MEANING-THEORETICAL CONDITIONS AND VERIFICATION

a defense of Dummett against Alfred Tarski

CONDIÇÕES TEÓRICO-SIGNIFICATIVAS E VERIFICAÇÃO

uma defesa de Dummett contra Alfred Tarski

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ABSTRACT
In the upcoming article, we will explore a critique of Dummett's towards Tarski that has often been overlooked or not fully appreciated. Dummett's verificationist anti-realism serves as the foundation for the critique. According to this author, a theory of meaning for a particular language—which are found in a theory of harmony—determine the circumstances in which the meaning of a sentence of the language can be theorized, or presented in a strategic and non-defeating theoretical depiction of its possible assertion. These prerequisites create a mediating bridge between the statement of a sentence and its effects, defining the circumstances in which the incompatibility of "p" and "not-p" can be considered and projected. Tarski is criticized for his formal and material semantic theory of truth, which hides or masks the epistemic circumstances by presenting them in a straightforward and codified manner in inductive principles.

Keywords: Meaning-theory. Verification. Dummett. Tarski.

RESUMO
Examinaremos uma crítica negligenciada ou subestimada de Dummett a Tarski neste artigo. O anti-realismo verificacionista de Dummett serve de base para a crítica. Segundo este autor, uma teoria do significado para uma determinada língua – que se encontra numa teoria da harmonia – determina as circunstâncias nas quais o significado de uma frase da língua pode ser teorizado, ou apresentado em uma representação teórica estratégica e não derrotista de sua possível asserção. Esses pré-requisitos criam uma ponte mediadora entre o enunciado de uma sentença e suas consequências, definindo as circunstâncias em que a incompatibilidade de "p" e "não-p" pode ser projetada como um conhecimento lógico. Tarski é criticado pela sua teoria semântica formal e material da verdade, que esconde ou mascara as circunstâncias epistêmicas, apresentando-as de maneira direta e codificada em princípios indutivos.

Palavras-chave: Teoria do significado. Verificação. Dummett. Tarski.

Verification and mediation: non-assertive conditions of meaning

Because verification is psychological, subjective, and contextual in nature, it is entangled in theoretical difficulties that challenge a scientific approach. These components kept a theory of verification from escaping its phenomenological, hermetic, and subjective realm, giving rise to the idea of a "mental representation" that can only be understood via the lens of hermeneutic horoscopes. The opposite trend may be observed in analytical philosophy, which focuses on the technical examination and demystification of the semantic mechanisms that define the relationship between the proposition and the verifier. Since Frege's time, the conventional approach to contemplating the notion of conceptual subsumption, application, or instantiation involves a second-order theory that encodes the conceptual identity (comprehension principle).

By referring to Barry Smith, we can acquire insights into Frege's methodology for dealing with the challenge of representing logical connections between the contents of thoughts. This approach aims to remove any subjective elements, thereby purifying our theoretical comprehension of propositions, particularly those of scientific and mathematical nature, from any empirical associations:

> Frege's solution to his puzzle about grasp owes a lot to his mathematical epistemology in the Grundlagen. Numbers were not spatio-temporal objects of the sort with which we could have a perceptual encounter; they could only be known to us though our understanding use of numerical terms used to refer to them. In similar fashion, our grasp of pure thoughts or senses were mediated by our mastery of a language in which such thoughts and senses were expressed. This meant that our access to, and indeed our only means of, analyzing thoughts was via the analysis of a language in which they could be expressed. Thus the methods of the

> analytic philosopher involved taking a linguistic turn (Smith, 1995, p. 26).

The author has disregarded solutions related to *a priori* syntheses and focused on the unfolding of our second-order conceptual cognitive capacity. Frege's theory, it is true, freed analytic philosophy from a tiresome neo-Kantian debate about the synthetic structure of mathematical proofs but, at the same time, it brought a new layer of challenges. The new challenge is the determination of contents whose verification is not direct, in a merely inductive way. This brings a problematic relation of principle to the cognition of p, or to the conception of its meaning. In any case, the cognitive relationship between truth and verification remains an enigma, which was represented by the problem called Frege's-Geach point:

> A thought may have just the same content whether you assent to its truth or not; a proposition may occur in discourse now asserted, now unasserted, and yet be recognizably the same proposition (Geach, 1965, p. 449).

Geach's problem has been deeply ingrained in meta-ethical discussions of how it is conceivable to have cognitive access to propositions with normative meaning in the absence of a source of verificational decision, which leaves such propositions open to assertion under capricious and contradictory circumstances. However, the philosophy of mathematics faces comparable challenges. The failure of Frege's predominant project to reduce arithmetic to logic, along with various reflections on the paradoxical limits of our understanding of set-theory, has still left doubts about inductive solutions. The problem of determining the truth of judgments in arithmetic and high-level theoretical science through a concept of abstract and ideal inductive proof remains unresolved and without consensus. Disputes on this matter, which should ideally be peaceful among logicians, demonstrate that the issue of verification and truth are divisive and that it is perhaps necessary to recognize, like Frege, that there are valid although non-referential dimensions of cognition, that is, dimensions where knowledge of p is not knowledge of the conditions for its assertion.

One way to address the question is to consider the problem, brought to centre stage in the twentieth century, of how to use an effective mathematical procedure to reconcile our notion of proof (evidence, confirmation, etc.), and our notion of truth (the theoretical truth-functional account of the pattern used to assign true to sentences). This difficulty of reconciliation has reflexive consequences, since it has led whole traditions of study in different directions, such as the theories of proof initiated by Gerhard Gentzen's *Untersuchungen ¨uber das logische Schließen* (1935), and the theories of semantic-models and truth functions inspired by Alfred Tarski (1944), but available since the first analytic philosophers (notably the first Wittgenstein, 1922).

Many issues separate these branches, and few could be included in this work without compromising integration. In any case, one issue looms large over the entire scenario, and that is the nature of the grounds that could project support for an inference. The question that must be answered before building a system of deduction is: under what conditions does a parameter of confirmation, proof and evidence—give grounds to – justify the conclusion? Once these conditions are known, it is easy to work them out formally. Deductive systems describe how a derivation of sentences can be specified solely by their syntactic shape and can be checked algorithmically. The same question about the grounds for a conclusion can also be asked for an assertion: under what conditions can a justified assertion be said to be non-false in only one way, *i.e*. without alternatives? As explained by Tim Maudlin:

> If the language were bivalent, then it appears that we would be done: if every sentence is either true or false, then every sentence would be either permitted or forbidden. But having abandoned bivalence, we need to add criteria by which we can evaluate rules for asserting ungrounded sentences (Maudlin, 2004, p. 96).

At this point, we can introduce the first of the authors heavily discussed in this article: Alfred Tarski. Tarski's recognition among the philosophical and semantic universe can be attributed to his deliberate neglect of the epistemic dimension of verification and his singular emphasis on the model-theoretical representation of truth and logical consequence.

This particular approach is viewed by some as advantageous, representing the pinnacle of an anti-psychological and anti-phenomenological tradition. Furthermore, it offers a means to continue the anti-metaphysical teachings of positivism without grappling with the complications surrounding confirmation, verification, and empirical induction that ultimately contributed to its decline.

Truth and verification: coding and nominalists accounts of that relation

The last chapter gave us a dimension of how the relationship between verification and truth is not automatically homogeneous: in some representations, verification is given by the senses, examples, ostensive learning, in others, by mathematical demonstrations, either (in Kant's case) as syntheses of relational contents or (in Frege's case) by representation through the second-order conceptual representation of inferior concepts, or even as the structural specification of the connection between representations. In all these cases, the connection between verification and truth does not manifest an evident and direct correspondence. However, this does not indicate the abandonment of the pursuit to discover a framework resembling an associative coding between proof and truth. The exploration of methods to codify this association lies at the core of projects dedicated to addressing this subject matter. Alfred Tarski's work culminates in the search for a description of the conditions under which knowledge of proof does not conflict with knowledge of truth conditions:

> We already possess a sense of interesting meta-mathematical results gained with the help of the theory of truth. These results concern the mutual relations between the notion of truth and that of provability (Tarski, 1944, p. 368).

The core of Tarski's project is the definition of truth in a purely semantic way. If we have a coherent theoretical use of the predicate "truth" – one that can be used without paradoxical results – we also have a way of organizing our non-dogmatic (testable) consistency parameter. This, in turn, means that the standard of truth we use in our daily lives need not be connected to our ability to prove propositions directly, but that we have access to more abstract ways of thinking about the supports and contributions for charting straightforward truth maps, using some auxiliary notion like that of 'satisfaction':

> For some technical reasons the method of recursion is actually applied to define, not the notion of truth, but the related semantic notion of satisfaction. Truth is then easily defined in terms of satisfaction (Tarski, 1969, p. 69).

The trick was to use the machinery of set theory to convert inductive determinations for the projection of categorical identities into simple definitions of isomorphisms:

> [...] it is characteristic of a Tarskian truth-definition that all of those of its clauses which relate to primitive particular expressions of the object-language, whether logical or non-logical, will have a straightforward form. And [...] there is a device, originating with Frege, for converting this inductive stipulations into an actual explicit definition (Dummett, 1993, p. 63).

Or, in Quine's words:"as Tarski observes, we can render the satisfaction predicate eliminable by furnishing the metalanguage with as much of the machinery of set theory as is needed for turning the inductive definition into a direct one" (Quine, 1994, p. 309).

The "truth" thus functions as a stable parameter that gives the sentence – even if it is false – the possibility of being understood and reproduced as assertable or provable exactly under the conditions under which it would be true. Additionally, the truth condition reveals that the proposition is presented with utmost clarity at the very instance when its

assertion establishes an irrevocable position. That is the disquotational position, where the sentence's content is so unambiguous that it cannot be revoked (unless the grounds for its assertion changes). The condition of irreversibility or invariance is one that establishes the limits at which the content of an assertion cannot be withdrawn. And this means that knowing that condition, we know how this proposition can be judged, while the adequate expression of the judgment is the truth attributed to the content of the assertion. The enchantment has been completed: we are now able to systematize our understanding of truth and the way we validate and assess it. Our concept of justification and judgment, which serves as a means to establish the veracity of our statements, will no longer possess a convoluted extent but rather be confined to a simple theory of correlation or encoding. The empiricis myth of the data (Sellars) may be replaced by a belief in the encoded relationship between variables.

This trick was already presupposed in the form of Frege's reflection, as Dummett noted, because Frege's effort to reduce arithmetic to logic required a device (Hume's principle) for converting inductive definitions into direct descriptions:

> [...] in order to establish the equality of two different expressions for the same function, it was necessary to transform one into the other, that is, to show that they coincided for each value of the variable magnitude (Ferreirós & Reck, 2020, p. 60).

The trick is linked to a rudimentary method of creating names from codes, even for things that lack a direct denomination criterion. This type of reasoning can be traced back to the Fregean inclination in Grundgesetze, where Frege employs the term 'name' in a broad sense. He utilizes names to represent unsaturated expressions of different degrees. Nonetheless, Frege did not perceive this as a mere simbolic trick, but rather as a means of recognizing concepts. These concepts form a fundamental part of our cognitive architecture, enabling us to make judgments about the truth value of a proposition. What changed with Tarski?

Tarski manages to offer a mechanical way of preventing us from attributing truth to a proposition p under conditions in which that proposition would have proof against it; but he does not instruct us at all about what is the cognitive content present in the minds of those who have learned – according to a concept – to judge that p is true.

Paradox avoidance, non-self-defeating assertions and verification

The most direct form of the semantic paradox is shown in the following sentence: i* This sentence is false. (i*) is true if and only if it is false. Modern semantics has tried to avoid paradoxes in the simplest possible way: with the help of set theory and some formal constraints. Alfred Tarski gained an undeniable reputation for determining the metamathematical solution to this problem:

> Making use of syntactical rules which concern the formation of more complicated sentences from simpler ones, we extend the definition to arbitrary compound sentences; we apply here the method known in mathematics as definition by recursion. (Tarski, 1969, p. 69).

In *Truth and Disquotation*, W. O. V. Quine briefly and precisely describes this property of the semantic theory of truth: "as Tarski observes, we can render the satisfaction predicate eliminable by furnishing the metalanguage with as much of the machinery of set theory as is needed for turning the inductive definition into a direct one" (1994, p. 309). Now we come to the way the problem is usually presented in its technical format:

> [...] to reduce satisfaction to truth, we need a function g mapping every class name or code of a class name into a name of the code: g: A(x 1) —> ⌜ A(x 1) ⌝. We are well along the way now, because if truth is not definable, but provability is, under the coding (and this

> will certainly be true in a rich enough system, like set theory; in fact it is true in first- order arithmetic, which is a little harder), then truth cannot be equal to provability, so they must be two different things. Hence, either there is something false but provable, which is very bad, or true but unprovable, which is also bad, but not as bad. (Kripke, 2014, pp. 229-230).

Tarski's hierarchical system of languages and meta-languages offers a solution to this problem which, if not trivial on a mathematical level, is at least capable of restoring epistemic triviality when the predicate "true" is used in a safe position in the hierarquy. Once that is done:

> It can be argued that such biconditionals are epistemologically fundamental: we do not arrive at them, or seek to justify our acceptance of them, on the basis of anything more obvious or more immediately known. In addition, it can be argued that our underived inclination to accept these biconditionals is the sourceof everything else we do with the truth predicate (Horwich, 1999, p. 559).

Then we have set the conditions under which a correspondence between proof and truth is possible and never paradoxical. The association between proof and truth will be unproblematic at this point in the Tarskian hierarchy, and hence we could grasp a notion of truth, assertion, and judgment that is unproblematic at the epistemic level: no assertion of "p" would make any case or score any point for non-p under favorable conditions. But this solution is simplistic and useless because it assumes that the Tarskian constraints are epistemically available when we work out a parameter for proof in empirical inquiry – which is at best a work in progress, not an unproblematic pre-condition.

The semantic theory of truth not even describes the *ideal circumstance* of verification, or the phenomenological representation of the active conciousness working on the representation of the conditions in which the verification of the proposition as true implies the falsity of its negation. The theory just shows the technical model for the disquotation

of p. But technical virtuosity, instead of solving the problem, can merely point out the conditions under which it would already be unproblematic. Once the inductive projection is transformed into a semantic map, everything looks as if there had never been a problem. In this projection, which can be equated with an idealization, being true never contradicts being verified – even for unproven sentences, and even for undecidable statements. The fact that the idealization is presented as a mere technical solution is only a dissimulation: behind the technicalities, it must be some "phenomenological presupositions" about the optimized conditions for the mind working on the mappings and computations.

Meaning-theorical conditions: Dummett against Tarski

Dummett's theory of meaning do not resort to Tarski's theory or any attempt to parameterize our cognition of meaning based on standards (sometimes superhuman-standards) of truth.

For Dummett, characterising the use of a language within a community in fact provides only a predictive basis for what was already normatively allowed in that community; importantly, this provides a multi-lateral notion of our parameters of meaning and suggests that what makes our propositions true or false has nothing to do with the finitude of our methods of proof:

> We derive from this practice an awareness of the fact that we are meant to understand that what any such statement relates to, and either renders it true or renders it false, is there independently of our knowledge or means of knowledge (Dummett, 1993, p. 345).

This shows that there are realist idealizations that must be deployed, albeit in disguise, in conceptions that use the notion of truth as a uni-

versal parameter for the construction of multilateral theories of meaning. Dummett takes a inferentialist route to undermine those premises. For him, If we lack (categorical or conceptual) information to make the decision for p or non-p, no super-evidence can compensate for this without additional cost – and eventual disarmony – in our catalog of meaning assumptions.

Dummett organizes his confrontation with this realist tradition by reminding us of its shortcomings as science of meaning, if we understand science in his way:

> [...] meaning-theory [...] has not fulfilled its function if it merely provides an accurate conspectus of a single complex phenomenon, the use of a language within a community whose language it is; it has also to explain in what the understanding of the language by any individual member of the community consists (Dummett, 1993, p. 343).

But Dummett goes beyond the accusation of scientific limitation. The author also reminds us that this kind of theory does a poor job of justifying the normative and intentional element present in a prescription of meaning: "[...] there must be an observable difference between the behavior or capacities of someone who is said to have that knowledge and someone who is said to lack it" (Dummett, 1975, p. 7).

The distinction lies in the fact that the requirements for assertive authorization are not contingent upon a notion of truth that surpasses the conceptual capacity to ground it and subsequently surpasses our capability to discern the varying competencies of two individuals who would derive dissimilar conclusions from identical grounds.

Dummett's theory offers an opportunity to describe the cognitive competence associated with the knowledge of a "meaning". He makes this description through his meaning-theory. To put it simply, recognizing the circumstances in which the introduction or usage of a proposition does not surpass or go beyond what can be demonstrated by it constitutes a mind's meaning-theory, which is a characteristic of harmony

theory inspired by the conditions enunciated by Gentzen. Gentzen was optimistic that we would find out that the elimination rule is dependent on the introduction rule, and all we had to do was ensure that an elimination rule matched its corresponding introduction rule. That hope is justified by the rule that the definitions of the symbol in question are represented in the introduction, and the eliminations are ultimately just the consequences of these definitions: "By making these ideas more precise it should be possible to display the [elimination rules] as single-valued functions of their corresponding [introduction rules], on the basis of certain requirements" (Gentzen, 1964, p. 195).

This meaning-theoretical conditions would be a condition that is present in all minds that do have the practical ability to determine the favorable circumstances under which a proposition p should be used, that is, the circumstances under which its application is cautious or prudent enough to express all that needs to be expressed without expressing more than can be supported.

In less simple terms, in order to reach a state in which any justification of non-p counts as a counter-assertion to p, it is necessary to strike a harmonious balance between the 'direct' conditions under which we authorize ourselves to assert p and the 'indirect' conditions under which one could verify the correctness of this assertion by simply observing that not(non-p): "we require a harmony which obtains only if a statement that has been indirectly established always could (in some sense of 'could') have been established directly" (Dummett, 1975, p. 227).

For Dummett the Introduction-rules and Elimination-rules should exhibit "a certain consonance between the two aspects of the use of a given form of expression" (Dummett, 1973, p. 397). A theory of harmony is usually elaborated into an inferentialist theory in response to Arthur Prior's famous 'tonk challenge'. Tonk functions as a notion adhering to both the introduction rules typically associated with disjunction (A/A tonk B) and the elimination rules for conjunction (A tonk B/B). The elimination of tonk justifies stronger assertions than those allowed by the grounds that support its introduction, so it mediates extraordinary con-

clusions: a runabout inference ticket. In fact, Prior's challenge shows a case in which it is not possible to synchronize the assertion ground of a mediating conclusion "p" and its immediate or intuitive proof. However, a theory of harmony need not be limited to resolving arbitrary and artificial cases of harmonic failure. It can be used to represent a theory of meaning that is synchronous with the ability to judge or assert.

Within the current discourse surrounding these problem, various approaches (Natural Deduction being the classical one) exist to develop an assertive strategy that maximizes the efficiency of bridges or mediating routes to validate non-assertive content. Every problematic content needs to have a cost-effective path towards becoming an possible assertion. This path represents the criteria that a rational agent would use to confidently assert a problematic content as a potential (ingredient) solution to a question about the truth of a proposition. In other words, this path represents what can be learned from this rational agent, or the concept he uses to instruct his own behavior. In this use, a harmonic notion is necessary to develop theoretical accounts of the relation between the grounds underlying a judgment and the conceptual mediation of those judgments, or, to use Kant's expressions, the congruence between concepts and intuitions.

The issue of harmony arises when one focuses on a specific aspect of reflection, which involves reconciling the direct and indirect foundations of one's assertion. It can be argued that this problem would not exist if, as Tarski assumes, this reconciliation is unproblematic at the epistemic level. Similarly, meaning-theorists who assume this reconciliation as a given, relying on mathematical coding to establish it before any meaningful correlation, do not encounter this problem. Additionally, there is another problem to consider. If we rely on a recursive--coding that defines conditions in which the proposition "p" is always indistinguishable from any proof-route for "p", even routes that seem unrelated to the grounds of the assertion (tonkian routes) would be assertable.

Conditions for representing the unity of content between a proposition and its possible consequences

The theory of harmony provides the conditions for rules for identifying compatibilities and incompatibilities between sentences. It means that those rules describe the structure of the relation of compatibility and incompatibility, codifying the alignment of the concept of truth-consequence and proof for a language. However, the realization of difficult conditions is necessary for the harmony between the logical consequences that we can represent functionally and what we can verify through a proof. This difficulty has long been recognized, ever since Kant revealed how difficult it is to get a priori concepts to agree with intuitions: "Now it is clear that there must be a third thing, which must stand in homogeneity with the category on the one hand and the appearance on the other, [...]. This mediating representation must be pure [...] (KrV A 138/ B 178).

Imagination can help us find the balance between our capacities for conception and intuition, but this harmony is not always there, and there is always a risk of speculating about things (Kant called these dialectical inferences) for which intuition is impossible. The goal of a theory of harmony is to find the point of convergence between what is possible to conceive and what is possible to verify, activating the hypothetical use of any meaning to substantiate the mediation of conclusions.

In a language with normal semantic conditions, there are no transformation rules that can reverse true sentences into false ones; that is, true sentences in this language have extensional coherence, so the sentence p can't be true on the same foundation as not-p. Since efficient languages are based on structural analogy principles that forbid rules from being overridden by other rules – exactly the stability that speakers of the same language enjoy – we can then characterize the above normalcy condition as follows: there is no assignable extension for the concept of p and non-p in any coherent semantic mapping. "Foundation" is a convoluted word that can mean a ground, an empirical justification, a

reason to believe, a power of confirmation, of support, etc. But here we have a simplification of it. That is the semantic trick: it eliminates the convoluted word and exchange it for a mapping technique, a functional concept. The challenge is solved when we are able to conceptualize a representation of the "not" truth-functional connective. This indicates that "not" has a single meaning in the language.

This appears to offer us a significant edge above traditional empiricism. Without having to conduct an empirical verification to see if it is accurate or if there are any grounds for it to be overridden, we can describe the entire scope of material incompatibility for a language if it is possible to represent its unified use of "not" semantically. As long as there is no ambiguity in using the connective "not", the incompatibility of p and no-p is a unified and coherent projection. An intellectual or ideal traditional condition is here re-designed on a technical level. The semantic condition simplifies the convoluted philosophical notions and gives a verifiable meaning (in the metamathematical level) to the law of non-contradiction, defining the extension and anti-extension of the consequence relation to a language – and therefore its completeness. Regarding the meaning of logical constants, Gentzen (1935), Hacking (1979), Peacocke (1987), and Dummett (1993) all adopt a semantic perspective. In the words of Donald Davidson: "it will be evident from a theory of truth that certain sentences are true solely on the basis of the properties assigned to the logical constants" (2001, p. 71).

Connectives can be seen as the means by which rules are established to guide the interpretation of the *paradigm of objection* for p, giving an unified account for the negation and material incompatibility. The theory of the semantic content of connectives serves as a consistent parameter for language evaluation, as the meaning of "not" is always called into question, debated, or criticized when discussing the truth of "p→q" (*i.e.*, if there is no model where the first statement is true and the second is false). As long as we do not have a contingent (non-logical) understanding of negation, we will not encounter significant conflicts regarding conflicting consequences. However, if there are substantial conflicts regarding competing logical consequences, this would indicate a discrepant interpretation of the connective "not".

For a language, this would be an aberrant state. When speakers of a language have to search for secondary or foreign constituents that do not structurally belong to the language in order for that language to be understood, the language has low expressive potential. Thus, the understanding's bounds would increase. As so, there would be potential for unresolved arguments over contested consequences because the meaning of "compatible" and "incompatible" would be vague and no consequence relationship would be fully established in this language.

The key takeaway from this is that a semantic theory concerning compound structures and potential combinations serves a specific objective: to establish a systematic framework that aids in the creation of maps for evaluating the accurate utilization of the concept of logical consequence and the consistency of the scope of the predicate "is true". We may call this conceptual geography, to emphasize that the conceptual or theoretical knowledge of a speaker of a language allows him to resolve any dispute about the logical consequences of sentences in that language. This solution can be represented mechanically. There must be a correspondence between the functional representation of a theory's logical consequence and the direct representation (even if through inductive proofs) of the theory's 'true' predicate extension. It's possible that this coincidence is just ideal – that is, a projection.

Dummett's reasons against a truth-theoretical prediction of Meaning

Dummett's intuitionism relies on the fact that the incompatibility of p and not-p is not self-evident. It can be built into our conceptual practices, but it cannot be grasped by verification, no matter how much one tries to transform infinite in finite conditions by code. The author supports the suspicion that the projection of a hypothetical value called "the incompatibility of p and not-p", perhaps calculated by God's intellectual powers, recalls the advantages of cheating over honest labor.

But what would honest work be? It would be one in which the mind capable of unlocking the content of the incompatibility between p and not-p also knows how this content can serve as a hypothetical ingredient of an assertion strategy; that is, one in which there is self-awareness of the role that a content has in a system of meaning, even if it is not asserted. The meaning of terms does not, therefore, come from outside, from a system of associations; but rather from within, from our meaning-theories. It is the task of our meaning-theories to create the harmonious conditions under which the hypothetical and the assertive can be coordinated without circularity or ad hoc extra-meaningfull conditions, so that the claim of p can be validaded both by evidence for p and by evidence against non-p. Pragmatically, this amounts to this: "A conjecture may be converted into a justified assertion if the proof (conclusive evidence) for its content becomes available. The description of a conjecture can be potentially asserted even if they may be not effectively asserted" (Chiffi & Giorgio, 2017, p. 12).

It is these meaning-theoretic conditions that anchor the transformation of the hypothesis that p is true into the assertion that the truth of p is grounded (even if risky). To reiterate using different terminology: we do not presuppose the veracity of p based on a random representation, but rather, in a theory of Sense (Sinn), we comprehend the circumstances of concordance in which the supportive evidential indications for p will (mediate) aid in establishing its truth in a singular manner, specifically, in the most advantageous/rewarding manner conceivable (not in a manner that could be contested by equally valid conflicting evidence). In our interpretation, Dummett contributes to replacing luck with hard work by exchanging the conditions of free-coded association for the awareness of a meaning-theoretic framework that supports our judgments and maximizes the rewarding conditions of our assertions.

Irreducibility of Meaning in Dummett: rescuing Frege's theory of Sense

Dummett showed that a semantic theory differs greatly in its predictive power from a theory of truth:

> Since understanding is genuinely a form of knowledge, and not a single piece of knowledge but the knowledge of a great many distinct though interrelated items, a meaning-theory that merely feigns to ascribe knowledge to the speakers, but fails to explain in what the constituent pieces of knowledge consist, must be regarded as defective (Dummett, 1993, p. 344).

A theory of meaning has to go beyond the mere empirical behavioral data of speakers of a language or the multilateral parameters of an entire community, for this theory must specify what epistemic methods – which we could call their idealized phenomenological self-conciousness – these speakers use to build their own meaning-theories. This is knowledge that belongs to an intensional dimension and whose theoretical character cannot be reduced to a testable standard through direct codification. This encourages us to justify the doubt that the linguistic behavior of speakers of a language is not illuminated by the mere pattern created by their theories of truth and codified by recursive procedures. If we are to do justice to the fact that some truths depend on mediation and therefore are not directly assertable, we must see our theories of language as means of supporting this mediation as the speakers of the language have a meaning-theory for that language. We must see our theories of meaning as dependent on the meaning--theory of the speakers, rather than as reductions and eliminations of this intensional domain to a convenient extensional one: "what must be brought is a grasp of the conceptual connection between meaning and truth" (Dummett, 1996, p. 18).

Dummett's theory rescues reflection on this mediating dimension of our knowledge of meaning and gives us reason to believe that we do not acquire truth beliefs by mere association (associated to encoding te-

chniques), nor from the confort of a theory of truth. There is no *ad hoc a priori* security that our systematic association of truth with non-falsity is consistent with the patter one uses to correct his beliefs. Nor the pattern of revision of our beliefs will authomatically coincide with the pattern of associations between truth and non-falsehood. No piecemeal descriptive framework will be able to reproduce, by mere encoding techniques, the normative force of an assertive authorization. Therefore, it is imperative that we acknowledge the fact that we cannot simply overlook the challenging aspect of validating the normative criteria employed to depict the harmonization of theories of interpretation and its verification.

Dummett's work had, in large part, the merit of rescuing this forgotten dimension of Frege's theory of meaning, the theory of our grasp of Sense and conceptual content:

> I note that the contents of two judgements can differ in two ways: either the conclusions that can be drawn from one when combined with certain others also always follow from the second when combined with the same judgements, or else this is not the case. The two propositions "At Plataea the Greeks defeated the Persians" and "At Plataea the Persians were defeated by the Greeks", differ in the first way. Even if a slight difference in sense can be discerned, the agreement still predominates. Now I call that part of the content that is the *same* in both cases the *conceptual content* (Frege, 1972, §3).

He not only rescued it, but also developed it into its professional element: a theory of the mediating foundation of assertions or the kinds of inferential pathways that justify our cognition of grounds for truth. The author thus did herculean groundwork to unify our understanding of the differences between proof-theories and semantic theories through a meaning-theoretical foundation:

> Proof-theoretical justifications form an interesting alternative to justifications in terms of semantic theories.

> Neither is autonomous however: both depend on the defensibility of the meaning-theory within which each finds its proper habitat (Dummett, 1993, p. 270).

Conclusion

In problematic instances, where the contribution to the truth of a sentence may be only an ingredient, Dummett's theory establishes conditions of correspondence between verification and assertion using the concept of harmony. In doing so, he revisits, without reducing them to a simple truth-functional mapping, the prerequisites for the theoretical depiction of the unity between a proposition and its meaning.

Dummett's criticism of Tarski focuses on the idealist and realist assumptions that underlie a truth-based approach to understanding the concept of meaning. Tarski's pattern is merely the metamathematical *a posteriori* description of the place in a meta-linguistic hierarchy where the assertion that p is true cannot be overridden. Achieving this safety, however, depends on how we choose the higher-order rules that are to govern the lower-order rules, and this is theoretical work that is done when *we need* to specify the meaning of p, *i.e*., when we want to find the secure point at which assigning the semantic value V to p is worth the risk. And this kind of certainty or security does not come for free. It comes with a pragmatic price that we have to decide whether we want to pay. We must decide whether the cash-value of p is worthwhile in an argumentative scenario.

For Dummett, it is not associative coincidence, but only the meaning--theoretical harmony of linguistic theory that can fulfill the mediating task of finding a correspondence between *hypothesis-that-p* and *grounded-assertive-bet-that-p*. This will additionally provide us with the reconciliation between the concept of truth and the portrayal of an ideal epistemic agent, who possesses the ability to identify the circumstances under which a true statement holds meaning or can be asserted in

winning – non-defeatist – conditions. A principle of induction based on truth standards will not convert the content of the hypothesis into a theory about its assertability.

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