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Variation

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INVESTIGATING THE SEMANTICS-SEMIOTICS
INTERFACE THROUGH TEXTUAL ANALYSIS

Rennie Gonsalves
Brooklyn College

According to Emile Benveniste, 'language combines two distinct modes of meaning which we designate on the one hand as the *semiotic* mode, and on the other [as] the *semantic* mode' (1969:129). For Benveniste, an understanding of these two modes of meaning is crucial to an understanding of the structure of language, which he describes at some length in another essay entitled 'The Levels of Linguistic Analysis' (1971). 'Semiotics,' he says, 'designates the mode of signification proper to the linguistic *sign* that establishes it as a unit' (1969:129). Furthermore, according to Benveniste, 'the only question to which a sign gives rise... is that of existence [which] is answered yes or no: *tree–song–to wash*... and not **tro–*rong–*dawsh*' (*ibid*:130). On the other hand:

> With the semantic, we enter into the specific mode of meaning which is generated by discourse. The problem raised here is that of language as producer of messages. However, the message... is not the sum of many signs... on the contrary it is meaning (*l'intente*), globally conceived, that is actualized and divided into specific signs, the *words*. In the second place, semantics takes over the majority of referents, while semiotics is in principle cut off and independent of all reference. [The] semantic order becomes identified with the world of enunciation and with the universe of discourse. (*ibid*)

It seems accurate to paraphrase Benveniste as suggesting that for language the semiotic mode is concerned with, in Saussure's terms, words (as 'sound-images') and their associated concepts in the mind, signifiers and their signifieds (1959:66–67), or, in Frege's terms, words and their associated senses. But unlike Frege, who suggested that the sense of a word is its mode of referring (1980:57), thus claiming that sense determines reference, Benveniste suggests plainly that 'semiotics is in principle cut off and independent of all reference' (2003:130). Curiously, something exactly like this independence of sense from reference is what Jerrold J. Katz's (2004) autonomous sense theory (in his *Sense, Reference, and the Philosophy of Language*) also suggests. That is, the independence of the theory of sense from the theory of reference in Katz's theory of meaning seems to correspond very closely to what Benveniste suggests concerning the independence of semiotics from all reference.

One important consequence of this separation of sense from reference is that it helps to solve certain problems concerning meaning-related concepts like analyticity debated in the philosophy of language. For example, according to Katz it protects analyticity from Putnam's thought problem of cats really being robot spy devices (Katz 2004:128–31). Briefly,

Putnam's thought problem asks the question: What happens to the analyticity of the sentence 'Cats are animals' if we find out that cats are really robot spy devices? Analytic sentences are supposed to be true on the basis of word meaning alone, but Putnam's thought problem suggests that facts about the world could change their truth value. Katz's response is basically that there is only a problem here if we insist on Frege's notion of sense as completely determining reference. However, if, as Katz proposes, sense and reference are in separate domains, with sense mediating rather than determining reference, then:

> The analyticity of ['Cats are animals'] depends on whether or not the sense properties and relations of 'cat' remain the same after we discover that the referents of our applications of it have been automata. The question whether or not the reference remains the same is beside the point. (2004:131)

In his *Foundations of Language*, Ray Jackendoff, for somewhat different reasons, describes a model of grammar that not only treats various components separately, but also sees a need for a bit of freedom for the way in which these components interface with each other:

> We should not expect an isomorphism: syntax should not (alone) determine semantics, as in mainstream generative grammar and many versions of formal semantics; but neither should semantics entirely determine syntax, as often asserted in cognitive grammar. It is in the character of interfaces everywhere in the f-mind to be 'dirty'; there is no reason to expect more here. (2003:427–28)

And of particular relevance to what we have so far chosen, following Benveniste, to call semiotics (sense) and semantics (reference), Jackendoff's grammar makes use of two broadly corresponding distinct 'tiers' of meaning by analogy to the use of tiers in phonology: a descriptive tier containing aspects of the conceptual structures of sentences, and a referential tier in which aspects of reference and referential dependencies are represented. Jackendoff uses his conceptual semantics to analyze several different kinds of sentences on the descriptive, referential, and information structure tiers before going on to briefly sketch features of longer discourses, such as narratives. What I would like to do here, then, is to make use of Jackendoff's analytical approach to investigate the semiotic-semantic interface by looking at some rough representations of several crucial sentences from a 'real world' text, a narrative, in order to illustrate the ways in which these two 'modes of meaning' interact, and to offer some suggestions as to reasons for treating them separately.

The text I will use for analysis is a fairly substantial narrative. Since space does not permit us to analyze the conceptual and referential details of every sentence in this text, and since, further, what we need to show here does not require such a lengthy analysis, we will use Roman Jakobson's functions of language to focus our attention on one of the sentences of the text that stands out because of its emotional salience for the teller; we will then track down the referential connections between this sentence and other sentences in the text in order to investigate the nature of the semiotic-semantic interface.

1. THE ANALYTICAL TOOLS. Jakobson (1960) first sketches the six elements of the message situation: the addresser, the message, the addressee, the context, the contact, and the code. When the message focuses on or draws attention to a particular element of the communicative situation, the addresser exercises one of the communicative functions: the emotive, the poetic, the conative, the referential, the phatic, and the metalingual functions. Thus, when the sentence focuses on the addresser, the emotive function is exercised, common, for example, in lyrical poetry; focus on the message itself gives us the poetic function, as in any creative use of language; focus on the addressee, perhaps in a sentence that is used to try to persuade the addressee into believing or doing something, gives us the conative function; focus on the context, especially when we want to explain or describe a situation or circumstance, gives us the referential function; focus on making contact between addresser and addressee, as in greetings, gives us the phatic function; and finally, focus on the code, as in drawing attention to the grammatical aspects of a message, such as its meaning, gives us the metalingual function. Of course, combinations of these functions may be engaged almost simultaneously. For example, at the beginning of Marc Anthony's famous speech we have both the phatic and the conative functions brought into play: 'Friends, Romans, countrymen, lend me your ears.' However, according to Jakobson, a particular discourse will often focus throughout on one of these functions, while occasionally making use of others. Thus, Marc Anthony's speech as a whole, perhaps because of its political nature, is primarily conative in its focus on garnering the support of the Roman masses. Also of interest to us in the following textual analysis, the poetic function, according to Jakobson, 'by promoting the palpability of signs, deepens the fundamental dichotomy of signs and objects' (*ibid*: 112).

Before going on to our text, we will look briefly here at the representation of a sentence on Jackendoff's descriptive tier (2002:6):

(1)   Conceptual/semantic structure of 'the little star's beside a big star':
       a. [[is   ([the little star],   [beside [a big star]])]]

$$\left[_{\text{Situation}}^{\text{PRES}} \left[_{\text{State}}^{\text{BE}} \left(\left[_{\text{Object}}^{[\text{TYPE:STAR}], \text{DEF}, [}{\atop_{\text{Property}}^{\text{LITTLE}}]} \right], \right.\right.\right.$$

$$\left.\left.\left.\left[_{\text{Place}}^{\text{BESIDE}} \left[_{\text{Object}}^{[\text{TYPE:STAR}], \text{INDEF}, [}{\atop_{\text{Property}}^{\text{BIG}}]} \right] \right] \right) \right] \right]$$

This representation of the conceptual structure of this sentence shows us that here the verb *be* is a two place predicate with one argument place filled by an object, some definite star with the property of being little, and the other argument place filled with the concept of a location, namely beside some indefinite, big star. Already present on this descriptive tier of the representation of the meaning of this sentence are elements that will get interpreted further at the referential tier: in particular, the two objects and their relative positions.

2. THE TEXT. We will move on now quickly to a brief analysis of our text. To give a little background, it is a story told by a Carib woman who had spent fifty years working as a midwife on the island of Saint Vincent in the West Indies. Saint Vincent is a very small

(about 112 square miles) volcanic island with an active volcano which erupted very violently in 1902, when it caused the deaths of some 2,000 people and devastated the northern one-third of the island where the volcano is located. The Caribs who are now left on Saint Vincent are the remnants (our storyteller used the more poetic word 'crumbs') of the original inhabitants of the island, who fought determinedly against British occupation during the last decade or so of the eighteenth century, but then were rounded up and shipped off to the tiny island of Roatan just off what is now Belize, where their descendants make up a still identifiable Carib community. The Caribs, who came to Saint Vincent some 200 years before Columbus 'discovered' the islands of the West Indies, were skilled in canoe-building, and came up the chain of islands in their canoes from their original homes on the South American mainland. Our storyteller, Mrs. Mabel Hooper, was ninety years old when she was interviewed in 1996, and her story is what her grandfather told her about the 1902 eruption of La Soufriere, the volcanic mountain in Saint Vincent.

I have divided the text into five sections for ease of reference. In addition, these five sections each seem concerned with a distinct stage of the narrative. Here is section 1:

1. Hooper: [S1] He tell me when the Soufre goin to erupt, dey started to see lots of small ting… [S2] You know , you know dose boys dus mek some little boat on the sea here? [S3] Yes… lots of little boats sailing out from Morne Ron goin out. [S4] He doan know whey dey goin.

[S5] Small boat with white sail. [S6] He say he callin the people a dem and showin dem because he live more pon the hill to the beach on Morne Ron.[1] [S7] And when he call the others and dey come, dey lookin at de little boats with white sail early morning and dey goin. [S8] Dey doan see when dey come back. [S9] Late evenin dey will see dem again goin. [S10] Dey doan know where dey went.

This section seems to be devoted to the mysterious appearance of 'small boats with white sail' just prior to the eruption. As such, it sets the stage for the eruption, with the suggestion that the 'small boat with white sail' were harbingers of the eruption. Apart from S2, which interrupts the 'story line' to ask a question of the addressee and thus is conative, the sentences here are dominantly referential, being devoted to describing the context (for the notion of the 'story line' in narrative, see Longacre 2006; it might be that most of the sentences in this story involve verbs using the unmarked Saint Vincent Creole version of the past tense—undoubtedly an example of variation from the prevailing tendency of the storyline to be expressed in a manner that is more obviously in the past tense).

Section 2 presents an explanation of these otherwise mysterious boats, introducing the idea that the people on the boats actually lived 'in the crater' (pronounced by Mrs. Hooper the same as the word 'creator').

2. Hooper: [S11] And it wasn't a month after, the volcano start. [S12] So the bigger older people now give in, dose are the people who were livin in the crater. [S13] So dey sailin out dey vessel goin. [S14] **Dat is what dey told me too.** [S15] Because dey

doan know whey dey come from. [s16] White, white boat and sail. [s17] Dey ain seein people, but they see the boat.

Again the sentences are all referential with the notable exception of s14 (here noted in bold), which refers directly to the teller, and so qualifies as an exercise of the emotive or expressive function.

Section 3 seems devoted to explaining how Mrs. Hooper's grandfather and the people around him escaped from the area near the volcano as the eruption began:

3. Hooper: [s18] Well dey fine out that the Soufre was goin to erupt. [s19] And my... my grandfather told me is ... and how all dey did get to move out from the Soufre

[s20] He say well we see it start to smoke, and we hear rollin, and we feel like the earth shakin. [s21] And everybody pick up, and dey have boat, and dey leave out Morne Ron. [s22] Dey ain go so. [s23] Dey come dis way. [s24] Dey go a in town. [s25] An de Soufre sweep down de country.

[s26] He say dey have five days out, and dey still was feelin shakin.

The sentences in this section are again mostly referential. s25, however, illustrating the poetic function, contains a metaphor of the lava flows from the Soufrierre volcano as a giant broom that swept the mountains of the island. The suggestion of agency in the metaphor is especially notable, and might be a clue to the larger or deeper meaning of the text.

Section 4 is concerned with the tentative moves at investigating the post-eruption situation, and section 5 talks about the courageous return of the people to their life on the land around the volcano.

4. [s27] Some a dem in boat come up where dey can see what is happening on the land.

[s28] But dey say a little puff a smoke was comin out from the crater. [s29] But de crater had plop down. [s30] Dey say it plop down, but jus a circle leave down dey, with a little water.

[s31] And when nothing coming, yet again nothing happenin, nothing happenin, well the bigger men dem now start to stroll to see what can be done and what is happenin.

[s32] And dey go up. [s33] Dey get up de road, and dey get up pon de hill. [s34] He say dey doan see no water down dey. [s35] Jus de empty bottom. [s36] As you haul out a foundation and you see de naked dirt.

5. [s37] From dat dey began to make back dey cultivation. [s38] And dey go back
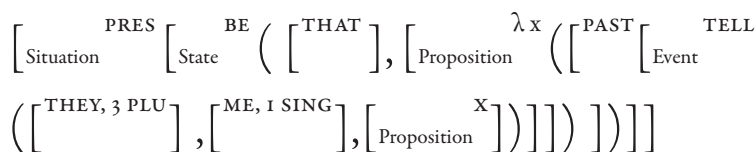
dey. [s39] I doan remember what he tel me...... de government give dem land around in de area. [s40] And some a dem build dey little house, and dey still go back dey, and build dey, and stay dey, and work de land.

3. THE ANALYSIS. Now, with respect to the semiotic mode of meaning, the dominant recurring concepts that seem to filter up throughout the story are the concepts associated with the volcano, the boats, the sea, the land, and the people. These five terms have a strong presence, either explicitly or implicitly, in each of the five marked out parts of the story. As we have seen, the Caribs were skillful boat-builders, and the emphasis, especially towards the end, on the land and the people hints at elements in the tragic past of the Caribs of Saint Vincent.

Now beyond the general hints at the Carib past mentioned earlier, the heart of the story seems to reveal a more specific connection which the storyteller almost shyly hints at in sentence s14 in our section 2 of the story, 'dat is what dey tole me too.' This is the only sentence in the narrative that carries the expressive function, with the 'me' indicating its focus on the narrator. Let us look first at how it gets represented on the descriptive tier. We will need to work out the reference of 'that' by looking at earlier sentences in the narrative. The following representation of the semantic/conceptual structure of this sentence is a very rough, tentative attempt to render the meaning of this sentence in a manner similar to that found in (1) above, Jackendoff's (2002) representation of the semantic/conceptual structure of 'the little star is beside a big star.'

(2)   Conceptual/semantic structure of 'dat is what dey told me too':
       a. [is ([that] , [what [told ([they] , [too [me]])]])]

$$\begin{bmatrix} \text{PRES} \\ \text{Situation} \end{bmatrix} \begin{bmatrix} \text{BE} \\ \text{State} \end{bmatrix} \left(\begin{bmatrix} \text{THAT} \\ \ \end{bmatrix} \right], \begin{bmatrix} \lambda x \\ \text{Proposition} \end{bmatrix} \left(\begin{bmatrix} \text{PAST} \\ \text{Event} \end{bmatrix} \begin{bmatrix} \text{TELL} \\ \ \end{bmatrix} \right.$$

$$\left(\begin{bmatrix} \text{THEY, 3 PLU} \\ \ \end{bmatrix} , \begin{bmatrix} \text{ME, I SING} \\ \ \end{bmatrix}, \begin{bmatrix} x \\ \text{Proposition} \end{bmatrix} \right)]]\Big)])]]$$

Because of the obvious difficulty of reading such labeled bracket diagrams, Jackendoff also uses corresponding tree diagrams; **Figure 1** is an attempt to represent (2) in this tree-diagram format. In general, the double lines are attached to functions, while the single lines are attached to arguments; THAT, THEY, ME, and X can be thought of as zero argument functions. The four pronominal expressions in the sentence—*that*, *what*, *they* and *me*—are represented here simply as their corresponding forms, together with information about person and number, except that the operation of the relative pronoun *what* is represented using lambda extraction following Jackendoff's treatment of a similar relative clause (2002:384–87). Now, if we look at the context of this sentence in part 2 of our story, the 'dat' of sentence (2) would be taken as referring back to the meaning of the sentence 'those are the people who were living in de crater,' a portion of sentence s12. **Figure 2** is an attempt to render the representation of this sentence on the descriptive tier.

Now at this point, if we try to locate the reference or antecedent of 'those' of the sentence in s12, we encounter the problem that there is no good candidate constituent in any of
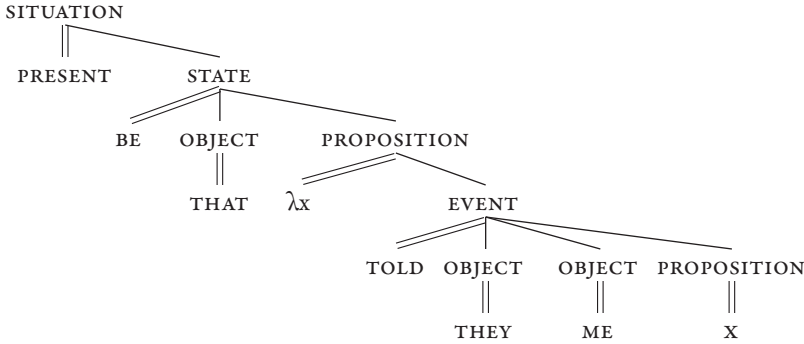
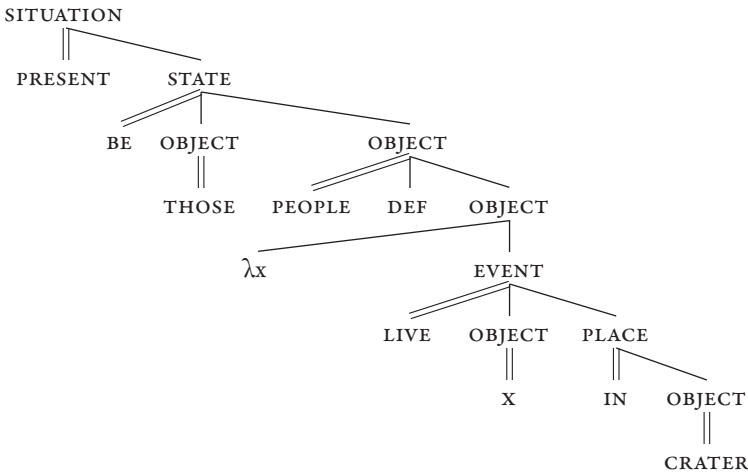**Figure 1.** *The conceptual structure of* that is what they told me too.

Figure 2. *The conceptual structure of* those are the people who were living in the crater.

the sentences before this for these people who lived in the crater. Clearly, what is intended is that the people who sailed the 'little boats with white sails' are the people referred to by 'dose' in S12. What we might suggest here, consistent with Jackendoff's own analysis in similar circumstances, is that the lexical representation of the noun 'boats' or the verb 'sail 'will have in what James Pustejovsky refers to as their qualia structure information that will specify that people are involved in sailing boats (Jackendoff 2002:369–73). If, for example, we consider Pustejovsky's representation of one sense of the verb *drive*, we see something like the following (1995:114):

Drive

EVENTSTR $= [\, E_1 = e_1\text{: process, } E_2 = e_2\text{: process, ...}\,]$

ARGSTR $= [\, \text{ARG1} = x\text{:human, ARG2}=y\text{:vehicle}\,]$

QUALIA $= [\, \text{FORMAL} = \text{move}(e_2,y), \text{AGENTIVE} = \text{drive\_act}(e_1,x,y)\,]$

It thus seems quite reasonable to suggest the following, then, as at least part of the representation of a closely corresponding sense of the verb *sail*, the one that seems to be used in our narrative text:

> **Sail**
> EVENTSTR = [E_1 = e_1: process, E_2 = e_2: process, ...]
> ARGSTR   = [ARG1 = x:human, ARG2=y:boat]
> QUALIA   = [FORMAL = move(e_2,y), AGENTIVE = sail_act(e_1,x,y)]

In any event, what is clear from our text is that referential pronouns can, as it were, look inside of the qualia structure of words to secure reference. Another way to look at the referential relations here is to say that a referential claim about the act of sailing entails a referential claim about the existence of boats and people sailing them, and the latter then becomes the antecedent of 'dose' in S12.

Such a referential dependency relationship in which a non-constituent referentially licenses a subsequent constituent suggests that the relationship between the semiotic or sense structure of words, and their semantic or referential structure is a complex one that probably requires that these two structures be represented on distinct levels of analysis. In addition, the relationship between these levels, their interface rules, must function, as Jackendoff suggests, with a certain degree of freedom. Perhaps, then, what Putnam's thought problem should really drive home to us is that the human imagination requires just such a loose connection between the conceptual structures of sentences and their referential relations to the world. After all, we have no problems imagining the counterfactual circumstance that Putnam's thought problem suggests. This same conclusion as to the need for a loose connection between sense and reference can be drawn from our narrative text.

4. THE TEXT AND THE WORLD. I believe we can find a real-world suggestion of the identity of 'the people who lived in the crater' in archaeological evidence in an area within a few miles of Rose Bank, where our storyteller lived. In a fascinating article about some interesting archaeological features of this area, Claudius Fergus discusses the significance of the petroglyphs or rock carvings 'atop the Chateaubelair/Petit Bordel promontory':

> The worldview of the native peoples of the Caribbean was conditioned by aspects of the macro-environment, alien to their ancestral homes in the South American mainland. The principal new forces they encountered were hurricanes and volcanoes, which confronted them from time to time with spectacles of awesome, destructive power... To these forces of nature their shamans successfully engineered new cosmogony and cosmologies, in which sea and volcano featured prominently. (2003)

Fergus goes on to suggest that the Amerindian petroglyphs of Petit Bordel might have been sites of rituals designed to 'appease the gods who dwell in the bowels of the volcano,' and then writes about Yocahu, the Arawacan God of the volcano, suggesting that:

to locate the home of their creator god in the hellhole of a crater is a most powerful cosmological problematic [*sic*]. It definitely speaks to the overarching importance of the volcano in the lives of these culture groups, and of native peoples in the Lesser Antilles on a whole. (Fergus 2003)

But how could people who, according to our storyteller, were able to 'stroll' up to the top of the volcano shortly after its eruption and look deep into its depths and see nothing there, not even a drop of water, cling to a belief in such a god of the volcano if the facts of the world as they saw it rigidly determined the conceptual structures of their beliefs? Well, of course: Yocahu and his entourage had presciently sailed away in their little boats with white sails long before the deadly eruption of La Soufriere.

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[1] Morne Ronde is an area located on the leeward side of the island, less than four kilometers from the crater of La Soufriere.

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