

LET'S TELL THE TRUTH

EXPRESSIVE MEANING AND PROPOSITIONAL QUANTIFICATION

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Abstract:

In this paper, I use an extension of Russell's theory of descriptions to give further support to an analysis of truth ascriptions that stems back to Ramsey and has been further developed by Dorothy Grover and Christopher J. F. Williams. It is the view that the truth predicate vanishes in the logical form of the sentences in which it occurs in favour of a combination of quantifiers and propositional variables. I argue that Russell's theory of descriptions can be used as a technical way of giving flesh to the sometimes-vague characterisation of truth terms as expressive. In my analysis, I assume the Fregean analysis of quantifiers, Frege's context principle, and the Fregean distinction between grammatical structure and logical form. These three groundbreaking insights are crucial to the Russellian interpretation of denoting phrases and the analysis of truth ascriptions that I advocate. In section one, I explain the sense in which truth is a higher-level concept and which consequences follow from this claim, one of them being the linguistic flexibility of the concept of truth. In section two, I apply Russell's insights to truth ascriptions and show that the truth predicate dissolves in their logical form in favour of propositional variables and quantifiers. The disappearance of the predicate in the logical form is the precise sense that I give to the claim that truth terms possess expressive meaning. As propositional quantification has

been felt as a serious obstacle to the Ramseyian approach, I show in section three that the Quinean arguments usually addressed against higher-order quantification are weaker than the received view has taken them to be. I also address the objection that rests on the normative nature of truth. I argue in section four that the approach to truth ascriptions introduced by Ramsey provides an accurate and technically irreproachable account of the semantic expressivism associated with the concept of truth.

1. Higher-level predicables

A higher-level concept is one that applies to concepts and other complex abstract entities involving concepts. Because of their higher-level status, the meaning of expressions that represent them cannot be explained as referring to objects or describing properties of objects. For this reason, higher-level concepts do not fit well in the standard representationalist semantics. They also produce serious malfunctions within truth-conditional semantics, in which truth is understood as successful representation. The alternative is understanding the meaning of terms that express higher-level concepts as contributing to the circumstance of evaluation, as opposed to the *lekton*, in Recanati's terminology (Recanati 2007, pp. 38-9). This means that higher-level concepts do not represent conceptual ingredients of propositions but perform alternative tasks. Among them, they display the speaker's commitments to

propositions¹. They can also redirect propositions individuated in the context of use to a different context, the context of evaluation, to be assessed.

Most uses of evaluative terms², i.e., terms like ‘good’ and ‘wrong’, are higher-level too. Here there are some examples:

(1) Doing Pilates is good for your back

(2) Discrimination against people because of their beliefs is wrong.

The higher-level nature of the evaluative terms in (1) and (2) can be made explicit by converting the predicates ‘is good’ and ‘is wrong’ into the operators ‘It is good that’ and ‘it is wrong that’, which call for sentential clauses:

(3) It is good for your back that you do Pilates,

(4) It is wrong that you discriminate against people because of their beliefs.

The linguistic flexibility of some concepts, which allows them to occur linguistically as ordinary predicates and as operators, is a defining feature of their higher-level nature.

(3) and (4) are ambiguous between an interpretation in which the that-clause makes a singular remark and a general attitude on course-of-actions (Frápolli 2019, pp. 102-7).

The following examples illustrate the first case:

¹ My take on propositions is inferential. Propositions are non-structured entities able to interact as premises and conclusions in arguments. They also are the contents of assertive acts, i. e. assertable contents, and some mental states such as belief and knowledge, i. e. Frege’s judgeable contents. I individuate propositions ‘from above’, i. e. by their properties and relations (Frápolli 2019). At this point, I depart from the compositional approach that individuates propositions by their ingredients (Frápolli and Villanueva 2016, Frápolli and Villanueva 2012). Compositionality applies to the meaning of sentences, to their semantic values. However semantic values fall short of being wholly propositional (Recanati 2004). I have developed this approach to propositions in (Frápolli 2023), where I offer an analysis that I consider deeply Fregean.

² Different uses of the same term may express concepts of different levels. Stevenson, for instance, accepts first-level uses of ‘good’, even if they are not central and do not exhaust the term’s meaning (Stevenson 1937, p. 15), Haack acknowledges first-level uses of ‘true’ (Haack 2013, p. 53), and Williams does not reject embedded first-level uses of ‘existence’ (Williams 1981, pp. 81ff.). I do not dispute this plurality but focus on high-level uses. It should be taken into account that different uses of *terms* do not imply different uses of *concepts*. The logical category of concepts does not change, even if homophonic words (or different uses of words) may express different concepts with different logical properties. In particular, first and higher-level uses of evaluative predicates express different concepts.

(5) It is good for your back, María, that you do Pilates

(6) It is wrong that you, Peter, discriminate against people because of their beliefs.

In none of the two possibilities the evaluative concepts qualify either objects or configurations of objects. They show the speaker's attitude to propositions (in the singular case) and concepts that classify particular action types (in the general case).

Alethic and epistemic modalities (truth, knowledge, believe), and locative, temporal, and fiction phrases ('In Paris', 'Ten years ago', 'In *Cien años de soledad*') express higher-level concepts too. It might be debatable whether propositions are the arguments of modal concepts in *de re* readings, readings such as those represented in the following examples:

(7) Of Victoria, Joan believes that she is brilliant

(8) Michael believes of Trump to be insouciant.

Nevertheless, there is little doubt that they are higher-level in *de dicto* readings³. Here are some examples:

(9) It is true that snow is white

(10) Necessarily, two plus two equals four

(11) Joan knows that vaccines are safe.

The condition of being either first or higher-level is absolute for concepts and does not depend on the linguistic or grammatical category of expressions. I have call this Fregean remark 'The Principle of Grammar Superseding' [PGS]:

[PGS]: Grammatical analysis is not a source of logical knowledge (Frápolli 2023, pp. 29ff.).

³ This claim is a *de facto* rejection of the time-worn view that propositional attitude verbs are ordinary relations, i.e., relations between two objects, an epistemic agent and a proposition. See footnote 3.

Frege used it from his earliest works⁴ until the end of his life. In *Begriffsschrift*, § 9, for instance, he compares the following two sentences:

(12) The number 20 can be represented as the sum of four squares.

(13) Every positive integer can be represented as the sum of four squares.

In (12), ‘the number 20’ is the grammatical subject of the sentence. The object referred to by it, i.e., the number 20, is the argument of the function expressed by the sentence’s predicate ‘can be represented as the sum of four squares’. In (13), by contrast, ‘every positive integer’ is the grammatical subject but its contribution to the proposition expressed is not the argument of the function represented by the sentence’s predicate. This function in the predicate place is precisely the argument of the quantifier, because, as Frege explains, ‘what is asserted of the number 20 cannot be asserted in the same sense of ‘every positive integer’’. [...] ‘The expression ‘every positive integer’ does not, as does ‘the number 20’, by itself yield an independent idea but acquires a meaning only from the context of the sentence’ (Frege 1879, § 9). Thus, the quantifier does not represent an identifiable component of the judgeable content and does not behave like the singular term ‘The number 20’, which can be represented by an individual constant. Let ‘P’ be the predicable *being a positive integer*, and ‘a’ the number 20, then (12) can be formalised as (14),

(14) $\exists xyzw (Px \& Py \& Pz \& Pw \& Pa \& a = x^2 + y^2 + z^2 + w^2).$

The standard logical form of (13) is nevertheless (15),

(15) $\forall n \exists xyzw ((Px \& Py \& Pz \& Pw \& Pn) \rightarrow n = x^2 + y^2 + z^2 + w^2).$

⁴ The principle clashes with the preeminent role neo-Fregeans grant to syntax, as seen in the principles of Syntactic Decisiveness (MacBride 2003, p. 108) and Surface Syntax (Linnebo 2008). I have discussed this point in (Frápolti 2023, pp. 61-62). Nevertheless, [PGS] is one of the principles framing Frege’s take on logic and semantics and grounding the distinction between logical form and grammatical structure.

The difference between the contribution of singular terms and quantifiers to judgeable content is one of the reasons for Frege's rejection of the grammatical pair of *subject* and *predicate* as a logical tool. Other reasons are provided by the stability of judgeable contents across syntactic operations such as passive conversion or the combination of the content stroke and the judgement stroke, as illustrated in the next example:

(16) *The circumstance that hydrogen is lighter than carbon dioxide is a fact.*

Interestingly, Frege claims that the quantified expression in (13) 'acquires a meaning only' in context, which, as we will see, is also the intuition that guided Russell's view in (1905). Expressions of the same syntactic category, such as the singular terms 'the number 20' and 'every positive integer' belong to different logical categories. In this context, 'belonging to different logical categories' means that they present different inferential properties: (13) authorises the application of the first-order concept *being the sum of four squares* to an infinite number of entities, grounding its interpretation as a rule; nothing like that follows from (12).

[PGS] is a negative principle. Its semantic counterpart is what might be called the 'Functional Role Principle' [FRP],

[FRP]: The logical category of terms is determined by the role they play in the proposition expressed by the sentences in which they occur.

What kind of concept a term expresses is seen in the inferential consequences that the use of the term brings about. As is shown in the contrast between 'the number 20' and 'every positive integer', differences in conceptual role imply differences in inferential properties. Inferentialism, the semantic position that I adopt following Frege and Brandom (1994, 2000), is a development of [FRP]. It is concerned with the *judgeable* or

assertable content and the contribution terms do to it and not necessarily with *semantic values*, which in some sense the expression are closer to the linguistic meanings of the terms expressed. Thus, inferentialism is not a position about language and linguistic meaning but about what is said by the use of language.

[PGS] and [FRP] leave the door open to the possibility that terms in different grammatical categories may represent the same concept. This happens with truth terms. Consider the following examples,

- (17) What he said is true
- (18) He spoke the truth
- (19) He spoke truly
- (20) He said that p and it is true that p.

No difference, apart from stylistic, is made by the utterances of (17)-(20) in a particular context (Frápolti 2013, chapter 2). The plurality of grammatical modes of presentation shown in (17)-(20) shows the linguistic flexibility which truth shares with other higher-level concepts and that first-order concepts lack. Examples (17)-(20) show that some higher-level terms float free from the grammatical strictures that apply to ordinary predicates. They are, in some sense, adverbial⁵.

The fact that (17)-(20) present only stylistic differences supports the inferentialist claim that logically equivalent sentences express the same proposition.

⁵ Urmson built up his interpretation of parenthetical verbs on this intuition (Urmson 1952), which also upholds adverbial views on truth. (Trueman 2020) has given new flesh to the idea that truth is not a relationship between an agent and a proposition, but that the proposition is the argument of the operator 'it is true that'. This view circulated in the second half of the past century about the interpretation of propositional attitude verbs and motivated Prior's views (Prior 1971, pp. 16ff., Williams 1992, p. 457), according to which some higher-level operators were 'connecticates', i.e., half predicates and half connectives (Recanati 2000, p. 30).

This claim can be formulated as the principle of the *Principle Inferential Individuation* [PI],

[PI] Two propositions are one and the same if and only if they follow from the same set of propositions, and the same set of propositions follow from them (Frápolli 2023, p. 22).

From [PI] it follows that there cannot be logically equivalent *propositions* even though there can be logically equivalent *sentences*.

The linguistic flexibility of higher-level concepts, in general, and of truth, in particular, undermines the interest of the endless debate about whether truth is a predicate that designates a property (Tarski 1944, Engel 2002, p. 126), a quantifier (Williams 1976, Azzouni 2001), or an operator (Trueman 2020). Truth is none or all of them. It is a higher-level concept with multiple options to be linguistically represented. What follows from its higher-level category is that it is not a property of objects, although it can occur in a sentence as a predicate of a singular term.

There is nothing identifiable either in states-of-affairs or propositions that corresponds to the truth predicate in the following examples:

(21) *That* hydrogen is lighter than carbon dioxide *is true*.

(22) *It is true that* snow is white.

(23) What she said *is true*.

Does this mean that truth cannot be a property? The answer will depend on how 'being a property' is defined. If 'property' is understood in the standard Fregean way, i.e., as the meaning of predicables, sentences like (23) show that truth is indeed a property (Edwards 2018, p. 7). If by 'property' we understand either features of state-of-affairs or features of propositions, features that discriminate between members of

these categories, then the claim is hard to substantiate. And the reason lies in the logical behaviour of truth terms, something that we cannot change at will.

The analysis of definite and indefinite descriptions that Russell (1905) put forward helps to support the claim that truth is not a property or, at least, not an ordinary one. It also illustrates the precise meaning of the two following claims: (i) that truth does not contribute to the *lekton*, being thus inferentially irrelevant, and (ii) that truth terms are expressive. In the next section, I will show how the Russellian analysis can be extended to grammatical predicates of a certain type and applied to the analysis of truth ascriptions.

2. Russellian incomplete symbols

‘Every positive integer’ is a denoting phrase as well as ‘what she said’ (Williams 1976, p. 41). Denoting phrases is the topic of (Russell 1905). His examples are the following ones: ‘a man’, ‘all men’ and all the quantificational variants, ‘the present King of France’, ‘The centre of mass of the Solar System at the first instant of the twentieth century’, etc. (op. cit., p. 479). ‘Everything the Pope says’, and ‘some of Trump’ statements’ belong to the same category, i.e., they are denoting phrases in Russell’s sense. Russell summarises his theory of denoting as the claim ‘that denoting phrases never have any meaning in themselves, but that every proposition⁶ in whose verbal expression they occur has a meaning’ (op. cit., p. 480). His explanation represents an explicit endorsement of Frege’s Context Principle, and a rejection of the almost

⁶ Russell’s use of ‘proposition’ differs from my use here. By this term, Russell refers to linguistic items, i.e., to sentences, and I refer to what is said by their use in context.

universally assumed thesis that propositions reproduce sentential structures⁷. Russell explains denoting phrases by analogy with quantifiers and takes truth and falsehood as primitive.

I adopt Russell's interpretation of denoting phrases, but reject his view that truth is primitive in truth ascriptions. The following is a sentence with a denoting phrase:

(24) The current King of England is kind.

The Russellian analysis of (24) is given by (25) and (26),

(25) There is one and only one entity that is currently King of England and is kind.

(26) $\exists y (Ky \ \& \ \forall x (Kx \rightarrow x = y) \ \& \ Ky)$.

The contribution of 'the King of England' to the assertable content of (24) is distributed over (25) and (26). In fact, what is distributed is the role of the descriptor 'the'; and, in sentences with indefinite descriptions, like (28) below, the role of the existential quantifier. Nevertheless, the first-order predicable 'is kind' is distinctly identified as the monadic predicate in the last conjunctive clause of (26).

Now, let's apply Russell's view to sentences including some of the denoting phrases that I have added:

(27) What she said was unwarranted

(28) Some of Trump's statements are much debated.

Their Russellian transformations are:

⁷ This is the import of the so-called 'Jackendoff's grammaticality constrain', accepted by relevance theory (Sperber and Wilson 1986), truth-conditional pragmatics (Recanati 2004, Carston 2002) and indexicalism (Stanley 2000). So-called 'neo-Fregeans' also follow Jackendoff's constrain (MacBride 2003, Linnebo 2008).

(29) $\exists p$ (she said that p & $\forall q$ (she said that $q \rightarrow q = p$) & p was unwarranted).

(30) $\exists p$ (Trump states that $p \rightarrow p$ is much debated).

The standard criticism systematically addressed against the analysis of (27) and (28) as (29) and (30) concerns propositional quantification, which is the topic of the next section. Before dealing with it, I will apply the Russellian approach to truth ascriptions, taking on board the features of higher-level concepts that I have presented in the previous section.

As mentioned, higher-level predicates will require some adjustment of Russell's original intuitions. Because of the higher-level nature of truth, truth ascriptions will turn out to be doubly incomplete. First, because they include a denoting phrase ('Some of Trump's statements' or 'what she said'); second, because the contribution of the truth predicate is also distributed along the logical form. In the end, quantification and anaphora will show to be the crucial phenomena that account for the conceptual shape of propositions expressed by truth ascriptions.

(17) above is an example of a truth ascription with a denoting phrase. I repeat it here,

(17) What she said is true,

And this is its proposed interpretation:

(31) $\exists p$ (she said that p & $\forall q$ (if she said that $q \rightarrow p = q$) & p).

(31) is Ramsey's proposal, the proposal that Tarski began with and then rejected (Tarski 1944, Frapolli 2011), the one put forward by C. J. F. Williams (Williams 1976, pp. 25-26, and *passim*) and D. Grover (1992, p. 30), and a version of the analyses that minimalist and deflationist views propose. And it is a good interpretation of the content of (17). Moreover, it shows in a clear, technical way what is for the truth predicate to possess expressive meaning, as opposed to conceptual meaning, and for it not to represent a

property. There is no property in (31) that corresponds to ‘is true’ in (17), whereas in (27) and (28) the predicates ‘was unwarranted’ and ‘is much debated’ remain in the conjunctive clause of (29) and (30). For this reason, we say that the meaning of the predicate ‘is true’, a predicate that is indeed meaningful, is expressive. It contrasts with the meanings of ‘was unwarranted’ and ‘is much debated’, predicates that contribute a substantive and identifiable component to the logical form.

Frege held a similar view on the meaning of truth throughout his life. In ‘My Basic Logical Insights’, for instance, he explains:

Knowledge of the sense of the word ‘salt’ is required for an understanding of the sentence [‘sea-water is salt’], since it makes an essential contribution to the thought [...]. With the word ‘true’ the matter is quite different. If I attach it to the words ‘that sea-water is salt’ as a predicate, I likewise form a sentence that expresses a thought. For the same reason as before I put this also in the dependent form ‘that it is true that sea-water is salt’. The thought expressed in those words coincides with the sense of the sentence ‘that sea-water is salt’. So the sense of the word ‘true’ is such that it does not make any essential contribution to the thought [...]. This may lead us to think that the word ‘true’ has no sense at all. But in that case a sentence in which ‘true’ occurred as a predicate would have no sense either. All one can say is: *the word ‘true’ has a sense that contributes nothing to the sense of the whole sentence in which it occurs as a predicate.* (Frege 1915, pp. 251-2, my emphasis)

In this passage, Frege prefigures the distinction between expressions that contribute to the proposition, i.e., those that have substantive or conceptual meaning, and expressions that do not contribute, and thus possess what linguists call ‘expressive’ or ‘procedural’ meaning (Bezuidenhout, 2004, Wilson 2016). The unorthodox kind of sense that ‘true’ possesses, and that Frege highlights in this passage, motivates so-called minimalism about truth, which is implemented in proposals such as the redundancy theory of truth, commonly attributed to Ramsey (Wright 1992, p. 13, n. 12, but see Frápolli 2013, chapter 6), Tarski’s T-scheme (Tarski 1956), Crispin Wright’s minimal truth (Wright 1992), the prosentential view (Brandom

1994, Frápolli 2013, Grover 1980, Williams 1976), and the prenective view (Trueman 2020).

Were it not for the discomfort that propositional quantification produces among logicians, this picture would be a smooth and elegant analysis of most of the semantic features that are commonly attached to truth terms. Nevertheless, although to a much lesser extent, there are some other reasons that have moved logicians to reject (31). I will comment on them in turn.

Allegedly, according to the standard interpretation of first-order languages, (31) is either ill-formed or circular. The argument is that conjunction needs propositions (or sentences) as arguments. Nevertheless, ‘p’ is a free-standing variable calling for a predicable to complete the sentential clause. Without a predicable, (31) is syntactically faulty. The addition of ‘is true’ would restore well-formedness, but at the price of making this analysis of (17) utterly circular. The objection was directly addressed by Ramsey, Tarski, and C. J. F. Williams (Ramsey 1927, p. 437, Tarski 1944, p. 358, Williams 1976) and their answers were all coincident. The criticism, they explained, rests on misidentifying the logical category of the variable: p is a sentential (propositional) variable, and as such it already contains a verb. The fact that first-order languages only include nominal variables makes it difficult to give a suitable analysis of higher-level notions. Understanding the difference between grammatical and logical forms is crucial to comprehending Frege's logic revolution. It is also a necessary assumption for the process of conceptual analysis and the objective of the philosophy of language. Failure to recognize this difference is partly accountable for common criticisms of the prosentential view.

Both criticisms, the one that focuses on propositional quantification and the one that stresses circularity, rely on features of natural languages that first-order languages

reproduce. We would gain some knowledge about higher-level notions by understanding why these criticisms are so forceful and, nevertheless, unwarranted. As Ramsey explicitly noticed, there are in English no simple sentential expressions that work as propositional variables. For obvious reasons: sentences are, by definition, complex structures⁸. Some uses of pronouns do the job and refer to propositions. An example is (32), where ‘it’ refers back to the content of the first sentence,

(32) Vaccines are safe. There is overwhelming scientific evidence of it.

Adverbs ‘yes’ and ‘no’ are simple propositional variables—we use them to endorse or reject propositions (Ramsey, Williams, Grover), as in (33),

(33) Do you think that a new pandemic is imminent? Yes (No).

But they do not belong to the grammatical category *sentence*. There is no need, nevertheless, for artificial languages to mimic this feature. In fact, in a Fregean spirit, there are plenty of reasons for them *not* to do so. Logic languages are useful *because* they bring into the open the logical category of expressions that the grammar of natural languages often hides. Frege designed his concept script to remedy the situation, which was also stressed by Wittgenstein (1922 §§ 3.323 and 3.324).

The criticism that (31) is ill-formed derives from the interpretation of the variable ‘p’ as nominal. But ‘p’ is propositional, its instances contain predicables, and possess the syntactic category to be the arguments of conjunction. And nothing precludes quantifiers from binding propositional variables. I take this issue over in the next section.

A different criticism against the analysis of (17) as (31) rests on the normative character of truth. Only a substantive property of truth can explain why truth is better

⁸ It should be noted that the existence of single-word sentences cannot be denied. For instance, in Latin, "ambulo" or in Spanish, "duermo" are single-word sentences. However, in all cases, single-word sentences are semantically complex, as they include the person, tense, and mode of the verb, which is usually their only word.

than falsehood. Truth is valuable. Thus, there must be something in true propositions and true sentences that make them preferable to false ones. The criticism has been raised by several authors (Engel 2002, Lynch 2004a and b, Wrenn 2015), who reject analyses such as the one given in (31) as incomplete.

Lynch, for instance, formulates [TN], a principle that expresses the normative status of truth that minimalism allegedly could not explain, as follows:

[TN] Other things being equal, it is good to believe a proposition if and only if it is true.

Wrenn rephrases the criticism differently. In his words,

The problem of accounting for the value of truth can be especially difficult for deflationists. It's not that deflationists can't hold that truth is the aim of belief or that it is better, other things being equal, to believe a true claim than to believe its denial. Rather, given a deflationist understanding of truth, it might seem very hard to explain why such things would be so (Wrenn, 2015, p. 200).

Both are perspicuous expressions of a generalised feeling that is basically correct: that truth, like most higher-level concepts, expresses a normative attitude towards propositions. This feeling is shared by the prosentential account. When combined with a pragmatist view that makes human actions the grounding level and the semantic pluralist perspective that permits distinct roles for different terms, prosententialism presents a comprehensive and refined explanation of truth as normative.

Truth terms as expressive devices have as their distinctive semantic role to make explicit the normative aspects of the assertive acts in which they are put to work. Semi-formal approaches, such as those used by minimalists, deflationists, and analytic

correspondentists, easily overlook that the variables included in formulas such as (31) represent propositional contents that are asserted. The instances of (31) and similar structures typically are contents by which somebody says that such and such, and such and such: that Joan says that vaccines are safe, and vaccines are safe, that Michael says that Trump is insouciant, and Trump is insouciant, and so on. These instances are part of assertive acts in which the speakers commit to the propositions that are their contents. Normativity lies with the assertion. Truth terms make this feature explicit.

It should be kept in mind that truth terms, by themselves, do not grant assertive force and thus, a fortiori, do not grant normativity (Frápolli 2023, pp. 243-247, Frege 1918-1919, p. 153). Truth does not have magic effects, it only makes normativity explicit if the grounding act already possesses this feature.

The fragment by Lynch highlights the danger of viewing truth as a property of propositions. Wrenn's text demonstrates the further risk of treating truth as an object: the aim of belief. Both cases exemplify the pitfalls of a representationalist approach to semantics, in which words are seen as either qualifying or denoting. The prosentential analysis denounces the analysis of truth as a qualifying property. The second option, i.e., understanding truth as a name, is similar but less common. A superficial reading of the following sentences might give the wrong impression that truth is some kind of object,

(34) People want to know the truth,

(35) Science seeks the truth.

[PGS], one of whose instances is Russell's theory of descriptions, shows that grammar is not reliable. The following examples will help make this point clearer,

(36) People want the latest iPhone,

(37) Joan seeks the TV remote control.

When (34) and (35) disclose, they become

(34) $\forall p$ (if $p \rightarrow$ people want to know that p).

(35) $\forall p$ (if $p \rightarrow$ science seeks that p).

But (36) and (37) possess a very different structure,

(36) $\exists y$ (y is an iPhone & $\forall x$ (x wants y)).

(37) $\exists y$ (y is the TV remote control & a seeks y).

As I argued (Frápolli 2013, pp. 9ff.), not every claim in which truth is involved must be explained by a theory of the meaning of truth. Truth is linked to assertion, and assertion is the expression of beliefs (Frápolli 2013, pp. 67ff.). It is not always true that people prefer believing what is true over what it is not. There might be diverse explanations as to why this happens or fails to happen: evolutionary, moral, psychological and even social, explanations that go beyond the scope of a theory of truth.

3. Propositional quantification

Existence and generality are second-level concepts in the Fregean orthodoxy, which I strictly follow. According to it, the existence of propositions follows from the successful performance of contentful acts of assertion, if propositions are characterised, as I do, as what we say in assertable acts. In *Begriffsschrift*, §2, Frege characterised judgeable contents as those contents that can accompany the judgement stroke, i.e. those contents that can be asserted. By analogy, acts of thinking that something is so and so, doubting whether something is so and so, believing that something is so and so, and knowing that something is so and so point to propositions —Fregean judgeable contents— since propositions are the so and so that makes these acts contentful. All in all, propositions are those items that are necessary or possible, the premises and conclusions of arguments and the bearers of truth. All this is hardly debatable (for a

discussion, see Frápolli 2023, pp.). Because you understand what I'm saying beyond the sentences I'm using, because you can make the same claim in English and Spanish, because you agree or disagree with me, because you think that what I'm saying is trivial or utterly false, etc., you and I presuppose the existence of propositions and have practical knowledge about how to individuate them.

Nevertheless, our continuous trade with propositions and concepts, this feature that makes us humans (Brandom, Frápolli???? forthcoming), does not force us to understand them as objects in the universe. It is acceptable to view propositions as objects for methodological purposes. However, if this approach causes more problems than advantages, we should not blame the content of our rational discourse, but rather our method of approaching it.

The Fregean take on the universal quantifier accurately represents, at least, some of its common and scientific uses. Assertion of universal sentences indicates, according to Frege, either the conjoined assertion of an indefinite (or even infinite) group of propositions, or else conceptual subordination (Frege 1884, §47). Here is an example,

(38) Philosophers are bright people.

The speaker who asserts (38) commits herself to the set of propositions that say of each philosopher that she is bright. Alternatively, the utterer of (38) asserts that the concept *being a philosopher* is subordinated to the concept *being a bright person*, and this subordination has specific inferential consequences. In the extensional mode, (38) says that the set of philosophers is a subset of the set of bright people.

Existential quantification indicates, in Frege's view, conceptual instantiation. The utterer of (39),

(39) There are brilliant women philosophers,

commits herself to the claim that the intersection of the set of brilliant philosophers and women is not empty. Non-standard quantifiers—‘many’, ‘a few’, ‘most’, etc.— can be explained on similar lines, as the theory of generalised quantifiers defends (Westerstahl 1989).

(38) and (39) say something about people, philosophers and women, who are objects from a logical point of view. But for quantifiers to do their job objects do not need to be involved. The combined assertion of sets of propositions, conceptual subordination, and instantiation does not imply that the propositions involved describe objects in the universe, that the concepts in the subordination relation express properties of objects, or the concepts that accompany the existential quantifier are first-level. Propositions and concepts of any kind can be quantified over without defying the Fregean explanation of quantifiers and the use we make of them in everyday life.

In everyday discourse, quantifiers are frequently combined with propositions. The combination is systematic in some philosophical areas, like epistemology— whose focus is justification relations among propositions, or logic—that deals with the perspicuous representation of arguments and the analysis of their validity. Here there are some examples,

(40) Only propositions can justify other propositions.

(41) From true premisses, only true conclusions follow.

Examples (40) and (41) represent central claims in epistemology and philosophy of logic, respectively. Rejecting propositional quantification would dissolve vast areas of philosophy and, if the rejection were seriously taken, would annihilate the rational, discursive behaviour of human beings. And nevertheless, logicians and philosophers of language insist on the risks of quantifying over the level of objects without offering detailed and well-grounded reasons for this dramatic move. The situation is then the

following: philosophers reject propositional quantification due to vague ontological and metaphysical concerns, despite using it profusely to support their claims..

But what problems does quantifying over concepts and propositions allegedly cause? Are they so serious as to prevent the development of reasonable positions in epistemology, metaphysics, the philosophy of language, and logic? Why are philosophers working on truth so reluctant to accept analyses as obvious as the one exemplified by (31)?

The issue traces back to Quine's defense of the 'objectual' interpretation of quantifiers. Quine explicitly defended it in 1948, and since then, it has become the received view in logic and semantics..

According to the received view, (31) commits us to the existence of propositions as basic objects in the universe. Thus, underneath its innocuous appearance, the objectual interpretation hides a substantive metaphysical assumption, with two distinguishable parts⁹. The fact that quantification commits us with a particular ontology, i.e., an ontology with a particular kind of universe populated by the kind of objects over which quantifiers range, is the first part. The second one is the assumption that propositions possess a dubious ontological status, i.e., that they are, in Quine's witty expression, 'creatures of darkness' (Quine 1956, p. 180). Both parts are unwarranted. In the rest of the paper, I focus on the first part. As I have suggested above, the second part is indirectly refuted by our discursive behaviour and the theoretical discussions in major areas of philosophy (Frápolli 2019, Frápolli 2023). As Brandom convincingly argues (1994, p. 5ff.), humans are producers and consumers of

⁹ Quine's reductive naturalism provides the framework for his philosophy of logic. Reductive naturalism has its weaknesses too and it is debatable that philosophy and science can survive in the suffocating atmosphere it provides. My naturalism is non-reductionist, as well as Price's subject naturalism (Price 2011, Frápolli 2014).

reasons, and reasons are the propositions we adduce to back the propositions we endorse and the actions we undertake.

As mentioned, the origin of the objectual interpretation is Quine (1948). '[T]he only way we can involve ourselves in ontological commitments', Quine says (op. cit., pp. 31-32), is 'by our use of bound variables.' As he explains it,

[t]he variables of quantification, 'something', 'nothing', 'everything', range over our whole ontology, whatever it may be; and we are convicted of a particular ontological presupposition if, and only if, the alleged presuppositum has to be reckoned among the entities over which our variables range in order to render one of our affirmations true (op. cit., p 32).

Part of the extraordinary success of Quine's ontological commitment argument rests on the ambiguity it presents between an interpretation according to which it is trivial and a substantive one, in which it puts forward a criterion that allegedly identifies the ontology underneath any kind of theory or discourse. Unfortunately, the trivial interpretation is uninformative, although true, and the substantive interpretation is unjustified. The uninformative part is that nominal variables afford us a glimpse into the assumed ontology. The false part is that variables of any category commit us to the inclusion of their values as *objects* of the universe the theory intends to systematise. Despite lacking solid justification, this perspective is widely accepted and used to reject any opposing analysis.

The truth of the uninformative interpretation is well-supported by the philosophy of language. As variables in first-order logical languages correspond to pronouns in natural languages (Geach 1962, pp. 125-126, Quine 1974, p. 129, Salmon 2006, p. 656), the interpretation is the formal counterpart of the widely accepted view that in natural languages, pronouns—demonstratives and indexicals— are referential tools that

indicate at which point language ‘touches’ the world. Pronouns also are instruments for anaphora, which is systematically involved in quantified sentences that include connectives. Nevertheless, from this analogy between variables and pronouns, it does not follow that all variables must be nominal. Variables in higher-order languages correspond to other kinds of proform, and natural languages include proforms in all grammatical categories (Frápolli 2023, p. 231). The function of proforms in non-nominal categories is not referential. Rather, they adopt the tasks that define their category, which varies based on the grammatical category of the terms involved. In summary, adverbial variables, pro-adjectives, proverbs, and pro-sentences do not establish a connection between language and the world, nor do they express ontological commitment.

To be fair, we must acknowledge that Quine's concern at this point is the interpretation of scientific theories, not the semantics of natural languages. First-order logic constitutes, in his view, the vehicle for the canonical representation of theories. Being this so, the generalised, explicit assumption displayed in the quoted passage above involves the implicit assumption that first-order languages are *the* languages of science. This passage would have been irrefutable had Quine mentioned that the variables he was referring to were nominal variables: ‘the alleged presuppositum has to be reckoned among the entities over which our *nominal* variables range’ (*term and stress added*).

Quine’s assumption that first-order languages are the only canonical language for scientific theories is as unwarranted as his assumption of the universal connection between variables and objects¹⁰. If it is true that some scientific theories can be represented in first-order languages, many others require quantifying over concepts and

¹⁰ To maintain set theory up and running, Quine finds alternative strategies as the distinction between genuine variables and mere schemata. The former but not the latter can be bound by quantifiers and indicate ontological commitment (Quine 1971, p. 10). The distinction is, nevertheless, one without a difference; it is a way of having the cake and eating it.

propositions. Peano's ninth axiom cannot be represented in a first-order language, to mention a well-known case. The debate about the status of axioms in geometry provides another illustration. As Frege explained to Hilbert in a letter written on the 6th of January 1900, Hilbert's contextual definitions of terms like 'point' and 'straight line' on sets of axioms made them higher-level concepts (Frege 1980, p. 46).

If, as the previous examples show, the restriction to first-order languages is damaging for formal sciences, for philosophy it is lethal. Most concepts with which philosophers are concerned are higher-level. They do not apply to objects but to other concepts and propositions whose systematisation requires quantifying over them. The Medieval transcendentals—*unum*, *verum*, *bonum*—belong to this category, as it happens with many central notions in epistemology and logic. What an agent knows and what she believes are not objects but propositions, and justification, as we have seen, is a relation among propositions. In logic, the situation is similar. Inferences and arguments are sets of propositions with a relation of support, and validity is a property of some inferences in which the support that premises lend to the conclusion is complete. The Principle of Excluded Middle is a quantified claim on propositions. We cannot walk a single step in philosophy without higher-level quantification.

Restricted to first-order languages, Quine's slogan 'to be is to be the value of a variable', whose complete formulation should be 'to be is to be the value of a nominal variable bound by an objectual quantifier', is empty. In its extended form, it loses the blocking effect it exerts against non-nominal quantification. Nevertheless, the whole discussion about quantification and ontology and the thoughtless endorsement of Quine's slogan has produced the practical elimination of the Fregean view of quantifiers; a view that logicians overtly praise as the defining mark of contemporary logic. 'Being the value of a nominal variable' is a first-level predicable. If this is Quine's definition of existence,

then existence turns out to be a property of objects (Williams 1981, p. 181). Thus, by definition, only objects exist. There cannot be concepts, properties, processes, rules, methods, etc. unless they can be understood as objects of some kind. We have accepted a very heavy rabbit coming out of an empty top hat.

As we conclude the section on classical objections, it's worth mentioning another common one, although not as prevalent as the Quinean ontological qualm, which was probably motivated by Grover's use of substitutional quantification (1992, p. 26 and *passim*). Grover acknowledged that propositional variables were not pronominal (1992, p. 46) and thus that treating them as names was a mistake. Quine made this mistake, but Ramsey, Williams, and Grover herself did not fail to recognise the significant difference between semantically simple expressions that mainly refer to entities and semantically complex expressions that primarily express truth-bearers. The objection goes as follows: universal propositional quantification of the kind involved, for instance, in the expression of the Principle of Excluded Middle $\neg(p \vee \neg p)$ requires language to have sentences for every proposition that could be asserted. However, the objection continues, things that can be said surely outnumber the number of expressions in language¹¹. This objection fails to touch the Ramseyian analysis, for several reasons. The objection would make sense if addressed against substitutional quantification, but not even in this case would the objection make a right remark, as we will see. In any case, the kind of quantification that (31) presupposes,

(31) $\exists p$ (she said that p & $\forall q$ (if she said that $q \rightarrow p = q$) & p),

which differs from the standard objectual and substitutional interpretations, rests untouched by it. Firstly, (31) represents the role of truth terms by appealing to what speakers do by using them and is a notational representation that shows speakers'

¹¹ I am grateful to an anonymous referee who drew my attention to this objection.

commitments to propositions, not to sentences. We should keep in mind that the use of quantifiers in (31) is identical to the use of quantifiers in the standard description formula: $\exists y (Py \ \& \ \forall x (Px \rightarrow x = y) \ \& \ Cy)$. If the latter does not presuppose that we have names for all objects that we need to identify, there is no reason to require as many sentences as propositions to analyse truth ascriptions. However, we have independent reasons to assume that, concerning (31), this is in fact the case. From the philosophy of language, the argument rests on the Principle of Effability, a principle that asserts that thoughts are essentially claimable (Frapolli 2023, p. 187) and that linguists formulate as follows,

(EP) Each proposition or thought can be expressed (=conveyed) by some utterance of some sentence in any language (Carston 2002, p. 33).

In mathematics and logic, the argument is based on the idea that by combining the finite vocabularies of artificial and natural languages only a denumerably infinite number of expressions can be built. Since the number of possible propositions cannot exceed this number —the idea of a non-denumerably infinite set of propositions does not make sense— the objection does not present a problem for either the Ramseyian analysis of truth or for the substitutional interpretation of propositional quantifiers that Grover favours.

To sum up, there are no serious reasons, independent of Quine’s particular take on the matter, to reject (31) as an adequate analysis of (17). I repeat it here,

(17) What she said is true.

The meaning of ‘is true’ in (17) occurs scattered across (31). The complete description formula along with the bound propositional variables represents its contribution to what is said by (17), which cannot be condensed into any particular ingredient. Moreover, part of (17)’s import relates to the assertion of the proposition represented in the second

conjunctive clause, as I have mentioned before. Assertive force, however, does not belong to what is said and cannot then occur as an ingredient of (17). To properly acknowledge (31) as a correct analysis of truth ascriptions, it is important to keep in mind that not all statements made using truth-related terms can be deduced from the definition of truth itself. If this were the case, truth claims would be considered analytical sentences. Many of the claims about truth that we consider to be true are actually based on empirical assumptions, the validity of which depends on theories that go beyond the scope of a logical-semantic analysis of the concept.

4. Conclusion

Sentences and what they say do not need to share their complexity. In other words, assertable contents do not need to reflect the structure of the sentences by means of which we express them. This fact supports [PGS] and motivates the essential distinction between grammatical and logical forms. As Russell's theory of descriptions shows, not every term that occurs in a declarative sentence corresponds to a distinct component of the proposition expressed by it. This does not only happen with singular terms, the target of Russell's analysis, some predicative notions fail to contribute an isolable component to the proposition too.

The terms 'expressivism' and 'expressive meaning' are used in the literature with many different senses, mostly with a marked subjectivist, internalist flavour (Baron and Chrisman 2009, Sias 2014). Nevertheless, they also have an objective, logical interpretation that connects them with alternative ways in which some terms add up to the general significance of sentences and also the linguistic actions in which they occur. Wittgenstein conferred this kind of meaning to logical constants (Wittgenstein 1922,

4.0312), and (Ryle 1949), with his metaphor of the ‘inference ticket’ applied to scientific laws, benefited from a similar intuition. The passage from Frege quoted in section two shows that Frege was open to assuming something like this non-substantive meaning related to truth. I propose to go back to Russell’s theory of descriptions to ground up a precise sense of the notion of expressive meaning that applies to higher-level concepts.

Once the standard charges of circularity, syntactic ill-formedness, and metaphysical clumsiness are removed, the door is open to accept (31) as the standard logical form of truth-ascriptions.

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