Chapter 4

Semantics and verbal communication

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Abstract

The present chapter considers the role of semantics in verbal communication, examining the way in which the information encoded in linguistic units contributes to construct the meaning of utterances and larger units of discourse. We introduce the key aspects of meaning construction, connecting the notions of predicate-argument structures, presuppositions and semantic frames. For this purpose, we employ an approach known as congruity theory. According to this approach meaning compositionality can be seen as the application of predicate terms to argument terms, guided by the exigency of congruity. The restrictions on argument saturation imposed by predicates are shown to be the source of presuppositions in discourse and to require the addressee to satisfy them or accomodate them in the developing *common ground* of the exchange. Moving from the argument-frames of predicates, we focus on the ways in which language represents situations and events in the world, demonstrating the framing power of predicate selection.

Keywords: meaning construction, congruity theory, predicate-argument structures, presuppositions, semantic frames

1. Introduction

The present chapter deals with meanings that are conveyed by the use of linguistic structures – such as words, phrases, clauses and sentences – in acts of verbal communication. This concern is the disciplinary purview of *semantics.* To put it in another way, we will be concerned with how the information encoded in linguistic units contributes to the construction of the meaning of utterances and larger units of verbal communication. The contribution of linguistic units to the meaning of utterances has been often considered a somewhat trivial matter: we often understand linguistic meanings in terms of a container metaphor, where meanings are there *in* the words. This container metaphor is itself part of a broader "conduit metaphor" of verbal communication (Reddy 1979), where communicating is equated with packing content in a container and moving the container through a conduit towards a destination where it will be unpacked. This metaphor has sometimes hold sway also over communication research. Examples could be found in the classic method of *content analysis*, defined by Berelson (1952) as a "a research technique for the objective, systematic and quantitative description of the *manifest content of communication* [our emphasis]".

According to Berg (2001: 242) *manifest content* corresponds to "those elements that are physically present and countable", first of all words. The meaning associated with these elements is *de facto* assumed to be transparent to the analyst, as well as to the members of the intended audience (cf. Berelson 1952: 19). According to a standard content analytic

terminology already introduced in Berelson (1952), manifest content is opposed to *latent content*. Taking into account latent content requires that "the analysis is extended to an interpretive reading of the symbolism underlying the physical data" (Berg 2001: 242). Berelson (1952: 19-20) mentions "a simple news story on train wreck" as an example of message for which the analysis of *manifest content* is sufficient, while "an obscure modern poem" exemplifies communication exhibiting a high level of "latency" of the content, for which reliable analysis is not possible.

In fact, semantically-oriented analysis of news discourse has shown that "even simple-looking news stories are often rather complex, and the events they describe rather less distinct than we supposed […] they are not telling a simple, clear tail, but are replete with ambiguity, unclarity, discrepancy and cavity" (Bell 1998: 65-66). More generally, a close examination of how words and other linguistic units contribute to making a meaning in discourse reveals that they do not "carry" meanings but rather provide pointers and guidance to their construction by the audience in context. These meanings are themselves stratified, involving foregrounded representations and a background that can remain unfocused while still playing a crucial role in determining the contextual appropriateness of the utterance.

In the following pages we will provide a brief presentation of some key aspects of meaning construction, introducing a few pivotal notions of semantics, namely *predicate-argument structures*, *presuppositions* vs. *semantic entailments*, *semantic frames*. Our discussion will be mostly limited to examining how language contributes to "what is said" (Recanati 1989). We will focus on the ways in which language represents situations and events in the world, leaving aside discursive and interactional meanings. It has been argued convincingly that the above mentioned key semantics notions can be productively extended to the study of broad stretches of discourse, rhetorical organization and interactional aspects (cf., Grimes 1975, Seuren 1985, Searle and Vanderveken 1985, Rigotti 1993, Asher and Lascarides 2003, Forbes-Riley, Webber and Joshi 2006). Even if these extensions of the semantic approach to discourse are of great potential value for discourse analysis in communication, due to space limitations, we will only able to cursorily allude to them.

The present chapter is complementary to the chapter on the understanding *implicit meanings* authored by Victoria Escandell-Vidal, which concerns the pragmatic processes of implying and inferring that allow communicators and addressees to go beyond linguistic guidance in meaning construction, be it by *enriching* "what is said" with the vividness of experiential and contextual detail or by *implying* more than "what is said".

This chapter is also related to those which deal with *figurative meanings* (Marcel Danesi) and *evaluative meanings* (Peter White). The former deals with modes of meaning constructions that have for a long time been considered exceptional, less transparent and more creative than ordinary language use. The latter is devoted to those elusive *emotive* meanings, which philosophers have often judged to be inherently distinct in nature from ordinary *descriptive* meanings (cf. Stevenson 1948) and which have been sometimes conflated with the constellation of secondary *connotations* more or less loosely associated with the use of certain words, as opposed to the stable representational *denotation* firmly attached to them (cf. Rigotti and Rocci 2006, Rocci and Monteiro 2009).

2. Discussing semantics and guns that kill people

If we were to believe the wisdom of the English idiom, *discussing semantics* would be a pointless exercise, as witnessed by countless Internet discussions where the *discussing*

semantics cliché is used, very effectively, to flag a point of disagreement as irrelevant and to cut it short, as in example (1) below.

(1)   I'm annoyed by it, if you're not then fine. For me *that's semantics* and and I'm not gonna argue about that (from a sports Internet discussion forum).

Yet, this is an English *idiom*. Here's a first observation that should give us pause and make us contemplate the hypothesis that semantics is, in fact, relevant in communicative interactions and worth discussing. The Italian and the French languages, for instance, do not have this idiom. This has immediate consequences on the availability of this move in a discussion. It is not that French and Italian speakers cannot flag a dispute as purely verbal and henceforth irrelevant. They can and, on occasion, they do. What they lack is a ready-made expression to perform such a move, so that performing it becomes more costly on the part of the speaker and involves a greater risk of not being immediately understood by the addressee. Beyond that, the lack of this idiom in Italian or French may hint at differences in cultural beliefs about the merits of discussing words and their definitions as a step in dealing with disagreements.

As observed by Sally McConnell-Ginet (2008: 497), the *discussing semantics* cliché manifests the commonsensical belief that "which form conveys which meaning is essentially arbitrary and thus not a matter for sensible folk to worry about". These views are, of course, "partly right", as McConnell-Ginet concedes, "right, but those offering them often seriously underestimate the cognitive, social and historical dimensions of linguistically mediated communication". Mc Connell-Ginet is particularly concerned by the potentially negative social impact of certain meanings, that is by "loaded language" as characterized by linguist Dwight Bolinger (1980) in a popular book entitled *Language: the loaded weapon.* The title relates to one of Bolinger's favorite examples of linguistic obfuscation discussed in the book:

(2)   Guns don't kill people, people kill people

The slogan, as Bolinger (1980: 68) reminds us, enshrines "the standard argument of the gun lobby in the United States against efforts to restrict the possession of firearms". Bolinger produces an ironic series of parallel examples, defending "other interests and occupations":

> Some careless groundskeeper must have said at some time or other: "It wasn't the hole in the course that broke your leg, it was your stepping into it". As it would be convenient for governments anxious about their food supplies to say "Food does not nourish people, eating does" (Bolinger 1980: 68)

Let us start introducing some elements of the conceptual toolbox presented in this chapter to discuss Bolinger's example (2). The problem with (2) is that the two occurrences of the verb *kill* appearing in it do not manifest the same predicate concept. The relation $kill_1$ that holds between *guns* and *people* is not the same relation of the relation $kill_2$ that can hold between *people* and *people*. The slots that each relation opens for its argument terms to fill are different. More precisely, the two predicates assign different *semantic roles* to their first argument term: the predicate $kill_2$ (x, y) requires x to be the *agent* of the action denoted by the verb, while $kill_1$ (x, y) requires x to be an *instrumental* cause. The difference between the roles of the two x slots can be highlighted when we observe that $kill_2$ can have an optional third argument z taking the role of the *instrument*, as in (3):

(3) $kill_2$ (x, y, z): People (x) kill people (y) with guns (z)

It is thus clear that there is no correspondence between the x arguments of $kill_1$ and $kill_2$ as the parallelism of created by the slogan falsely suggests. Rather, x of $kill_1$ corresponds to z of $kill_2$, the two predicates being *converses*, reading the same scene from different angles. The linguistics we used in discussing this example is pretty classic, not to say old. It was Charles J. Fillmore, in a seminal 1968 article, the first to introduce a system of "deep-structure cases" such as *Agentive* and *Instrumental* (cf. Fillmore 2003[1968]: 49), nowadays more often called *semantic roles*, and to describe the different admissible arrays of semantic roles among which broad classes of action verbs, such as *kill*, can alternate. The polysemy between $kill_1$ and $kill_2$ is thus a highly regular and predictable one. These kind of alternations are nowadays seen as but one aspect of *regular polysemy* (Apresjan 1973), whose mechanisms have been intensely studied by semanticists for the last two decades (cf. Pustejovsky 1995, Asher 2011).

What is interesting in Bolinger's example is not semantics per se but its rhetorical significance: the simple semantic analysis helps us to uncover a *fallacy of equivocation* in the pro-firearms slogan. As it is often the case, the equivocation is instrumental to perpetrating another fallacy: thanks to the equivocation the slogan can easily refute a *straw man*, that is the improbable adversarial standpoint that 'Guns (x) $kill_2$ people (y)' – in other words that guns are (comparable to)[1] *agents* in the process of killing people.

The phenomenon of equivocation and the fallacies it masks reveal that the imperative to cut short the discussion about the meaning of words – instead of being simply a manifestation of the no-nonsense attitude of those who legitimately refuse being told what is the correct, original, true meaning of a word – can leave us ill prepared to counter the ploys of those who, so-to-say, want to have their meaning and eat it. A recent book by argumentation scholars Macagno and Walton (2014) is devoted to examine the persuasive role of the (re-)definition of words in argumentative discourse, including both explicit discourse moves providing persuasively crafted definitions of key-words and the implicit redefinition that is obtained by *coercing* (cf. Pustejovsky 1995) the word in a sentential and discursive context that is incongruous with the most accessible meaning.

For instance, Macagno (2011) examines the failed attempt by the Obama administration to implicitly redefine *hostilities* when claiming that U.S. military operations in Libya in 2011, involving support to NATO air raids as well as attacks carried out with unmanned drones, did not require congressional approval. Approval is required for *hostilities* lasting more than 90 days, but – the Obama administration argued – US military operations in Libya "do not involve sustained fighting or active exchanges of fire with hostile forces, nor do they involve U.S. ground troops". As observed by Macagno (2011), such an argument presupposes (rather than proposes) that features such as "active exchanges of fire" and/or "presence of ground troops" are necessarily part of the definition of *hostilities*, while as long as one can hit the enemy safely from a distance without reprisal no *hostilities* are taking place.

The frequency of such public arguments about meaning in the media, what Alan Durant (2010: 2) calls "meaning troublespots" and the recurrent difficulties, which Durant profusely documents, in regulating them purely on the basis of an appeal to "ordinary understanding" should provide a good argument that semantic analysis is needed in the study of verbal communication.

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[1] The precise nature of the straw man created through the equivocal parallelism between guns and people taking the Agentive role remains, of course, strategically vague. One construal of the straw man that avoids the more patent incongruity of having the non-human guns taking the role of agents would be a denial of the alleged standpoint that weapons are the efficient cause of the killing.

3. Predicate-argument structures

The view of semantic analysis we adopt here draws directly on congruity theory (Rigotti 1993; Rigotti and Rocci 2001 and Rigotti 2005), but its fundamental features can be found in slightly different forms in a broad tradition of linguistic semantics.

According to this view, the fundamental operation of meaning composition is the application of predicate terms to argument terms. Doing a semantic analysis thus means to rewrite natural language utterances in terms of predicate-argument structures (cf. also Mel' uk 2004, 2012, 2013, 2015). In this perspective the semantic contribution of virtually every content word in a language can be represented in terms of a predicate. To analyse the meaning of a lexical item means, first of all, to establish what kinds of predicates it can manifest when it occurs in its different syntactic constructions.

The idea that the fundamental articulation of meaning consists of predicate-argument structures can be traced back to Plato (*Sophista* 262 a-d). The dialogue argues that articulated *logos* requires the interweaving (*symplokè*) of complementary kinds of signs, namely nouns (*onomata*) and verbs (*rhemata*), while heaping together words of one kind does not result in a connected discourse. This venerable conception, on which much of linguistic semantics is based, has been recently argued to be grounded in the neurophysiology of visual and auditory perception (Hurford 2003). According to Hurford (2003: 261), "neural evidence exists for predicate-argument structure as the core of phylogenetically and ontogenetically primitive (prelinguistic) mental representations", so that the formula *PREDICATE (x)* can be seen as "a schematic representation of the brain's integration of the two processes of delivery by the senses of the location of an arbitrary referent object, mapped in parietal cortex, and analysis of the properties of the referent by perceptual subsystems" (Hurford 2003: 261).

Not all predicate terms can be applied to all argument terms. Predicate-argument structures that make up the "texture" of meaning are characterized by a requirement of *congruity* between the predicates and their arguments. Predicates impose conditions, sometimes called *selectional restrictions,* that the arguments must fulfil. A first shot at a characterization of the way in which a predicate predefines its argument frame could consider the following three levels:

1) The number of arguments selected by the predicate;
2) The semantic type of the argument selected;
3) The order in which the arguments are arranged

If a lexeme manifesting a predicate which presupposes a certain type of arguments is connected with a lexeme manifesting an argument of this type, an ontologically possible state of affairs is constructed; in the opposite case a non-sense arises. On the other hand, if two readings of a lexeme differ either in the semantic types of the entities which can appear in their argument frames or in the number of conceptually required arguments, they have to be considered as expressing different predicates.

The incompatibility of the requirements on the argument places can be established with the help of appropriate semantic tests. For example, the *zeugma test* (cf. Lascarides, Copestake & Briscoe 1990: 43-44) allows us to see when different uses of a word depend on diverging incompatible ontological requirements – as opposed to general or vague requirements:

(4) *Neither *Louis* nor *the word processor* were able *to read* the document.

The same applies, even more clearly, to readings involving a different number of entities. For instance we cannot combine (a) and (b) and obtain an ellipsed sentence like (c):

(5)

(a) The rock on the slope *moved.*

(b) John *moved* the picnic table.

(c) *The rock on the slope *moved*, and John the picnic table.

We cannot change the number or the ontological type of the argument places without changing the content proper of the predicate. In our first example, the meaning of the verb *to read*, insofar as its subject is a human being, manifests a semantic content, and hence a predicate, which is very different from the one expressed in occurrences with a non-human subject[2]. In the second example what is indicated by the impossibility of ellipsis is the fact that *to move* manifests two different predicates, the two-place predicate *to move² (x₂, x₁)* being the *causative* of the one-place predicate *to move¹ (x₁)*[3].

The third level at which predicates predefine their argument frames requires further commentary as it brings into the picture the non-truth conditional dimensions of perspective and salience. Compare (6.a) and (6.b) below:

(6.a) Mary is *taller* than John.

(6.b) John is *shorter* than Mary.

The two predicates *taller* and *shorter* are said to be *converses* of each other as they depict the same situation – we can say that the two sentences are truth-conditionally equivalent – but present it from a different perspective: (6.a) is statement about Mary, it takes Mary as its focus of interest, while (6.b) reads the same situation taking John as focal point. It is clear that here *order* of arguments does not mean their linear disposition on the surface of the text; it rather functions as a shorthand to refer to the meaningfulness of the mapping between argument places and syntactic structures that each predicate predefines for its argument frame. For instance, in English, as well as in large share of the world's languages the mapping of an argument on the syntactic subject ensures a particular prominence of the argument in the perspective adopted on the scene. We will come back to these issues of perspectivization in the following pages, discussing the role of semantics in *framing*.

4. Compositionality and context

Meaning compositionality in natural language discourse can be seen a process guided by the exigency of congruity between predicate and argument terms, as predicates combine with argument terms according to the restrictions they impose at the three levels discussed in the previous section.

Compositionality, however, is less straightforward than what many philosophers, logicians and formal semanticists have liked to assume in their attempts to cast natural language semantics into the mold of the formal languages of logics and mathematics (see. Montague 1970 for an early and influential attempt). Charles Fillmore (1984) was among the first to suggest a broader view of compositionality that is now becoming common place among linguistic semanticists. On the one hand, an account of compositionality has to consider the significant weight of *idiomaticity* in natural languages, in the form fixed expressions,

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[2] In the former case, to read means "to reconstruct the phonetic form and retrieve the meaning of a written text"; while, in the case of the word processor, it means "to process symbols stored on a permanent storage device".

[3] That John *moved* ² the picnic table means that John performed an action which caused the table *to move*¹.

collocations (cf. Mel' uk 2015; Stubbs 2001), as well as syntactic constructions that carry an additional meaning of their own (Kay and Michaelis 2008). On the other hand, compositionality requires an "integration process" that is accomplished "with the help of language-external information of a variety of kinds" (Fillmore 1984: 126). We will briefly consider here this second aspect, examining how the determination of predicate-argument structures involves in many cases the integration of contextual information into a skeletal or somehow 'gappy' schema provided by linguistic structures.

Consider the semantic interpretation of the common noun *foreigners* in the following example:

(7) The survey also revealed that 27 per cent of locals did say they saw value in working with *foreigners*. They also agreed that *foreigners* tend to be less demanding at work, and better skilled (WebCorp).

We can see that its content and extension cannot be determined until we find out the country with respect to which we are speaking – in the example it's Singapore. *Foreigner* is clearly to be analysed as two-place relational predicate, taking a human being as its x_1 and a state as second argument x_2; of which the human being *is not a citizen*. Interestingly, there is no way a sentence like (8a) could be understood as expressing a minimal proposition with an indefinite tacit argument like (8b).

(8.a)   John is a foreigner.

(8.b)   *There is a country* of which John is not a citizen.

The contextual part of the meaning of *foreigner* really requires the hearer to search the common ground of the discourse participants (Clark 1996) to find a *specific* country salient in the context of utterance.

A more complex example is offered by the well-known context-dependency of the adjective *good*. Consider the following examples, taken from Zeno Vendler's (1967) seminal paper on this adjective:

(10.a) John is a good *dancer*

(10.b) John is a good partner *to dance with*

(10.c) Venus is a good planet *to observe*

(10.d) This shoe is good *to eat*

(10.e) John is a good *poet*

(10.f) John is a good *father*

(10.g) Venus is a good *planet*

(10.h) Mumbo is a good *baboon*

The adjective *good*, involves a free predicative variable whose value has to be saturated deictically in the context of utterance. This variable must correspond to a relevant goal, purpose, function or finality. As Vendler (1967) reminds us, this kind of context-dependent functioning was first detected by Aristotle in the *Nichomachean Ethics* (Aristotle, *Nichomachean Ethics*, 1098a, in Vendler 1967: 464).:
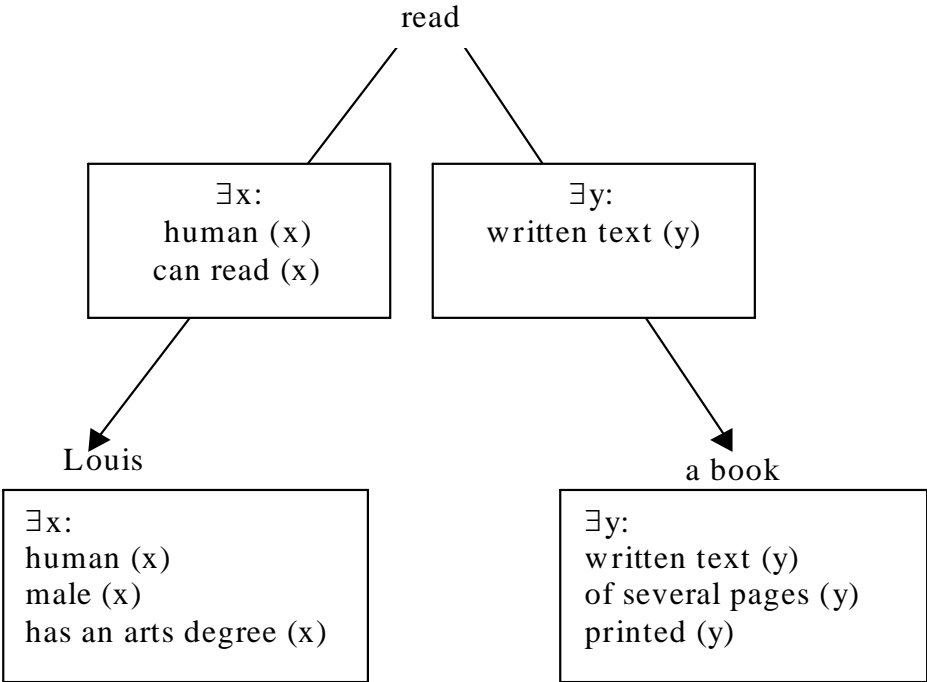
The noun which the adjective modifies provides a highly accessible context for saturation and when *good* modifies nouns that clearly connote a function (e.g. *dancer*, *poet*) or for which a range, or hierarchy, of functions, can be inferred (e.g. *father*) this may be sufficient to assign the variable. Sometimes, the noun lacks this *telic* component, as in "the sad case of Mumbo

the good baboon". "Being a baboon", Vendler (1967: 464) observes, "is certainly not having a function; moreover baboons ordinarily are not things that acquire functions, either". Complements specifying the relevant function may present (e.g. *to dance with*, *to observe*) but often it is simply the context of utterance that provides what is needed: even in poor Mumbo's case, *pace* Vendler, a context where scientists are selecting the best specimen for an experiment can satisfy the free variable of *good*. Clearly, even the functions associated with the modified nouns can be overridden by contextual information, as shown by the case of the shoe *good to eat* for a starved arctic explorer (Vendler 1967: 462).

5. Predicates and presuppositions

Let us now consider more closely the nature of the type restrictions that predicates impose to their arguments. It has been observed by several scholars (Seuren 1985, Rigotti 1994, Rigotti and Rocci 2001, Asher 2011) that these restrictions behave like presuppositions and require the addressee to satisfy them or accommodate them in the *common ground* of the utterance.

Consider a simple sentence like *Louis reads a book* as a fragment of a possible discourse utterance. The two-place predicate *to read* (x,y) imposes several quite specific presuppositions on the referents that occupy its argument places. In the diagram below the arrows represent the relation between the predicate and its arguments, the rectangular boxes placed over the arrows represent the presuppositions that characterize its argument places. In the example these presuppositions are satisfied by the traits characterizing the actual arguments filling the argument slots *Louis* and *a book*. These traits, which are congruous with the presuppositional requirements (*i.e.* they are more specific) are meant to represent part of the developing *common ground* of the utterance (Stalnaker 2002 and Clark 1996). Thus, they are not limited to the traits entailed by the lexical meaning of the arguments (a *book* is a written text, printed, consists of several pages) but include all the information associated to the real referents in the context of utterance as, for instance, the existence of a certain Louis, known by the speaker and the hearer.

read

| $\exists$x:
human (x)
can read (x) | $\exists$y:
written text (y) |

Louis

a book

| $\exists$x:
human (x)
male (x)
has an arts degree (x) | $\exists$y:
written text (y)
of several pages (y)
printed (y) |

If there is an incompatibility between the conditions imposed by the predicate and the characteristics of the real arguments the utterance becomes semantically incongruous, a nonsense, as in *The books read the newspaper* or *John reads the squirrel*. These cases are seen as similar to the classic cases of presupposition failure due to the void reference of definite descriptions (*e.g. The current King of France is bald*).

In fact, the presuppositions associated with argument places are not limited to *type presupposition,* also called *categorical* presuppositions. They also include *factual* presuppositions and *existential* presuppositions. In example (11) below, the predicate *to continue* (x_1, x_2) imposes a communicatively interesting factual presupposition on its second argument place:

(11) Real, two-way communication between our stakeholders and Heineken is crucial. That is why in 2008, *we will continue* to actively seek dialogue with stakeholder groups across these seven focus areas (from Heineken's 2008 Corporate Social Responsibility Report).

Here the company, by using *continue* invites the readers to accommodate in the *common ground* the information that the company *was already* 'actively seeking dialogue' with its stakeholders in the past.

While presuppositions prompt a recovery of the taken for granted information in the common ground of the utterance, their communicative significance often hinges on the powerful mechanisms of accommodation that govern their processing in ordinary discourse: when a presupposition cannot be satisfied in the actual common ground, accommodation dictates that the required information be added to the common ground as long as it does not conflict with the information already present in it. This phenomenon is also known as the *informative* use of presuppositions (Sbisà 1999).

Existential presuppositions, with which the philosophical literature has been familiar for a long time (for a review, see Beaver 2001: 7-30), are also part of the conditions imposed by predicates on their arguments, as shown by examples (12), (13), (14) and (15) below.

(12)   John *painted* the fence

(13)   Michelangelo *painted* the Last Judgment

(14)   John is *bald*

(15)   The Abominable Snowman *exists*

In (12) the predicate *to paint,* understood as 'to cover with color a surface' presupposes the existence of the surface. In contrast, *to paint* understood as 'to create a pictorial work of art' in (13), which is, in fact, a distinct homonymous predicate, does not. Being *bald* in (13) presupposes, among other things, the existence of the creature involved by this state. In contrast, as observed by Seuren (1985), the predicate *to exist* in (15) does not presuppose the existence of its argument. In fact, existence is what the predicate entails.

Some scholars (cf. Seuren 2000, Rigotti and Rocci 2001) have indeed hypothesized that *all* presuppositional phenomena in language have their structural source in the conditions imposed by predicates on their argument places. This hypothesis requires to postulate predicates at an "abstract level of analysis" (Seuren 2000: 279) will not be pursued in detail

here. In the next section we will instead focus on examining the connection predicates, presuppositions and *frames*.

Seuren (1985), developing a style of representation introduced earlier by Fillmore (2003 [1969]) sketches a semantics where two types of conditions are associated with predicates: "satisfaction conditions", which represent the semantic entailments of the predicate, and "preconditions": when a satisfaction condition is not fulfilled the result is falsity, whereas the failure of a precondition results in nonsense, or, as Seuren would put it in "radical falsity". A Seuren-style semantics for the unary predicate *bald*, for example, can be given as follows (without pretensions of real lexicographical adequacy):

bald (x) = [preconditions: x exists, x belongs to a category whose members are normally covered with hair in prototypical places□ satisfaction condition: the normal hair is absent from x]

From a rhetorical viewpoint an interesting case is represented predicates that exhibit basically the same informational content and differ only in the way they distribute this content in the presuppositional preconditions and in the satisfaction conditions. The verbs of judging analyzed by Fillmore (2003 [1969]: 170-173) are a classic example.

To criticize (x_1, x_2, x_3) = [preconditions: x_1 exists, x_1 is human, x_2 exists, x_2 is human, x_3 exists, x_3 is an activity a or the result of an activity a, x_2 is responsible of x_3□ satisfaction condition: x_1 makes a discourse in which he declares that x_3 is negative]

To accuse (x_1, x_2, x_3) = [preconditions: x_1 exists, x_1 is human, x_2 exists, x_2 is human, x_3 exists, x_3 is an activity a or the result of an activity a, x_3 is negative□ satisfaction condition: x_1 makes a discourse in which he declares that x_2 is responsible of x_3]

The entries given above for the predicates *to criticize* and *to accuse*, adapted from Fillmore (2003 [1969]) make explicit how *to accuse* presupposes the negativity of x_3, whereas *to criticize* entails the negativity of the situation. Conversely, where criticism presupposes that 'x_2 is responsible of x_3', accusation does not have this factual presupposition as alleging the responsibility of the accused is the very point of the act of accusation. This kind of analysis is able to cast light on subtle lexical shifts, such as the one in example (16), which would otherwise escape the attention of the discourse analyst as well as of the journalistic writers that produced them.

(16) A top adviser to Hillary Clinton's campaign-in-waiting *accused* the George W. Bush administration of using private emails to skirt transparency rules in 2007. John Podesta […] *criticized* Bush administration officials for using Republican National Committee email accounts for official business. (From thehill.com, March 03, 2015)

In (16) the change of verb is motivated by the difference in the propositional content of the activity occupying the x_3 slot: one can *criticize* the use of private e-mail for official business taking for granted that such use is documented and advancing the standpoint that is reprehensible, but one *accuses* of engaging in this practice "in order to skirt transparency rules" as such an intention can be presented as obviously reprehensible but at the same time is not yet proved.

Evaluative presuppositions such as the one exhibited by *to accuse* are worth special consideration as they represent a widespread means of embedding judgments in discourse presenting them as taken for granted and socially accepted in the discourse community. For instance, when we say that x_1 *is degenerating* into x_2 we presuppose that x_2 is a condition worse than x_1, when we say that x_1 *admitted* to x_2 we presuppose that the content of the admission is a truth that is somewhat painful, embarrassing or damning for x_1, when we say that x_1 *succeeded* in x_2 we presuppose that x_2 was a goal for x_1, when we say that x_1 *failed* to x_2 we presuppose either that x_2 was a goal of x_1 or that x_2 was a standard to which x_1 was morally, socially or legally expected to conform.

6. Frame semantics

Consider the factual presuppositions attached to the predicate *to chase* in a sentence like (17) below,

(17) The police did not *chase* the suspects.

Fillmore (2006 [1982]: 397) observes that when this verb "is used of two beings moving in the same course, the movement of the one in front is presupposed, independently of whether the movement of the individual designated by the subject of the verb is asserted, denied, questioned, or supposed". As Fillmore observes, the question of *chasing* or *not chasing* arises in a particular kind of situation or scene: "in a setting in which one person is running, especially where it is understood that that person is fleeing, it is relevant to consider whether some other person is or is not going to try to prevent that first person from getting away." Fillmore's point, in commenting on this verb, is that presuppositions associated with argument slots in lexical predicates may ultimately depend on the structure of larger, more global, sub-lexical models that we use to understand everyday situations. Fillmore calls such a model a *frame*. This relationship between predicates, presuppositions and frames is poignantly illustrated by George Lakoff (2003: 32) with an example taken from US political discourse:

On the day that Geoge W. Bush took office, the words "tax relief" started appearing in White House comuniqués. Think for a minute about the word *relief*. In order for there to be relief, there has to be a blameless, afflicted person with whom we identify and whose affliction has been imposed by some external cause. Relief is the taking away of the pain or harm, thanks to some reliever. […] The relief frame is an instance of a more general rescue scenario in which there is a hero (the reliever), a victim (the afflicted), a crime (the affliction), a villain (the cause of affliction) and a rescue (the relief). The hero is inherently good, the villain is evil and the victim after the rescue owes gratitude to the hero.

Communication scholars are familiar with Goffman's sociological notion of *frame* as a basic definition of a situation "built up in accordance with principles of organization" that shape the understanding of events and regulate social events and "subjective involvement" in them (Goffman 1974: 10-11). This notion of frame, and related notions developed in cognitive and social psychology, has formed the basis of various attempts at "frame analysis" by communication scholars aimed at reconstructing culturally shared patterns of interpretation used by communicators. Despite the notorious vagueness of Goffman's frame analysis, the concept has been productively applied to various areas of communication research. One noteworthy example is journalism where frame structures have been used to understand "the cognitive patterns of interpretation" used by journalists in the newsroom (*journalists frames*) as well as "the patterns of meaning articulated in news content" (*news frames*) (Brüggerman 2014: 63).

Communication scholars are usually less aware of the parallel and largely independent development of the notion of *frame* in linguistics, due primarily to the work of Charles Fillmore since the early 1970s (cf. Fillmore 2003 [1977], 2006 [1982]). The notion of frame emerges as a direct development of Fillmore's research on the concept of the *argument frame* of a predicate and on the *roles* that characterize each argument place. In his earlier works Fillmore (2003 [1968]) tried to develop a fixed list of *semantic roles* (*Agentive, Instrumental, Dative, Factitive, Locative*, etc.) and examined how different predicates provide representations of scenes selecting, highlighting or shadowing participants' roles. Later, he moves to a local view of roles as defined in a relation to cognitive models of scenes, which he calls *frames*.

The meaning of lexical predicates has to be understood as relative to these background scenes or frames. Consider the four-place predicate *buy* (x_1, x_2, x_3, x_4) in example (18):

(18) [x_1: John] *bought* [x_2: a house] [x_3: from Elizabeth] [x_4: for €500,000]

Each of the argument slots corresponds to a role in a 'commercial transaction': x_1 is the *buyer*, x_2 the *goods*, the x_3 *seller*, and x_4 the *price*. These roles, however, are also evoked by other words referring to the commercial event (*spend, sell, pay, charge*) including the nouns denoting the roles themselves (*goods, price,* etc.). Each of them evokes the whole *scene* of the 'commercial transaction', while putting in focus different aspects of it:

(19) [x_1: Elizabeth] sold1 [x_2: a house] [x_3: to John] [x_4: for €500,000]

(20) [x_1: The house] sold2 [x_2: for €500,000]

(21) [x_1: John] paid [x_2: €500,000] [x_3: to Elizabeth] [x_4: for the house]

(22) [x_1: Elizabeth] charged [x_2: John] [x_3: €500,000] [x_4: for the house]

(23) [x_1: €500,000] is the price [x_2: of the house]

(24) [x_1: The house] costs [x_2: €500,000]

In this perspective we come to better appreciate the notion of *converse* that we introduced in section 3: converse predicates relating to the same frame "index portions or aspects of some conceptual or actional whole" (Fillmore: 2003[1977]: 282). The meaning of each predicate cannot be understood if not with respect to the whole *frame* commercial transaction. Frame elements evoke parts of a culturally shared conceptual scheme which allow us to understand the scene in terms of roles and relations between roles. The choice of one predicate or the other activates, or highlights, certain elements of the schema leaving other elements unexpressed, and present the whole scene from a particular perspective. For instance (19) takes the perspective of Elizabeth, the seller, while (21) takes the perspective of John, the buyer.

From the point of view of the rhetorical choices of the communicator, frames involve two levels of meaningful choice. First, the communicator can decide to present a given situation according to different conceptual frames. More than one frame can apply to a given situation, and the possible schemes can have very different implications for the rhetorical objectives of the communicator. A classic example of alternative framing is offered by Aristotle in *Rhetoric* (III, 2, 1405b) when he observes that the Orestes can be rightly called both *mother-slayer* and *father's avenger*. The two epithets select two alternative framings of the very same action perpetrated by Orestes. Second, once a given frame has been chosen, the choice of the specific lexical predicates within it can serve to selectively activate certain components of the

frame and to select a viewpoint on the scene. Discourse analytical work on the news texts is rich in contributions dealing with the framing power of predicate selection (see for instance Van Leeuwen 1995).

Fillmore (2006[1982]: 385) makes an important distinction between situations where the "lexical […] material observable in the text 'evokes' the relevant frames in the mind of the interpreter by virtue of the fact that these lexical forms […] exist as indices of these frames" and situations "in which the interpreter assign coherence to a text by 'invoking' a particular interpretive frame".

On the one hand, the power of linguistic forms in evoking extremely precise frames should not be underestimated. For instance, as soon as a payment from x_1, to x_2 is referred to as *alimony* we immediately know that x_1, and x_2 were married, their marriage ended in divorce and that their divorce settlement would involve the payment of money from x_1, to x_2. (Fillmore 2003 [1977]: 238-239); once we refer to an x_1 as a *heretic* we immediately evoke the frame of a "religious community which has a well-defined notion of doctrinal correctness" and characterize x_1's religious opinions as 'wrong' from the viewpoint of such an orthodoxy (Fillmore 2006 [1982]: 384).

On the other hand, the underlying conceptual structure of a frame can be invoked to provide a coherent interpretation of semantic materials that are congruous with the presuppositions characterizing its *role slots*. Example (25) below is an excerpt from a speech given by UBS chairman Marcel Ospel on February 23, 2008, in which he summarized the events of the financial crisis before the shareholders of the bank:

(25) […] 1. Last year, the major securities markets in the United States *experienced a sharp and unexpected downturn*. 2. Prices of previously highly-rated securitized loans *dropped sharply* and liquidity in the market promptly *dried up*, subsequently affecting credit markets worldwide. 3. Market risks *changed with incredible speed* and on a scale that could never have been expected. Even seasoned financial experts see the current phase in the market as possibly the most difficult one for the financial services industry since the crash of 1929. 4. So far, this financial crisis *has resulted in* writedowns worldwide of more than 300 billion US dollars. 5. As a result, in recent months UBS has *had to recognize* writedowns of more than 21 billion Swiss francs in several stages, *resulting in* a loss for the 2007 business year of 4.4 billion francs. At the same time, the UBS share price, which *had reached* an all-time high back in May 2007, *came under enormous pressure*. […](Speech by Marcel Ospel, Chairman of the Board of Directors, at the Extraordinary General Meeting of Shareholders of UBS AG in Basel on 27 February 2008)

The passage features a series of predicates that select non-human, inanimate entities as their x_1 (*markets*, *loans*, *liquidity*, *the financial crisis*) some of them considerably abstract (*market risks*, *UBS share price*). These predicates convey a) notions of sudden, violent, fast unintentional movement (*sharp and unexpected downturn*, *dropped sharply*, *changed with incredible speed*), b) physical processes taking place in the inanimate world such as evaporation (*drying up*), atmospheric pressure (*came under enormous pressure*), and c) non-agentive causality (*resulted in*). The only predicate enjoying a human organization as its x_1 is *had to recognize*.

While the predicates in this passage do not directly *evoke* any definite comprehensive framing of the situation, one could argue that they strongly invite the *invocation* of a natural disaster frame as the correct model for understanding the financial crisis. In such a frame the role of

human entities can only be that of spectators obliged to recognize the damage and of targets of the pressure exerted by natural forces. This hypothesis of frame invocation finds indirect confirmation in a subsequent passage of the speech (26) where the crisis is referred to as a *storm*.

(26) […] the *storm* that then broke over the financial markets.

It is clear at this point that the framing invoked in (25) and later evoked in (26) is metaphorical in nature and involves the mapping of the whole social frame of the financial markets onto the natural, inanimate domain of meteorology. The rhetorical expediency of such a frame in minimizing human agency and responsibility in the crisis may not be purely coincidental. Metaphor represents a powerful framing device (cf. Wallis and Nerlich 2005) prompting the audience to make sense of a whole domain of experience in terms of another. Like all framing devices, metaphors "inevitably highlight some aspects of reality and hide others" (Semino and Masci 1996: 267).

Arguably, by discussing frame invocation and metaphorical framing we have now entered the territories of implicit meaning understanding and of figurative meaning, which make the subject of other chapters of the present Handbook. This is therefore a good occasion for closing our brief introduction to semantic analysis as a resource for understanding meaning construction in verbal communication.

7. References

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