

# CARNAP'S ALTERNATIVE TO LOGICAL PLURALISM, MONISM AND NIHILISM<sup>1</sup>

## *A ALTERNATIVA DE CARNAP AO PLURALISMO, AO MONISMO E AO NIILISMO LÓGICO*

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**ABSTRACT** *Current literature offers a pluralist, a monist and a nihilist reading of Rudolf Carnap's works. Despite their differences, these readings assume that, while determining which objects have the property of being a logic and that of being logically correct, Carnap's works aim at answering a question: What is the number of correct logics? This exegetical essay challenges this*

<sup>1</sup> Article submitted on: 17/12/2024. Accepted on: 10/07/2025. This study resulted from research financed by: UNESP's Edital Prope Nº 13/2022 / Project Nº 4209; UNESP'S Edital Prope Nº 05/2024 / Project Nº 5468; CNPq (Process Nº 311630/2021-9, "Information, cognition and fake News: an analysis based on Fred Dretske's works") as well as São Paulo Research Foundation (FAPESP) (Process Number 2024/13530-2 and Process Number 2025/01620-0). The authors would like to thank *Kriterion's* anonymous referees for valuable comments on previous versions of this essay.

*assumption; it proposes a not yet explored reading according to which Carnap's works point, even if only in a tentative fashion, to logical experimentalism. The latter sets itself up for three tasks. The first is to deflate the dispute about the number of correct logics in the sense of showing its lack of pertinence. The second task is to react in a bottom-top way to the fact that those who use "logic" – say, to describe a use of language that they adopt – have and probably will continue to decide on their own what properties are those of the object, which they describe with this term. The third task is to settle a condition for dialogue with these users, while seeking to have a constructive interaction with them within a particular context of application of the term, "logic".*

**Keywords:** *Carnap. Logic. Logical Correctness. Pseudo-Question. Dialogue.*

**RESUMO** *A literatura atual oferece uma leitura pluralista, uma monista e uma niilista dos trabalhos de Rudolf Carnap. Apesar de suas diferenças, essas leituras pressupõem que, ao determinar quais objetos têm a propriedade de ser uma lógica e a de ser logicamente correto, os trabalhos de Carnap almejavam responder a uma questão: Qual é o número de lógicas corretas? Este ensaio exegético desafia esse pressuposto; ele propõe uma leitura ainda não explorada dos trabalhos de Carnap segundo a qual esses apontam, mesmo que apenas de modo hesitante, para o experimentalismo lógico. Esse último se coloca três tarefas. A primeira é deflacionar a disputa acerca do número de lógicas corretas no sentido de mostrar a sua falta de pertinência. A segunda tarefa é reagir de um modo de baixo para cima ao fato de que aqueles que usam "lógica" – digamos, para descrever um uso de linguagem que eles adotam – têm e provavelmente continuarão a decidir por si mesmos quais propriedades são aquelas do objeto que eles descrevem com esse termo. A terceira tarefa é estabelecer uma condição de diálogo com esses usuários, ao procurar ter uma interação construtiva com eles num contexto particular de aplicação do termo, "lógica".*

**Palavras-chave:** *Carnap. Lógica. Correção Lógica. Pseudo-Questão. Diálogo.*

## Introduction

Current literature offers a pluralist, a monist and nihilist reading of Rudolf Carnap's works. The pluralist reading is by far the most popular one. According

to it, Carnap's works proposed a kind of *logical pluralism*. Champions of this reading include Greg Restall (2002), JC Beall and Restall (2006), Geoffrey Hellman (2006), Roy T. Cook (2010), Stewart Shapiro (2014), Teresa Kouri (2019), etc. However, as Gillian Russell and Christopher Blake-Turner (2023) indicate, it is debatable whether the pluralist reading should be adopted. Indeed, Teresa Kouri Kissel (2023) endorsed the monist reading while indicating that Carnap's works pointed to a kind of *logical monism* somehow similar to the one proposed by Beall (2017, 2018). The nihilist reading is that Carnap's works suggested a form of *logical nihilism*. Though very roughly, Leon Commandeur (2025, p. 1208) once pointed to this direction in a footnote. The three italicized expressions cannot be found in Carnap's works. Nevertheless, they are often adopted by contemporary philosophers of logic who do not always apply them in the exact same way.

"Logical pluralism", Susan Haack (1978, p. 225) indicates, has been applied in reference to a negative response to the following question: "Is there one correct logic?". Other times, as made explicit by Beall and Restall (2006), "logical pluralism" stands for a view that though consistent is not necessarily entailed by this response: that there is indeed a plurality of correct logics, say, insofar as there are at least two correct logics.

"Logical monism" has been used in reference to stances like Willard van Orman Quine's (1986); he defends that the only "true logic" is a first-order one that has points in common but does not resort to the second order predicates or sets found in Gottlob Frege (1953) and in Alfred North Whitehead and Bertrand Russell (2011). "Logical monism" is also associated with the likes of Graham Priest (2006). Distinct from Quine (1986), Priest (2006, p. 174) claims that "*the correct logic*" grasps a "common core" characterized by the "syntactic intersection" of all legitimate inferences within particular domains. That is to support that the only correct logic is not what has been called "classical logic".<sup>2</sup>

"Logical nihilism", Kouri Kissel (2019, p. 154) highlights, is occasionally applied as a sort of synonym for "logical instrumentalism". "Logical nihilism" or "logical instrumentalism" has stood for the thesis that there are no correct logics; a thesis that is likewise consistent with a negative response to the question on whether there is only one correct logic. Other times, "logical nihilism" or "logical instrumentalism" is used in reference to the view that

2 This expression, Priest (2008, xvii) and Griffiths and Paseau (2022, p. 22) indicate, is a misleading one. After all, it has been usually used in reference, not to Ancient Greek writings, but, rather, to works like Frege (1953) and Whitehead and Russell (2011) that were only articulated in the end of the 19<sup>th</sup> century and in the beginning of the 20<sup>th</sup> century, respectively. This is why we refrain from using "classical logic".

“logics”, as Commandeur (2025, p. 1208) put it, “are best understood as tools, a technology or instruments to achieve particular goals or purposes”.

We do not propose to show what the best way of using “logical pluralism”, “logical monism” and “logical nihilism” is. Instead, we assume a hopefully plausible use of these expressions in applying them in reference to stances that though different, share a feature; they pursue three tasks. The first is to determine which objects have the property of being a logic (in a given sense of “logic”). The second task is to determine – within the domain of objects that have the property of being a logic – which one of them (if any) has correctness. By correctness, let us understand the property of being logically correct, true, adequate, genuine, legitimate, universal or world-carving in some sort of fundamental sense which is somehow independent of the particularities of any area of inquiry like Mathematics or Physics. The third task is to tackle a dispute slightly distinct from the one articulated by Haack (1978, p. 225) concerning whether there is one correct logic. The dispute at stake is about what the number of correct logics is. That is, to put it differently, the dispute regarding the number of objects that have correctness and the property of being a logic. So, our use of “logical pluralism”, “logical monism” and “logical nihilism” – which is hereafter embraced – applies these expressions in reference to three responses to this dispute: respectively, that this number is *at least two*, *exactly one* and *zero*.

This essay’s aim is the exegetical one of showing that Carnap’s works do not forerun any of these theses, which are more easily associable with positions mainly developed by Anglo-American authors after the appearance of works like Quine (1986) or Haack (1978) in the 1970s.<sup>3</sup> More exactly, that is to read that Carnap’s works do *not* pursue the stated tasks while aiming at establishing the number of correct logics. Rather, they set themselves up – even if only in a quite tentative fashion – for three very distinct tasks:

- (i) To deflate the dispute about the number of correct logics in the sense of showing its lack of pertinence.

3 As far as this essay is concerned, we do not need to commit ourselves to three claims. First, that Beall and Restall (2006), Otávio Bueno and Scott Shalkowski (2009), Hartry Field (2009), Shapiro (2014), Kouri (2019) and Bueno (2020) champion different versions of *logical pluralism* (in our sense). Second, that Willard van Orman Quine (1986), Susan Haack (1978, 1996), Graham Priest (2006), Owen Griffiths e A.C. Paseau (2022) and Erik Stei (2023) support distinct kinds of *logical monism* (also, in our sense). Third, that Aaran J. Cotnoir (2018) makes a case for what we call *logical nihilism* – a stance whose plausibility is also indicated by Curtis Franks (2015), Gillian Russell (2018) and Gillman Payette and Nicole Wyatt (2018). It is yet worth underlining that we tend to concur with these claims whose defenses cannot be developed here insofar as they would require a more detailed take on the contemporary literature on philosophy of logic.

- (ii) To react in a bottom-top way to the fact that those who use “logic” – say, to describe a use of language that they adopt – have and probably will continue to decide on their own what properties are those of the object, which they describe with this term.
- (iii) To settle a condition for dialogue with these users, while seeking to have a constructive interaction with them within a particular context of application of the term, “logic”.

We call the conjunction of these tasks logical experimentalism. This should make it explicit that we do not read Carnap as a logical pluralist, monist or nihilist. Let us now show that Carnap's works pursue tasks (i), (ii) and (iii) in sections 1, 2 and 3, respectively.

### 1. Carnap and Task (i)

Evidence that though tentatively, Carnap (1937a) pointed to task (i) is mainly provided by the following two passages:

The first attempts to cast the ship of logic off from the *terra firma* of the classical forms were certainly bold ones, considered from the historical point of view. But they were hampered by the striving after ‘correctness’. Now, however, that impediment has been overcome, and before us lies the boundless ocean of unlimited possibilities (Carnap 1937a, p. xv).

The fact that no attempts have been made to venture still further from the classical forms is perhaps due to the widely held opinion that any such deviation must be justified – that is, that the new language-form must be proved to be ‘correct’ and to constitute a faithful rendering of ‘the true logic’. To eliminate this standpoint, together with the pseudo-problems and wearisome controversies which arise as a result of it, is one of the chief tasks of this book (Carnap 1937a, pp. xiv-xv).

By a “logic” or a “form”, Carnap (1937a, pp. ix-xv) seems to have in mind what he later in the book calls a “logical syntax of a language” (Carnap 1937a, p. 1). By that, he understands the “formal theory of the linguistic forms of that language – the systematic statement of the formal rules which govern it together with the development of the consequences which follow from these rules”. There are, according to Carnap (1937a, p. 2), two kinds of formal rules: “*formation rules*” that indicate how a well-formed formula (hereafter, formula) can be articulated and “*transformative rules*” that indicate which inferences are allowed. “A rule”, Carnap (1937a, p. 1) underlines, “is to be called *formal* when no reference is made in it either to the meaning of the symbols (for example, the words) or to the sense of the expression (e.g., the sentences)”. Rather, that which is formal would refer “simply and solely to the kinds and order of the

symbols from which the expressions are constructed” (Carnap 1937a, p. 1). So, as Restall (2002, p. 430) indicates, Carnap (1937a) seemingly adopts a broad use of the term “logic” in reference to that which “could contain all sorts of inferential machinery, such as arithmetic and rich theories of types and function – all the content of which was simply a part of the choice of the *language*, no matter how rich the mathematical theories were which have been adopted”.

Later in “Empiricism, Semantics and Ontology” – whose first version (Carnap 1950) dates from 1950 and the second one from 1956 – Carnap (1956, p. 206) does not distinguish in a particularly precise way “logic” or, more broadly, “use of language” from what he calls “linguistic framework” (hereafter, framework). The latter is a “system of new ways of speaking, subject to new rules” that would deviate in somehow being more precise and clearer than those found in everyday life linguistic activities or philosophical writings (Carnap 1956, p. 206). Thus, by “the *terra firma* of the classical forms”, Carnap (1937a, p. xiv) seemingly alludes to a kind of logical syntax of a language or to a framework.

More exactly, that is the one described in works, such as Frege (1953) or Whitehead and Russell (2011). Let us call it Canonical Framework ( $F_{CA}$ ) insofar as, throughout the 20<sup>th</sup> century, it became the most widely shared one. By a “ship” that ventures into the “ocean”, Carnap (1937a, p. xv) seems to allude to any kind of logical syntax of language or framework that is distinct from  $F_{CA}$ , say, the one outlined by Allan Ross Anderson and Nuel D. Belnap (1975) or the one proposed by Arend Heyting (1956) under L. E. J. Brouwer’s (1975) influence. Respectively, let us call these logical syntaxes of a language or frameworks Relevant Framework ( $F_{RE}$ ) and Constructive Framework ( $F_{CO}$ ).

Also, we suppose that  $F_{CA}$ ,  $F_{RE}$  and  $F_{CO}$  are what is usually called – e.g., along Joseph R. Shoenfield’s lines (1967) – formal systems. Besides, let us assume that  $F_{CA}$ ,  $F_{RE}$  and  $F_{CO}$  share some features. Within  $F_{CA}$ ,  $F_{RE}$  and  $F_{CO}$ ,  $\alpha$  and  $\beta$  represent formulas that can be connected to one another by means of logical connectives. For example, disjunction ( $\vee$ ), negation ( $\neg$ ), conjunction ( $\wedge$ ), material implication ( $\rightarrow$ ) and the biconditional ( $\leftrightarrow$ ). Moreover,  $F_{CA}$ ,  $F_{RE}$  and  $F_{CO}$  take arguments to be sequences of one or more formulas (so-called premises) followed by a single formula (a so-called conclusion). A set of premises,  $\Gamma = \{\alpha_1, \dots, \alpha_n\}$ , and a conclusion,  $\beta$ , can satisfy a relation of logical consequence ( $\vdash$ ). When  $\Gamma \vdash \beta$ , the argument –  $\{\alpha_1, \dots, \alpha_n\}, \beta$  – is valid.  $F_{CA}$ ,  $F_{RE}$  and  $F_{CO}$  lead to distinct evaluations of an argument’s validity. To see why, let A and B be formulas. Furthermore, consider arguments usually called Explosion (EX) and Double Negation (DN):

EX:  $\{A \wedge \neg A\}$ , B  
 DN:  $\{\neg \neg A\}$ , A

According to  $F_{CA}$ , both of these arguments are valid. However,  $F_{RE}$  takes that this is the case exclusively with DN, but not with EX. By its turn,  $F_{CO}$  leads to the opposite view. That is the view that only EX, but not DN, is a valid argument.

More crucially, the two passages quoted in this section's first paragraph are a first indication that Carnap's works does not seem to be interested in championing any kind of condition for correctness. Instead, what these passages insinuate is that any kind of talk about "correctness" or, as these passages put it, any kind of talk about "the true logic" should be deflated, that is, its lack of importance should be made explicit. After all, Carnap (1937a, p. xv) associates conditions for correctness to "impediments" that should be "overcome" so that one can sail into the "boundless ocean of unlimited possibilities". To do that is different from proceeding in a logically pluralist fashion while insinuating that correctness is a property of all sorts of objects that have been labelled "logics". Besides, instead of aiming at answering the question concerning whether there is one correct logic in the negative, Carnap's works seem more interested in deflating this issue.

Consider the very vocabulary that the *Logical Syntax of Language* implicitly attaches to the dispute about the number of correct logics: "pseudo-problems", "wearisome controversies" and "overcome". Consider, furthermore, the German terms that this book original 1934 German version, *Logische Syntax der Sprache*, associates with this dispute: "*Scheinfragen*" (Carnap 1934a, p. V); "*müßigen Streitigkeiten*" (Carnap 1934a, p. V) and "*überwunden*" (Carnap 1934a, p. VI). Throughout Carnap's works, these terms are associated with "metaphysics", a term, which these works apply in a derogatory fashion.

By "metaphysics", Carnap (2003, p. 295) understands – in *The Logical Structure of the World* whose first German edition (Carnap, 1928) dates back from 1928 – "the result of a nonrational, purely intuitive process". In "Remarks by the Author" – added in 1957 to the English version (Carnap, 1959) of a 1931's essay called "*Überwindung der Metaphysik durch logische Analyse der Sprache*" – Carnap (1959, p. 80) calls "metaphysics" "the field of alleged knowledge of the essence of things which transcends the realm of empirically founded, inductive science". Accordingly, in "*Von Gott und Seele. Scheinfragen in Metaphysik*" from 1929, Carnap (2004a, p. 49) takes metaphysical claims that resort to concepts, such as that of "God" and "soul", to be pseudo-statements.

Carnap (1931) points to a similar direction. In doing that, Adrian W. Moore (2012) explains, Carnap's works are influenced by David Hume



(2007). That is so insofar as, for Carnap (2004, 1931, 1959),  $x$  is or deserves to be called a “sentence” if and only if  $x$  is either what Hume (2007, p. 28) calls a “relation of ideas” or a “matter of fact”; otherwise,  $x$  is a pseudo-statement. Relations of ideas are what Carnap (1959, p. 76) calls – under the influence of Ludwig Wittgenstein’s 1921 *Tractatus Logico-Philosophicus* (Wittgenstein, 1961) – “tautologies”; they “correspond approximately to Kant’s ‘analytic judgements’”. A tautology is an *a-priori* sentence whose truth value is determinable exclusively in virtue of the sense of its terms’. “ $1+1=2$ ”, for Carnap (1931), is a tautology.

Matters of fact are *a-posteriori* sentences whose truth values are not exclusively determined in virtue of the sense of their terms and which are translatable, reducible or identical to “protocol sentences” (Carnap, 1959, p. 63). The latter are based on experiences gathered through one of the five human senses. From a syntactic point of view, sentences, such as “ $1+1=2$ ” or “Water boils at  $100^{\circ}$  Celsius”, can be understood as finite sequences of expressions that respect the rules of a grammar, say, that of a vernacular language like English. Expressions, such as “one” or “water”, are finite sequences of symbols that likewise respect these rules. Examples of symbols are those of the English’s alphabet, such as “w”, “a”, “t”, “e” and “r”. From a semantic point of view, a sentence is that which is a possible bearer of a truth value, such as that of being true or that of being false.

“Pseudo-statements”, semantically speaking, would not have truth values. Besides, syntactically speaking, they would be ill-articulated. That would occur, as Carnap (1928, 1931, 1934b, 2004a, 2004b) indicates, either because a pseudo-statement contains a made-up word like “teavy” (Carnap 1959, p.64) or because it leads to “the problem of the ‘confusion of spheres’” (Carnap 2003, p.291). “This rock is sad” would illustrate the latter case, for it would confound the sphere of objects that can have emotions with that of those, such as rocks, cannot have this kind of mental feature (Carnap, 2003, p. 326).

A legitimate problem or question, Carnap (1937a) seems to presuppose, is one whose response is either a tautology or a matter of fact. “What is the result of  $1+1$ ?” and “What is the temperature that makes water boil?” exemplify legitimate questions that should be raised and answered. Their answers are “ $1+1=2$ ” or “Water boils at  $100^{\circ}$  Celsius”, respectively. “Pseudo-problems” (Carnap, 1937a, pp. xiv-xv) or “pseudo-questions” would be, on the other hand, exemplified by “Where is God?” or “Where is the soul?”. These questions, Carnap (1931, 2004a) claims, would either resort to a made-up word (e.g., “God”) somehow analogous to “teavy” or confound the sphere of the objects



that can with that of the ones, such as souls, that cannot occupy places in space or even in time.

Given the context of Carnap's works, an interpretation seems motivated. This is that Carnap (1937a, pp. xiv-xv) suggests – though not in a particularly explicit way – that “What is the number of correct logics?” is like a metaphysical question that lacks cognitive sense. For instance, because “correct logic” is a meaningless expression or because this question confounds the sphere of the objects that can with that of the ones that cannot have correctness. Moreover, that is to read that Carnap (1937a) would take logical pluralism, monism and nihilism to be characterized by pseudo-statements that can be identified neither to relations of ideas nor to matters of fact. Accordingly, it seems plausible to read Carnap (1937a, pp. xiv-xv) as suggesting that “What is the number of correct logics?” is a question that is bound to lead to overwhelming dissensus. In this vein, let us bear in mind that, in his 1963 *Intellectual Autobiography*, Carnap (1963) underlines the following:

Even in the pre-Vienna period, most of the controversies in traditional metaphysics appeared to me sterile and useless. When I compared this kind of argumentation with investigations and discussions in empirical science or in the logical analysis of language, I was often struck by the vagueness of the concepts used and by the inconclusive nature of the arguments. I was depressed by disputations in which the opponents talked at cross purposes; there seemed hardly any chance of mutual understanding, let alone of agreement, because there was not even a common criterion for deciding the controversy (Carnap, 1963, pp. 44-45).

That is evidence that Carnap's works, as Michael Friedman (2000), A.W Carus (2007) and Felipe G. A. Moreira (2022) indicate, assume that the pursuit of consensus is more valuable than the promotion of dissensus. Additionally, as Thomas Uebel (p.133) argues, “Carnap emerges as an *activist* and his philosophy as part of his *activism*”. This activism, Carnap (1937b) indicates, is mainly based on the aim of dismissing inquiries, such as those associable with “metaphysics”, that would be excessively emotional inquiries, not particularly rational ones. “Metaphysics”, in short, would be an “expression of an attitude toward life”; an attitude, which Carnap (1959, p. 78) takes to lack purpose or value.

In this vein, Carnap (1937b, p. 110) goes as far as comparing metaphysicians' attitudes to those of authoritarian political leaders who emotionally manipulate the masses. More exactly, Carnap (1937b, p. 110) goes as far as suggesting that the main difference between metaphysicians and these leaders is that the latter would lead to more “serious practical consequences” (Carnap, 1937b, p. 110). In contrast, “the doctrines and the confusions arising from [metaphysicians’]

failures to distinguish between cognitive and expressive function of sentences produce little harmful effect upon human destiny” (Carnap, 1937b, p. 110). In light of this textual evidence, it is not surprising that Carnap (1937a, p. xv) purports to overcome any standpoint that leads to “pseudo-problems” or to “wearisome controversies”. That is, Carnap (1937a, p. xv) emphasizes, “one of the chief” practical tasks of the *Logical Syntax of Language*. In sum, what textual evidence from Carnap’s works indicate is that he points to task (i); not to a kind of logical pluralism, monism or nihilism that purports to respond to a sort of – to put in the terms of Haack (1978, p. 221) herself – “metaphysical question” that leads to overwhelming dissensus.

## 2. Carnap and Task (ii)

Once Carnap’s works are read as pointing to task (i), it seems likewise motivated to read them as pursuing task (ii), even if merely in a considerably tentative fashion. This interpretation is mainly corroborated by the last paragraph of Carnap (1956). Here it is:

The acceptance or rejection of abstract linguistic forms, just as the acceptance or rejection of any other linguistic forms in any branch of science, will finally be decided by their efficiency as instruments, the ratio of the results achieved to the amount and complexity of the efforts required. To decree dogmatic prohibitions of certain linguistic forms instead of testing them by their success or failure in practical use, is worse than futile; it is positively harmful because it may obstruct scientific progress. The history of science shows examples of such prohibitions based on prejudices deriving from religious, mythological, metaphysical, or other irrational sources, which slowed up the developments for shorter or longer periods of time. Let us learn from the lessons of history. Let us grant to those who work in any special field of investigation the freedom to use any form of expression which seems useful to them; the work in the field will sooner or later lead to the elimination of those forms which have no useful function. *Let us be cautious in making assertions and critical in examining them, but tolerant in permitting linguistic forms* (Carnap’s, 1956, pp. 221).

We read this passage as Carnap’s way of indicating that practical disputes on whether a use of language – or, to put it differently, an object described as a “logic”, “logical syntax of a language” or “framework” – should be adopted have, can and probably will continue to be approached locally. In other words, by those who are working “in any special field of investigation”, as Carnap (1956, p. 221) put it. Similarly, the latter suggests that those who work in such fields have, can and probably will continue to decide on their own what properties whatever kind of object which they call “logic” has. That is not a particularly surprising finding. In fact, it is hard to find anyone who would

reject it. So, it is not our aim to suggest that if Carnap were a logical pluralist, monist or nihilist, he would go as far as doing so. Rather, what we claim is that if Carnap endorsed logical pluralism, monism or nihilism, he would react to the fact at stake in task (ii) differently.

To begin to see why that is so, note that Carnap (1956, p. 206) draws a distinction between “internal” and “external” questions. Internal questions are about a particular framework, such as  $F_{CA}$ ,  $F_{RE}$  or  $F_{CO}$ . External questions can be read as pseudo-questions in a sense of “pseudo-question” distinct from the one discussed in the last section and which is associable with works that appeared in the 1920s or 1930s like Carnap (1928, 1931, 1934b). The distinct sense is that of purporting to be formulable and answerable independently of any framework. An external question can also be read as a “practical question” that begs for the “practical decision” of adopting or rejecting a framework (Carnap, 1956, p. 207). Under Kouri’s (2019) influence, we assume that Carnap’s works permit a distinction between logical and metalogical frameworks. The former are definable in an ostensive way; they refer to frameworks like  $F_{CA}$ ,  $F_{RE}$  and  $F_{CO}$ . By a metalogical framework, let us take one that addresses logical frameworks like these.

If Carnap were a logical pluralist, monist or nihilist, he would react to the fact at stake in (ii) by articulating a metalogical framework. For instance, those that might be called Pluralist Framework ( $F_{PL}$ ), Monist Framework ( $F_{MO}$ ) and Nihilist Framework ( $F_{NI}$ ). Suppose that these frameworks share some features; they resort to usual uses of some of the symbols and expressions present in the question about the number of correct logics: “what”, “is”, “the”, “of” and “?”. That can be done under the basis that the syntactic and the semantic rules that govern the application of these terms in English suffice for the purposes of these frameworks. Moreover, in  $F_{PL}$ ,  $F_{MO}$  and  $F_{NI}$ , the predicates “to be a logic” and “to have correctness” are first order ones. These frameworks, let us suppose, also resort to the Fregean move of applying “to be a number” as a second order predicate.

Additionally, suppose that  $F_{PL}$ ,  $F_{MO}$  and  $F_{NI}$  differ, for they presuppose distinct ways of applying, if not “to be logic”, at least “to have correctness”. More exactly, imagine that  $F_{PL}$  assumes – e.g., along the lines of Shapiro (2014) – a broad condition for the use of the latter: that this predicate is attributable to any object that is useful for the purposes of at least one mathematician. While assuming this condition,  $F_{PL}$  leads to the logical pluralist thesis that correctness is a property of countless so-called “logics” like  $F_{CA}$ ,  $F_{RE}$ ,  $F_{CO}$  etc. In contrast, let us imagine that  $F_{MO}$  presupposes that a so-called “logic” has correctness if and only if it maximizes theoretical virtues, especially that

of being conservative. While assuming this more demanding condition,  $F_{MO}$  leads to a kind of logical monism similar to Quine's (1986) according to which only a somehow simplified version of  $F_{CA}$  that resorts neither to second order predicates nor sets has correctness, that is, a first order so-called "logic" would be "The True Logic". Lastly, we suppose that  $F_{NI}$  presupposes a very demanding condition for correctness: that only an object – or, more exactly, a so-called "logic" – that grasps all inferences made in vernacular languages deserves being depicted with the predicate, "to have correctness".  $F_{NI}$  – say, along the lines of Cotnoir (2018) – leads then to the logical nihilist thesis according to which there are no correct logics. This is to state that the extension of "to have correctness" is null insofar as it does not contain  $F_{CA}$ ,  $F_{RE}$ ,  $F_{CO}$  and, more broadly, any object whatsoever.

Carnap's works do not react in a logical pluralist, monist or nihilist way to the fact at stake in task (ii) because nowhere in such works one can find an articulation of a metalogical framework, such as  $F_{PL}$ ,  $F_{MO}$  and  $F_{NI}$ . Indeed, to attribute any framework of this kind to Carnap's works runs in tension with last section's remarks which point to this work's pursuit of task (i). In fact, though not in a very explicit fashion, Carnap (1956) seems to associate the decision of adopting metalogical frameworks, such as  $F_{PL}$ ,  $F_{MO}$  and  $F_{NI}$ , to a problematic top-bottom attitude characterized by the three tasks (stated in the Introduction) shared by logical pluralists, monists and nihilists. To put it differently, this attitude begins by adopting a metalogical framework like  $F_{PL}$ ,  $F_{MO}$  and  $F_{NI}$ ; and then – in light of such metalogical frameworks – seeks to determine the objects that should be described by means of the predicates "to be a logic" as well as to "to have correctness".

Carnap's works associate this kind of attitude to "wearisome controversies" (Carnap 1937a, p. xv). These works go as far as insinuating that this attitude is a particularly problematic or even politically dangerous one. For instance, in case it convinces or even forces someone working in an area of inquiry to drop a form a language on the basis that this form is an "incorrect logic", given a condition for correctness that is irrelevant (at least, outside of Philosophy). In short, the top-bottom attitude can lead to unjustified or police-like prohibitions that, as Carnap (1956, p. 221) quite strongly underlines, are "worse than futile" and indeed can be "harmful" while obstructing "scientific progress".

There is then another reason – arguably, the main one – for refraining from reading that Carnap's works react in a logical pluralist, monist or nihilist way to the fact at stake in task (ii). The reason is that – as the last paragraph of Carnap (1956, p. 221) makes it particularly explicitly – he probably thought that this sort of reaction would lead to a "dogmatic prohibition" that does not

work for science's best interests insofar as it is based on "prejudices deriving from religious, mythological, metaphysical, or other irrational sources". Carnap (1956, p. 221) – or, even more broadly, Carnap's works – do not seem interested in doing that at all; "let us learn from the lessons of history", he emphasizes.

To do that – Carnap seems to think – is to adopt what may be called a bottom-top reaction to the fact at stake in task (ii). This attitude begins experimentally, that is, by acknowledging that all sorts of objects have been called "logics" or deserve being called "logical syntaxes of a language" or "frameworks". These objects like  $F_{CA}$ ,  $F_{RE}$  and  $F_{CO}$  raise various internal questions. For example, do  $F_{CA}$ ,  $F_{RE}$  and  $F_{CO}$  – to put it in Carnap's (1937a, p. 2) terms – rely on distinct "*formation rules*" or "*transformative rules*"? More exactly, is the negation sign  $\neg$  applied differently in  $F_{CA}$  and in  $F_{RE}$ ? What about the disjunction sign ( $\vee$ )? Is the way of applying this sign in  $F_{CA}$  different from that of  $F_{CO}$ ? It seems that these internal questions can be somehow easily answered in the affirmative.

Additionally, no passage in Carnap's works explicitly indicates that he is particularly interested in a matter focused on by Restall (2002, p. 432): to compare the consequence and the connective explanation for why exactly  $F_{CA}$ ,  $F_{RE}$  and  $F_{CO}$  evaluate the validity of arguments, such as EX or DN, in distinct fashions. Respectively, as Restall (2002, p. 432) indicates, these two explanations are: that  $F_{CA}$ ,  $F_{RE}$  and  $F_{CO}$  resort to distinct notions of logical consequence; and that these logical frameworks apply logical connectives differently. According to Restall (2002), the former explanation is more attractive than the latter one. Whether this is the case is not particularly relevant insofar as this essay is at stake. For the given purposes, it suffices to bear in mind that Carnap's works does not distinguish the stated explanations very sharply. More exactly, Carnap (1937, p. xv) sometimes seems to point to the connective explanation, say, when claiming that the choice of the "postulates" and of the "rules of inference" of a logical syntax of a language "will determine what meaning is to be assigned to the fundamental logical symbols". Short after claiming so, Carnap (1937, p. xv) also alludes to the consequence explanation in indicating that a question arises; that concerning "the syntactical consequences to which one or other of the choices leads, including the question of non-contradiction".

More crucially, let us note that Carnap (1956) indicates a second feature of the bottom-top reaction to the fact at stake in task (ii). That is the feature, not of resorting to correctness in a sort of police-like fashion, but, rather, experimentally aiming at understanding how those inserted into special fields of investigation already respond to internal questions like the stated ones. That is to suggest that these questions need to be answered on a case-by-case experimentalist vein, in other words, by studying in detail the kinds

of frameworks that give rise to them. While doing that, it seems particularly crucial for Carnap (1956) to distinguish internal questions from meaningless and practical external questions about logical frameworks. For instance, respectively, “what is negation, disjunction or logical consequence over and above  $F_{CA}$ ,  $F_{RE}$  and  $F_{CO}$  or any other kind of logical framework?” and “should one adopt  $F_{CA}$ ,  $F_{RE}$  or  $F_{CO}$ ?”.

To distinguish questions, like these, is to learn from the “lessons of history”. That is what Carnap (1956, p. 221) seems to have in mind while seeking to have a less “futile” reaction to the fact at stake in task (ii). This reaction, moreover, cannot fail to distinguish internal questions, meaningless external questions and practical external questions about metalogical frameworks, such as  $F_{PL}$ ,  $F_{MO}$  and  $F_{NI}$ . An example of such internal question is: “What is the number of correct logics according to  $F_{PL}$ ,  $F_{MO}$  and  $F_{NI}$ ?”. This question can be somehow easily answered: that this number is at least two, exactly one and zero, respectively. A meaningless external question is illustrated by “what is the number of correct logics over and above any metalogical framework?”. This question is very different from the practical external question: “should one adopt  $F_{PL}$ ,  $F_{MO}$  or  $F_{NI}$ ?”.

Our interpretation is that Carnap’s works – as the quoted passages indicate – tentatively point to a negative response to the latter question, that is, that one should *not* adopt any kind of pluralist, monist or nihilist framework whatsoever. While doing that, these works indicate a third feature of the bottom-top reaction to the fact at stake in task (ii). This feature is not that of seeking to establish the number of correct logics in a sort of “philosophical” or even “metaphysical” fashion. Rather, it is that of inflating distinct matters in the sense of showing their importance and urging other to address them in a way that should appeal for those working in “any special field of investigation” (Carnap 1956, p. 221). Evidence that Carnap’s works aim at that while purporting to do a kind of philosophy more allied with the empirical sciences is provided by Carnap (1937a).

The latter differentiates “Language I” and “Language II” – two logical syntaxes of a language or frameworks. Distinct from what would be expected from a logical pluralist, monist or nihilist, Carnap’s (1937a) procedure is not that of adopting a condition for correctness. For instance, by pluralistically suggesting that Language I and II meet this condition, by monistically suggesting that only one of them does that or by nihilistically suggesting that neither of these languages deserves the title of “correct logic”. What Carnap (1937a) does, instead, throughout Parts I to III of *Logical Syntax of Language*, is to describe the rules (e.g., the “*formation*” and the “*transformative rules*”)

that would govern these forms of language (Carnap 1937a, p. 2). In doing that, Carnap (1937a) seems to aim to appeal to those who work in any area of inquiry while inflating a distinct kind of issue; the one on whether Language I or Language II have applications in such fields.

To put it in the terms of Carnap (1934b), what Carnap (1937a) seems to urge the likes of mathematicians or physicians to do is to take a practical decision, that is, a *praktische Entscheidung*: that of adopting or rejecting Language I or Language II. What follows is that textual evidence also indicates that Carnap's works adhere to task (ii), which would not be pursued if such works supported a kind of logical pluralism, monism or nihilism.

### 3. Carnap and Task (iii)

Now, let us consider once again the italicized excerpt that closes Carnap (1956, p. 221), that is, “*let us be cautious in making assertions and critical in examining them, but tolerant in permitting linguistic forms*”. That is textual evidence, we interpret, that Carnap's works likewise pursue task (iii), even if not in a particularly explicit fashion. Though written almost two decades before the appearance of Carnap (1950) or Carnap (1956), the following (considerably well-known) passages point to a similar direction:

*Principle of Tolerance: It is not our business to set up prohibitions, but to arrive at conventions*” (Carnap, 1937a, p. 51).

*In logic, there are no morals.* Everyone is at liberty to build his own logic, i.e. his own form of language, as he wishes. All that is required of him is that, if he wishes to discuss it, he must state his methods clearly, and give syntactical rules instead of philosophical arguments. (Carnap, 1937a, p. 52).

For the sake of argument, let us suppose – e.g., along the lines of those who adopt the pluralist reading of Carnap's works – that these passages corroborate an extremely lenient condition for correctness. For example, that “to have correctness” is a predicate attributable to any kind of so-called “logic”, “formal syntax of a language” or “framework” that resorts to clearly stated “methods” and “syntactical rules”. This view entails, not only that  $F_{CA}$ ,  $F_{RE}$  and  $F_{CO}$  are “correct logics”, but, rather, that countless other objects also deserve this title. In fact, granted this condition, it seems that most (if not practically) all objects that have been called “formal systems” would be “correct logics”.

This view may be called “logical anarchism”; it does not seem to be a particularly attractive one. Even if that were not the case, an exegetical issue is more pressing here: the attribution of logical anarchism to Carnap's works



is not a particularly charitable reading. The reason is that this attribution runs in tension with textual evidence that indicates that these works pursue tasks (i) and (ii). More directly, if Carnap (1937a, p. 51) were in the “business” of proposing an extremely lenient condition for correctness, he would run in tension with two other suggestions that, as indicated above, can be found in his works. The first is that talk about correctness should be dismissed. The second suggestion is that the top-bottom reaction – which resorts to this talk – faces the risk of being detrimental to scientific progress and might even be a politically dangerous attitude.

One may interpret that the passages quoted in the beginning of this section are somehow inconsistent and even contradictory ones *vis-à-vis* those tackled in the last two sections. That is indeed – we would like to grant – a rational interpretative option. The same is the case with the options of championing monist or nihilist readings of Carnap that avoid attributing to him logical anarchism while also running in tension with the two suggestions stated in the last paragraph. On our part, what we claim is that another interpretative option is also available. In other words, there is room for a distinct and considerably more charitable reading that, as far as we know, has not yet been proposed.

The reading at stake is that the quoted excerpts from Carnap (1937a, pp. 51-52) – like the italicized passage found in Carnap (1956, p. 221) – point to a criterion for dialogue with users of language, especially those who have labelled their forms of language “logics”. This reading is grounded by the fact that Carnap (1937a, p. 52, our emphasis) resorts to the following phrasing: “if he wishes *to discuss*”. In the original German, one finds a similar phrasing: namely, “wenn er mit uns *diskutieren* will” (Carnap, 1934a, p. 45, our emphasis). The English verb, “to discuss” – like the German verb, “*diskutieren*” – are evidence that Carnap (1937a, p. 52) or Carnap (1934a, p. 45) seemly has in mind a dialogical setting that begs for a condition for dialogue; not for a condition for correctness.

The condition for dialogue suggested in Carnap (1937a, p. 52), Carnap (1934a, p. 45) as well as in more convoluted ways in Carnap (1937a, p. 51) or Carnap (1956, p. 221) runs as follows: users of language – especially, those who describe these uses with the term, “logic” – should explicitly state the methods and syntactic rules (that is, the *formation* and the *transformative* rules) that they adopt so that accords or “*Festsetzungen*”, to use the original German terms of (Carnap 1934a, p. 45), are promoted. Otherwise, one should not or even could not truly dialogue with these users in a properly rational fashion. We read that this is then what Carnap’s works indicate while tentatively pointing to task (iii).

Further evidence for this reading is that throughout Carnap's works – say, Carnap (1928, 1931, 1934b, 1937b, 2004a, 2004b) – it is suggested that metaphysicians would not have usually respected the stated condition for dialogue. Instead, they would have resorted to forms of language whose rules depart from those of natural languages without yet characterizing something that deserves being called a “framework” or that resorts, even if merely implicitly, to a “logical syntax of a language”. Metaphysicians, like authoritarian politicians, would have then caused all sorts of disaccords in provoking dissensus, instead of promoting what Carnap (1963, p. 9) labels the “main task of an individual”. That is the “development of his personality and the creation of fruitful and healthy relations among human beings” (Carnap 1963, p. 9). One cannot do that – it is like suggested throughout Carnap's works like Carnap (1928, 1931, 1934b, 1937b, 2004a, 2004b) – if one raises and answers pseudo-questions, say, the one about the number of correct logics, whose responses are pseudo-statements. Therefore, it is not surprising that Carnap (1937a, p. 52) does not seem interested in hearing “philosophical arguments”.

In striking contrast, those working in the so-called “sciences”, such as Mathematics or Physics, would already have acted in accordance with the aforementioned condition for dialogue. Let us consider that Carnap (1937a, p. 52) underlines that “the tolerant attitude here suggested is, as far as special mathematical calculi are concerned, the attitude which is tacitly shared by the majority of mathematicians”. That would be attested “with especial emphasis (and apparently before anyone else) by Menger ([*Intuitionismus*] pp. 324 f.”.

Regardless of whether that is the case, it is hardly deniable that Carnap's (1937a, pp. 51-52) aim is “conservative” *vis-à-vis* the so-called “sciences” but “revolutionary” *vis-à-vis* another discipline, that is, Philosophy. That is so because whereas mathematicians, logicians and empirical scientists would act in a tolerant fashion, the same would not be the case with some members of the latter field, that is, philosophers. This is the case at least with those who Carnap (1959, p. 80) derogatorily labels “metaphysicians” and who would be illustrated by the likes of “Fichte, Schelling, Hegel, Bergson [and] Heidegger”.

It is beyond this essay's scope to debate the pertinence of Carnap's (1959) take on these philosophers' works, especially Heidegger's.<sup>4</sup> What is crucial is to underline that the reading of Carnap's works proposed here is quite distinct from the pluralist, the monist or the nihilist reading found in the literature. What we champion, to put it bluntly, is a new take on Carnap's works. That is an

4 Consider, in this vein, Abraham D. Stone (2006).

advantage of our proposal, at least if one – arguably, *pace* Quine (1986) or Haack (1978) – is willing to grant us that conservatism is not the most important theoretical virtue; that at least sometimes there are reasons for believing that innovation is a theoretical virtue that trumps conservatism. However, imagine that a possible opponent of ours is not willing to make this concession to us.

Our reply to this opponent is that – besides being new and more charitable than pluralist, monist and nihilist readings – our stance on Carnap’s works likewise seems more historically sound. Consider that these works began to be developed in Germany in the 1920s up to the moment that Carnap immigrated to the USA in 1935. As explained in Carnap (1963, p. 34), Carnap did that because “with the beginning of the Hitler regime in Germany in 1933, the political atmosphere, even in Austria and Czechoslovakia, became more and more intolerable”. What follows is that it seems more historically sound to dissociate a work developed in this historical context from those articulated in a considerably distinct setting. That is the one of English-speaking countries, such as the USA and the UK, after the 1970s, where works like Quine (1986), Haack (1978) and countless others that champion logical pluralism, monism or nihilism were developed.

More directly, what we champion is a sort of *German Carnap*, someone who points to logical experimentalism’s tasks (i), (ii) and (iii). In doing that, “our Carnap” is distinct from what may be called *Anglo-American Carnap* who would propose to respond to a dispute that mainly reached prominence in 1970s within the stated English-speaking countries, that is, the dispute about the number of correct logics. It seems, we have argued, that the *Anglo-American Carnap* is not particularly grounded by textual evidence. Textual evidence, we have aimed at showing, points to Carnap’s works commitment to logical experimentalism. Imagine yet that another possible opponent of ours disagrees with this last statement. Regardless of our efforts to back up our interpretation, this opponent argues that Carnap’s works still leave room open for a pluralist, monist or nihilist reading.

Our reply begins by acknowledging that like most philosophical works – including the ones that Carnap strongly criticizes, like Heidegger’s – Carnap’s works have given rise to a myriad of readings. We do not hold that ours is the only rational one, that is, this essay does not entitle itself to go as far as arguing that pluralist, monist or nihilist readings are irrational views. One may rationally adhere to readings of this kind. However, we have provided, with any luck, strong reasons for allowing a distinct reading – that is, ours – to at least *see the light of day*. In other words, we have provided motives for publishing

our take on Carnap's works in a socially significant venture that is up for public scrutiny.

## Conclusion

What follows is that Carnap's works offer an alternative to logical pluralism, monism and nihilism; not a new version of any of these stances. This alternative is logical experimentalism; it is characterized by tasks (i), (ii) and (iii) that Carnap's works pursue in a tentative fashion. Respectively, that is at what Sections 1, 2 and 3 indicate. While doing so, these sections aimed at backing up a new exegetical stance on Carnap's works.

In contrast, pluralist, monist or nihilist readings are not usually embedded in a strictly exegetical setting but, rather, in one whose aim is also to have a say on what the most appealing stance on contemporary philosophy of logic is. For instance, Restall's (2002) and Beall's and Restall's (2006) logical pluralist readings come together with a suggestion: that their logical pluralism is more attractive than the one that would be found in Carnap's works. By her turn, Teresa Kouri Kissel (2023) seems to assume that to have points in common with the logical monism found in Beall (2017, 2018) would be a sort of a virtue of the kind of logical monism allegedly present in Carnap's works. On his part, Leon Commandeur (2025) very roughly suggests a nihilist reading on these works, while yet being mainly interested in supporting a logical nihilist stance of his own.

Against this background, one may be inclined to pressure us to go beyond merely exegetical lines. For instance, by asking whether logical experimentalism is a more attractive view than logical pluralism, monism or nihilism. Were this the case, our take on Carnap would have another advantage: to point to a stance that may as well deserve attention for its own sake while being a promising alternative to countless forms of logical pluralism, monism and nihilism. In contrast, if logical experimentalism faces problems of its own, one may grant our reading of Carnap's works but yet emphasize that these works do not have a stance that could be particularly pertinently adopted today.

To begin with, one may point to this direction by objecting that Carnap's way of championing task (i) is attached to the problematic deflationist thesis that a dispute should be deflated if and only if it leads to overwhelming dissensus. One may also object that while pointing to task (ii), Carnap's works seem to endorse a disputable demarcation thesis according to which science is distinct from non-science (in particular, philosophy) insofar as the uses of language adopted in science are frameworks but the same is not the case with non-

scientific uses of language. Lastly, another objection is that the pursuit of task (iii) in Carnap's works is seemingly attached to a considerably narrow condition for dialogue that is not particularly friendly to philosophy and may even lead to the highly debatable thesis that one should or even could not dialogue with philosophers like Heidegger or even more traditional ones like Plato, Saint Anselm or René Descartes etc.

It is beyond this essay's scope to handle these objections in detail but we would like to conclude by stressing that we plan to do that in a future occasion while indicating that logical experimentalism may as well be the most interesting stance on contemporary philosophy of logic. That is so especially for those who work in the so-called "Global South" or are unwilling to take for granted all sorts of problematic assumptions that can be found in the currently hegemonic and mainly Anglo-American literature on this area.

**Disponibilidade de dados:**

Todo o conjunto de dados que dá suporte aos resultados deste estudo foi publicado no próprio artigo.

**Ausência de conflito de interesses:**

O autor declara que não há conflito de interesses.

**Editores responsáveis:**

Mauro Luiz Engelmann

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