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Logical Positivism, Metaphor, and (Non)Cognitivism

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Introduction

The view that knowledge is dependent on the senses is called empiricism. From there it isn't very far to an empirical theory of meaning.[1] In modern times, the view has had many advocates and has led to several related theories of meaning. Early in that century, advances in the understanding of formal languages began to influence what research focused on and the way such research was conducted. Married to the empiricist stance, this gave rise to logical empiricism or logical positivism. Logical positivists focused a lot on linguistic phenomena. Metaphor (often) takes a linguistic form. So we might expect positivists to have turned their attention to it. While no lengthy consideration of linguistic metaphor exists, they did, at times, treat it if only indirectly. Assuming the logical positivist's treatment of metaphor amounts to a positivist theory of metaphor, what kind of theory is it? One way to describe the positivists' discussion of metaphor is to call it a non-cognitivist treatment of metaphor. Thus, a positivist theory of metaphor would be a non-cognitivist theory of metaphor. But what does this mean? In this paper, I hope to do two things: First, I aim to define several ways in which a theory of metaphor can be described as non-cognitivist. These definitions draw on positivist literature in the same way as non-cognitivist theories of ethics or aesthetics draw on positivist literature in grounding the sense in which they are seen as cognitivist or not cognitivist. Second, I thereby aim to classify the positivist theory of metaphor in terms of the definitions provided. It turns out there is only one clear sense in which the said theory of metaphor can be described as non-cognitivist, but several senses in which it cannot. The discussion leads to a positivist based contextualisation of metaphor that is flexible and not inconsistent with many contemporary claims made regarding the relationship between literal meaning and metaphor related phenomena. To end I make the following points. First, given the conclusions drawn, the positivist treatment of ethics is different to the positivist treatment of metaphor. Second, it is unclear whether definitions of the cognitive/non-cognitive distinction based on the historical progress of psychology through the 20th century undermine anything that has been said.

To start, I say more about the kind of positivism that is going to be relevant to us. Next, I define the senses in which the theory might be thought of as cognitivist or non-cognitivist. There are three senses of the cognitivist/non-cognitivist distinction to introduce. Based on key positivist claims and interpretations, I argue that a positivist theory of metaphor is clearly non-cognitivist in only one of these senses. The most charitable interpretation is given to the kind of positivism in question and, therefore, when problems arise, where possible, an effort is made to resolve them. Ultimately, this leads to a contextualisation of the theory in question making it interpretable in a way that is not inconsistent with contemporary empirical findings. In a last section, I point out a difference between the non-cognitivist claims made for a positivistic theory of ethics and the non-cognitivist description of the positivist treatment of metaphor. I end by introducing a sense of the cognitive/distinction that is based on a historical treatment of psychology. I argue this does not undermine the argument made. None of this amounts to advocating the positivist position. Rather, it amounts to a clarification of one historical treatment of metaphor.

Logical Positivism, Introduction

Logical positivism is associated with verificationism. For logical positivists, sentences are either analytic or synthetic. The analytic/synthetic dichotomy divides sentences into two types and is referred by positivists like A

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[1] Indeed, it appears, one can go from a classic empirical stance quite quickly to the kind of positivism considered here (see discussion in Blandford 1999).

J Ayer (1936) to Immanuel Kant (1781). According to Ayer, Kant did not succeeded in making the distinction clear. However, positivists like Ayer did adopt the distinction. Ayer writes:

> I think that we can preserve the logical import of Kant's distinction between analytic and synthetic propositions, while avoiding the confusions which mar his actual account, if we say that a proposition is analytic when its validity depends solely on the definitions of the symbols it contains, and synthetic when its validity is determined by the facts of experience (Ayer 1936, 42-43)

Examples of the distinction are provided below:

(1) A square is a shape that has four sides of equal length and four right-angles

(2) It is raining outside

The truth of an analytic sentence (or sentence that expresses an analytic proposition) can be established by attending to the meanings of the words alone. (1) is an example. The truth of a synthetic sentence (or sentence that expresses a synthetic proposition) cannot be established by attending to the meanings of the words alone. Its truth is established by attending to the empirical facts. (2) is an example. Though the distinction seems somewhat intuitive, the analytic-synthetic classification is rather difficult to pin down (Hempel 1965). Some have rejected it outright (Quine 1953, 1960). Though others have been more supportive of it (Grice and Strawson 1956). Positivists adopted it.

For positivists the meaning of a sentence that is not analytic is associated with verification. One way to introduce the basic idea behind verification is as follows. A J Ayer writes that "[N]o statement which refers to a 'reality' transcending the limits of sense-experience can possibly have any literal significance" (Ayer 1936, 5). This quite naturally leads to verificationism. For it means that any statement that is literally meaningful is a statement that does not refer to a reality that transcends sense-experience. Given that such a reality is naturally open to the senses, it is open to being verified by the senses. Thus, it follows that any literally meaningful statement is open to sensible verification. Perhaps, too, it is appealing to think that if a statement can be verified by the senses, it is literally significant. Now, this looks like a biconditional is taking form. This gives the kind of positivism in question a logical form and suggests a criterion of meaning. Formalised, this comes to be known as the verification principle.

But we can note, problems have dogged this type of positivism. The most well-known of the complaints against positivism in this form is that the verification principle is self-refuting (Feuer 1951). Indeed, most criticisms centre upon the verification principle itself. For example, consider Carl Hempel (1965). Hempel introduced a version of the principle like this (the "observation sentences" in question are supposed to describe potentially observable phenomena or observable states of affairs):

> A sentence has empirical meaning if and only if it is not analytical and it follows logically from some finite and logically consistent class of observation sentences (Hempel 1965, 104)

Hempel set about demolishing the principle. He argues the principle is too restrictive because it rules out sentences that include universal claims but, at the same time, too liberal because it rules in metaphysical statements of the kind positivists had hoped to eliminate. He claims attempts to revise the principle have fared no better. They seem to render any statement whatsoever meaningful (see also Church 1949). In response Hempel wonders whether it would not be better to start by connecting extralogical subsentential expressions to observable

phenomena. A sentence composed of such terms would be empirically meaningful. This, too, is rejected on the basis that an extensional way of defining dispositions can't be found,[2] and dispositional terms are essential to the scientific understanding of the world—which positivism advocates for.[3]

Is there anything in favour of this form of positivism? Perhaps. It seems intuitively attractive. Indeed, for the positivist, it is completely natural (Schlick 1932, 32). It is, also, said to be presupposed by the scientific method (Schlick 1932, 38). This should appeal to more contemporary students of metaphor. For example, consider conceptual metaphor theory (CMT). A clear sense in which CMT theorists are positivist is in their advocacy of the empirical method. In a sense, CMT theorists are more true to the empirical method than positivists. Positivists did not apply it to the understanding of literal meaning. CMT theorists do apply it to the study of metaphorical phenomena (Gibbs 2008). A second sense in which CMT theorists are empiricists is in making the sensible the ground of meaning. For positivists, it is the source of literal meaning. For CMT theorists, it is, in many cases, the source of metaphorical meaning. For example, Kövecses says, "Our experiences with the physical world serve as a natural and logical foundation for the comprehension of more abstract domains (Kövecses 2010, 7). There are also suggestions that it is the basic source of basic metaphorical schema.[4] Nevertheless, positivists and CMT theories differ in a major respect. Positivism, it is thought, leads to a non-cognitivist theory of metaphor. CMT is resolutely cognitivist (e.g. Knowles & Moon 2006, p. 69). And now we are led to ask, what is it for a theory of metaphor to be called "non-cognitive"? As said, I will introduce three senses and argue that only in one sense is the positivist treatment of metaphor not cognitivist. Further, I will argue that this does not put it at odds with some claims made by contemporary researchers against philosophical treatments of metaphor.

Logical Positivism, Non-Cognitivism (1)

Positivism of the kind in question is taken to lead to a non-cognitivist perspective on metaphor. Non-cognitivism is to be contrasted to cognitivism. What exactly are non-cognitivist and cognitivist theories of metaphor?

In the most common view, non-cognitivism is a label applied to theories of metaphor that deny metaphorical meaning. Sentences or their utterances, it is said, do not have metaphorical meanings. Another way of putting

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[2] Today, intensional definitions of dispositional terms is favoured. At the time, Hempel rejected this due underdeveloped nature of intensional approaches to meaning (Choi & Fara 2013).

[3] These are not the only problems with verificationism. For example, the verification principle tells us that some statements are meaningless, but they appear meaningful. For example, religious statements and even some scientific statements (see Woit 2007). Some have wondered whether prior to applying the verification principle to a sentence (or deciding whether or not it can be applied), the meaning of the sentence needs to be understood (c.f. Berlin 1938). A last problem to mention is the problem of compositionality. Consider the following set of sentences:

    (i)   There are brown chocolate **nibs** on your plate
    (ii)   There are no brown chocolate **nibs** on your plate

Suppose a sentence has meaning iff all of its component expressions have meaning (e.g. morpheme, word, phrase, etc.) This is often called the "principle of compositionality." Suppose one doesn't know the meaning of the expression "nibs" (in bold above). Suppose, next, one examines one's plate and finds nothing there. One has falsified (i) without knowing the meaning of (i). Indeed, one has falsified (i) without knowing what would make (i) true. A similar story can be told for (ii). Given the assumptions in question, one may verify the truth of (ii) without knowing the meaning of (ii), and that without knowing what would make (ii) false. A response might be this. If a sentence is open to verification by the senses, then it can be shown to be either true or false. If a sentence can be shown to be either true or false, the sentence is literally meaningful. Since in both cases above, the disjunction holds, the path from verification to literal meaning is secured. But, given the first supposition, this renders the principle of compositionality false. This is a problem for many philosophers of language and semanticists.

[4] For example, see Mark Johnson introducing a suggestion made by Chris Johnson (1997) re the acquisition of basic metaphorical structure, Chris Johnson's theory suggests babies go through two pertinent stages. First, there is the "conflation" stage, followed by the "differentiation" stage. Babies, for example, held by their careers will experience affection and warmth. Affection and warmth are conflated. Later, the two are differentiated. At this stage, the application of temperature to affection becomes metaphorical. (Johnson 2017, 111).

this is to say non-cognitivist theory denies that there is *propositional* content over and above *literal* propositional content.

To give an example, we can consider a well-known theory of metaphor. One of the oldest theories of metaphor is the comparison theory of metaphor. Metaphors are comparisons. One of the most notorious versions of this theory is the simile theory of meaning. One version of this theory is non-cognitivist. To understand it, consider the following sentence:

(3) Richard is a lion

The literal simile theory of meaning says that (3) is elliptical, which we may represent like so:

(4) Richard is...a lion

Filling in the ellipsis gives us the meaning of (3), which is:

(5) Richard is like a lion

The latter sentence is the literal meaning of (3). It is not the metaphorical meaning of (3), since (3) is just the elliptical version of (5). Assume for a moment that for any metaphor, such a reduction can be engineered (this is unlikely, see Tirrell 1991). On this assumption, there are no metaphorical meanings, there are only literal meanings. This, then, is a non-cognitivist theory of metaphor.

In contrast, consider what we will refer to as a substitution theory of metaphor. It is cognitivist. In its simplest form, the meaning that (3) expresses, in the metaphorical context, is the following:

(6) Richard is brave

Another way of saying this is (6) paraphrases (3). It is not the literal paraphrase of (3). It is the metaphorical paraphrase of (3). It does not paraphrase the literal proposition expressed by (3). It paraphrases the metaphorical proposition expressed by (3). This is a cognitivist theory of metaphor.

It is the contention that a positivist theory of metaphor is not of this type, but of the previous non-cognitivist type. For positivism only allows for literal propositional content. This first sense of cognitivism, I shall denote by adding a subscript character to the expressions in question, giving us a dichotomy: cognitivism$_M$ vs. non-cognitivism$_M$. The subscripted "M" highlights that we are talking about this kind of cognitivism (that type contingent on metaphorical meaning or propositionality). The literal simile theory of metaphor is non-cognitivist$_M$ but the contrasted substitution theory is cognitivist$_M$. Most importantly for us, the positivist theory of metaphor is non-cognitivist$_M$.

Logical Positivism, Non-Cognitivism (2)

It has been said that a positivist theory of metaphor is non-cognitivist in the sense that it eschews metaphorical meanings or propositions. But there is another sense of non-cognitivism that a positivist theory of metaphor does not entail. This is explained below.

For logical positivists, it is contended, only one sort of meaning matters. Hilary Putnam summarises like this:

> [A]ccording to the logical positivists, the 'scientific method' exhausts rationality itself, and testability by that method exhausts meaningfulness ('The meaning of a sentence is its method of verification'), the

list or canon would determine what is and what is not a cognitively meaningful statement. Statements testable by the methods in this list (the methods of mathematics, logic and the empirical sciences) would count as meaningful; all other statements, the positivists maintained, are 'pseudo-statements', or disguised nonsense (Putnam 1982, p. 105).

There are some things to highlight here. First, the type of meaning in question is linguistic. Second, positivists want to determine cognitive meaning. And since they are interested in linguistic meaning, they want to determine the cognitive meaning of a linguistic unit (above a sentence or statement). Third, empirical testability (or mathematical or logical methods) are individually sufficient for cognitive meaning. The joint negation of the three is sufficient for cognitive meaninglessness. The applicability of the methods in question establish when a sentence or its use has cognitive meaning or not. Last, then, putting the mathematical or logical methods to one side, it is empirical testability that is *the* measure of cognitive meaning or meaningfulness. Thus, we might say, if a sentence is empirically testable, then it has cognitive meaning, and thus the sentence has linguistic meaning. On the other hand, if the sentence is not empirically testable, it has no cognitive meaning, and, therefore, has no linguistic meaning, i.e. it is linguistic nonsense. Cognitive significance or meaning is equivalent to empirical testability (if not mathematical or logical verification). We have seen problems with this kind of principle above, but let us assume that in some sense it is correct.

We, now, seem to have a problem. We have said that a non-cognitivist theory of metaphor denies metaphorical meaning. And, we have seen that the literal simile theory is one such theory as opposed to the substitution view. And, we have noted that the positivist view is supposed to lead to a non-cognitivist view of metaphor. But, if cognitive meaning is equivalent to empirical testing (when not open to mathematical and logical methods), no theory entails the non-cognitivist outcome. What's worse, if denying metaphorical propositionality entails non-cognitivism, then the literal simile theory and the positivist theory lead to confusion. Let me explain.

Consider the literal simile theory. It was said to be a non-cognitivist theory of metaphor. It was said to be a non-cognitivist theory of metaphor because there was said to be no metaphorical content over and above a sentence's literal content. So the sentence:

(7) Richard is a lion

in its non-elliptical form is:

(8) Richard is like a lion

If, as far as the sentence in question is concerned, cognitive meaning is equivalent to empirical testability, then (7) has cognitive meaning. For any sentence, *M*, of the form:

(9) X is Y

if equivalent to:

(10) X is like Y

where both X and Y terms refer to empirical phenomena, *M* is cognitively significant. Thus, literal simile theory cannot entail non-cognitivism.[5]

The same goes for a positivist theory of metaphor. The senses can verify the truth of (7). If, then, the literal simile theory and the positivist way of treating (7) are non-cognitivist because they do not allow for nonliteral propositions, but cognitivist because (7) can be empirically tested, both views lead to contradiction. Our concern is the positivist theory.

It seems the fault lies with confusing two different ideas of non-cognitivism. The first notion has it that if a theory of metaphor denies a sentence like (7) metaphorical meaning, then the theory of metaphor is non-cognitivist. The second notion has it that a sentence like (7) is cognitively meaningless iff it lacks empirical testability (ignoring one of the other types). We must reject one of these senses of non-cognitivism or accept both as two different and distinct senses of non-cognitivism.

Adopting this latter course, leads to a set of divisions explicable in the following way. The first sense of non-cognitivism denies *metaphorical* meaning to a typical sentence. Any theory that denies metaphorical meaning to sentences like (7) is a non-cognitivist theory. The second sense of non-cognitivism denies *literal* meaning to a typical sentence on condition it is not empirically testable (nor susceptible to mathematical or logical methods). A theory that denies literal meaning to sentences in *that* way also divides cognitively significant from non-cognitively significant sentences. And only if the theory denies literal meaning to all sentences like (7) is it non-cognitivist in this sense. Thus, a positivist theory may be non-cognitivist in the first sense, but not in the second sense, since it (a) rules out metaphorical meaning; but (b) allows for sentences like (7) to have cognitive significance or be cognitively meaningful.

Other theorists have charted a similar course. However, they have done so in order to take up a position that is contrary to positivism. For example, for John Searle (1979) a sentence may be literally meaningless but its utterance metaphorically meaningful. Writing on literal meaning, Searle says:

> A sentence may have more than one literal meaning (ambiguity) or its literal meaning may be defective or uninterpretable (nonsense) (Searle, 1979b, 117).

Writing on metaphor, he tells us this:

> Even when we discuss how a nonsense sentence, such as Chomsky's [1957] example, "Colourless green ideas sleep furiously", could be given a metaphorical interpretation, what we are talking about is how the speaker could utter the sentence and mean something by it metaphorically, even though it is literally nonsensical (Searle, 1979a, 77).

Of course, Searle is telling us a different story to the one that the positivist wants to tell us. But there is an important point here. Meaning can be divided between literal propositionality and metaphorical propositionality. For Searle, sentences may have or lack the former whilst their utterances possess or lack the latter. For the positivist, the metaphorical set is just empty.

Drawing directly on positivist writing, there is reason to think metaphorical sentences are to be treated in the manner discussed; *some are cognitively significant* (in the literal sense), entailing a positivist theory of metaphor which is not fully or automatically non-cognitivist (in the literal sense). Consider these remarks from A J Ayer's *Language, Truth, and Logic*:

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[5] Indeed, in most cases, if not all, the sentences in question will be literally true since everything is like everything else in some respect (Davidson 1978).

> In the vast majority of cases the sentences which are produced by poets *do* have literal meaning… [T]o say that many literary works are largely composed of falsehoods, is not to say that they are composed of pseudo-propositions….If the author writes nonsense, it is because he considers it most suitable for bringing about the effects for which his writing is designed (Ayer 1936, 14)

We can suppose that the poets that Ayer has in mind use metaphor and some of the sentences that Ayer is referring to are sentences that are metaphorical. Supposing too that literal significance and cognitive significance are synonymous, Ayer's comments then suggest that not all sentences used metaphorically imply nonsense. Which ones? The obvious answer is those that are literally false, for example, (7). But, moreover, there are sentences that are literally true that are used to bring about the effects that an author is taking aim at. For example,

(11) The man is an ape[6]

used to insult the man.

There are reasons, then, to divide between two senses of cognitivism. The first sense, I have said, I shall denote by adding a subscript: cognitivist$_M$ vs. non-cognitivist$_M$. The second sense, I shall denote by adding a subscript: cognitivist$_L$ vs. non-cognitivist$_L$. The subscripts denote the kind of meaning that is denied to a sentence. The former denies metaphorical propositionality or meaning. The latter, literal propositionality or meaning. There are reasons to think a further sense of cognitivism is called for.

Logical Positivism, Non-Cognitivism (3)

Thus far, two kinds of non-cognitivism have been identified. There is the type that denies that there are *metaphorical* propositions. There is the type that denies that there are *literal* propositions (based on the lack of empirical or formal verification methods). Sentences that are metaphorical, it seems, are non-cognitivist in the first sense. But they need not be non-cognitivist in the second sense ((7) and (11) give us examples of this).

There are positivists who seem to demand a harder line. Consider Rudolf Carnap (1935). He says,

> The aim of a lyrical poem in which occur the words "sunshine" and "clouds" is not to inform us of certain meteorological facts, but to express feelings of the poet and to excite similar feelings in us. A lyrical poem has no assertive sense, nor theoretical sense, it does not contain knowledge (Carnap 1935, 29)

I will assume complete sentences that appear in lyrical poems can be thought of as metaphorical. For example,

(12) A little cloud stood lonely (Ruby Archer)

This is a sentence that appears in a poem and one that we might call metaphorical. Clouds do not stand and clouds do not feel lonely. According to Carnap, then, the aim of this lyric is not to inform us of anything, but, rather, to

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[6] It is difficult to see how CMT theorists can explain this kind of metaphor. CMT holds that a linguistic metaphor, for example, *a is b* is an exemplar of a deeper cognitive relation *A IS B* (capitalisation signifying that it is concepts we are discussing). *A* is called the target. *B* is called the source. Elements of *A* are understood through elements of *B*, exemplified by the linguistic metaphor *a is b*. Elements of *A* belong to one conceptual domain. Elements of *B* belong to another conceptual domain. Target domain and source domain are alien to each other. In most cases, something less concrete is understood in terms that apply to something more concrete, where what is most concrete is something that is sensible and found in one's environment. But, in the case cited, what is the conceptual metaphor? Perhaps, the conceptual metaphor is *HUMANS ARE ANIMALS*. The target domain is neither alien to the source domain nor more abstract.

express, incite, and excite. What Carnap means to say, with respect to our sentence, is that the sentence is not used to inform us about anything.[7] Rather, it is used to express the feelings of the author and excite those same feelings in the audience. This draws out a distinction, between two different kinds of functionality (and related effect), which for the time being we will refer to as simply "cognitive" and "non-cognitive."

In terms of the effects that Ayer has mentioned above, cognitive effect may be distinguished from a non-cognitive effect in the following sense. Cognitive effects are related to shifts in thoughts and beliefs. This suggests they are likely propositional. Non-cognitive effects are related to shifts in attitudes, emotions, feelings, moods, and motivations. They are non-propositional in this sense.

But, also, we are not only talking about cognitive and non-cognitive functionality and effect, but meaning. That is, cognitive and non-cognitive *meaning*. Whilst attacking metaphysical statements, Carnap says this:

> Today we distinguish various kinds of meaning, in particular cognitive (designative, referential) meaning on the one hand, and *non-cognitive (expressive) meaning components*, e.g. emotive and motivative, on the other. In the present paper, the word "meaning" is always understood in the sense of "cognitive meaning." The thesis that the sentences of metaphysics are meaningless, is thus to be understood in the sense that they have no cognitive meaning, no assertive content. The obvious psychological fact that they have expressive meaning is thereby not denied; this is explicitly stated in Section 7 (Carnap 1931, 80-81, my italics).

Carnap, then, accepts distinct kinds of meaning. There is cognitive meaning, associated with a designative, referential function. There is expressive meaning, which is associated with emotive and motivative functions. This is an "obvious psychology fact"—at least, one that *Carnap* can agree with. So far as the sentences of metaphysics are concerned, they do not have a cognitive meaning, though they may have expressive meaning. For Carnap, the lyrical verse associated above with the poets have an affinity to metaphysical statements.

> Metaphysical [statements]—*like lyrical verses*—have only an expressive function, but no representative function. Metaphysical statements are neither true nor false, because they assert nothing, they contain neither knowledge nor error, they lie completely outside the field of knowledge, of theory, outside the discussion of truth or falsehood. But they are, like laughing, lyrics, and music, expressive. (Carnap 1935, 29)

Assuming again that lyrical verse incorporates metaphor, given the passage, we may conclude: metaphor only has an expressive function; does not have a representative function; is not true, nor false; asserts nothing; contains no knowledge; contains no error; has no relation to knowledge, no relation to theory; is expressive; and is rather like laughing, crying, and music. To sum up, the sentences in question have an expressive function, but lack a cognitive function. But just as important, given the previous passage, the verses or sentences in question can be thought to be significant in the non-cognitive sense even if they lack cognitive significance.

There is, then, significance and functionality (and effect) to incorporate into the positivist picture. Along the significance dimension, we have cognitive and expressive significance, which we can read as two distinct types of meaning. The one is cognitive meaning. The other, which we have seen Carnap endorse, is "expressive meaning." This we have referred to as non-cognitive meaning. Along the functionality dimension, we have cognitive functionality and expressive, or non-cognitive, functionality. The poet who uses expressions like "cloud" and "sunshine" to say nothing about the weather, is not using the expressions in question cognitively, but expressively. The effect of these sentences is on the non-cognitive centres of the mind.

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[7] Lyric verses or sentences do not have aims.

Perhaps, the positivist that speaks most clearly to this end is the meta-ethicist C L Stevenson. Stevenson has the view that there are two kinds of meaning that matter: descriptive and emotive. Stevenson also identifies two kinds of use (function and associated effect, in the vocabulary above). There are descriptive uses and dynamic uses. Let's think about meaning first.

Descriptive meaning is invariant with respect to individual psychology and context, and, at the level of the sentence, it is propositional (Stevenson 1937). Emotive meaning is referred, by Stevenson (1937), to Ogden and Richards (1923). Basically, emotive meaning is symbolically vacuous (Ogden and Richards 1923, 125) or non-referential. We may suppose this to mean that it is semantically or linguistically vacuous. According to Ogden and Richards, the archetype is the expression "good." It is, they suggest, somewhat polysemic. But in its ethical constituency, it is wholly emotive. So consider the following set of sentences:

(13)This is red

(14)This is good (said in an ethical context)

For Ogden and Richards, the predicate in (13) is symbolically significant. But the predicate in (14) is not. If we suppose this to mean that the predicate in (14) is semantically vacuous, we can see how it might render the sentence in question meaningless. Following a Fregean line of thought, today, many prominent systems of semantic representation take predicates to denote functions (e.g. Heim & Kratzer 1998). But if the predicate in (14) is semantically vacuous, then it denotes nothing and (14), itself, is classified as *undefined*. That is, it, too, lacks a denotative sense. In other words the sentence is semantically meaningless. This rings true for the positivist. Rather, the expression is associated with a somewhat *persistent tendency* to reflect and produce non-cognitive responses in the speaker-hearer (Stevenson 1937, 23). As said, the archetype is the expression "good." Stevenson builds a whole meta-ethical positivist theory based on this line of reasoning. In any case, what is important here is the idea that an expression like (the ethical) "good" can lack semantic value, yet be said to possess a *meaning* where such meaning is just *the tendency to reflect and effect non-cognitive responses in the respective speaker and hearer*.

What of functionality? Non-dynamic descriptive uses track descriptive meanings. The use of a sentence, for example, to ascribe a light-reflecting object a colour, is descriptive. Dynamic use aims for emotive effect. We might say, adopting the language above, non-dynamic uses have a cognitive function and aim for cognitive effects. Dynamic uses have non-cognitive functions and aim for non-cognitive effects. Importantly, Stevenson suggests that meaning and use are not equivalent. Emotive meaning does not demand a dynamic use since an expression can possess the tendency in question even if it is not used dynamically. In turn, we can envisage circumstances in which an expression is used dynamically, but lacks the tendency to reflect and produce non-cognitive effects. Though such an effect may emerge contextually. For example, it is not too difficult to see how a sentence that is true can be used non-cognitively (see (11) above and (15) below). Stevenson is very sensitive to the contextual nature of use and the shifts in function and effect that this produces. This is one reason he eschews any reduction of meaning to use (Stevenson 1937, 22).

Having denied the equivalence between emotive meaning and dynamic use, or non-cognitive meaning and non-cognitive functionality-effect, we note that Stevenson does stress that emotive meaning is well-suited to reflecting and producing non-cognitive results (Stevenson 1937, 23). In fact, it can be so well-suited that a non-cognitive function-effect can be hard to suppress. Stevenson's example is somewhat dated (if interested see Stevenson 1937, 23). Likewise, we can see how an expression is so well-suited to describing the facts that it is difficult to see how it might take on a non-cognitive function-effect.

We are talking about cognitive significance and cognitive functionality, on the one hand; and, non-cognitive significance and functionality, on the other. We can draw on psychological definitions to reframe what we are calling non-cognitive significance and functionality. To do this, I draw upon contemporary definitions provided by the American Psychological Association:

- Cognition: All forms of knowing and awareness, such as perceiving, conceiving, remembering, reasoning, judging, imagining, and problem solving (APA Dictionary, 2020).

- Affect: Any experience of feeling or emotion, ranging from suffering to elation, from the simplest to the most complex sensations of feeling, and from the most normal to the most pathological emotional reactions...both mood and emotion are considered affective states (APA Dictionary, 2020).

- Conation: The proactive (as opposed to habitual) part of motivation that connects knowledge, affect, drives, desires, and instinct to behaviours (APA Dictionary, 2020).

We may use these definitions to make sense of what the positivists are saying. Poetical sentences and lyrics, following Ayer, may have cognitive significance. Following Carnap, they do not have cognitive function, which we now take to mean they do *not* produce a cognitive effect. Rather, they have affective-conative functionality and effect. That is, they act on the affective-conative centres of the mind—expressing and inspiring emotion and motivating behaviours or connecting affect to cognition. This runs parallel to Stevenson. The descriptive meanings he talks of are cognitive. The emotive meanings affective-conative defined by tendencies to produce affective-conative effects. Likewise, the non-dynamic uses, we can think of as cognitive uses associated with cognitive functions and effects; the dynamic uses, we associate with affective-conative functions and effects. But, now, this is very important for the development of our understanding. For if the sentences that we are considering do not *directly* connect to the cognitive centres of the mind, they may *indirectly* do so. Why? Simply enough because they have conative functionality-effect, and, as defined, conation can connect affect to cognition. This is evidentially true when we consider a word like the ethical "good." The positivists believe it is cognitively insignificant. This is a belief. Evidentially, therefore, there is a route from its dynamic meaning and force to a cognitive effect (e.g. the belief).

The positivists, then, allow for linguistic uses that lead to different psychological outcomes. There are cognitive effects, on the one hand, and non-cognitive affective-conative effects, on the other. These may be defined as we have defined them above, psychologically. One aspect of the functionality-effect in question (the conative) may connect circuitously to the cognitive.

But, now, it seems there may be three senses in which a theory of metaphor may be called non-cognitivist: metaphorical, literal, psychological. In the first sense, the theory denies that metaphorical sentences or utterances have metaphorical meaning. In the second sense, the theory denies that metaphorical sentences or utterances have literal meaning. In the last sense, the theory denies that metaphorical sentences or utterances have cognitive functions-effects. The positivist is clearly non-cognitivist in the first sense; there are no metaphorical meanings--no nonliteral propositionality. The positivist is not non-cognitivist in the second sense to the extent positivism does not entail denying literal meaning to sentences that are used metaphorically. Though, such sentences, in the metaphorical context, for example, that of a poem, may not be used with a cognitive function-effect in mind. The positivist is not non-cognitivist in the last sense. A sentence may, lacking emotive sense in ordinary contexts, register cognitively, even when used in Stevenson's more dynamic sense. (11) is an example. In another sense, the most important sense, if a sentence is used with a non-cognitive function-effect in mind and it succeeds in realising its affective-conative function, it may trigger a cognitive response given the connective nature of the

conative faculty whether or not it has cognitive significance in any other sense. It is, that is, cognitively significant circuitously.

Let us add, then, a further sense of the cognitive/non-cognitive division to our list. First, we talked of a cognitive$_M$/non-cognitive$_M$ divide. Next, we introduced a cognitive$_L$/non-cognitive$_L$ duality. We may, given the discussion above, introduce a third, the cognitive$_P$ vs non-cognitive$_P$ distinction. Here the subscript emphasises the psychological underpinnings. Given this, it is being argued that a positivist theory of metaphor is non-cognitive$_M$, but nothing entails that it is non-cognitive$_L$ or that it is non-cognitive$_P$. Yet, there is a lingering issue. We seem to have ignored Carnap's claim that lyric verse, and, thus, metaphor is to be thought of as cognitively insignificant. In which sense does he mean?

Logical Positivism, Cognitive$_L$, Sous Rature

The positivist wishes to eject metaphysical sentences from scientific discourse. This is because they are not cognitively significant. Carnap thinks lyrical verses are like metaphysical sentences. They, too, lack cognitive significance. Assuming lyrical verse includes metaphor, we can conclude metaphor lacks cognitive significance. But I have just argued that metaphor does not lack cognitive$_L$ significance in many cases, and that so far as it has affective-conative meaning it may not lack cognitive$_P$ significance. But Carnap cannot just be saying metaphor lacks cognitive$_M$ significance. So, ultimately, there is a claim attributable to Carnap to explain, lyrical verse and, therefore, metaphor is cognitively insignificant. If that means it is not cognitively$_L$ significant, his claim looks like it is inconsistent with the conclusions drawn. (We can accept that the kind of sentence in question is not directly cognitively$_P$ significant, but circuitously so.) Since the conclusions are based on positivist writings and scientific assumptions, this puts Carnap and odds with his own project. I have said, I want to present the positivist in the best possible light. If we want to pursue that charitable line, we must find some way to make Carnap's claims consistent with the conclusions that we have drawn. Is there a way to do this? I think so. The apparent inconsistency is not a knockout blow at all.

One way to establish consistency is to adopt the following position. The basic idea is that a sentence such as

(15) It is raining

is disposed to have a certain cognitive$_L$ significance (factoring for ambiguity or polysemy) in a context of use given certain contextual factors (pertaining to the use of literality), but that such significance can be erased by certain other contextual factors. Recall, Carnap says that when expressions like "cloud" and "sunshine" do not aim to inform us about the meteorological facts, they lack cognitive significance. I will now suppose that Carnap means that when they are not *used* or do not *function* to inform us about the meteorological facts, they lack *cognitive$_L$ significance*.[8] We can then suppose that some of the contextual factors that erase cognitive$_L$ significance are related to use or function. For the positivist it needn't follow that there is any other meaning that replaces the erased meaning. In this sense, we think of the sentence as meaningless. But not entirely. We can still speak of affective-conative meanings associated with *tendencies* to produce certain affective and conative effects, and we might even think certain secondary cognitive$_P$ effects. Though, in novel cases such tendencies may not exist with. They may need to be nurtured. In any case, this will make sense of Carnap's claim that sentences, here (15), are cognitively insignificant (in this case when not used to speak of the weather—that might be the case in a situation where money is being distributed, bad news is being heard, etc.). It is consistent with our claim that (15) does have a cognitive$_L$ significance, too. That is, when it is considered without reference to contextual factors of the kind that render it as a sentence that does not speak to the meteorological facts.

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[8] Linguistic expressions do not have aims.

In addition, to provide the positivist the opportunity to develop the most expansive theory of metaphor, contextual factors that erase cognitive$_L$ significance can be thought of in two ways:

(a) as erasing the cognitive$_L$ significance of the sentence as a whole, or

(b) as erasing the cognitive$_L$ significance of the sentence's cognitive$_L$ significant components either in part or as a whole.

First, following the positivists in question, a sentence is cognitively$_L$ significant or it is not. The positivists in question are engaged in providing criteria that distinguish meaningful sentences from nonsense—not degrees or shades of such meaningfulness.

Second, it is *sometimes* sensible to think that the cognitive$_L$ significance of expressions associated with the nonliteral use of a sentence matters in part to the metaphorical effect. There are a number of theorists who argue that literal meaning is essential to metaphor (non-cognitivists and cognitivists alike (see Magidor 2015)). Positivism, as presented, needn't wholly reject this, even if in the relevant contexts the cognitive$_L$ significance of the sentence is erased. For example, consider:

(16) Biden is square

Since the sentence is not being used to talk about actual shapes, the cognitive$_L$ significance of the sentence is erased. Still, the expression "Biden" has cognitive$_L$ significance here. It is being used to talk about the President of the United States. Even in sentences where every expression is metaphorical, the cognitive$_L$ significance of each expression may figure in producing secondary cognitive$_P$ effects. Sentences whose expressions have cognitive$_L$ significance wholly erased—insofar as they do not function to talk about the facts they are ordinarily used to talk about—may be aimed at producing secondary cognitive effects—cognitive$_P$ significance—through attention to their erased content, rather than anything else. Such sentences exist. This sentence is borrowed from Searle (1978b):

(17) The bad news congealed into a block of ice

Following Carnap, neither the noun phrase nor the verb phrase (nor its contained noun phrase) are used to refer to things that they usually refer to, and, thus, are not cognitively$_L$ significant—or, in the terms, I am advocating, they have had their literal significance erased.

At the same time, focusing on the erased cognitive$_L$ significance may not be possible or even interfere with the related effects. I have associated metaphorical effect with affective-conative effects and secondary cognitive$_P$ effects. We might suppose that literal meanings need not figure in producing any affective effects. We might also suppose that literal meanings need not figure in producing any conative effects; not even in producing any secondary cognitive$_P$ effects. For example, when a sentence contains no cognitively$_L$ significant expressions. That is, for example, a sentence in which every expression is not used to talk about what it is factually used to refer to. (Again, (17) might be such a sentence).

There is some evidence that suggests that focusing hearers-readers on the literal meaning of a non-literal use interferes with the cognitive processing of that non-literal use. Glucksberg (2008) presents the following experimental outline. Consider four sentences:

(18) Lawyers are sharks

(19)Apples taste good
(20)Lawyers are married
(21)Sharks are good swimmers

The first sentence is taken to be metaphorical. The interpretation is that it has a topic, lawyers, and a vehicle, sharks. On this account, the topic is understood through the vehicle through a shared ground. Three experimental scenarios follow:

1. Subjects are given sentences that focus on the topic (20) and asked to interpret (18)
2. Subjects are given sentences that focus on the vehicle (21) and asked to interpret (18)
3. Subjects are given sentences that focus on neither topic nor vehicle (19) and asked to interpret (18)

The second scenario slowed down processing time. It is interpreted that this shows that literal meaning interfered with processing or interpreting nonliteral meaning. [9] If the conclusion is true, our positivist might interpret the experiment as showing cognitive$_L$ significance interferes with secondary cognitive$_P$ effects in contexts in which the erasure of cognitive$_L$ significance is obvious—that is, following Carnap, where "shark" is not being used to talk about the biological category. The conclusion might also be hypothesised of sentences like (17). On the other hand, as said, even though wholly erased, the cognitive$_L$ significance of one or more expressions might matter.

At this point, I think, it is also useful to add that we may think of the erasure of cognitive$_L$ significance, related affective-conative functions-effects, and secondary cognitive$_P$ effects as automatic. For example, in the last scenario, it seems that the erasure of cognitive$_L$ significance, the affective-conative function-effect, and the secondary cognitive$_P$ effects are somewhat automatic—that is, prior to registering the cognitive$_L$ significance of the sentence in question. We can just see this as the tendency for certain affective-conative tendencies (and related secondary cognitive$_P$ effects) to follow immediately in processing the sentence. That may be why the presence of cognitive$_L$ significance interferes with processing the sentence in question. [10] Insults, slurs, and category mistakes might attest to this. This is not antithetical to positivism which, as we have seen considering Stevenson, quite willingly takes up the view that nonliteral significance may take priority over literal significance. It is not a hard stretch to think that such significance can have an automatic cognitive$_P$ significance. One can still deny it cognitive$_L$ significance. One can still deny it cognitive$_M$ significance. This needn't contradict the claim that

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[9] A quick comment about the experiment in question. Consider the following syllogism. A:

1. Sharks swim.
2. My lawyer is a shark.
3. My lawyer is a predator.

Now compare it to the following syllogism, B:

1. Sharks are predators.
2. My lawyer is a shark.
3. My lawyer is a predator.

Syllogism A is not valid. Syllogism B is valid. A1 is a sentence that subjects are given before being asked to process the metaphor A2/B2. A3/B3 is the result of processing the A2/B2. Suppose that metaphor processing is a syllogistic or inferential process. If this were the case, then it would be no surprise that A1 interferes with the process. An alternative to A1 might be B1. Given our assumption, we would also expect that B1 would not interfere with the process. Indeed, we might suspect that it would expedite the process. If this were the case, since B1 is no less literal than A1, we could not conclude that literal meaning interferes with the processing of metaphor. Though, we might conclude that obscuring the vehicle-ground relationship does.
[10] However, see the previous note.

cognitive$_P$ significance is circuitous if we have a "career of metaphor" story to tell about the development of the automatic tendency. In other words, automatic cognitive$_P$ significance may be instilled and sustained over time (as a tendency or disposition).

Contextualisation is not alien to the positivist approach. Carnap's words suggest contextualisation. Carl Hempel (1965), belonging to a second wave of positivists, seems to see contextualisation as a natural outcome of theory building the positivist way. And Hempel himself emphasised that practical aspects shape cognitive significance within the context of a theory and its application. Theories are cognitively significant. Theoretical statements are cognitively significant to the extent the theory is cognitively significant. Arbiters of theoretical significance are clarity and precision of formulation, explanatory and predictive power with respect to observable phenomena, simplicity, and confirming evidence (Hempel 1965, 117). This seems to lead to the rejection of metaphor from scientific theory for theories containing metaphor are not as cognitively significant as those without. But this is not a proposition put forward here. Hempel is not the kind of positivist we have in mind.

Last Comments

In this brief last section, I wish to highlight two things. First, the positivist treatment of ethical statements and the positivist treatment of metaphor is to be distinguished. Second, it is unclear whether a historical classification of psychology into cognitivist/non-cognitivist groups undermines the conclusions drawn.

First, a positivistic treatment of sentences said to express ethical truths denies that they express ethical propositions. But other theories assert that they express ethical propositions. We can draw a distinction. A theory is a non-cognitivist$_E$ theory if it denies there are ethical propositions. A theory is non-cognitive$_E$ if it asserts there are ethical propositions. The positivist treatment of sentences thought to express ethical statements is non-cognitive$_E$. This is just like the positivist treatment of sentences that express metaphors. In parallel, it is non-cognitive$_M$. Moreover, a positivistic treatment of sentences said to express ethical truths denies that they express literal propositions. Let's suppose that a non-positivist treatment of sentences that are said to express ethical truths do not deny that they also express literal truths. The first theory is a non-cognitivist$_L$ theory with respect to ethics. The second theory is a cognitivist$_L$ theory with respect to ethics. The positivist theory is a non-cognitivist$_L$ theory. This is different from the positivist treatments of sentences that are metaphorical. That treatment does not entail that they lack literal meaning (only that it can be erased if it is present). Therefore, it is not a non-cognitivist$_L$ theory in the sense defined. In the third sense, of cognitivism defined above, we can take both theories are primarily non-cognitivist$_P$ but circuitously cognitivist $_P$ in that each theory does not rule out psychological functions and effects and it is possible to think such psychological functions and effects engender non-cognitivist$_P$ effects.

A last sense of the cognitivism/non-cognitivism distinction may be grounded in a distinction drawn from the historical development of psychology. At the turn of the century, psychology was marked by a turn to behaviourism. John B Watson (1913) argued that psychology should not study private, subjective, or qualitative events. Rather, psychology should study public, objective, quantitative events. This amounted to studying behaviour, physiological processes, the effects of conditioning, and stimulus-response events, all of which could be produced under experimental conditions. A second wave of behaviourists developed soon after. This school is better known as "neobehaviourist." Three names stand out here: Edward C. Tolman, Clark L. Hull, and B. F. Skinner. In general, neobehaviourists emphasized theory construction grounded on the empirical observation of behaviour. Unlike Watson, however, many neobehaviourists did allow for psychological explanations that included appeals to conscious events, mental processes, and unobservables (theoretical constructs). Cognitivism comes next. Cognitivists indirectly inferred unseen mental processes. Cognitivists thought that stimulus-response relations were much more mediated and complex than the neobehaviourists. Later cognitivists, under the influence of philosophers like Hilary Putnam (1967), came to view the mind as an information processing unit.

This gives rise to the multidisciplinary research field of the cognitive sciences. Cognitivism is to be strongly contrasted to J. B. Watson style behaviourism. Watson does not seem to allow for any type of inferred reality beyond what is given outwardly in behaviour. We may, thus, call Watson a non-cognitivist. But, also, following the history charted, we might want to call any stage prior to the cognitivist school non-cognitivist. Then, if the positivist treatment of metaphor entails one of these non-cognitivist schools of thought, we can call it non-cognitivist (in this historical sense). Sigmund Koch (1964) has suggested positivism has a very close relation to neobehaviourism and, indeed, neobehaviourists themselves stressed this. However, things are not this simple. For neobehaviourist do seem to allow for some psychological outcomes that appear cognitivist and sometimes neobehaviourists took these outcomes as being positivist. A brief introduction to the neobehaviourists introduced above will suffice to show this.

A brief introduction to the neobehaviourists introduced above will suffice to show this. Tolman and Hoznik (1930) developed the idea of latent learning, learning that is not dependent on reinforcement. In consequence of this, Tolman (1948) developed the idea of a "cognitive map." These were representations or internal images. Keep in mind, this was at a time after Tolman had come under the influence of the positivists. Indeed, Tolman thought he was doing for psychology what the logical positivists had done for physics (Tolman 1935). Hull was one of the strongest advocates of the positivists. On a number of occasions, he explicitly talked of the close relation between his work and the logical positivism (e.g. Hull 1938, 1943a). At the same time, Hull that "intervening variables" were inferred from observable behaviour. They were, themselves, unobservable. They were, according to Hull, somewhat like "electrons, protons, positrons, etc." (Hull 1943b, 21). Hull is no Cartesian and Hull is not positing anything like an entelechy, which he is at pains to demonstrate (Hull 1943b, 23). He seems to be introducing a functional theoretical construct, which is indirectly verified. It is difficult not to think of the construct as cognitive. And, yet, Hull seems to think he is working in parallel to Carnap when talking about these variables (Hull 1943a,). B. F. Skinner is associated with the label radical behaviourism. Whilst accepting the existence of mental events, he argued environmental effects (including evolutionary effects) were the most important factor in explaining behaviour. And that, ultimately, behaviour would be given a physiological explanation relating behaviour to environmental factors with respect the species as a whole and the individual in question (Skinner 1974). More pertinently, he rejected the claim that behaviourism does not try to explain cognitive processes (Skinner 1974). Though, at the same time, he also rejected the kind of psychology that explains behaviour by appealing to, in his words, the conceptual nervous system of mathematical models (Skinner 1974). Yet, others have found elements of cognitivism in Skinner (Delprato and Midgley, 1992, 1517). It might also be pointed out, unlike Tolman and Hull. Skinner didn't say he was carrying out the logical positivist project.

In any case, at this point, we can draw the following conclusion. If the positivist theory of metaphor entails neobehaviourism in one of its guises, we cannot simply conclude that the theory entails non-cognitivist thought. The positivist theory needs to do more than that. It needs to entail not just the aforementioned schools of psychology, it needs to entail them in a form that rules out the cognitivist elements associated with these forms. For example, it needs to rule out Tolman's cognitive maps, or Hull's "intervening variables." This might better demonstrate that there is a historical sense in which the positivist theory is antithetical to the cognitivist school. But there is a lot more to say here. For positivists, themselves, talked of psychology (e.g. Carnap 1959) and it is not clear that they were committed to any one school. Wilson (2003), for example, connects positivism to Freud. To connect the positivists and, thereby, the positivist theory of metaphor to behaviourism in order to deem it non-cognitivist requires more careful thought.

Let me sum up. There are three senses of cognitive significance that may be posited to be consistent with positivist writings: cognitive$_M$ significance, cognitive$_L$ significance, and cognitive$_P$ significance. A positivist theory of metaphor is non-cognitivist in the first sense. A positivist theory of metaphor is not non-cognitivist in the second sense and neither in the last sense. To retain consistency, though, in metaphorical contexts, where

factual or literal expressions are not used to speak factually or literally, such expressions may be taken to lack cognitive_L significance (as Carnap would have it). Cognitive_L significance can be erased. But this is no impediment to positivism since it can be interpreted in a way that matches intuitive claims and experimental facts. Last, an attempt to connect the positivist metaphor theory to a historical sense of non-cognitivism via an entailment to a very specific and narrow form of psychological theory remains obscure. This isn't a defence of positivism and there is no advocating for a positivist treatment of metaphor. This is an attempt to say in what senses a positivist theory of metaphor is non-cognitivist in a fair, unbiased, and charitable manner. Whether or not a positivist theory of metaphor is viable today is, positivistically speaking, an empirical matter.

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