

SOME NOTES ON NEURATH'S SHIP AND QUINE'S SAILORS

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Abstract

This paper is intended as a set of notes on the philosophical use of metaphors, similes, analogies, and the like (Part I), the analysis of Neurath-Quine's famous nautical metaphor (Part II), and a discussion of Quine's views concerning the revisability of beliefs, common sense convictions, and the Continuity Thesis (Part III).

I

I will approach the subject of metaphor conservatively.

It is hard to draw a line between literal and non-literal uses of speech. *Literal* and *non-literal* are polar concepts that, typically, cannot be elucidated without mutual reference. Conceptual polarity makes it impossible to produce operative criteria for sorting out, empirically, literal and non-literal uses of linguistic expressions. John Austin (1962) has suggested a way of approaching the problem that does not solve it, but gives it a fresh twist. Austin draws a distinction between *serious* and *non-serious* uses of language and states that *seriousness* is a property of utterances "issued in ordinary circumstances," i.e., in circumstances in which standard conditions of sense and reference hold. 'Ordinary circumstances' can be characterized, in its turn, by presenting ideal-type examples of situations in which language is used to inform, to direct or to express something.

Non-literal uses of speech are an intricate lot. Some are conceptualized as types of actions (joking, acting [at a theater], reciting [a poem], hyperbolizing, illustrating); some are viewed as a sort of activity (swearing, insinuating, showing off); others, do not have the privilege

of a verbal identificatory label, they just get nouns (irony, sarcasm, metaphor, meiosis, analogy, simile, mockery, satire) or adjectives that, normally, help to modalize or qualify a verb that refers to some intentional event ('John says something with irony', 'Mary cannot avoid making sarcastic remarks concerning her mother-in-law', 'Neurath likes to speak metaphorically', 'Humans are prone to think about God by analogy').

I am aware that I am putting in the same bag disparate things that should be distinguished in a careful study of non-literality. This is not my task. I intend my conservative remarks to set up a scenario from which I will pick up a few items that belong to the non-literal side of the divide. I am interested in metaphor and related phenomena as analogy, simile and illustration. From now on, I will use 'metaphor' as an umbrella-word to refer to all of them.

Susan Haack (1998) has drawn a useful distinction between thinking about "the epistemology of metaphor," on the one hand, and thinking about "the metaphor of epistemology," on the other; it is a distinction between elaborating a theory of "how metaphor works" in order to explain "both its usefulness and its dangers," and to state how and why philosophers have recourse to metaphors when doing philosophy. Haack's distinction helps me to express an additional *caveat*. I am not interested in the epistemology of metaphor but in the metaphor of epistemology, in the philosophical use of metaphors for cognitive purposes.

Metaphors recur in philosophical texts. Some of them got names for standard reference: Plato's Cave, Sextus Empiricus' and Wittgenstein's Ladders, Lovejoy's Chain of Being, Fodor's Thought as language, Austin's Seminal Sun, Wittgenstein's Family resemblance. The list could be easily expanded.

I am not suggesting, of course, that in these and other possible cases, metaphors have the same format or are used for the same purposes. Obviously, when *Austin* writes,

In the history of human inquiry, philosophy has the place of the initial central sun, seminal and tumultuous: from time to time it throws off some portion of itself to take station as a science, a planet, cool and

well regulated, progressing steadily towards a distant final state (1961),

he is venting his literary talent (he enjoys doing so, obviously) to produce a suggestive figure about a state of affairs that can be described, easily, in literal terms: individual sciences depart again and again from philosophy when they reach an autonomous status, both methodologically and ontologically.

However, metaphor can play a different and more attractive role. Consider the following examples *Kant* equates pure reason to a tribunal, "the true tribunal for all disputes of pure reason," that can secure "the peace of a legal order... in which our disputes have to be conducted solely by the recognized methods of *legal action*." Otherwise, reason is in a "state of nature... and can establish and secure its assertions only through *war*." *Kant* adds,

In [this] state, the disputes are ended by a victory to which both sides lay claim, and which is generally followed by merely a temporary armistice, arranged by a mediating authority; in the [first state] disputes are ended, by a judicial sentence which, as it strikes at the very root of the conflicts, effectively secures eternal peace. (*Kant*, *KRV* B779.)

Peirce, writing on thinking and the process of attaining belief, wants to single out two "sorts of elements of consciousness" and, to that effect, he appeals to what he calls "an illustration." In a piece of music there are notes, and "there is the air." Air consists "in an orderliness on the succession of sounds which strikes the ear at different times." *Peirce's* point is that "we certainly perceive the air by hearing the separate notes"; hence we can distinguish the objects of which we are *immediately* conscious of and those of which we are conscious by some other means. *Peirce*, then, proceeds:

Thought is a thread of melody running through the succession of our sensations, just as a piece of music may be written in parts, each part having its own air, so various systems of relationships of succession subsist together between the same sensations. And what, then, is a belief? It is the demi-cadence, which closes a musical phrase in the symphony of our intellectual life. (*Peirce* 1955.)

James' complaints against the idea, so dear to traditional psychologists, of taking images as discrete "portions of our mind" that exist in nature. Traditional psychologists, says James, are like persons that can only conceive of a river "as composed of a certain number of buckets, spoonfuls, drops or jugs of water." True, they are "contained" in the river stream, but the stream of the river glides among them: the "free stream of consciousness is what psychologists frequently overlook." (1892).

Neurath fights against some hard-minded Viennese fellow-philosophers that believe "in the fiction of an ideal language constructed out of pure atomic sentences," that think it possible to draw a sharp line between the physicalistic ordinary language and the physicalistic language of advanced science, and that posit *protokollsätze*. Famously, Neurath writes:

There is no way of taking conclusively established pure protocol sentences as the starting point of the sciences. No tabula rasa exists. We are like sailors who must rebuilt their ships on the open sea, never able to dismantle it in dry-dock and to reconstruct it there out of the best materials. Only the metaphysical elements can be allowed to banish without trace. Vague linguistic considerations always remain in one way or another as components of the ship. If vagueness is diminished at one point, it may well be increased at another. (Neurath 1932/33.)

He adds,

*The transformations of the sciences are affected by the discarding of sentences utilized in a previous historical period, and, frequently, their replacement by others. Sometimes the same form of words is retained, but their definitions are changed. Every law and every physicalistic sentence or one of its sub-sentences is subjected to such change. And the same holds for protocol sentence. No sentence enjoys the *noli me tangere* which Carnap ordains for protocol sentences. (Neurath 1932/33.)*

In a first version of the metaphor (1921), Neurath introduced another famous figure: the metaphor of a set of sentences and the corre-

sponding set of beliefs, as making up a web; hence, *the web of beliefs*.

By the way, it is interesting to note the persistence in philosophy of aquatic metaphors, from Heraclitus' swimming proposal to Neurath's "rebuilding the ship on the open sea," from James stream to Wittgenstein's point about "the river-bed of thoughts" and the "movement of waters;" and also from Neurath's isolated sailing affair to Putnam's imperial fleet of "scientific" ships full of interacting sailors – an influence, perhaps, of our Darwinian aquatic ancestry or of a Freudian primeval existence in amniotic liquid?

Well, in advancing their metaphors, Kant, Peirce, James and Neurath were not interested in exercising their literary gifts (as Austin was interested in), nor they were evading the difficulties of a strict statement of their views. They were making some sort of interesting theoretical point. What point? and what sort of theoretical interest?

Let me put aside what I would call *pan-metaphorical views* (dressed up, say, *à la* Nietzsche, *à la* Dennett, or *à la* Lakoff), and let me keep presupposing, *for the sake of the argument*, that it is possible to draw a *more or less* clear dividing line between literal and non-literal (metaphorical) uses of speech. The questions become, what theoretical service Kant, Peirce, James and Neurath think their metaphors provide? Did they succeed in advancing them?

One might say, Kant, Peirce, James and Neurath are paying a courtesy to their readers in order to help them to understand, to figure out, what they are really after when they write in a literal, serious, mood; or they are using their metaphors as speculative instruments, or as "sketch maps for the exploratory phase of inquiry;" or their metaphors are part and parcel of their theories, they are, say, "theory-constitutive."

I owe these distinctions to Haack (1998). I agree with her that metaphors play at times a "courtesy role." I also agree that metaphors may play an "exploratory role" (actually, she tells an interesting autobiographic story about foundherentism and the metaphor of intersecting entries in a crossword to help thinking about "the way a person's beliefs about the world support one another"); but I think that in some cases metaphors are speculative instruments that fulfill a more important function. Haack says that taking them as theory-constitutive

would be “overstating it a bit.” I agree. I will say, instead, that they are *theory-expressive*.

I have a test to establish when a metaphorical locution functions that way. I call it “The Paraphrasability Test.” Naively put, it amounts to this. Notice how easy was to render Austin’s metaphor into a literal format. However, when one tries to do the same with Kant’s, Peirce’s, James’ and Neurath’s metaphors, one finds it difficult to paraphrase them straight in order to put them into a literal format; the reason is, I think, that their theories involve a view of the world that fits nicely with what their metaphors tell. In that case, I say that the metaphor does not pass the paraphrasability test. The test provides a criterion for saying that their metaphors are theory-expressive: Kant’s conception of pure reason *is* legal, judicial; Peirce *really has it* that thinking and belief *are* musical; James also has it that conscience *is* a stream of water; and that Neurath’s conception of human beings as epistemic subjects, *is* nautical. Their metaphors are not mere accretions or ornaments of their theories, but expressions of the way they *actually* conceptualized their subject matters.

Suppose I am right. One consequence that follows is this. If in elaborating the metaphor we discover that there are some respects that are uncongenial with the theoretical job it is supposed to do, we can have a good argument against the theory itself or, at least, against those aspects of the theory particularly related to the metaphor. Keep this comment in mind.

II

Quine was in love, metaphorically speaking of course, with Neurath’s metaphors of the sailing sailors and the web of beliefs. He entitled *The Web of Belief* (1970) an introductory book to present his epistemological views. Years after (1991), commenting on the elaboration of his views, he says that the idea that his metaphor of the web of beliefs “needed unpacking, ...was largely [his] concern in the ten years between ‘Two dogmas’ and *Word and Object*.” He thinks, moreover, that the web of belief metaphor is of a piece with the nautical metaphor; of

which he makes a profuse use. What he calls Neurath's figure or image or way, is mentioned, referred to or explained in many places: "Identity, ostention and hypostasis" (1953), *Word and Object* (1961), "Mental entities" (1966), "Answer to Grover Maxwell" (1966), "Natural kinds" (1969), "Speaking of objects" (1969), "Five milestones of empiricism" (1981). I do not claim that the list is exhaustive.

In what follows, I will restrict my discussion to two questions concerning Quine's use of Neurath's sailing boat metaphor, what the metaphor is supposed to air, to expose?, and, what are the limits of the possible omni-revisability of beliefs that it seems to imply?. It goes without saying that, as I see it, Quine's use of the nautical metaphor does not pass the paraphrasability test: it is theory-expressive.

Notice that Neurath's nautical metaphor is motivated by and intends to be an answer to several related, but different issues, viz.,

1. the construction of an ideal language out of pure atomic sentences;
2. whether scientific theories are grounded and possibly reduced to basic sentences, protocol sentences, whose content is experiential, certain, and non-revisable;
3. the continuity or discontinuity of the ordinary physicalist language and the scientific physicalist language; hence, the relationship between the ordinary and the scientific;
4. the possible transformation of the language of physicalism at basic and non basic levels;
5. the extension and limits of the revisability of sentences and beliefs; and
6. the fate of metaphysical sentences and abstract entities;

For obvious reason, items 1 and, in part, 2 are not Quine's concern. What about the rest?

Quine appeals to Neurath's metaphor when arguing for four different, though related issues.

Naturalism. Quine reads Neurath's 'we' ("...we are alike sailors...") as 'we philosophers' (cf. "Identity, ostention and hypostasis"), and also as 'we philosophers and scientists'. Quine's point is that "Philosophy

[philosophers] and science [scientists] are on one and the same boat” (cf. “Reply to Grover Maxwell,” *Word & Object*). It follows; then, that no real distinction can be drawn between the disciplines and their practitioners; there is a continuity between them. The Continuity Thesis is the gist of Quine’s naturalism. (See Haack 1996, for a foundhrentist reading).

Standards used to appraise conceptual change. Improving our conceptual scheme, says Quine, is like rebuilding our boat. “...we cannot detached ourselves from it and compare it with an non-conceptualized reality... Our standard for appraising basic changes of our conceptual scheme must be, not a realistic standard of correspondence to reality, but a pragmatic standard.” (cf. “Identity, ostention and hypostasis”).

Mental entities and circularity. To posit a subjective curtain (say, sense-data) *vis-à-vis* reality, shows that we are under the spell of an old philosophical myth. Neurath’s figure about philosophy and science being on the same boat, help to realize that some problems are solved when perception is viewed as a causal transaction between external bodies and speaking people (cf. “Reply to Grover Maxwell”). Furthermore, “to view physical stimulation rather than the sense datum as the end point of scientific evidence would be to make physical science rest on physical evidence... with Neurath, we accept the circularity... the science of science is science. (cf. “On mental entities”).

The three issues are extrapolations from Neurath’s way of interpreting the nautical metaphor. Obviously, the issues are Quinean-related, say, but they enjoy in themselves a certain degree of conceptual independence. For instance, one may reject the idea of a “subjective curtain” *à la* Davidson, or one may adopt pragmatic standards to appraise conceptual change *à la* C. I. Lewis, and refuse to be a naturalist *à la* Quine. Obviously, that is not so for Quine. That is what I have in mind when I say that the three issues have the property of being Quinean-related.

Neurath and Quine made use of the nautical metaphor to fight against positivism. Quine’s version may be generalized against some major views: non-naturalism, foundationalism (in general), and those that grant sensations a peculiar epistemological role.

III

Let me comment now on the issue of *revisability* and the Continuity Thesis.

There is a tendency to read Neurath and Quine as arguing in favor of an unlimited revisability of our beliefs, viz., revisability *in toto*. Standard examples concerning changes of scientific theories and logical principles (the excluded middle, intuitionism, and all that), on the one hand, and recent discussions about the so-called Theory-theory of folklores, on the other, help to give the tendency a veridical twist.

'Revisability *in toto*' is ambiguous between 'revisability of all our beliefs at the same time' and 'revisability of each and every belief at some time'. Neurath and Quine, sensibly, take for granted the second sense. Neurath states, "Every law and every physicalistic sentence or one of its sub-sentences is subjected to such change." The same holds for protocol sentences. No one enjoys a Carnapian *noli me tangere*, as he points out. Quine does not put explicit restrictions on the revision of our conceptual scheme. Both admit, however, that in order to produce a change or a revision, we must count on something stable. Neurath says: "Vague linguistic considerations always remain in one way or another as components of the ship. If vagueness is diminish at one point, it may well be increased at another." Quine assumes a more explicit, though equivocal, commitment. Talking about the way linguistic expressions are "keyed" to experience, he says that we get the system, in its main lines, "from our forebears," and adds,

As scientists we accept provisionally our heritage from the dim past, with intermediate revisions by our more recent forebears; and then we continue to warp and revise. As Neurath has said, we are in the position of a mariner who must rebuilt his ship plank by plank while continuing to stay afloat on the open sea. How do we decide on such retentions and revisions? ...how do we decide, apropos the real world, what things there are? ...by considerations of simplicity plus pragmatic guess as to how the overall system will continue to work in connection with experience. (Quine 1966.)

According to Quine, we *posit* molecules and electrons, and also

tables and sheep. From an epistemological point of view, the difference between them is only in point of their antiquity, the specific purpose, and permanence.

Because the notion of external macroscopic objects is so fundamental both to the origins of language and to the continued learning of language, we may be pretty sure that it is here to stay, though electrons and other more hypothetical entities may, with the continuous revisions of science, come and go. (Quine 1966.)

In a first reading, “being here to stay” is not enough guarantee for permanence. Being posits, nothing prevents that one day “the notion of external macroscopic objects” may go and with it, macroscopic objects. Is this a sensible thesis? Is it really implied by the nautical metaphor? Or is Quine implicitly granting a peculiar permanence due to the crucial relationship between the notion of macroscopic objects and the origins and learning of language? Let me expand briefly on this.

According to the metaphor, Quine’s sailors have to keep the ship afloat or, better, they have to make sure that the ship keeps navigating. To that effect they rebuilt it plank by plank. There is no restriction on the planks they are supposed to change. Do they have to abide to additional restrictions, other than keeping, contingently, the ship stable structure? My answer is, yes. For instance, they cannot produce changes that could affect the general conditions that make the ship (any ship) what it is. They have to abide, say, to Archimedes and Pascal principles about flotation, to keep a structure over the flotation line, to see that the weight of the keel is appropriate, to honor the relation between length and breath, etc. Notice that in Neurath’s and Quine’s versions of the metaphor, these conditions are taken for granted. They are right in doing so because in normal circumstances, there is no need of making them explicit. After all, we are sailors in a ship that keeps navigating. But, suppose that in rebuilding the ship we decide not to pay attention to them. Is that a possible move, if we want to keep the ship afloat plus its standard capability to navigate? My answer is, no. To rebuild the ship by changing its planks is to substitute one for another. To rebuild the ship by altering the principles of

navigability is to alter the conditions that make navigability possible. These are different senses of 'rebuilding the ship'. In other words, revisability reaches a limit when the conditions that make something possible are ignored.

When applied to us, epistemic subjects, the consequence of our elaboration of the metaphor comes to this. We are in a constant process of rebuilding our doxastic system. In this sense, we are like Neurath's and Quine's sailors, with a proviso: we have also to abide, as the sailors, to the general conditions that make it possible, say, that our cognitive ship is able to navigate in the seas of reality. For us, human epistemic beings, these general conditions are a set of *basic convictions* concerning the world and ourselves. They are not mere posits, held for the sake of mere pragmatic reasons, but basic features that evolution has granted us. The notion of macroscopic object is "going to stay" not because of a *hypothetical* character endowed with a degree of permanence higher than that of other transient posits, but because, for us, the world is composed of macroscopic objects. No metaphysical thesis is hidden in this statement. That there are macroscopic objects is a basic *commonsense conviction* (there are others, of course). Change it (them) and our cognitive ship will sink or it will turn into a different, unrecognizable, device. Change it (them) and we will change as the epistemic subjects we are, becoming unrecognizable in an awkward world.

I have swelled the roll of sailors. The Quinean epistemological crew includes scientists and philosophers, but I have added plain human beings. In other words, I am reading the Continuity Thesis ("...philosophers and scientists are on the same boat...") in an extended way: "we philosophers, scientists and plain human beings are on the same boat." That means that, essentially, the extended crew is involved in similar epistemological work, facing similar hardships. In other words, the extended Quinean crew is composed by a group of *theoreticians*, naive or sophisticated, that "warp and revise" their beliefs according to their needs and interests.

Quine is one of the founding fathers of the so-called "Theory-theory," so fashionable, these days, among philosophers of mind and developmental psychologists. According to the Theory-theory we are

in possession of a theoretical framework to approach other human beings and, in general, the world. Notice that Quine's move assimilating the theoretical status of electrons, macroscopic objects and sheep, is a consequence of holding the Theory-theory .

I think there are good arguments to question the Theory-theory model. (Rabossi 1999). One of them comes from empirical findings showing that the aptitude of recognizing macroscopic objects, as discrete entities, as well as spatial location, are innate: they are operative aptitudes in newly born human infants. The list of innate mechanisms of that sort is open to further empirical findings. What is important concerning us is that if innate, they are not subjected to revision. Furthermore, the aptitudes that develop in the forthcoming years (take as an instance Perner's false belief test) are also natural developments "written," somehow, innately, plus maturation and external stimulation. It goes without saying that the corresponding notions and beliefs are not revisable either.

Quine does not ignore these findings. In Chapter VIII of *From Stimulus to Science* (1989), empathy and the perception of non-verbally expressed thinking are granted the condition of being "instinctive." Quine says that child psychologists have shown that a newly born infant responds to the facial expression of an adult to the point of imitating it through the unlearned flexion of the appropriate muscles. He adds that the perception of non-verbally expressed thinking is, up to a certain point, older than language, and that empathy plays a role that favors the production of the first observation sentences of the child. Without articulating it, the child perceives that the person who talks perceives the object or the event she is talking about. When the child uses the sentence there is, again, a perceiving a perceiving, in the reverse way. 'Perceives that...' is the primitive expression for the attribution of thinking processes.

It is interesting, though, to evaluate how far Quine's departure from the strict behaviorism he embraced all his life, has an effect on his thesis concerning the mental. As to the problem of revisability, some consequences are these.

First, the very possibility of observational sentences presuppose, on the part of the child, not only empathy but the aptitude to recognize

macroscopic objects. Second, empathy is selective: it only has a role when a sub-class of entities with intentional capacity, persons, are involved and recognized as such. Third, the aptitude of iterating perceptions (perceiving a perceiving), is an extraordinary cognitive feat that happens, normally, in two to three years old children: it is the starting point of aptitude to produce of meta-representations. These innate aptitudes are the cognitive counterpart of what I have called basic commonsense convictions. My argument against the revisability *in toto* is based on their existence.

It goes without saying that my disagreement with Quine's thesis does not affect my partisan enthusiasm for a cautious version of metaphilosophical naturalism, nor does it imply the attribution of some sort of queer philosophical status to what I have called commonsense convictions.

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Resumo

Este artigo pretende ser um conjunto de notas sobre o uso filosófico de metáforas, símiles, analogias, e coisas semelhantes (Parte I), a análise da famosa metáfora náutica de Neurath e Quine (Parte II), e uma discussão das concepções de Quine a respeito da revisibilidade das crenças, das convicções de senso comum, e da Tese de Continuidade (Parte III).

Palavras-chave

Metáfora, senso comum, crença, mudança conceitual, evolução, convicções inatas.

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