent of Convention-T. First, it is notable that section 1 of CTFL is entitled: "The Concept of True Sentence in Everyday or Colloquial Language," which signals in Tarski an awareness of and possibly respect for the average person's understanding of truth. Yet, toward the end of that section Tarski reveals that a formally correct definition and the ordinary person's conception of truth cannot be equivalent. He writes:

present. See Jané, Ignacio 2006: 'What is Tarski's common concept of consequence?'. *Bulletin of Symbolic Logic*, 12, pp. 1-42. In the paper, Jané has claimed that the ordinary people Tarski speaks of include only those people working within a specific mathematical paradigm. Unfortunately, Jané is silent with respect to the evidence he calls upon in support of his view. For an extended argument against the idea that Tarski's view of the 'common concept' of truth was so limited, see Barnard, Robert and Ulatowski, Joseph 2016: "Tarski's 1944 Polemical Remarks and Naess' "Experimental Philosophy". *Erkenntnis*, 81, pp. 457-77.

If these observations are correct, then *the very possibility of a consistent use of the expression 'true sentence' which is in harmony with the laws of logic and the spirit of everyday language seems to be very questionable, and consequently the same doubt attaches to the possibility of constructing a correct definition of this expression.* (Tarski 1936, 165, original italics)

Tarski distinguishes between the formal correctness condition of truth and the “spirit” of how ordinary persons use the term ‘true’, but nowhere in the discussion does Tarski summarily dismiss the everyday or common-sense usage of the term true.

Contrast this discussion with Tarski’s own discussion of the ordinary notion in a later (and perhaps more famous / notorious) work. According to Tarski, some believe there is relatively little compatibility between the ordinary notion of truth and the semantic conception, yet he admits that that is an empirical claim deserving of some further consideration in the context of a carefully designed experiment. He writes:

[S]ome doubts have been expressed whether the semantic conception does reflect the notion of truth in its commonsense and everyday usage. . . . I happen to believe that the semantic conception does conform to a very considerable extent with the common-sense usage although I readily admit I may be mistaken. (Tarski 1944, 360)

Not only does he believe that the everyday use of ‘truth’ corresponds with some practical variant of the semantic conception but also Tarski suggests that if some maintain that the ordinary concept of truth is different from it, then the issue “can be settled scientifically . . . with the help of the statistical questionnaire method” (Tarski 1944, 360fn29). Here, Tarski seems to question whether that disorderly nature of anecdotal evidence is sufficient for coming to terms with a colloquial view of truth, but he certainly does not give up. Tarski seemingly abdicates ultimate

authority over the question of whether the assumption actually captures the content of the ordinary notion of truth.

While an approach that applies empirical research to questions in philosophical logic is widely considered unorthodox, Tarski himself was among the first to take Næss' empirical results seriously. Tarski claims that he was "by no means surprised to learn" that Næss' results show only 15% of people accept the "philosophical formulation" of the classical correspondence conception of truth and 90% of people agreed with the "plain word" expression ('It is snowing' is true, if and only if, it is snowing) of the "same conception" of truth (Tarski 1944, 360).

Wherever the data were published or how Tarski came to know about the data is somewhat of a mystery, as there are only two places in Næss' early work that mention the data on the semantic conception (cf. Næss 1938, 144-48).

In the next section, Næss' empirical work on the semantic conception of truth will be reported and explained not in accordance with Næss' own view of the matter but based upon an updated analysis of the raw data Næss published in his 1953 study of truth and synonymy.

2. Næss' 1953 Experimental Work

In (1953), Næss reported his work on intuitive responses to questions about Tarski's semantic conception of truth. The data Næss reported in the 1953 studies replicates what he had reported in his earlier 1938 work. The ordinary conception of truth, though deeply fragmented along multiple lines of inquiry, converged upon the view that people tended to believe that an expression and the appearance of that expression as an instance of the T-Schema were synonymous for some examples but not for others. His results provided a broad overview of the aggregated data without so much as breaking down the empirical data into its component parts. Whilst Næss' results do show statistically significant differences *overall*, my analysis will unpack the summary data, ultimately revealing quite interesting contours in the non-philosophers' use of the term 'truth' and its cognates.

The study involved 130 Norwegian respondents enrolled in sophomore level courses at the University of Oslo. The questionnaire consisted of two parts: (i) a general overview of synonymy with a few examples and a set of criteria participants were recommended to employ and (ii) a list of sentences where respondents were asked whether any of the sentences were expressive of the same assertion. Here are the criteria appearing in part one:

A sentence A is for you expressive of a different assertion from that of another sentence B, if and only if you can imagine possible (but perhaps not actual) circumstances (conditions, existing state of affairs) of such a kind that if they were present you would accept A as warranted but reject B, or vice versa.

A sentence A expresses for you one and the same assertion as another sentence B, if and only if you cannot imagine such circumstances, that is, if you under all conditions whatsoever either would accept both A and B as warranted, or reject both A and B.
(Næss 1953, 38)

The presentation of these guidelines immediately preceded part two where study participants were asked about the equivalence schema.³

In Part two, respondents were provided with a series of sentences, labeled A through D (or A through G depending upon the number of sentences involved) and asked, “Are some of the following sentences for you expressive of the same assertion, and if that is the case, which ones?” (Næss 1953, 39). The alphabetically labeled sentences had the following general structure:

³ One notable wrinkle in the criteria is the conflation of the meaning of truth with that of its accepted usage. Perhaps for future experimental investigations there should be a careful accounting of this distinction such that confusions over it need not arise in study participants. I would like to thank Marc Moffett and Franz-Peter Griesmaier for bringing this concern to my attention.

- A) p (or not p).
- B) It is true (or not true) that p .
- C) It is perfectly certain (or not perfectly certain) that p .
- D) It is extremely probable (or not extremely probable) that p .

- E) It is true that not- p .
- F) It is extremely probable that not- p .
- G) It is perfectly certain that not- p .⁴

Næss hypothesised that “There is a more pronounced tendency to affirm the synonymy of “ p ” and “It is true that p ” in case “ p ” is a sentence expressing a (supposed) matter of fact than in case “ p ” expresses ... a theory” (Næss 1953, 16). The hypothesis was borne out in the cumulative data Næss originally reported, but what this section and the next will go on to show is that, if we drill down a bit further in raw data, we find an even more interesting series of experimental results bearing upon the semantic conception of truth.

Let’s focus on the content of Questions 1A and 1B and Question 7A and 7B. In each of the questions, p was replaced by:

Question 1: There is at least one copy of the Bible in the University Library.

Question 7: [A formulation of Darwin’s selection theory, e.g.] Darwin’s selection theory explains the evolution of populations through change in heritable traits over time.

Generally, the declarative sentence of question 1 is an empirical matter of fact that affirms the whereabouts of a copy of the Bible in the University Library. The sentence of question 7, on the other hand, involves a scientific theory—specifically Darwin’s evolutionary theory.

⁴ E through G were not asked in all iterations of the questionnaire. For this reason, I have separated them out from A through D using an asterisk ellipsis.

	Q1A&B	Q7A&B
Synonymy Affirmation	87%	44%
Synonymy Denial	13%	56%

Figure 1. Comparison of Responses to Q1 and Q7.

As Næss had hypothesised, affirmation of synonymy seemed to vary according to whether the sentence was an empirical matter of fact or a statement about a scientific theory. A majority of people responded that the two expressions 1A and 1B were the same, while a majority of respondents who received a statement of (7A) “the selection theory of Darwin” and (7B) “Darwin’s selection theory is true” tended not to affirm that the two statements were synonymous (see *Figure 1*). The results are statistically significant ($\chi^2 = 40.9116$, $df = 1$, $p < .01$).

Næss’ preliminary study shows that people seem to think about a partial and informal rendering of Tarski’s semantic conception of truth differently, depending upon contextual features of the expressions contained in “equivalences of the form (T)”. While it is much too hasty to conclude that non-philosophers reject the semantic conception of truth, we have reason to believe based upon these data that some characteristic of the sentences tend to manipulate people’s intuitive responses. Næss writes:

In 7A - 7D, the term “theory” reminds the readers of the kind of general and abstract sentence they have to consider. There is a tendency in relation to such sentences to find the term “true” to be inapplicable or somehow too “strong.” (Næss 1953, 13)

Næss’ explanation of the data seems to be correct, but the explanation leaves us with a puzzle. When ordinary people are asked to judge whether a theory is true, they tend to hedge away from affirming its truth. This might be the result of study participants entertaining an alternative

conception of evolution, e.g., a Lamarckian view, or a belief that a theory amounts to nothing more than an unconfirmed hypothesis. Of course, we needn't let the puzzle go unsolved, as empirical studies could help us resolve them.

While no empirical study has been done in association with ordinary judgments of truth, Tania Lombrozo and colleagues have shown how people's accepting evolutionary theory positively correlates with a mature understanding of the nature of scientific enquiry. What Lombrozo and colleagues uncovered was that people weren't necessarily misinformed or uninformed about evolutionary theory so much as they had a misconception of how scientific knowledge accrues. People, so they found, tended to believe that a scientific *theory* leaves considerable room for one to doubt rather than a systematic set of claims with an appreciable amount of evidence accumulated in its favour (cf. Lombrozo, Shtulman and Weisberg 2006; Lombrozo, Thanukos and Weisberg 2008). On at least one interpretation offered here, Næss' empirical study suggests that just as in the Lombrozo and colleagues case if study participants had a proper understanding of what a scientific theory is and how scientific knowledge accumulates, at least with respect to the nature of repeatable experimental results under strictly controlled conditions, then they would have affirmed the synonymy of 7A and 7B.

3. *A Second Comparison Case*

For question 6, Næss asked study participants whether the following two sentences were synonymous:

Question 6A: There is an ether that oscillates in accordance with the following laws - - (here you may imagine a complete formulation of "the wave theory of light" or closely related theories).

Question 6B: It is true that there is an ether that oscillates in accordance with the following laws - - (here you may imagine a complete formulation of “the wave theory of light” or closely related theories).

The failure to affirm the synonymy between a sentence describing a scientific theory and that same sentence when it’s prefixed by “It is true that…” might have more to do with the sentence’s specific content than it has to do with the sentence’s being about a scientific theory. If people harbour a general distrust of the scientific enterprise, then a majority of people would deny that formulations A and B in Question #6 are synonymous in the same way that they fail to affirm the synonymy in formulations A and B for Question #7. If people were sensitive just to the specific content of 7, i.e., Darwin’s theory of evolution, because of background religious belief or some such reasonable explanation, then a majority of people would disagree with the two expressions being synonymous but they wouldn’t be so disagreeable for other formulations involving scientific theories other than evolution.

When we contrast the data set of Question 6 with Question 7, we find an asymmetry similar to the one when we review the data for Questions 1 and 7 (See *Figure 2*). A majority of people believe that the expression about the new wave theory of light is synonymous with that same sentence when it’s prefixed by the phrase, “It is true that…”.

	Q6A&B	Q7A&B
Synonymy Affirmation	85%	44%
Synonymy Denial	15%	56%

Figure 2. Comparison of Responses to Q1 and Q6.

The empirical results yielded statistically significant differences ($\chi^2 = 36.707$, $df = 1$, $p < .001$). As it turns out, people tend to affirm that 6A and 6B are synonymous at about the same rate as they

affirm the synonymy of 1A and 1B, which yields the same asymmetry as Question 1 had with Question 7.

4. *A Final Comparison*

All of the above analyses have involved particular instances of the T-Schema where the collected empirical data seem to show that people's intuitive responses regarding synonymy between "*p*" and "It is true that *p*" tends to fluctuate according to *p*'s content. So sensitive are people's responses that they seem to recognise a distinction between different scientific theories. If we remove the content of *p*, there's a sense in which we could control for external background factors, such as people's potentially misguided views about what it takes for something to be a scientific theory. At the beginning of the paper, Convention-T was introduced as a generalised form of instances of the T-Schema, and it was from Convention-T, according to Tarski, that the particular instances of the T-Schema were derived. Whilst we cannot test people's views on the nuances of the formal correctness conditions of Convention-T, we can test whether an informal rendering of something approaching Convention-T is something people uphold. The purpose of the final comparison, then, is to check whether synonymy judgments among non-philosophers fluctuates in the same way when there is no content of *p*. In this third and final comparison, we compare empirical matters of fact (Question 1) with Question 8, a generalised form of the T-Schema that resembles Convention-T.

For Question 8, because there would be no content replacing the variable, Næss revised the question appearing before the list of four expressions. He asked study participants: "are some of the following kinds of sentences for you expressive of the same assertion, if you replace S by actual instances of sentences of the kind which express assertions (declarative sentences)[?]" (Næss 1953, 40). And participants received the following list:

A) S

- B) S is true.
- C) S is perfectly certain.
- D) S in (sic.) extremely probable. (Næss 1953, 41)

If we compare responses to Question 8 with responses to Question 1, empirical matters of fact, then we have the following data set (See *Figure 3*).

	Q1A&B	Q8A&B
Synonymy Affirmation	87%	64%
Synonymy Denial	13%	36%

Figure 3. Comparison of Responses to Q1 and Q8.

A majority of non-philosophers tended to affirm the synonymy of “*p*” and “It is true that *p*”, but there were fewer non-philosophers that affirmed the synonymy of Q8A&B than those people who affirmed the synonymy for empirical matters of fact such as in Q1A&B. The difference was statistically significant ($\chi^2 = 15.74$, $df = 1$, $p < .001$).

Just as when we compare Q1A&B with Q7A&B, there is a statistically significant difference in people’s judgments regarding the synonymy or equivalence judgments. When people were not provided with the content of the T-Schema, the tendency to shy away from synonymy judgments could be explained by non-philosophers reluctance to affirm any statement in the abstract. Given that respondents had been told that S may be “replaced by actual instances,” they may have preferred not to be associated with content that they might otherwise find objectionable, such as Darwin’s Selection Theory. Prefixing “It is true,” according to non-philosophers, comes with some kind of bindingness they want to avoid for abstract cases or cases involving some theoretical expressions they believe to be controversial.

5. Possible Challenges

While the above accounting of Næss' empirical data is intrinsically interesting, this empirical study does not come without methodological and substantive challenges. There are two notable methodological drawbacks of Næss' study of synonymy affirmations. First, perhaps the most serious methodological problem associated with Næss' study was the lack of diversity in the respondent pool. Næss' participants were limited to Norwegian undergraduate Sophomores enrolled at the University of Oslo in the late 1940s and early 1950s. That group of respondents fails to include a population that exemplifies people with a diverse set of characteristics. Since the study included participants with very restricted characteristics, one might argue that the study's findings are inapplicable or, worse, invalid.

When an experimental investigation involves human participants, there is a non-zero probability that the study population will not reflect the views of the wider population. If the study's population is limited to undergraduates enrolled at a particular university, then the likelihood increases that the study's respondents will not reflect a view upheld by a general audience not enrolled at that particular university. That the view might not generalise does not take away from the study's validity, but it does recommend against making any sweeping claims inferred from the data set.

This paper has not attempted to hide the fact that the respondent pool was limited to a very small sub-population of university students living in mid-20th-century Norway. Even Næss openly admitted that participants were restricted to Norwegian undergraduate students "on approximately the sophomore level" at the University of Oslo. Since the respondent pool fails to represent a wide cross-section of the general population, extrapolating general conclusions about ordinary persons' views of the semantic conception of truth from the empirical data would be too presumptuous. In this paper, sweeping general conclusions about the ordinary view have been avoided.⁵ The paper has not attempted to make such generalisations; instead, the view has

⁵ Næss very nicely summarises his own view of the problem in Part II of 1953. He writes:

been restricted to an explanation of the collected data and what that data tell us about the study's population. More empirical studies will have to be undertaken and the same (or similar) results yielded in order for us to generalise the explanation provided in this paper.

In connection with the above concern, one might worry that Norwegian students who completed the survey were issued a questionnaire in a language, e.g., English or German, that is not their native language. Completing a survey in a foreign language distinct from one's own native language could introduce several concerns over the participant's comprehension of the questions. Participants could be answering questions randomly or misunderstanding the question, providing responses consistent with other study participants who also are mistaken over the question. This suggests, yet again, that the data might be invalidated if the participants received a questionnaire in a language other than Norwegian.

Næss offered questionnaires to respondents in their native language of Norwegian. Since study participants were minimally capable of comprehending and using their own native language, it seems that the concern over translation is ill-fated. Næss has provided several illustrations of reasons for thinking the translation into Norwegian was fitting for asking non-philosophers about the equivalence of an expression with that same expression and the prefix, "It is true that..." (Næss 1953, 6ff.). He does not consider the translation issues a drawback of the questionnaire.

A second methodological concern might have to do with the experimental design. In Question 8, for example, the way that the question has been framed may have confused respondents. One notices the rather convoluted way in which 8 is framed, when we compare it with Questions 1 through 7. Even Næss admits to this: "The answers to question 8 reflect a

In order to delimit the predictional field to a surveyable domain, let the convention be made that the field covers Norwegian university students in their relations to declarative sentences in their textbooks, excepting mathematics, and in observational journals worked out as part of their training (Næss 1953, 34).

certain uncertainty concerning the interpretation of the instruction preceding the sentences”

(Næss 1953, 18). Then, he shares what some study participants said in response to Question 8:

[Respondent (1):] If S is expressive of a theory (for instance Darwin’s theory of selection) it follows that [“ p ”] and [“It is extremely probable that p ”] have the same meaning.

[Respondent (2):] 8. [“ p ”, “It is true that p ”, and “It is perfectly certain that p ”] are expressive of the same (assertion), but I am not certain as to what is meant by the expression “actual instances of sentences of the kind which express assertions”. (Næss 1953, 18)

Respondent examples (1) and (2) seem to point toward a misunderstanding of synonymy judgments. That they received instructions before the question seems not to matter to how they go about judging whether expressions of the form “ p ” and “It is true that p ” are synonymous. Their misunderstanding is symptomatic of two misreadings. On one hand, these respondents seem to believe that judging whether two expressions are synonymous somehow depends upon the content of the statements, and, on the other hand, they seem to think that adding the prefix: “It is true that...” to any statement, p , is to further affirm or agree with the content of the expression.

Investigators cannot rule out such misunderstandings, and, likewise, they cannot prevent respondents from not understanding the question. The only hope is for researchers to mitigate comprehension problems from occurring, and it appears that Næss has done everything in his power to do just that. Using plain language, as it appears Næss has done for the questionnaire, is the best means of maximising understanding among study participants. As Næss reports, it appears that only 16% of the participants responded in a “superficial” or “careless” manner (Næss 1953, 31). Yet, these same people were subjected to further scrutiny whether through

“oral interrogation” or written remarks (Næss 1953, 32). Finally, and perhaps more importantly, Næss subjected the formulations of the questions and their accompanying expressions to many “pretests” (Næss 1953, 28, cf. 21ff.). Only after these analyses did Næss feel comfortable moving forward with the empirical study and releasing the preliminary findings, which have been capitalised upon in this paper.

A more substantive problem the study must address concerns whether the study has anything to say about the semantic conception of truth. It is beyond doubt that the collected empirical data ought not have the last word on whether the semantic conception is accurate. Indeed, perhaps these responses have nothing to do with the semantic conception of truth, particularly the highly-technical formal and logical version of the thesis as propounded in Tarski’s most famous work on truth. Basically, the objection amounts to this: whatever the non-philosopher has to say about truth, whatever the difference between philosophers and non-philosophers with respect to Convention-T, as well as its instances of the T-Schema, none of this is about the semantic conception of truth.

The fundamental assumption of this criticism is that there is a single target known as *the* semantic conception of truth. Perhaps the most teachable moment of this exercise is that instances of the T-Schema leaves us with the possibility that people’s interpretation of Convention-T depends upon its content. Næss’ prompts were designed to evoke responses in people who either embrace or reject various formulations of the T-Schema. And what all the data show is that people’s responses tend to be pushed around by contextual background features truth theorists never thought mattered.

6. Conclusion

This paper has shown that a majority of non-philosophers in Næss’ 1953 empirical study balked at some practical instantiations of the T-Schema. When the T-Schema includes abstract or theoretic statements, people tended not to endorse that the statement itself is synonymous

with the statement when it is prefixed by the phrase “It is true that...”. If the proposition is an empirical matter of fact, then people are less hesitant to say that the statements are synonymous. For practical variants of Tarski’s Convention-T, an otherwise logically robust and carefully orchestrated conception of truth, non-philosophers seem to harbour some doubt about whether they find practical variants intuitive.

The failure of non-philosophers to subscribe to practical variants of the T-Schema in an unrestricted way might have some unintended but quite serious implications for a variety of deflationary accounts of truth. For example, if an assumption of Horwich’s minimalism is that all competent speakers have an underived inclination to accept non-paradoxical instances of the T-Schema, then the above reported data suggest that that assumption might be wrong. Horwich only *might* be wrong for two reasons. First, perhaps one could argue that the speakers aren’t competent speakers. The easiest way to support this conclusion is by pointing out that prefixing “It is true that...” to any statement doesn’t *re-affirm* or give the statement a special status. The thought that it does so is just mistaken. Second, the limited scope of the population in Næss’ original study might cause us some pause in deriving any general conclusions without affirming them through further experimental studies. If follow-on empirical studies were to affirm Næss’ results, then there would be a groundswell of empirical data to cite in opposition of Horwich’s sweeping claim.⁶

Whatever the outcome and implications are of this empirical data for any theory of truth, one thing seems relatively certain: *what we have found in the empirical data is quite vexing*. Næss’ original report of the empirical data pointed out that practical variants of the T-Schema were not

⁶ This paper hasn’t outlined all possible concerns one might have for deflationary theories. One could easily see that the data reported here are telling for prosententialists regarding the view of the operator schema or disquotationalists about the disquotational schema (cf. my ‘The Empirical Adequacy of the Prosentential Theory of Truth: An Empirical Analysis from Franz Brentano to Robert Brandom’). See Grover, Dorothy L., Kamp, Joseph L. and Belnap, Nuel D. 1975: ‘A Prosentential theory of truth’. *Philosophical Studies*, 27, pp. 73--125, Leeds, Stephen 1978: ‘Theories of references and truth’. *Erkenntnis*, 13, pp. 111 - 29, McGee, Vann 1993: ‘A Semantic Conception of Truth?’. *Philosophical Topics*, 21, pp. 83-111.

wholeheartedly supported by non-philosophers. In this re-examination of Næss' studies, I drilled down to uncover some interesting asymmetric differences among respondents' views of abstract or theoretic statements versus empirical statements. People tend to believe that p and ' p ' is true are synonymous for straightforward empirical claims but exhibit some reticence in saying that p and ' p ' is true are synonymous if there is no statement standing in for the variable, p , or if the statement is theoretical or abstract.⁷

⁷ I am grateful for comments from members of the audience at the 2016 Australasian Association of Philosophy meeting, as well as conversations and correspondence with Jamin Asay, Bob Barnard, Elke Brendel, Filippo Ferrari, Franz-Peter Griesmaier, Paul Horwich, Lloyd Humberstone, Justine Kingsbury, Max Kölbel, Catherine Legg, Marc Moffett, Sebastiano Moruzzi, Alan Musgrave, Shaun Nichols, Nikolaj Pedersen, Charles Pigden, Shawn Standefer, Justin Sytsma, Dan Weijers, Jonathan Weinberg, Cory Wright, and Jeremy Wyatt.

References

- Alexander, Joshua 2012: *Experimental Philosophy: An Introduction*. Polity Press.
- Asay, Jamin 2013: *The Primitivist Theory of Truth*. Cambridge University Press.
- Barnard, Robert and Ulatowski, Joseph 2013: 'Truth, Correspondence, and Gender'. *Review of Philosophy and Psychology*, 4, pp. 621-38.
- Barnard, Robert and Ulatowski, Joseph 2016: 'Tarski's 1944 Polemical Remarks and Naess' "Experimental Philosophy"'. *Erkenntnis*, 81, pp. 457-77.
- David, Marian 2008: 'Tarski's Convention T and the Concept of Truth'. In *New Essays on Tarski and Philosophy*. Patterson, Douglas (ed) Oxford Univ. Press.
- Etchemendy, John 1988: 'Tarski on truth and logical consequence'. *Journal of Symbolic Logic*, 53, pp. 51-79.
- Field, Hartry 1972: 'Tarski's theory of truth'. *Journal of Philosophy*, 64, pp. 347-75.
- Grover, Dorothy L., Kamp, Joseph L. and Belnap, Nuel D. 1975: 'A Prosentential theory of truth'. *Philosophical Studies*, 27, pp. 73--125.
- Heck, Richard 1997: 'Tarski, truth, and semantics'. *Philosophical Review*, 106, pp. 533-54.
- Horwich, Paul 1990: *Truth*. Oxford, UK ; Cambridge, Mass., USA: B. Blackwell.
- Horwich, Paul 2001: 'A defense of minimalism'. *Synthese*, 126, pp. 149 - 65.
- Horwich, Paul 2010: *Truth-meaning-reality*. Oxford ; New York: Oxford University Press.
- Jané, Ignacio 2006: 'What is Tarski's common concept of consequence?'. *Bulletin of Symbolic Logic*, 12, pp. 1-42.
- Knobe, Joshua and Nichols, Shaun 2008: *Experimental Philosophy*. Oxford University Press.
- Knobe, Joshua and Nichols, Shaun 2014: *Experimental Philosophy: Volume 2*. OUP USA.
- Leeds, Stephen 1978: 'Theories of references and truth'. *Erkenntnis*, 13, pp. 111 - 29.

- Lombrozo, Tania, Shtulman, Andrew and Weisberg, Michael 2006: 'The Intelligent Design Controversy: Lessons from Psychology and Education'. *Trends in Cognitive Science*, 10, pp. 56-57.
- Lombrozo, Tania, Thanukos, Anastasia and Weisberg, Michael 2008: 'The Importance of Understanding the Nature of Science for Accepting Evolution'. *Evolution: Education and Outreach*, 1, pp. 290-98.
- McGee, Vann 1993: 'A Semantic Conception of Truth?'. *Philosophical Topics*, 21, pp. 83-111.
- Næss, Arne 1938: 'Common-Sense and Truth'. *Theoria*, 4, pp. 39-58.
- Næss, Arne 1938: *"Truth" as Conceived by Those Who Are Not Professional Philosophers (Skrifter Utgitt av Det Norske Videnskaps-Akademi I Oslo II. Hist.-Filos. Klass 1938 No. 4)*. Oslo, Norway: I Komisjon Hos Jacob Dybwad.
- Næss, Arne 1953: *An Empirical Study of the Expressions "True", "Perfectly Certain", and "Extremely Probable"*. Oslo, Norway: I Komisjon Hos Jacob Dybwad.
- Putnam, Hilary 2015: 'Naturalism, Realism, and Normativity'. *Journal of the American Philosophical Association*, 1, pp. 312-28.
- Sher, Gila 1999: 'What Is Tarski's Theory of Truth?'. *Topoi*, 59, pp. 149-66.
- Sytsma, Justin and Livengood, Jonathan 2015: *The Theory and Practice of Experimental Philosophy*. New York: Broadview.
- Tarski, Alfred 1936: 'The concept of truth in formalized languages'. In *Logic, Semantics, Metamathematics*. Tarski, A. (ed) Oxford University Press, pp. 152--278.
- Tarski, Alfred 1944: 'The semantic conception of truth: And the foundations of semantics'. *Philosophy and Phenomenological Research*, 4, pp. 341-76.
- Ulatowski, Joseph 2016: 'Ordinary Truth in Tarski and Næss'. In *Uncovering Facts and Values*. Kuzniar, Adrian and Odrowąż-Sypniewska, Joanna (eds) Brill, pp. 67-90.
- Vaught, Robert L. 1986: 'Alfred Tarski's work in model theory'. *Journal of Symbolic Logic*, 51, pp. 869-82.