12. THE SEMANTIC GRAPH

SUMMARY

A tool introduced by Rastier (and based on Sowa, 1984), the semantic graph can be used to represent any semantic structure in terms of semes and the relations between them. The semes are the nodes of the semantic graph (shown in boxes or brackets) and the relations are the links (shown in ellipses or parentheses). The arrows indicate the direction of the relation between nodes. Most semantic structures can be described using fifteen or so different links - like ERG (ergative) for the agent of an action and ACC (accusative) for the patient of an action. This is an example of a simple graph: [Prince] ← (ERG) ← [RESCUE] \rightarrow (ACC) \rightarrow [Princess].

1. THEORY

1.1 FUNCTION

Rastier's semantic graphs (see Rastier, 1997 [1989] and Hébert, 2000 a and 2001), which are based on Sowa's conceptual graphs (1984), can be used to make a formal, rigorous, comprehensive and elegant representation of any semantic structure: a word, an entire text, a topos (an argumentative or narrative cliché), a character, an action, an image, or what have you1. A structure is an entity composed of at least two terms (the linked elements) joined by at least one relation.

1.2 ELEMENTS

1.2.1 NODES, LINKS AND THE DIRECTION OF THE LINK

The elements that make up this structure are the nodes (the terms), the links (the relations) and the direction of the links². A node is generally labelled with one or more semes (semantic features, or parts of a signified) and a link is labelled with a semantic case (or case, for short)3. At the center of the graph one generally places a node corresponding to a process (filled in with either a verb or a noun, such as transmit or transmission), written in uppercase letters.

NOTE: NODES, LINKS AND LABELS

The particular semes and cases that invest the nodes and links on a given graph are known as the labels for these nodes and links. Where necessary, we will distinguish the node or link per se (as a sort of empty slot) from its label. Otherwise, when we speak of nodes and links, we are including their labels.

Here is a simple graph shown in text format (later we will give the strictly graphical format), where (ERG) corresponds to the ergative case (the agent of an action) and (ACC) to the accusative case (the patient of an action, the one affected by it):

$$[dog] \leftarrow (ERG) \leftarrow [BITE] \rightarrow (ACC) \rightarrow [mailman]$$

The following table summarizes the constituent elements of a semantic graph and the symbols used to represent them:

The elements and symbols of a graph

	ELEMENTS OF A GRAPH	TYPE OF	SYMBOL USABLE IN TEXT FORMAT	SYMBOL USABLE IN GRAPH FORMAT	
		LABEL			
1	node	seme	brackets: [seme]	rectangular box	
2	link	case	uppercase abbreviation in parentheses:	uppercase abbreviation inside an ellipse	
			(CAS)	(Rastier) or on the link (Hébert)	
3	direction of a link between		arrow: → or ←	arrow	
	nodes				

¹ Using the graphs, content may be conceived of and represented as a complex structure, not just as an inventory of semes (see Pottier) or

a simple semichierarchy (see Greimas).

Nodes and links correspond to the logical notions of subject (or argument) (what we are talking about) and predicate (what we say about it) (Rastier, 1994, p. 57). In theory, a link may be joined directly to another link (with no intervening node), and a node may be joined directly to another node (with no intervening link).

³ Nodes and links may be left blank or unlabelled (Ø), especially (or only?) for type-token relations (see the section on typicality).

NOTE: ALTERNATIVE FORMATS

To make the graphs more immediately understandable, the links may be written out as complete words rather than abbreviations. And to distinguish nodes from links, one can simply use the opposition between upper and lowercase by itself, or use parentheses or circles for the links, with no symbol for the nodes.

1.2.2 CASE

The inventory of possible labels for nodes is open-ended; the inventory of labels for the links (that is, the cases) is limited methodologically, depending on the discourse, the genre, the author, or even the particular semiotic act one is analyzing⁴. The semantic cases shown in the following table can adequately account for most textual semantic structures⁵.

The primary semantic cases

	CASE	DEFINITION	POSSIBLE NAME FOR TEACHING PURPOSES		
(ACC)	accusative	the patient of an action; the entity affected by the action			
(ASS)	assumptive	point of view	PERspective		
(ATT)	attributive	property, characteristic	CHARacteristic		
(BEN)	benefactive	the entity for whose benefit the action is performed	BENeficiary		
(CLAS)	classitive	an element of a class	CLASsitive		
(COMP)	comparative	elements joined by a metaphorical comparison	COMParison		
(DAT)	dative	receiver, entity that receives a transmission	RECeiver		
(ERG)	ergative	the agent of a process or an action	AGEnt		
(FIN)	final	goal (result or effect sought)	GOAL		
(INST)	instrumental	means used	MEAns		
(LOCS)	spatial locative	position in the space represented (LOC S)	SPAce		
(LOC T)	temporal locative	position in the time represented (LOC T)	TIME		
(MAL)	malefactive	the entity to whose disadvantage the action is performed	MALeficiary		
(PART)	partitive	part of a whole	PARTitive		
(RES)	resultative	result, effect, consequence	EFFect (or CAUse)		

NOTE: CHANGES TO RASTIER'S LIST OF THE PRIMARY CASES

We have modified the inventory of primary cases established by Rastier (the essentials can be found in Rastier, 1997, p. xv). We are distinguishing the temporal locative from the spatial locative by using different abbreviations (both of which were labelled (LOC) by Rastier). We are adding the assumptive, the malefactive, the classitive (for set relations, as in [dog] \rightarrow (CLAS) \rightarrow [mammal]) and the partitive (for mereological relations, as in [word] \rightarrow (PART) \rightarrow [sentence]). We should mention that the summary diagram at the end of each chapter of our book is a kind of semantic graph: in it, we use the classitive case (for classification, represented by horizontal arrows), the partitive case (for breaking things down, represented by vertical arrows) and a case that encompasses the other relations (these relations are represented by boldface lines with no arrows). Note also that the typology of cases developed for textual analysis, which is primarily focused on narrative functions, is inadequate for analyzing images. In particular, we will need to have cases relating to color (blue, white, red, etc.), texture (smooth, rough, sticky, etc.), and materials (wood, glass, metal, stone, etc.), and the specific spatial locative cases (in front, behind, above, next to, on, etc.). Since we are describing the semantic plane, we must be careful in image analysis not to confuse signifiers with semes that evoke perception. The colors we are talking about are thematized colors, not the colors of the signifier. For example, the color seme /transparent/, which is in the signified 'drinking glass' in a painting by Magritte, is produced using a complex, organized blend of signifiers: white, gray and black brush strokes.

1.2.3 ARROWS

The nodes and links are connected by arrows indicating the direction of the relation. The table below shows the direction of the arrows in the simplest graphs and is based on the directions Sowa used (1984).

⁴ For the sake of descriptive precision, it is helpful to add to the inventory of cases. "The case primitive LOC (locative) can then be particularized with all sorts of values indicating specific positions in the represented space or time" (Rastier, 1994, p. 56). This points to a general principle: links and nodes may vary in generality/specificity.

⁵ Semantic cases are not to be confused with morphosyntactic functions. To give an example of the distinction between semantic cases and morphosyntactic (surface) cases, in *The crow was outsmarted by the fox*, 'the crow' is in the nominative morphosyntactically, but in the accusative semantically; the fox is in the agentive morphosyntactically, but in the ergative semantically (Rastier, 1994, p. 138).

The direction of the arrows in the graphs

[element to which the action applies]	←	(ACC)	←	[process]
[focus of a point of view]		(ASS)	←	[element to which a point of view applies]
[specific characteristic]	↓	(ATT)	←	[element to which the attribute is given]
[beneficiary element]	↓	(BEN)	←	[element given to the beneficiary]
[element of class]	↓	(CLAS)	←	[element being classified]
[comparing element]		(COMP)	←	[compared element]
[element that receives the transmission]		(DAT)	←	[element being transmitted]
[acting element]	↓	(ERG)	←	[process]
[element of desired effect]	↓	(FIN)	←	[element of cause]
[element being used]	↓	(INST)	←	[element to which the means is applied]
[place associated with the element]	←	(LOCS)	←	[spatially located element]
[time associated with the element]	←	(LOC T)	←	[temporally located element]
[maleficiary element]	←	(MAL)	←	[element given to the maleficiary]
[the whole]	←	(PART)	←	[the part]
[element of effect]	←	(RES)	←	[element of cause]

For the sake of uniformity, horizontal arrows pointing to the left were used in the above table, which dictated the relative positions of the nodes. As we will see in our examples, in practice, the arrows in a given graph can also point to the right (for instance, [process] \rightarrow (ACC) \rightarrow [element to which the action applies]) or vertically (up or down). Rather than following Sowa's rules, one can orient the arrows "intuitively" (for example: [man] \rightarrow (ERG) \rightarrow [LOVE] \rightarrow (ACC) \rightarrow [woman] \leftarrow [brilliant]), or even replace them with lines minus the arrows if there is no possible ambiguity in the direction of the link. It is also permissible to draw a link with only one arrow on its trajectory rather than two, as we have done in our strictly graphical-format examples).

NOTE: ENDOCENTRIC/EXOCENTRIC ARROWS

An arrow may point toward a link or node, or it may originate from a link or node. Each node is joined to at least one arrow, which is either endocentric (\rightarrow [node]) or exocentric to it ([node] \rightarrow). Each link is joined to at least two arrows, of which one is endocentric and the other exocentric (\rightarrow (LINK) \rightarrow). However, as we have already mentioned, in contrast with Sowa and Rastier, we use only one (exocentric) arrow per link in our strictly graphical format. The opposition endocentric/exocentric should be kept separate from the oppositions right/left and high/low since its only function is to stipulate that the arrow goes either toward the node or link (endocentric) or away from it (exocentric). Thus, despite the fact that they point in both directions, the following arrows are endocentric: \rightarrow [node] \leftarrow , whereas these are exocentric: \leftarrow [node] \rightarrow .

1.3 TEMPORAL RELATIONS BETWEEN GRAPHS

The primary temporal relations between any terms – graphs in this case (and narrative programs or actantial models elsewhere) – are simultaneity (complete or partial) and succession (complete (immediate or delayed) or partial).

These relations are based on the temporal segmentation of the semiotic act (which establishes the beginnings and ends of the elements that constitute the act) and on assigning segments to positions in a given temporality (time as represented in the story, narrative time, or the tactical sequencing of units such as sentences and paragraphs). Besides these relations, one should include comparative relations that involve recurrence and thereby produce rhythms (cyclical or non-cyclical).

1.4 NON-TEMPORAL RELATIONS BETWEEN GRAPHS

Of the possible non-temporal relations between elements, we should mention identity, alterity, opposition, similarity, homologation, transformation, presupposition, mutual exclusion, and type-token relations. We will take a look at two of these, inclusion or embedding and the type-token relation (refer to the chapter on structural relations for the others).

1.4.1 EMBEDDING

A graph or group of nodes may be condensed or expanded. A node can in fact be expanded into a graph, or a graph condensed into a node (embedding). In this case, the node "summarizes" a graph (for example, [man] summarizes [human] \rightarrow (ATT) \rightarrow [male sex]) and/or refers to it (for example: (RES) \rightarrow [graph 5])⁶. Moreover, instead of being joined to another node (which may or may not be the result of condensation), a node maybe joined to a group within the same graph, made up of one or more links and/or nodes. The group can be demarcated using any sort of closed shape, such as a dashed-line rectangle enclosing the group, with at least one arrow either originating or ending at its boundary; any arrow going through this boundary would then apply only to the element indicated, and not to the group (see our analysis of "Playing Bones", below).

⁶ Hypertext (in the computer science sense of the term) allows one to "hide" a graph under a node, which can be accessed by clicking on the appropriate hyperlink.

1.4.2 RELATIONS OF TYPICALITY BETWEEN GRAPHS

There are five basic transformational operations by which two entities may be related when one of them "originates" from the other.

- 1. Preservation: both entities remain identical;
- 2. Deletion: an element is deleted in the transformed entity;
- 3. Insertion (addition): an element is added in the transformed entity;
- 4. Deletion-insertion
- 5. Permutation: the order of the elements changes in the transformed entity.

In terms of graphing, these operations affect: (1) the number of nodes and links, (2) the labeling of nodes and links, (3) the specific configuration of the nodes and links. A common deletion-insertion in graphs consists of replacing an element by making it more general (e.g., human instead of woman) or more specific (e.g., man instead of human). As for permutation, in the simplest of cases, the permuted configurations have the same number of elements and positions that may be occupied. For example, one can invert the relative position of two nodes: $[human] \leftarrow (ERG) \leftarrow [KILL] \rightarrow (ACC) \rightarrow [animal]$ becomes $[animal] \leftarrow (ERG) \leftarrow [KILL] \rightarrow (ACC) \rightarrow [human]$.

These five operations describe the transformational relations between a graph's type (a model graph) and its tokens, or between one graph's type and another's. We shall identify four kinds of typicality in the relations between a graph type and its corresponding tokens, based on whether or not the token preserves the form of the graph and the labels for its links and nodes⁷. The number of tokens covered by the type varies depending on the kind of typicality selected and its tolerance for variation.

Typicality in graphs

TYPICALI	PRESERVED (+)		_	EXAMPLES OF GRAPH TYPES	EXAMPLES OF GRAPH TOKENS
7					
	Graph form	Labels for the links	Labels for the nodes		
1	+	-	-	[]←()←[]→()→[]	$ \begin{array}{l} \text{1. [garden]} \leftarrow (LOC\;S) \leftarrow [flower] \rightarrow (LOC\;T) \rightarrow [spring] \\ \text{2. [rich]} \leftarrow (ERG) \leftarrow [GIFT] \rightarrow (ATT) \rightarrow [inadequate] \\ \text{3. [wolf]} \leftarrow (ERG) \leftarrow [KLL] \rightarrow (ACC) \rightarrow [human] \\ etc. \end{array} $
2	+	+	-	$[] \leftarrow (ERG) \leftarrow [] \rightarrow (ACC) \rightarrow []$	3. [wolf] \leftarrow (ERG) \leftarrow [KLL] \rightarrow (ACC) \rightarrow [human] 4. [flea] \leftarrow (ERG) \leftarrow [BITE] \rightarrow (ACC) \rightarrow [John] 5. [Mary] \leftarrow (ERG) \leftarrow [LOVE] \rightarrow (ACC) \rightarrow [freedom] etc.
3	+	1	+	$[animal] \leftarrow (\) \leftarrow [KlLL] \rightarrow (\) \rightarrow [human]$	3. [wolf] \leftarrow (ERG) \leftarrow [KILL] \rightarrow (ACC) \rightarrow [human] 6. [animal] \leftarrow (ERG) \leftarrow [KILL] \rightarrow (ACC) \rightarrow [human] 7. [animal] \leftarrow (ACC) \leftarrow [KILL] \rightarrow (ERG) \rightarrow [human] etc.
4	+	+	+	$[animal] \leftarrow (ERG) \leftarrow [KLL] \rightarrow (ACC) \rightarrow [human]$	$ \begin{array}{l} 3. \ [wolf] \leftarrow (ERG) \leftarrow [KILL] \rightarrow (ACC) \rightarrow [human] \\ 6. \ [animal] \leftarrow (ERG) \leftarrow [KILL] \rightarrow (ACC) \rightarrow [human] \\ 8. \ [bull] \leftarrow (ERG) \leftarrow [KILL] \rightarrow (ACC) \rightarrow [toreador] \\ etc. \\ \end{array} $

1.5 GRAPHS AND MODAL EVALUATIONS

⁷ Rastier says (1994, p. 138): "In representations, the rapport between type and token is basically a rapport between two semantic graphs. Depending on the objectives of the description, different kinds of typicality may be defined: (1) the most abstract type preserves only the form of the graph, and not the labels for the nodes or the links. (2) traditional types preserve the form of the graph and the labels for the links, but they change the labels for the nodes (by replacing the names of the variables with names of particular agents). (3) a third kind of typicality concerns the links and their labels." These three kinds of typicality are found (with the same numbers) in our table. But should we not consider a fourth kind of typicality, in which the form of the graph is preserved as well as the labels for the nodes and links? In fact, typicalities three and four seem irreducible to one another: in number three, labels are absent, and in number four, the labels demarcate the semantic range of the nodes, within which the tokens must remain. We will give an example from literature for the third kind of typicality. In the work of Gerard de Nerval, a graph type with the nodes /sun/ and /black/ is manifested in at least two tokens: in one of them, the link is in the resultative ("The Black Spot", where the sun causes a black spot in the narrator's vision); and in the other, it is in the attributive (the "Black Sun of Melancholia" in El Desdichado"). This chapter's analysis of the topos of the scomed poet is based on a literary example of the fourth kind of typicality.

Some elements may be implicit in a graph, such as the time of the story in which the graph occurs and the modal evaluations applied to it. Modal evaluations and the observing subjects involved in them may be integrated directly into the graph by using attributive and assumptive links, respectively, or they may be included in the labels for the nodes or links. Modal status may also be indicated by using an element internal to the graph, which is neither a node nor a link (such as the designation true/false in our graph illustrating the fundamental cases (below) or the use of a symbol, such as \Diamond , to indicate possibility). One can also specify modal evaluations and observing subjects (and other elements, like the time of the story) "outside" of the graph, by setting it in context (for example: "This graph represents the character's thoughts and beliefs at this moment".) In principle, in the absence of any explicit assumptive case in the graph or outside of it, the ontological and veridictory status of the graph is implicitly ("by default") real and true, and this evaluation is the "reference" one: that is, it corresponds to the absolute truth of the text.

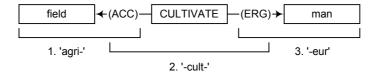
NOTE: GRAPHS AND NEGATION

In this section, we will consider logical negation as a modal category. The logical negation of a graph or one of its parts is represented in various ways within the graph: by using a negation operator (such as ¬), a veridictory status (such as false) or indicating it in the formulation of the label (e.g., the process [GIVE] vs. [NOT GIVE] or [KEEP]).

1.6 EXAMPLES OF GRAPHS

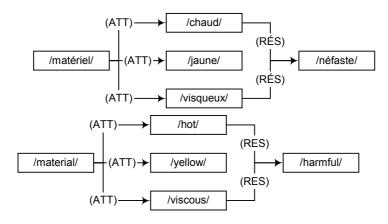
This is how Rastier (adapted from Rastier, 1994, p. 56) represents the content of the French word (lexia) "agriculteur" ["farmer"] (section 1 of the graph represents the signified (sememe) 'agri-', section 2 the signified '-cult-', and section 3 the signified '-eur'; the overlap between sections is due to the semes that recur in each of the signifieds):

Graph of the word "agriculteur"



This is how one would represent the group of semes (the semic molecule) /tangible/ + /hot/ + /yellow/ + /viscous/ + /harmful/ present in Zola's *L'Assommoir [The Drunkard]* (see Rastier, 1997, pp. 129-131):

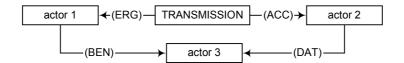
Graph of a semic molecule



The typical act (dialectical function⁸) of "giving", in which someone (actor 1) gives something (actor 2) for the benefit of someone (actor 3), can be represented as follows:

Graph of the dialectical function "giving"

⁸ For the list of the ten dialectical functions that can be used to describe most narratives, see Rastier, 1997, p. 47 and Hébert, 2001, p. 130).



1.7 GRAPH ILLUSTRATING THE PRIMARY CASES

The following is an example illustrating the primary cases, in which both the analysis and its representation are simplified: "According to John, yesterday, right here, Peter – a generous sort – gave Mary a doll and a cup-and-ball game so that she would have fun with these presents; but instead she cried like a geyser." We are using the opposition true/false to show the distance separating the intention (Mary as beneficiary) from the result (Mary as maleficiary).

8 toys (INST 2 3 11 (ACC) (COMP) fun cry geyser ·(RES) -faux (BEN)→ 6 ←(ERG) (DAT)→ Peter **GIFT** Mary (MAL)→ vrai (ATT) (LOCS) (LOC T) 4 (ASS) generous here yesterday

A graph illustrating the primary cases

2. APPLICATIONS

2.1 APPLICATION I: "THE CICADA AND THE ANT" BY LA FONTAINE

* * *

9 John

"The Cicada and the Ant" Jean de La Fontaine (1988, p. 5)

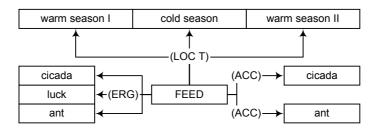
Cicada, having sung her song All summer long, Found herself without a crumb When winter winds did come. Not a scrap was there to find Of fly or earthworm, any kind. Hungry she ran off to cry To neighbor Ant, and specify: Asking for a loan of grist, A seed or two so she'd subsist Just until the coming spring.

⁹ In order to simplify our representation, while certain links or nodes should apply to a group or even the whole graph, we have tried to attach them to just one link or node. For example, in the story on which our graph is based, the gift of toys (a group made up of a node and links) is what provokes the tears, not the gift in isolation. Obviously, it is also possible for a node to apply to only one node of the graph (e.g., [generous] applies to [Peter] in this graph).

She said, "I'll pay you everything Before fall, my word as animal, Interest and principal."
Well, no hasty lender is the Ant; It's her finest virtue by a lot.
"And what did you do when it was hot?" She then asked this mendicant.
"To all comers, night and day, I sang. I hope you don't mind."
"You sang? Why, my joy is unconfined. Now dance the winter away."

* * *

Graph type of "The Cicada and the Ant"



The main graph tokens derived from the graph type

GRAPH N°	(ERG)	[PROCESS]	(ACC)	(LOC)	ACTUAL	POSSIBLE STATUS
					STATUS	
1	The cicada	feed	the cicada	warm season I	false	possible true (it could have been true)
2	The cicada	feed	the cicada	cold season	false	possible true (it could have been true)
3	The ant	feed	the ant	warm season I	true	possible false (it could have been false)
4	The ant	feed	the ant	cold season	true	possible true (it could have been true)
5	The ant	feed	the cicada	cold season	false	possible true (it could have been true)
6	Luck	feed	the cicada	warm season I	true	possible false (it could have been false)
7	Luck	feed	the cicada	cold season	false	impossible true (it could not have been true)
8	Luck	feed	the ant	warm season I	false	possible true (it could have been true)
9	Luck	feed	the ant	cold season	false	impossible true (it could not have been true)

Our graph type is a synthesis of the graphs centered on the process FEED, the preeminent process in the fable "The Cicada and the Ant", by Jean de la Fontaine. The inventory of links is identical in all of the graphs covered by this graph type. However, the labels for the nodes in ergative, accusative and temporal locative positions are variable. Deductively, it would be possible to produce a very large number of graph tokens from this graph, by exhausting all of the potential combinations of labels for the nodes it contains. But we have selected only the most pertinent graphs (for a detailed analysis, see Hébert, 2001, p. 177 and following).

Each graph corresponds to a logical proposition marked for ontological and veridictory status. Ontological and veridictory dialogics (see the chapter on this subject) is the study of true/false evaluations and their relations with the actual (what is), counterfactual (what is not), possible (what could be or could have been) and impossible (what could not be or could not have been) realms. Each graph does not necessarily correspond to a proposition marked as true and real in the universe of reference (the universe that defines the ultimate truth of the text). For example, the proposition *The ant feeds the cicada during the cold season* (graph 5) is actually false, but possibly true: it could have been actually true (if we put ourselves in the past) or it could be actually true (if we put ourselves in the present at the time when the cicada is making her request, or at the time when the cold season has not yet gone by). Propositions of this kind are actually false by chance; at the other end of the spectrum, one finds propositions that are actually false in their substance, that is, they are impossibly true: for instance, in the logic of the story, *Luck feeds the cicada during the cold season* is actually false and impossibly true.

NOTE: NEGATION OF AN ACTION

We have elected to indicate the negation of an action with ontological and veridictory status alone, rather than introducing an action marked by negation (such as NOT FEED or using a negation operator like ¬ FEED). Thus, the real and false proposition *Luck feeds the cicada during the cold season* (graph 7) is equivalent to the real and true proposition *Luck does not feed the cicada during the cold season*.

Proposition 1: The cicada does not provide for her own needs; she is dependent on good luck, or mother nature, which is evident from her powerlessness during the cold season, when flies and worms are no longer abundant.

Propositions 3 and 8: The strongly contrastive nature of the text no doubt justifies the idea that even during the summer, the ant is self-sufficient and does not rely on her good luck (or Providence, to put it in terms of human faith). But if we do not espouse this reading, we could consider these propositions as partially true and partially false: if we read these propositions restrictively, for instance, it is not completely true to say that the ant alone feeds the ant, since luck also plays a part in it.

Proposition 5: As it happens, this proposition is presented by the cicada, who knows perfectly well that it is possible in the context of proposing an exchange. The ant can lend food (this is possible), but does not want to. As long as the cold season has not gone by, technically, this proposition is still possibly true (after that, it automatically becomes actually false). However, it seems doubtful that the opinionated ant will change her mind, so one can consider this proposition as actually false.

Propositions 1, 2, 3 and 4: The ant implicitly formulates possible propositions that might have become true or false at some hypothetical time that has already gone by. For instance, the cicada's providing for herself during the cold season could have become true if only she had worked (graph 2). Likewise, the ant could have not provided for herself during the summer, and played, like the cicada did (graph 3). This group of propositions illustrates the cicada's and the ant's free will; the cicada could have worked, and the ant could have played instead of the reverse. The ant's moralizing lays out the choice illustrated by the whole text: play or work. Her remarks show that she was clearly aware of this choice. What distinguishes her from the cicada (before its mishap) is her awareness of the relation of absolute presupposition between eating and working.

2.2 APPLICATION II: THE TOPOS OF THE SCORNED POET

We will examine a *topos* (a common-place, or narrative cliché) that is pervasive in French poetry: the misunderstood, scorned poet. *Topos* analysis entails relating the *topos* type to the various *topos* tokens that manifest it.

The graph we propose is a generalized one representing the *topos* of the scorned poet: In it, the poet becomes an exceptional individual, and his poetry a positive transmission to the collective group. With this generalized representation, one can illustrate the cross-disciplinary nature of the *topos*, which applies not only to its occurrences in literature, but also in religion (the *Bible*), philosophy (Plato), song lyrics (Charles Aznavour), and so on. As far as literature goes, with a few exceptions, we will limit our analysis to the poet figure (and not generalize him as a writer or an artist) as represented in 19th- and 20th-century French poems (not as represented in novels). Obviously, one could apply the transformational operations (insertion, deletion, insertion-deletion, permutation) to this generalized *topos*, which would change the number and inventory of tokens related to this type. For example, the number of tokens covered by the *topos* type will decrease if we change /exceptional individual/ to /exceptional poet/ (deletion-insertion).

The graph may be verbalized as follows: An (3) exceptional individual, who is part of (1) a superior world, effects (5) a positive transmission (an exceptional work of poetry, for instance) to (4) the collective group, which belongs to (2) an inferior world; but in return, the collective group sends a (6) negative transmission (for example, by revealing its scom for the work of poetry).

NOTE: OTHER POSSIBLE REPRESENTATIONS

Let us briefly discuss the ways we have chosen to represent this *topos*. In the same node, we have included both the transmission and its positive or negative quality, which we could have identified by using attributive links connected to the transmission nodes. We could also have connected the dative link with a benefactive or malefactive link, depending on the circumstances. In addition, we have not shown the many other thymic evaluations underlying the graph. The two separate evaluators – the individual and the masses – have contradictory evaluations about the two worlds and the two transmitters in our graph, but they agree on the negativity of the scom directed at the poet (unless the poet adopts an attitude of stoicism). The names superior world / inferior world are meant in the value-related sense, but these thymic evaluations are often homologized with the spatial positions high/low, as we will see, which is why we have chosen these terms¹⁰. The people's evaluation of the transmission and the transmitter occurs on a scale ranging from not-positive to extremely negative: the transmitter could be viewed as laughable, but inoffensive (see Baudelaire's "The Albatross") or as threateningly subversive (Jesus, Socrates, the poet in Plato's city). In summary, the labels we have chosen for the graph type reflect the transmitter's point of view, which corresponds to the truth of the text (we will see some exceptions). Technically speaking, this is the universe of reference, which says that the masses are indeed wrong to discount the transmitter.

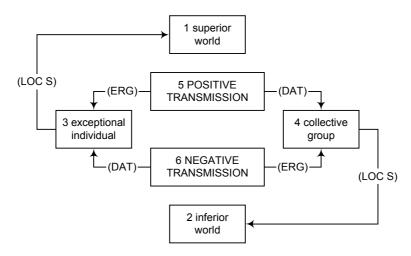
Between the masses and the exceptional individual, one can place a third agent, which we will call the enlightened elite (e.g., Socrates' and Jesus' disciples); they will compensate – although poorly in numerical terms – for the scorn of the public. The producer is usually seeking both critical and popular acclaim.

In our graph of the scomed poet, the two transmissions have no temporal location relative to each other, but they seem to occur in succession, with the poet going first and the crowd retorting. (This does not exclude the possibility that some sort of implicit or explicit inducement may have been directed at the poet previously.) The poems in which this *topos* is

¹⁰ The locative link can take on a metaphorical value, as can other links, no doubt; for instance, "the world of poetry" is not a space *a priori*, although it can be associated with a celestial world (e.g., in Baudelaire's "The Albatross").

strongly thematized are a sort of tit-for-tat, since the poet complains about the scorn in a new positive transmission to the masses: positive in the aesthetic sense, that is, since the poet often responds to scorn by giving it back (see "The Dog and the Perfume" by Baudelaire). Be that as it may, in dialectical time (the time of the story), the whole graph may be followed by a complementary graph to form a syntagm, or stereotyped sequence of *topoi*. The second graph is that of later recognition, traditionally posthumous, by the masses (as for the elite, it can either maintain or reverse its evaluation).

Generalized graph representing the topos of the scorned poet:



The following are a few tokens that exemplify this *topos*¹¹. Obviously, this list is not exhaustive:

- A. Plato, the Myth of the Cave (*The Republic*). 1. The world of ultimate reality (ideality). 2. The world of illusion. 3. The man who gains access to ultimate reality. 4. Mankind, enslaved to illusion. 5. The exceptional man tries to liberate his fellows, as he liberated himself. 6. Rejection; they don't believe him; they think he is crazy.
- B. Plato. 1. The world of understanding. 2. The world of ignorance. 3. Socrates. 4. Socrates' accusers. 5. Socratic understanding. 6. The punishment: drinking hemlock. This transmission is object-related (pragmatic, and not solely cognitive, as is often the case).
- C. *The New Testament* 1. The spiritual world. 2. The material world. 3. Jesus. 4. Mankind. 5. Christ gives his life out of love for mankind. 6. Rejection by the majority (for example, Barabbas is preferred over Jesus), with the exception of Palm Sunday, the kindness of the disciples, the "enlightened few" (aside from some denials).
- D. Victor Hugo, "The Poet's Function". *Sunbeams and Shadows* (March 25-April 1, 1839). 1. The world to come. 2. The world as it is. 3. The poet (lexicalized as "singer", "prophet", etc.). 4. "Brothers", "city". 5. The poet is tempted to escape from the city and merge with nature (the secularization of the spiritual world), and like Christ, tempted to shirk his duty, but "Alas! Duty calls each of us to the others!" and moreover, the poet-prophet has a higher responsibility. 6. The poet fulfills his role, whether he is insulted or praised: However, the rejection may be in appearance only: "many a false prophet at his words / Laughs aloud and reflects silently". (The false prophet introduces the theme of the mediocre poet, as well as the theme of the usurper).
- E. Baudelaire, "The Albatross", *The Flowers of Evil* (1857). 1. The poetic world (compared element) / the aerial world (comparing element). 2. The prosaic world / the non-aerial world. 3. The poet / the albatross. 4. The masses / the sailors. 5. Positive transmission or autonomy, withdrawal of the poet-albatross (a Parnassian position)? Here the metaphor doesn't fly, it seems, since the albatross transmits nothing positive to the sailors, except his beauty in flight. 6. Jeers. In the aerial-poetic world, the albatross-poet can simply launch attacks on the inhabitants of lower worlds: He "haunts the storm and laughs at the archer".
- F. Baudelaire, "Benediction", *The Flowers of Evil* (1857). 1. The spiritual and poetic world. 2. The temporal and prosaic world. 3. Poet: "I know that among the uplifted legions / Of saints, a place awaits the Poet's arrival". 4. The masses and even the poet's mother and his wife. 5. Messenger from the spiritual world. 6. Rejection. "Those he would love [...] experiment / With various possible methods of exciting derision / By trying out their cruelty [...] " This token, like the one from Hugo above, is a merging of two subspecies of the *topos*: the scorned poet and the scorned prophet (as in the *Bible*).
- G. Baudelaire, "The Dog and the Perfume", *The Parisian Prowler* (1869). 1. The world of superior art. 2. The world of inferior art. 3. The great poet and the great parfumeur. 4. The dog, the masses ("the public"). 5. The parfumeur and the poet give superior products to the people, like the master (narrator) to his dog. 6. The people

¹¹ Using numbers or letters to identify the nodes and/or links makes it easy to present the labels for the graph (or references to explanatory quotations and glosses), especially when the graph tokens are numerous, as they are in this case.

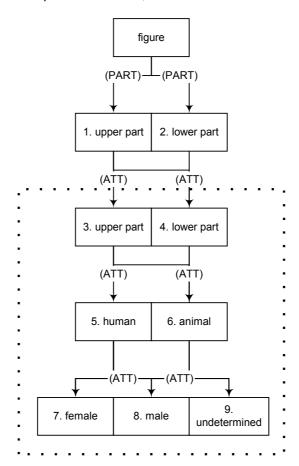
reject them, preferring "rubbish", and even the dog rebuffs his master. Between the lines, we find the motif of the usurper, the charlatan (the bad poet adored by the masses).

H. Uderzo and Gosciny, the comic strip *Astérix*. 1. The poetic world. 2. The prosaic world. 3. The bard. 4. The masses. 5. He bestows his art generously. 6. Harassment. In this case, the *topos* is reversed; the poet has no talent and everyone is right to scom him. This rejection of poets in general or a poet in particular may also be expressed by a poet, which is exactly what happens in "To an Ignorant Poet" by Marot. And Cendrars (*Prose of the Trans-Siberian*) criticizes a poet as well, himself in fact, although perhaps just in days gone by: "Anyway, I was a really bad poet".

I. Charles Aznavour, "Je m'voyais déjà" ["I could already see myself"]1. The world of superior art. 2. The world of inferior art. 3. The singer. 4. The public. 5. "I have talent". 6. The singer has had only "cheap victories, night trains and soldiers' whores". He blames "the public, who just didn't get it". Success and recognition are presented by the narrator as being possible, but the universe of reference leads us to believe they are impossible, since the singer has been trying his luck in vain for "30 years". This relates to the *topos* of absurd perseverance, also found in "Madeleine" by Jacques Brel, to give another example from a songwriter.

2.3 APPLICATION III: HALF-HUMAN, HALF-ANIMAL CHARACTERS

We would like to briefly describe a certain kind of "mythical" half-human, half-animal character commonly found in images and texts. The characters we are interested in have two parts: an upper part and a lower part. These parts are derived from the upper or lower part of a human or an animal, of masculine, feminine or undetermined gender. The following graph represents this combinatorial set.



Graph of half-human, half-animal characters

In the table below, we have examples of the possible combinations between the different elements of the graph 12 . For example, a siren (mermaid) combines the upper part of a woman (1 + 3 + 5 + 7) and the lower part of a fish, which one would presume to be female, more out of coherence than from any external signs of its gender ((2 + 4 + 6 + 7 or 9)). The character may be created by permuting the parts of one single source character (e.g., *The Rape* by Magritte permutes different parts of what one would assume to be one feminine

¹² All of the characters we present are real in the fictitious universe created by a semiotic act (technically speaking, they belong to the actual world of the universe described in that semiotic act): for example, in the painting, the siren is real. However tokens can simply be comparative, like this one: "I'm conscious of my body all the time as if it were made of lead, or as if I were carrying another man on my back" (lonesco, 1960, p. 18).

body) or by combining parts from two source characters (a woman and a fish for the siren). A character produced by permuting or combining parts conjures up what we will call a reciprocal character, made by combining the leftover parts of the source character(s) (such as an anti-siren, made out of the upper part of a fish and the lower part of a woman). This reciprocal character might be represented in the same semiotic act or in another act in a specified corpus. Lastly, we will distinguish the two ways of combining parts in a character: the parts may be merged (as they are in a siren) or simply juxtaposed. In the latter case, the character is formed by juxtaposing two sub-characters (e.g., in Goya's *Tu que no puedes*, one finds two characters that are each made up of two sub-characters: a horseman and a mount).

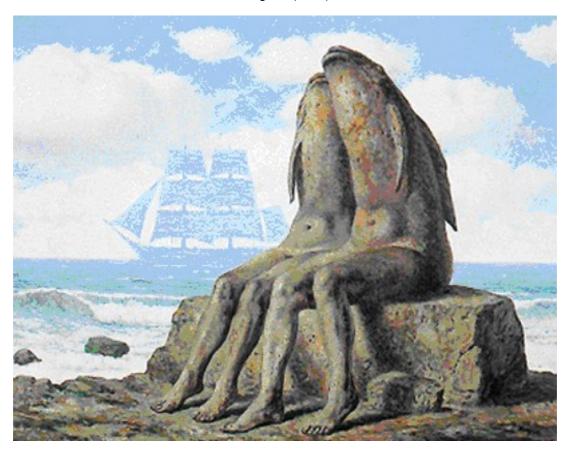
Examples of half-human, half-animal characters

	DESCRIPTION	IMAGE OR TEXT EXAMPLE	TOP OF CHARACTER	BOTTOM OF CHARACTER	NOTE
Α	centaur		1+3+5+8	2+4+6+8	а
В	siren (mermaid)	The Forbidden Universe (Magritte, 1943)	1+3+5+7	2+4+6+7	а
	male siren (merman)	Merman Hanging from a Gibbet (Magritte, 1946)	1+3+5+8	2+4+6+8	
С	pig-man	A Stroke of Luck (Magritte, 1945))	1+3+6+8	2+4+5+8	а
D	female anti-siren	Collective Invention (Magritte, 1934) The Wonders of Nature (Magritte, 1953)	1+3+6+7	2+4+5+7	а
E	male anti-siren	The Wonders of Nature (Magritte, 1953)	1 + 3 + 6 +8	2+4+5+8	а
F	face-torso	The Rape (Magritte, 1934)	1 (head) + 4 (torso) + 5 + 7	partially represented	а
G	man carrying animal	Tu que no puedes (Goya, 1799)	horseman: 1 + 3-4 + 6 + 8?	mount: 2 + 3-4 + 5 + 8	b
Н	man-animal carrying man- animal	Miren que grabes! (Goya, 1799)	rider: 1 + 3-4 + 5-6 (merged man- animal) + 8?	mount: 2 + 3-4 + 6 (merged animals) + 8?	b, c, d
Ī	man carrying chimera, more or less merged	To Each His Chimera (Baudelaire, 1869 [1862])	rider: 1 + 3-4 + 6 (chimera: merging of animals) + 9?	mount: 2 + 3-4 (whole man) + 5 + 8	a-b, c

NOTES:

- a: character created by merging upper and lower parts;
- b: character created by juxtaposing upper and lower parts of two sub-characters;
- c: upper sub-character (rider) created by merging parts;
- d: lower sub-character (mount) created by merging parts.

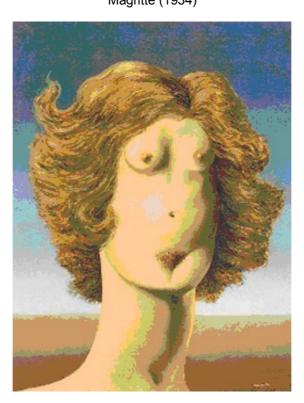
The Wonders of Nature Magritte (1953)



© Estate of René Magritte / ADAGP (Paris) / SODRAC (Montréal) 2006

The Rape Magritte (1934)

© Estate of René Magritte / ADAGP (Paris) / SODRAC (Montréal) 2006



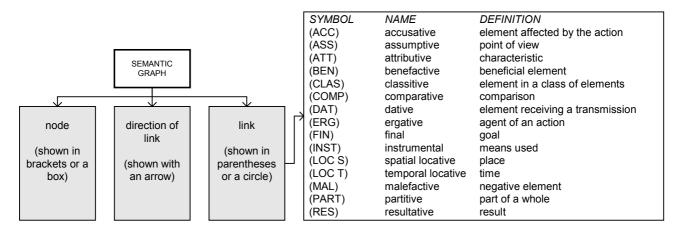


Miren que grabes! Goya (1799)



3. SUMMARY DIAGRAM

Summary diagram of the semantic graph



LEGEND

- 1. Vertical arrows: components (for ex., a graph is composed of nodes, a link and the direction of the link)
- 2. Horizontal arrows: classifications (for ex., a link is classified as accusative, assumptive, etc.)