

2. The Detection of the Hidden Design of Meaning

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Abstract. Meaning is a marvellous and dreadful matter, as it is neither totally intelligible nor totally unintelligible. It cannot be considered as an univocal, closed and fixed entity, atomic in nature, universally shared and invariable in time. Rather, meaning has a complex design, composed by different facets: a referential, an inferential, and a differential one. This standpoint, which overcomes the truth-conditional semantics as well as the structural one, entails that meaning is patterned in nature, based on the encyclopaedic knowledge and connected with mental concepts. The meaning dilemma between variability and stability is crucial for every semantic theory, as meaning flexibility, grounded on the daily experience, displays a large range of linguistic phenomena like the defeasibility of semantic traits, fuzzy boundaries, radial categorization, semantic gradualness and polysemy, the interconnection between the literal and non-literal semantic domain as well as the context dependence. The semantic variability calls for an inferential process, as modal meaning is not an immediate and fully evident datum; rather, it is generated by communicators during their interaction in a dynamic way in the light of the principle of semantic and pragmatic synchrony. At the same time, meaning shows stability over time owing to its conventional nature. Without semantic stability it would be ungraspable. As patterned, meaning is coded in some way and follows at least some standard features to be taken by default. Presumptive meanings basically depend on context regularity and communicative formats. On this platform the meaning compositionality appears to be a critical issue. Traditionally, such compositionality has been faced by the feature semantics in which meaning is composed by a finite set of necessary and sufficient conditions. More recently, the prototype theory in its extended version afforded another explication of meaning compositionality by proposing the distinction between essential and typical features. In the present chapter a new model based on the T-patterns detection has been briefly advanced and illustrated, as, based on empirical observations extracted from the flow of communicative events, it seems to arrange quite well both with the variability and the stability of meaning. The detection of T-patterns enables to appreciate the hidden design of meaning encompassed in an utterance or in a nonverbal item not generally and in an abstract way but locally and in a contingent manner. The attention is focused on the local management of meaning, as each moment communicators have the opportunity of organizing, regulating, managing and monitoring their communicative interaction through the most effective choice between different semantic routes.

Keywords: Meaning; verbal and non-verbal communication; semantic features.

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2.1 Introduction

Among specie-specific properties of human kind, meaning is certainly one of the principal, if not the principal one. From the evolutionary standpoint, meaning is the access to the symbolic domain and is the way through which individuals become able to communicate each other their internal states of mind. By means of symbols the human interaction has been unbelievably enhanced and has reached layers of multiplicative complexity through an endless process which enables more and more sophisticated communication patterns.

Dating from 17,000 to 18,000 years ago, in caves near Lascaux, in France, hundreds of aurochs bulls (ancient oxen), horses, and deer, along with mysterious dots and geometric figures were painted on the walls by humans of that time. Previously, approximately 25,000 years ago an anonymous artist sculpted the so-called “Willendorf Venus”, found in Austria, one of the earliest non-tool artefacts yet discovered. This ancient expression, made of fine limestone and 11 cm tall, plainly details a bountiful mother figure. On the inclined head is designed a complicated hairstyle made of parallel curls extending to the neck. Both wrists are decorated with ragged arm-rings.

Quite likely, since the origin of the *Homo sapiens* in Africa, human beings were endowed with some kind of symbolic representation and were provided with the basic ability of mind-reading in order to grasp the other’s intentions and goals. Similarly, the emergence of language about 150,000 years ago gave an enormous and exclusive advantage to human species and, as Knight, Studdert-Kennedy and Hurford [1] argued, the symbolic adventure began in its fullness. Actually, with the evolutionary emergence of language, communication expanded its range of opportunities in an exponential manner, although it retained the nonverbal roots in its architecture. As Deacon [2] pointed out, thanks to language human species became a symbolic species, since language enabled to generate and share meanings, to develop abstract ways of thinking, to grasp the other’s mind, as well as to participate plans and goals. As a result, human beings began to question about the sense of life and death, to produce rituals, to invent first magic and religions and then philosophy and science, to give a hierarchical architecture to social order, and the like.

Within this evolutionary perspective, meaning is actually a complex matter, insofar as linguistic abilities have not cancelled the previous nonverbal (or extra-linguistic) competences; rather, they have rooted in the nonverbal ground. Consequently, linguistic meaning is always associated with extra-linguistic (or, nonverbal) components. Its semantic compositionality does not only concern linguistic features but also nonverbal ones. Meaning is patterned in nature. Without patterns meaning may not be meaning anymore; rather, it might be a chaotic and ungraspable aggregate which does not mean anything. Without patterns any communicative interaction becomes anarchic, disorganized and purposeless, by nature unforeseeable.

Therefore, as Anolli [3] highlighted, meaning turns out to be the local outcome of a large and consistent multiplicity of distinctive semantic facets, some of which are apparent and immediately understandable, while others are latent and concealed. The meaning design of a word, an utterance, a gesture, or whatever else is not obvious and plain in its entirety; rather, given a contingent situation between communicators, it always displays some hidden elements to be detected through an inferential way. As a result, meaning is not given once and for all and for any circumstance; instead, it should be recognized and defined each time within a specific situation.

The present chapter aims at facing this complex subject by developing a course through three subsequent steps. First, the meaning complexity will be deepened considering different theoretical standpoints: the truth-conditional semantics (meaning as plain reference), the structural semantics (meaning as mere linguistic value), and the cognitive semantics (meaning as cognitive pattern). Second, the dilemma between variability and

stability of meaning will be examined. Obviously, meaning is a flexible and contingent matter, insofar as it is subjected to a wide range of semantic phenomena like the defeasibility of semantic traits, fuzzy boundaries, the radial categorization, the semantic gradualness and polysemy, context dependence, and so on. Within this domain modal meaning turns out to be the contingent outcome of inferential processes, ruled out by the principle of semantic and pragmatic synchrony. However, at the same time, meaning displays stability since without stability it is ungraspable. Meaning is coded in some way and follows at least some standard features to be taken by default. Presumptive meanings basically depend on context regularity and communicative formats. Third, on this platform it will be worth analysing the compositionality of meaning in its different versions. Particularly, the feature semantics, the extended prototype theory, and the type-pattern framework will be focused.

So, my aim in this chapter is to show how the type-pattern concept, proposed by Magnusson [4-6] for a wide range of interactions and events, is also very useful for semantic analysis and understanding. Within the communicative sequence of exchanges between interlocutors, there seems to be some chances to initiate a new path to detect, recognize, and interpret meaning in an empirical way, adhering to the contingent situation in a given cultural system.

2.2 Meaning as complexity

Meaning is, at the same time, a marvellous and dreadful matter. The starting point of this challenge is that meaning is neither totally intelligible nor totally unintelligible. As Bohr [quoted from Morin, 7] persuasively illustrated, you have to kill a dog to obtain the whole information included in it. Till it is alive, you have not its complete information. Similarly, it is impossible to gain the entirety of meaning hold in a word or in an utterance or in a gesture. Of course, the meaning of a number, like “two”, is apparently self-evident. “Two” means “one plus one” and it seems that such necessary truth incorporates the whole meaning of “two”. However, also in this case – an elementary semantic item – “two” does not always mean exactly “two” but could mean less or more than “two”. For instance, if you say “two” with a very low pitch and with a sad and disappointed expression for receiving something much less of what you expected, you would very likely mean “just two”. Conversely, if you exclaim “TWO!” with a high pitch and a happy smile for getting more than the one only gift you expected, you would very likely mean “really two!”. In another situation, to the question “What time is it?”, the answer “It is two o’clock” could mean “right two”.

In each of these instances the literal meaning of “two” is always the same but at a subjective (experiential) layer the meaning of “two” is quite different for it could mean much less or much more than two or elsewhere exactly two. In the linguistic domain the attention of scholars has often been focused on the literal meaning, as if the linguistic level were able to exhaust the totality of meaning.

As Sapir [8] pointed out, never a plain word like “horse” can be pronounced without some kind of prosodic melody and vocal variation in pitch profile that, unavoidably, modifies, and in some circumstances deeply modifies, the meaning of the word in matter. On these nonverbal aspects of meaning we will come back later. At the moment, it is worthwhile to highlight that there is an enormous range of ambiguities in natural language, requiring at least a one-to-many correspondence between the lexical item and its meanings. Paraphrasing the words of Cruchfield, it is rarely, if ever, the case that the appropriate notion of meaning is extracted from the communicative interaction itself using minimally

biased procedures. Briefly stated, meanings are usually guessed and then verified [quoted from Solé and Goodwin, 9, p. 20].

Meaning cannot be considered as an univocal, closed, and fixed entity, atomic in nature, universally shared and invariable in time. It has not a discrete structure, defined by clear-cut boundaries. Rather, meaning should be interpreted as a mental and cultural scheme, endowed with a high flexibility and adaptability to the different contingent situations through communicative exchanges.

Historically, philosophy and logic, linguistics and semiotics, sociology, anthropology and psychology coped with the challenges of meaning. Furthermore, phonology, syntax, semantics, and pragmatics are areas each with their own generative capacities in defining the meaning structure. As Jackendoff [10, 11] underlines, there are correspondences across phonological, syntactic, and semantic representations, but such correspondences may be partial and not one-to-one. Also Levinson [12] points out that the correspondence rules between these representations are not deterministic in nature.

As a complex and a multidimensional subject, not reducible to a single component by definition, meaning should be thought of as a relation between *expression*, *representation*, and *referent*, as it is highlighted in the following semiotic triangle (see figure 2.1):

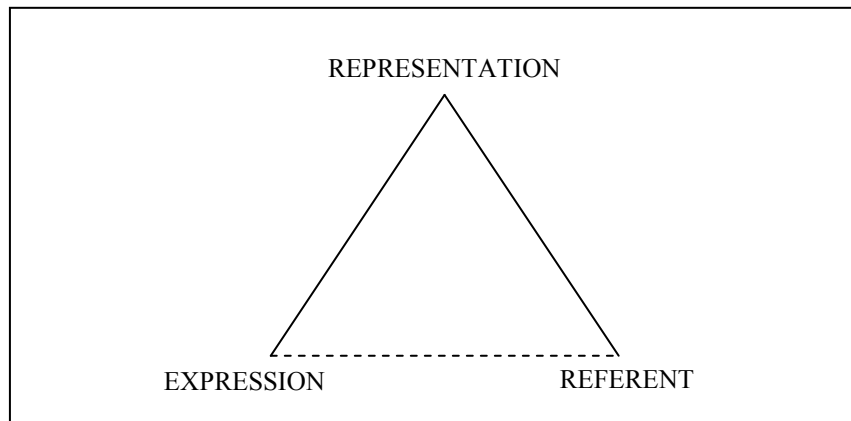


Figure 2.1 Semiotic triangle (adapted from Ogden and Richards, [13])

In such a diagram, derived from the one proposed by Ogden and Richards [13], *expression* is meant as every sign able to generate a meaning between the interlocutors (i.e. an utterance, a word, a gesture, and the like). In turn, *representation* should be considered as a mental schematic image extracted from all the modes of experience, and indicates the manner (or way) in which an expression designates its referent. It is a mediating term, insofar as individuals understand a referent through the mental representation of a given expression. Last, *referent* means the object, the event or something else in a (real or possible) world.

According to this point of view, *meaning* may be defined in a threefold manner: (a) the meaning of an expression is the state of things to which the expression refers; (b) meaning is the relation that each linguistic item entails with all the other elements; (c) meaning is the mental image that connects an expression to the correspondent referent. On this ground, as Violi [14] sharply argued, three main theoretical approaches for meaning analysis were developed: referential or truth-conditional semantics, structural semantics, and cognitive semantics.

2.2.1 Meaning as plain reference

In the truth-conditional semantics, starting with Frege, Russell, Carnap, and Tarski and running through to the more recent theories of Montague, Hintikka, Barwise, etc., the relationship between language and world has been deepened, insofar as the meaning of a sentence would consist in saying something about a given state of things that could be true or false in a (real or possible) world. Therefore, the meaning of a sentence is essentially given by its *truth conditions*. More precisely, understanding a sentence about a certain state of things means understanding in what conditions and circumstances such state of things would be true, independently from its reality. As Wittgenstein [15] stated in his Proposition 4.024: “To understand a proposition means to know what it is the case, if it true. (One can therefore understand it without knowing whether it is true or not)”.

Frege [16] first introduced the basic distinction between *sense* (*Sinn*) and *reference* (*Bedeutung*). Sense is the way through which we can grasp the reference connected with a certain expression. Sense thus is able to mediate the relation between language and the world. However, according to Frege, sense is not a psychological and subjective process but a “common property of many people and so is not a part or a mode of the individual mind” [16, p.59].

Reformulating the Frege’s notion of sense, Carnap [17] proposed the idea of *intension* to resolve the so-called “opaque or non-truth-conditional contexts”. Such contexts are generated by verbs of propositional attitude like *to believe that p*, *to hope that p*, and so on, in which the truth value of the completive clause following verbs does not depend on referring to an actual state of affairs but on the mental attitude of the speaker. To overtake this difficulty, Carnap developed the viewpoint of *possible world*. If I say *The king of France is tall*, we are able to grasp the sense of this utterance even though everybody knows that nowadays there is not any kingdom in France. Its meaning is not given by what it designates in the actual world but it is an *intension*, that is, a function to a possible world in which a kingdom would exist in France and the king would be tall. The *extension* of a sentence is what it refers to, and gives the truth conditions on whose ground it might be taken as true (or false). The intension of a word or a sentence is a function which fixes its extension in every possible world.

Going on with this theoretical framework, Montague [18] founded his formal analysis of language. According to him, there is no difference between natural language and formal language, and semantics should be considered as a meta-mathematics that interprets syntax. Montague conceives syntax and semantics as having a parallel construction, as each syntactic category has a corresponding semantic type and, likely, each syntactic rule has a corresponding semantic rule which attributes intension to the linguistic expression. So, according to Montague, syntax and semantics are characterized by isomorphism, since the syntax of a language is closely linked to its semantics.

To put in a nutshell, denying any attention to flesh and blood individuals and confining the meaning’s study to the formal logic, the truth-conditional point of view turned out to be referential and anti-psychological in nature. In such perspective, meaning was designed as an independent affair from the subjective mind, and as a matter of fact it was regarded as an objective and absolute entity. However, this standpoint was not without a set of logical and semantic difficulties. Herein I will limit to mention only some of them.

First, the notion of meaning itself remains unconsidered, insofar as the analysis of the mental representation has been disregarded. Without any mental representation, meaning, intended as a logical and mathematical construct which serves to define truth conditions, becomes an empty formula, unable to explain elementary linguistic processes. For instance, according to Montague’s semantic model, the intensions of simple expressions are determined only in terms of their logical type. In such a way, it is possible to

distinguish between the intension of a transitive verb from that of an intransitive one (as in *Peter leaps* and *Peter loves his mother*) but it is impossible to discern the intensions within a given category, such as transitive verbs. So, we cannot distinguish the meaning between *Peter loves his mother* and *Peter hits his mother*, as these two sentences have the same logical type of intension. Therefore, truth conditional semantics, which focuses on truth conditions, is not in the position to actually define them.

Second, this prevalence of formal semantics and the lack of reference to mental representation lead to misleading analysis in linguistic semantics. For instance, within the field of quantifiers, in formal semantics there is no difference between the quantifiers *each*, *every*, and *all* as they are represented by the universal quantifier. However, in linguistic semantics they originate significant differences as it shows in the following sentences:

- 1a. *All the men lifted the car.*
- 1b. ?? *Every man lifted the car.*
- 1c. ?? *Each man lifted the car.*

The sentences (1b) and (1c) sound odd since the use of *every* and *each* implies a distributive meaning, while in (1a) the use of *all* entails a collective meaning.

Third, within the case of lexical substitution, while the truth conditions remain the same, there is a change in the point of view with which the statement is said. See, for instance, the following couple of sentences:

- 2a. *The cat is under the chair.*
- 2b. *The chair is over the cat.*

In such a case, the truth conditions are the same in both sentences but the meaning is quite different, as the difference of the subjective point of view entails a different mental orientation of speakers toward the contingent situation in (2a) and (2b).

Summing up, the truth-conditional theory of meaning appears to be explicitly abstract and formal, without any attention to subjective aspects. The notion of truth condition has been developed within a totally objective viewpoint, insofar as a sentence turns out to be true or false independently of our recognition of it as such. Meaning is conceived as an objective entity disconnected to the mental processes which make the linguistic understanding possible. As Lakoff [19] pointed out, the truth-conditional theory assumes a “God’s eye” standpoint to see and grasp the meaning in its absolute and objective nature.

2.2.2 *Meaning as mere linguistic value*

de Saussure [20], Hjelmslev [21] and other scholars of the structural linguistics advanced the hypothesis that language may be considered as an autonomous network of mutually interdependent relations within which linguistic items exist by virtue of each other, independently from any outside determination. Thanks to its autonomy, structural semantics conceives meaning as a biunivocal combination of signifier (i.e., the acoustic image) and signified (i.e., the mental image). The inseparable link between signifier and signified assures the autonomy of meaning from any possible adulteration coming from the mental and psychological field.

What does meaning mean according to de Saussure? In his latest writings meaning is *value*, that is, the possibility for each lexical item to be compared and contrasted to any other in the linguistic system. The starting point is given by the consideration according to which “in a language there are only differences, and no positive terms” [20, p. 118]. Thus, the meaning of *apple* is not given by a set of its features (i.e., what it is, described in

positive terms); rather, it is only given by the comparison with all the other linguistic items within a certain language. *Apple* is what it is, insofar as no one other linguistic item takes its own position within a certain natural language. Consequently, meaning is generated by the intra-linguistic negative relations of a given word with one other, and consists of the set of differences which exist between that word (i.e., *apple*) and all the other words of a given natural language.

For the structural semantics, the meaning of a word is defined in a positional differential negative way. Meaning is put totally within the boundaries of a linguistic system, and there is no need to do any reference to an extra-linguistic world and to any conceptual and mental representation. Meaning is designed only by the position of a word in the linguistic system. As a consequence, the autonomy of semantics implies an anti-referential and anti-psychological approach. Concerning this, Hjelmslev [21] formulated the *principle of immanence*, according to which semantics aims at an immanent understanding of language as a specific self-sufficient system, looking for consistency and regularity inside language rather than outside of it.

Nevertheless, the structural semantics turned out to be invalidated by its intrinsic circularity. If all linguistic items are defined on the ground of the relations between them, how can such relations be defined without referring to the items themselves? As De Mauro [22] highlighted, we define the terms thanks to the relations, but the relations cannot be defined without having defined the terms. Knowing all the system of linguistic relations existing between a linguistic entry and each other entries does not generate any meaning. Knowing that *zeffo* is the opposite of *zoffo*, a pejorative of *zaffo*, and the superlative of *ziffo* does not enable anybody to know the meaning of *zeffo* at all.

2.2.3 *Meaning as cognitive pattern*

Around the eighties, in an anti-Chomskian position, a group of scholars – among others I would like to mention Fillmore [23, 24], Jackendoff [25, 26], Lakoff [19], Talmy [27] – gave rise to the so-called *cognitive semantics*. Rather than a unitary theory, it is a family of theories which share some common principles and assumptions. Generally speaking, these scholars were unsatisfied with a viewpoint of meaning as an objective, discrete, absolute entity just as it was developed by the traditional semantics in both formal and structural design. On this ground, they set up a network – although loose, by nature – of semantic principles useful to grasp the character of meaning. Thus, they suggested a new design of meaning as the outcome of mental processes and social interactions.

First, in the cognitive semantics understanding meaning involves understanding the way in which individuals communicate each other. Meanings are neither abstract entities as in formal and logical semantics, nor intra-linguistic relations as in structural semantics. Rather, they are items of conceptual and mental networks. So, semantics and understanding are two sides of the same coin.

In particular, Fillmore [28] advanced the distinction between a semantics of understanding (*U-semantics*) and a truth semantics (*T-semantics*). The former is interested in understand the relations between linguistic statements, their context of use, and the processes of their interpretation; conversely, the latter is based on truth judgments. In turn, Jackendoff [26], even more radical in his position, assumes that, to understand the meaning of a word or an utterance, we have to grasp the relations between that word (or utterance) and the corresponding concept.

Consequently, any semantic model should be endowed with psychological plausibility, insofar as it should be able to conform to actual processes of interpretation and linguistic communication, as well as to adopt experimental methods to verify its statements. As a further consequence, within the cognitive standpoint, semantics loses its autonomy, as it

turns out to be impossible to study the semantic aspects of language and communication in isolation from other cognitive abilities. It is enough to think of the categorization processes which involve both linguistic and conceptual competences.

The non-autonomy of semantics concerns both cognitive and cultural layers. The meaning of a word, an utterance or a gesture cannot be disconnected from our experience of the world, which is physical, mental, social, and cultural. Even without falling in the relativistic approach of Sapir and Whorf, nowadays there is much evidence of the deep influence of culture on any natural language, concerning the lexical entries, the grammar, the contextualization indices and the like, as Gumperz and Levinson [29] have strongly underlined.

Second, the cognitive semantics broadens the meaning's notion. Meaning cannot be designed only by the dictionary knowledge but should take into account the encyclopaedic knowledge at disposal to an individual. Dictionary knowledge is the circumscribed set of linguistic features and components of a word which it is possible to find in a dictionary, while encyclopaedic knowledge is the general collection of factual knowledge, extracted from the daily experience. In this sense, it is impossible to discern on principle what is intrinsically linguistic and what is not, as well as to distinguish between what is essential in defining the meaning of a word or an utterance and what is not. By nature, meaning is "opened up" to encompass all our encyclopaedic knowledge. As a consequence, meaning cannot be disconnected by our experience, culturally mediated and psychologically situated.

Third, according to the cognitive semantics linguistic meanings cannot be isolated and detached from their conceptual correspondences. Yet, there are different theoretical positions on this issue and still nowadays there is not agreement among scholars. According to Fillmore [23], meaning and concept are two different domains, as the information processing and the conceptual system are general and abstract in nature, while linguistic frames turn out to be more specific and detailed in describing categories and individual relations to a contingent situation. Conversely, Jackendoff [26, 11] holds up that the semantic structure coincides with the conceptual one, insofar as the former is a subset of the latter. The meaning of a word is conceivable as a part of the conceptual system, connected in the long-term memory to a phonological circuit and to a syntactic structure.

Fourth, cognitive semantics refuses the externalist position of the truth-conditional standpoint, according to which meanings are externally connected to states of the world through devices that are extrinsic to speakers. At the same time, it rejects the structural approach, according to which meanings are generated only within the linguistic domain. Generally following a phenomenological point of view, cognitive semantics argues that language interacts with perception, cognition, reasoning, and emotion (for instance, see Jackendoff [26]). Eco [30] has already associated linguistic meaning and perceptual meaning, insofar as perceptual aspects are the link enabling the mapping of language onto the world.

Summing up, cognitive semantics endorses a referential and psychological notion of meaning, widening the theoretical boundaries of its comprehension, and offering new possibilities to deepen its empirical understanding.

2.2.4 Toward a unified theory of meaning

As we have seen, truth-conditional, structural and cognitive semantics are in conflict with each other in defining meaning. Each of them has focused its attention on particular facets of meaning. Nonetheless, it is worth deepening the opportunity to put together some facets encompassed in them, actually developing a framework that can match a unified theory of

meaning. Herein I intend to point out three basic aspects of the meaning design: (a) the referential facet, (b) the inferential facet, (c) the differential facet.

Referential facet – The referential facet of meaning entails the need to foresee a relationship between meaning and reality. Reference is a necessary condition to generate the meaning of a word, an utterance or a gesture. Putnam [31] argued that meanings are not in the head but depend on references in the environment. Meaning is always the meaning of something, and there cannot be the meaning of anything that does not exist somewhere. Even the meaning of nothing is an actual meaning. Without any kind of reference the risk is to collapse in a solipsistic abyss where there is no room for meaning.

Needless to say that reference should not be conceived as an absolute and objective entity, externally defined and independent from speakers. Rather, it should be intended as an entity which designs a given content of experience referring to a specific reality. The connection between meaning and reality is not immediate and direct but normally mediated by the personal experience. In turn, experience constantly and intrinsically is shaped by the referring culture that defines beliefs, ways of thought, values, behavioural, social and moral standards, as well as practices and rituals. To put in a nutshell, meanings are the outcome of a cultural activity generated by everybody who feels and goes through a set of events, who participates each other in creating symbols and mental representations of such events, and who shares with other people the conventional devices to form new meanings in an endless journey.

Inferential facet – The inferential facet of meaning concerns how meanings are mentally organized. First of all, meanings have links with concepts, although meanings and concepts are different each other. They are correlated and interdependent but distinguished. Thus, semantics should not be confused with “conceptual structure”; the semantics of a language is a language-specific phenomenon, and the system of correspondences between language and thought is not, by nature, isomorphic. Consider, for instance, the so-called “lexical gap”, that is, the phenomenon in which a given concept does not have its direct equivalent in the lexical system but it is necessary to resort to a circumlocution. This issue is quite recurring in the translation of specific utterances or words from a natural language into another.

Likewise, in the opposite case, we may consider the condition in which a speaker knows a given word but is confused about its meaning, or, alternatively, he does not even have it. Such a condition, called “conceptual ignorance”, is often found in the case of scientific words or utterances, as, for instance, for the notion of imaginary number: you can have the meaning of “number” and “imaginary” but not the concept of “imaginary number”.

Furthermore, in case of polysemy, it does not exist an equivalent equation between a word and the corresponding concept, as different concepts match one word only (relationship “one-to-many”). Take, for instance, the word *bank*: it has different conceptual equivalents as (a) a business that keeps and lends money and provides other financial services, (b) a land along the side of a river or lake, (c) a large pile of earth, sand, snow etc., (d) the money in a gambling game that people can win as in *break the bank*, (e) a slope made at a bend in a road to make it safer for cars to go around. It happens the reverse with synonymy, where different linguistic items – as *car*, *automobile*, *machine* – correspond to the same concept (relationship “many-to-one”).

Moreover, the inferential aspect of meaning resorts also to the mental activity of inference. Meanings are not given once and for all in their plain nature. They should be intended and interpreted by interlocutors through a set of linguistic and non-linguistic cues. Grice [32] gave prominence to the distinction between “what is said”, “what is meant”, and “what is presupposed”. The transition from “what is said” to “what is meant” involves

many mental operations of inference, in particular of abduction. Concerning this, Grice [32] introduced the notion of *conversational implicature* to explain the gap between what is literally said and what is conventionally implicated by speakers. In turn, Levinson [12] widened this standpoint with the theory of *generalized conversational implicature*, that is, a preferred interpretation of a given utterance, and a default inference able to immediately grasp the presumptive meanings of such utterance.

Differential facet – The differential facet of meaning involves that language, as any other communication system, participates in defining the meaning of a word or an utterance. The semantic organization of an utterance or discourse binds the mental representations which are combined with its speech. The expressive modes of accentuation or mitigation or else inhibition, the contribution coming from hedges or modifiers, the linear order of words in an utterance, and the like effectively contribute in specifying the meaning toward a given sense direction rather than another one. de Saussure was right in taking a language as a system of differences. Such system, insofar as it enables an unlimited set of comparison actions, may generate linguistic variations in meanings.

2.3 Variability and stability of meaning

As we have seen, the complexity of the meaning design is given by the difficulty to grasp and confine it in a circumscribed room. Meaning never repeats itself. A twice-said utterance has not the same meaning of the first-said one, as in any case it arises semantic hidden nuances. Repetition itself intrinsically brings a new meaning. By definition, a semantic clone is impossible. From this standpoint, meaning seems to have the same disease of being: as soon as you grasp a meaning of something, it changes and fades away to leave room for new meanings. Consequently, meaning design seems to be rather slippery and evasive in nature, since it displays a certain number of hidden elements.

On the other side, meaning appears to be eternal and unchangeable. The meaning of *dog* always is the meaning of *dog*, and never will it change in the meaning of *cat*, at least in a (real or possible) world where dogs and cats are animals intrinsically different in their nature. Similarly, it is easy to find regularity, recurrence, and standardization of many kinds of pragmatic inferences, as Levinson [12] highlights. From this standpoint, opposite to previous, meaning design turns out to be rather enduring and well-founded.

Consequently, meaning appears to be struggled between contingency and fixedness. From time to time, the meaning's pendulum swings to contingency and variability to turn back to stability and steadiness, and vice versa. This twofold nature of meaning makes it a theoretical and empirical challenge for scholars belonging to different disciplines. At the same time, it is graspable and ungraspable, as in any case we can grasp it only partially. How to tackle this challenge?

2.3.1 Meaning variability

de Saussure had already considered meaning evolution in the course of time, and differentiated between the synchronic and diachronic levels of a natural language. But it is not necessary to resort to a long temporal period to see the meaning variability – and it is actually a large variability – of a word or an idiom. Many communicative phenomena are implicated in this process.

2.3.1.1 Defeasibility of semantic traits

Following Cruse [33] and Violi [14], we firstly take into consideration the *defeasibility of semantic traits*. Putnam [34] had already suggested that it is not possible to determine semantic definitional features for natural categories or for artefacts. For instance, if we say that cats have four legs and a tail, how can we manage with a cat without a tail and with only three legs? Is it still a cat or not? Recently, it has been underlined by Geeraerts [35], Kleiber [36], and Violi [14] that the *typical properties* of a meaning are practically all subject to the possibility of cancellation, without changing the meaning itself.

We briefly reaffirm that typical features are those that can be recognized by the diagnostic test of the adversative *but*. For instance, consider the following pair of statements:

- 3a. ?? *It is a bird but it flies.*
- 3b. *It is a bird but it does not fly.*

There is a semantic anomaly in (3a) but not in (3b). Within this perspective, for instance, in the meaning of *bird* there are typical features – and therefore cancellable or defeasible – like flying ability (there are birds that do not fly, like ostriches), feathers (there are birds without feathers, like penguins), wings (there are birds without wings, like kiwis), as Geeraerts [35] reminds. But even the *essential properties*, that is, those properties which are shared by every member of a category, can be cancelled in extraordinary situations. For example, in the past the whale was considered a fish, because it lives in the sea, while now is considered a mammal: in this case the essential property “fish” has been cancelled and substituted by “mammal”.

The possibility of cancelling semantic traits is based on the *conventional nature* of meaning as a historically and culturally defined entity, and entails the overcoming of every ontological and natural conception of meaning. As for being conventional, it can also be negotiated, modified, and culturally transformed.

2.3.1.2 Fuzziness of meaning

Even the folk psychology assumption that meanings have clear-cut boundaries as a discrete semantic unit has been criticised. After several studies, among which those worth mentioning are particularly the ones proposed by Labov [37], and Lakoff [38, 39], it is already recognised that many meanings are characterised by *fuzzy boundaries*. An utterance is fuzzy if it has the property of referential opacity. For instance, a lecture could be *not bad*, a girl may be *rather pretty*, and John may have *many friends*. In all these cases qualifiers and quantifiers enable to carve the meaning of an expression more or less intensively and with a certain semantic shape. Within this perspective, according to Zadeh [40] and Zhang [41] among others, meaning hinges on a *fuzzy set*, that is, a class of communicative units with a continuum of grades of membership.

The same linguistic process is reduplicated with *hedges* which render a reading fuzzy. For instance, the statement:

- 4a. *It is three o'clock.*

is temporally precise, but it becomes fuzzy when combined with *around*, as in:

- 4b. *It is around three o'clock.*

Hedges like *about*, *almost*, *technically speaking* or *so to speak*, behave in the same way as *around*. Also in the attributive clauses such as *John is clever*, *Mary is tall*, the hedges

very and *somewhat* modify the degree of fuzziness. In particular, *very* in *John is very clever* pushes the degree of meaning upwards; while *somewhat* in *John is somewhat clever* pushes the semantic value of *clever* downwards.

Additionally, a word can have a meaning with fuzzy boundaries. In a classic study by Labov [37], based on the analysis of words referring to material artefacts like *bowl*, *cup*, *mug*, and *dish*, which compose the semantic field of “domestic containers for food and drink”, the data showed that the meaning of these words varied noticeably for what it concerns the presence and relevance of some perceptual features like depth, breadth, height, presence of a handle and the like, as shown in figure 2.2. As things deviate progressively from a standard type, we enter a semantic vagueness zone, where the same object could be, in turn, a bowl, a mug or a glass. The borderline between them is not clear-cut, but is undetermined and graded. It seems like a continuum more than a fair delimitation.

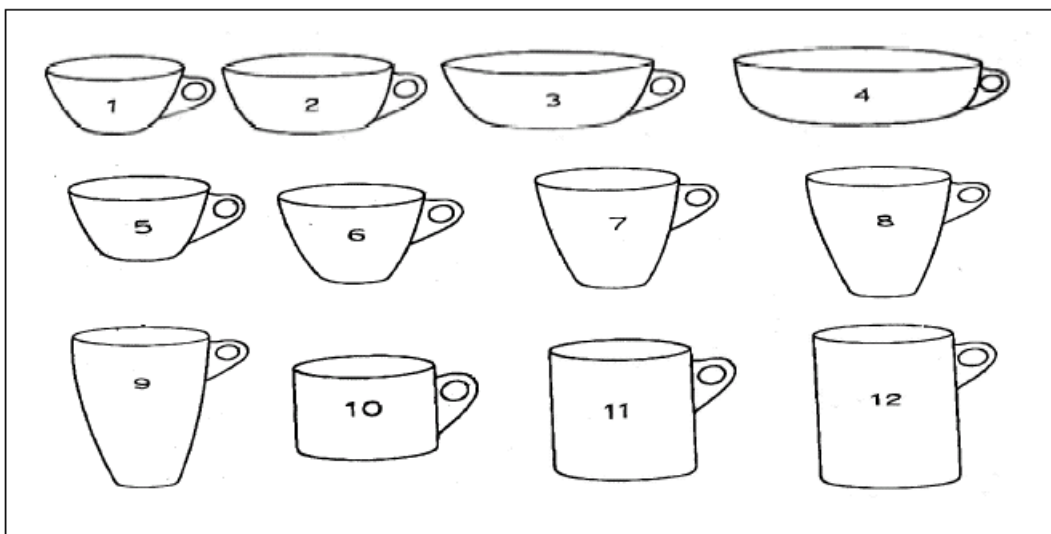


Figure 2.2 Series of cup-like objects (adapted from Labov, [37])

Semantic fuzziness phenomena were studied in depth within the prototypical framework of meaning, proposed, among other scholars, by Givón [42], Kleiber [36], Posner [43], and Rosch [44, 45]. Lakoff [38, 39], for instance, had already underlined the fuzzy nature of the semantic boundaries of meaning, considering the different position of a few members along the ranking of a category membership like *bird-likeness*, starting from robins and eagles to chickens and ducks and further on to penguins, ostriches, and pelicans. According to the prototype theory, even in its recently “extended” version advanced by Kleiber [36], and Geeraerts [35, 46], meaning in many circumstances does not symbolise a discrete and unitary category with clear-cut and closed boundaries, but represents a salient features pattern on the base of which we operate by inference and by partial similarity judgements.

In the field of semantic vagueness, it is worth mentioning the *family resemblance* phenomenon, underlined by Wittgenstein [47]. For instance, the meaning of *game* is not univocal but it spreads over a multiplicity of semantic subsets, not always related to each other, as in Wittgenstein’s words:

Consider for example the proceedings that we call “games”. I mean board-games, card-games, ball-games, Olympic Games, and so on. What is common to them all? – Don’t say: “There must be something common, or they would not be called ‘games’” – but look and see whether there is anything common to all. – For if you look at them you will not see something that is common to all, but similarities, relationships, and

a whole series of them at that. To repeat: don't think, but look! – Look for example at board-games, with their multifarious relationships. Now pass to card-games; here you find many correspondences with the first group, but many common features drop out, and others appear. When we pass next to ball-games, much that is common is retained, but much is lost. – Are they all 'amusing'? Compare chess with noughts and crosses. Or is there always winning and losing, or competition between players? Think of patience. In ball-games there is winning and losing; but when a child throws his ball at the wall and catches it again, this features has disappeared. Look at the parts played by skill and luck; and at the difference between skill in chess and skill in tennis. Think now of games like ring-a-ring-a-roses; here is the element of amusement, but how many other characteristics features have disappeared! And we can go through the many, many other groups of games in the same way; we can see how similarities crop up and disappear. And the result of this examination is: we see a complicated network of similarities overlapping and criss-crossing: sometimes overall similarities, sometimes similarities of detail. [47]

From this point of view the meaning of *game* is not described by a complex of common and necessary features but by a partial similarity shared by at least two or more game types. In this case, members of a specific category are connected to each other without the presence of common properties. Fuzzy boundaries and family resemblance enable meanings to adapt to each speaker and situation and to reach a very high flexibility.

2.3.1.3 Radial categories and semantic polysemy

Endorsing this theoretical perspective, Lakoff [19] has given an accurate analysis of the linguistic categorisation system of Dyrirbal language. In this Australian indigenous language there are only four lexical categories: *bayi*, *balan*, *balam*, *bala*, each one comprising totally heterogeneous meanings that cannot be described by referring to the classic categorisation principles. For instance, the *bayi* category contains these items: men, kangaroos, possums, bats, most snakes and fishes, the moon, storms, rainbows, boomerangs etc. The *balan* category includes: women, dogs, most birds, some snakes and fishes, the sun and stars, fire, water etc. Lakoff [19] underlines that these categories are neither arbitrary nor random but they are regulated by a set of local similarities in terms of Dyrirbal myths and beliefs. Therefore, we have to understand and manage complex categories made up by successive chains of items linked by local similarities. They can branch out along the so-called *radial categories*, that is, categories “where there is a central case and conventionalised variations on it which cannot be predicted by general rules” [19, p. 84].

Semantic fuzziness and vagueness phenomena like family resemblance and radial categories are neither isolated nor extraordinary, but they are related to the wider field of *polysemy*. The polysemic word refers to a number of different meanings, semantically related to each other, each one, however, having its own autonomy. In the semantic polysemy a word takes different semantic layers. For instance, the Italian adjective *fresco* that corresponds approximately to the English word *fresh*, entails three different meanings along three different levels of sense, as Violi [14] reminds:

- a) temporal semantic layer (“new, recent, just given”: for instance, *it is fresh news, it is a fresh vegetable*),
- b) positive state semantic layer (“pure, uncontaminated, in optimal conditions”: for instance, *it is fresh fruit, it is fresh fish, fresh mountain air*),
- c) caloric semantic layer (“not hot”: for instance, *this room is fresh, fresh air this morning*).

As we can see, there is a partial overlapping area between (a) and (b) and between (b) and (c) but not between (a) and (c). In this example, because of the plurality of different meanings that partially overlap, *fresh* constitutes a polysemic category and cannot have a

single prototype, because a central case is not expected. As such, polysemy provides for a basic meaning which includes different courses of meaning.

2.3.1.4 *Meaning gradualness*

The semantic variability is further strengthened by the *semantic gradualness* phenomenon, according to which the semantic traits (or features) of a word do not share the same semantic weight and value. In particular, Violi [14] deepened the distinction between *essential properties* (common to every member of a category) and *typical properties* (distinctive and specific of only some members of a category, which can increase their representativity and characterize them by other members of the same category). For Cruse [33] the essential properties are *criterion traits* that cannot be cancelled without negotiating the meaning of the word. For instance, for the *bird* category the essential features are only two: (a) being oviparous; (b) having a beak. All the other features are merely typical and can be cancelled without creating semantic modifications. A bird that cannot fly, like an ostrich or a penguin, is nevertheless a bird. The salience of typical properties is strictly connected to a given culture.

Generally speaking, meanings are largely based on gradable or continuous criteria rather than all-or-nothing distinctions. Even in the case of words that, according to Sperber and Wilson [48], express “absolute” (or “well-defined”) concepts like *bold* or *dead*, they are gradable in English as in other natural languages. Thus *completely dead*, *clearly dead*, *quite dead*, *nearly dead*, *almost dead*, *not quite dead*, *very dead*, *not very dead*, *hardly dead* are scalar modifiers or intensifiers of *dead*. But, according to Thibault [49], the semantic variability of the word *dead* is also present in utterances like *John is dead up top* which does not mean that John is brain-dead but rather that he is stupid or dull. In this perspective *dead* can designate a biological condition, states of mind, moods, and attitudes towards someone or something.

2.3.1.5 *The issue of literal meaning*

The semantic gradualness enables to overcome the distinction between the *literal* and the non-literal meaning of a word or an utterance. According to the standard semantic theory, the former concerns the linguistic meaning as the combination of meanings of single words, conceived as the outcome of linguistic operations including the phonological, the lexical, and the syntactic ones. It is the basic (primary) meaning of a sentence, i.e. the plain, immediate and unproblematic meaning of a sentence (so-called “sentence meaning”). As a consequence, it has unconditional priority. Within this perspective, literal meaning is an abstraction, grounded on the hypothesis that words are like “meaning containers”, which are context-free (that is, they remain unchanged regardless of context of use). They are also sufficient to convey the sense of speech, that is, the “conduit metaphor”, according to which “ideas are conducted from one inner mind to another, transported in small compartments by the train of speech”, as Gibbs [50] has pointed out.

On the contrary, the *figurative (or non-literal) meaning* is derived from the literal one and can be discovered by resorting to semantic substitution mechanisms (i.e. when non-literal meaning takes the place of the literal one, as in the metaphoric expression, for example, *Surgeons are butchers*). As a result, people can reach a translate and symbolic meaning, used in figurative speech by means of tropes of “speech figures”, like metaphor, metonymy, hyperbole, oxymora, and so on.

This standard theory is also shared by Grice [32] when he proposed the dual logic involved in conversation: the *logic of language* which concerns literal meaning (sentence meaning), and the *logic of conversation* which applies to the pragmatic rules used by people to infer (“implicate”) what a speaker intends to convey (utterance meaning).

“Conversational implicatures” require additional cognitive effort to go beyond the literal meaning of an utterance in order to grasp the speaker’s “intended meaning”.

However, such a distinction between literal and figurative meaning is not unproblematic and the notion of literal meaning has become a subject of theoretical revision upheld by the work of Gibbs [50] and Glucksberg [51]. The standard logic of literal meaning follows a three-stage model:

- a) *Derive the literal meaning of an utterance.*
- b) *Test the derived literal meaning against the context of the utterance.*
- c) *If the literal meaning makes sense, accept that meaning as the utterance meaning, that is, the speaker’s intended meaning. If it does not make sense, then seek an alternative, non-literal meaning that does make sense in the context [Glucksberg, 51, p. 10].*

This standard model entails some testable implications. First, literal meaning is primary and basic, obvious and context-free (unproblematic). Second, literal meaning has unconditional priority, and it will always be derived first; only when it is “defective” can non-literal meaning be attempted. Third, literal meaning is derived automatically, generated easily by the linguistic input (without conscious control), while non-literal meaning is derived only optionally and requires additional cognitive effort. However, none of these statements has been verified empirically; on the contrary, the opposite has been verified, as Glucksberg [51] has highlighted.

Above all, literal meaning is not exclusively the outcome of linguistic decoding, based on linguistic operations (i.e. phonological, lexical, and syntactic ones) but requires a semantic interpretation. The utterance *Cats are animals* could be taken as granted and universally fixed in its literal meaning in any situation, independently from any context. However, the literal interpretation of this utterance is rather different if it is pronounced during a natural science lesson focusing on the distinction between animals and plants, or if it is said as an answer to the comment *Our Pussy went on caterwauling last night*.

As we have already seen, context dependence especially concerns logical connectives, quantifiers (like *some, few, many*, and so on), deictic terms, qualitative adjectives, and pronouns. As Horman [52] underlines, there is a great semantic difference of literal meaning, for instance, of *a few* in: *A few people in the kitchen* (four or five people) and in *A few people in the stadium* (several thousand of people). As we have seen, the fact that words have a graded and gradable meaning inevitably requires reference to the context in order to be able to interpret correctly the semantic value of the literal meaning as well. A plain linguistic decoding is not sufficient to interpret the literal meaning of an utterance.

Likewise, given that meaning (the literal one included) depends upon context, both literal and figurative meaning have the same time of comprehension, as it results from the researches of Onishi and Murphy [53], and Pynte, Besson, Robichon, and Poli [54]. It is also unnecessary to understand literal meaning before proceeding to derive the non-literal meaning. The interpretation of both these kinds of meaning is immediate, and follows the same time curve of computation, because they both show a parallel cognitive processing and activate the same inference mechanisms, as McElree and Nordlie [55] have shown in their research.

Consequently, the determination of so-called “literal meaning” is already the outcome of a choice of a certain interpretation among many other possible ones, all legitimate. The literal meaning of *The cat is on the mat* depends on the basic assumptions about such an utterance (for instance, in this case we do not refer to a floating mat; see next paragraph). Such assumptions are not semantic in their nature but they belong to our *knowledge encyclopaedia*, since they are derived from our experience within the culture of reference. Besides, these assumptions are not fixed, since each assumption entails other assumptions along an associative chain without end.

Within this perspective, determining the literal meaning of every word or sentence is an impossible communicative operation. Each utterance offers an indefinite range of opportunities, among which the addressee has to choose the one that he/she considers more appropriate and effective to the context and communicative interaction. In this respect, the so-called “literal meaning” is one of such possibilities.

Actually, what people above all are interested in is understanding the speaker’s communicative intention, which can be conveyed by any kind of utterance and language. They do not proceed to a philological study in order to discover the literal meaning, discriminating it from the figurative one. Instead, they are ready to grasp immediately what a speaker intends to communicate and, on that account, they are able to understand the variations, and also the nuances, of the meaning of an utterance.

2.3.1.6 Context dependence and semantic assumptions

Finally, the meaning design of a word or an utterance or a gesture does not hinge so much upon a universal, abstract and fixed semantic system but it is strictly connected with the *context*. We cannot figure out a meaning isolated from the context or without a context. No meaning is totally foreseeable or definable a priori, because it depends on the context in a contingent way. Due to this context dependence, the meaning of a word, an utterance or a gesture varies each time, being subject to the nonce conditions of a certain situation. For this reason, in different contexts the same message may receive a different interpretation. Besides, it may be a basic ambiguity between a given communicative intention by the speaker and the ascription of another intention to him/her by the recipient [van Rooy, 56].

In particular, the meaning of any utterance, word or gesture cannot be expressed and grasped in a totally explicit way but it always entails some implicit aspects. Practically, it is impossible to enunciate all the features of any meaning because we take for granted many things in speaking and in interpreting the utterances of others. Such things are given as “presupposed” and often they are entailed by the appropriateness condition of the sentence itself. For instance, if I say that Peter has stopped drinking, I presuppose that Peter was used drinking before since the verb *to stop* implies a specific behaviour in the *previous* time.

On this subject Searle [57] introduced the notion of *background assumptions* as the totality of things taken for granted by the interlocutors in a given communicative exchange. For example,

Suppose I go into the restaurant and order a meal. Suppose I say, speaking literally, Bring me a steak with fried potatoes. [...] I take it for granted that they will not deliver the meal to my house, or to my place of work. I take it for granted that the steak will not be encased in concrete, or petrified. It will not be stuffed into my pockets or spread over my head. But none of these assumptions was made explicit in the literal utterance. [Searle, 57, p. 180].

Though not explicitly said, those assumptions contribute in a basic way to determining the meaning of the utterance. Such condition is binding not only for utterances but also for single words. For instance, Searle [57] analyses the word *cut* in sentences such as *Bill cut the grass* and *Sally cut the cake*. The word *cut* is not equivocal, yet it projects a quite different meaning in the two situations because of the differences in the respective background assumptions. It is obvious that grass is cut in a certain way, and cakes in another way.

Besides background assumptions, the *circumstantial assumptions* concern the specific conditions of a given context, the communicative intention of the speaker, as well as the intention ascription by the recipient. People’s interpretations of their own and other people’s expressions are not necessarily stable or constant over a period of time, but they

may change as the context changes. For instance, the semantic features of *book* radically change according to the reference contexts, as in the following examples:

- 5a. *Peter is reading the book for the exam with attention (book as an object of study);*
- 5b. *Mary has lost the book that George gave her as a present (book as a souvenir in an inattentive and affective context);*
- 5c. *Paul, flown into a rage, has thrown the book against the glass of the window and broken it (book as a blunt tool in an anger context).*

In each of these occurrences the context calls attention to some specific properties of the meaning and, at the same time, it “narcotises” other semantic traits, which can be activated in a different circumstance.

The communicative phenomenon herein described is also involved in the so-called *contextual resemanticization* analysed by Violi [14]. In such a case, a speaker can assign specific semantic traits to something that does not possess them of its own, but that obtains them thanks to a specific contingent situation. For instance, we may call *chair* a table, an empty chest, a pile of books, if there are no free chairs, and we seat down on one of these items. Even we may say: “*Please, don’t take my seat*”. In this process the meaning of a word takes a double semantic valence: the table remains a table, but it performs the general function of a chair (that is, it permits the action of “sitting”). The contextual resemanticization stresses the great plasticity and high flexibility of meaning, allowing a wide range in its use as the result of accurate processes of semantic adjustment.

2.3.1.7 *Meaning as inferential outcome*

Semantic variability and plasticity entail that, to understand each other, communicators necessarily have to resort to some inferential processes. Meaning design is not an immediate and fully evident datum, univocally correspondent to a real object or event, simply to be produced by a speaker and simply recovered by an addressee. Similarly, meaning design is not an obvious and apparent entity, ready to be recognized. Rather, it is created between two or more communicators in a dynamic way, and then it displays a more or less large number of hidden components to be detected. Moreover, meaning is referred to as a mental and cultural pattern that involves an inference process from the interlocutors, since it shows a specific point of view about reality. It does not only say something; it also points out and indexes how to intend what is said. In this way, meaning implies a *semantic opacity* residue that needs to be elaborated and interpreted starting from some communicative cues and indices conveyed by the speaker.

Particularly, words, utterances, gestures, and other nonverbal signals are to be intended as communicative cues from which communicators can proceed to make suitable and opportune inferences through logical implication, analogy and similarity processes. Aristotle already defined the *sign* (τό σημεῖον) as “a demonstrative premise which is necessary or generally accepted. That which coexist with something else, or before or after whose happening something else has happened, is a sign of that something’s having happened or being” (*First analytic*, II, 27; 70a, 7). A classic example is given by the hypothetical enthymeme: “if she has milk, then she has given birth to a new-born child”. Subsequently, the Stoics distinguished between “referring signs” (for instance, “where there is smoke, there is fire”), and “indicating signs” (for instance, “body movements are signs of the soul”).

Within this perspective, meaning design is not constituted by a fixed system of univocal correspondences between expression and content, but by a set of possible inferences that have different probability degrees of accomplishment. In particular, from a realistic point of view, the meaning of a word, an utterance or a gesture is not to be considered as

determined and established in a precise and definitive way by its necessary and sufficient components, because it does not refer to a metaphysical and abstract reality. Conversely, we have to conceive meaning as the semantic expression of our *experience*. Many different factors come into play here, since experience is a complex structure, made up at the same time of sensorial and perceptual, cognitive and emotional, inter-subjective and cultural processes, embedded and interconnected mutually with each other.

Experience is an affair to be analyzed, detected, and interpreted. Linguistic semantics and, more in general, communication are essentially based on our experience of the world, and, consequently, they will be influenced and guided by perceptual, cognitive and emotional constraints which control and manage the interaction with reality. Therefore, meaning entails a remarkable amount of variability in order to fit and express in the right way the continuous flow and the great variety of our human experience.

On one side, this semantic flexibility is at the basis of the *meaning plasticity* that enables speakers to use these meanings in a pliable way, according to their communicative intentions. In this way, we can observe a process of continuous remodelling of meanings in order to adapt them to referring contexts. Meaning is not a closed and univocal, fixed and hard pattern, but it refers to a mental and cultural pattern with a high degree of adaptability to the contingent situations of interlocutors. Within fairly wide limits, meaning can be stretched, expanded or reduced according to the expectancies, beliefs and goals systems of communicators. Essentially, it has a very wide degree of freedom and an opening value that allows a set of its possible and different expressions and interpretations, although such a set is neither undetermined nor chaotic nor even random. In theory and in practice, on that account it is always possible to re-define and re-negotiate meanings in communicative interaction.

On the other side, this semantic variability enables to explain in a relevant way the phenomena and processes of default communication and miscommunication, reaching as far as processes of communicative distortion and pathology. Semantic variability concerns not only what is communicated but also what is said [Reboul, 58]. Consequently, lexical and semantic ambiguities are common; sometimes, conversations are characterised by incomprehension and misunderstanding as well as confusion phenomena. Communicative games often appear and they make the conversation more interesting and intriguing.

2.3.1.8 Modal meaning and semantic-pragmatic synchrony

A last (but not least) notion about meaning variability concerns the *modal meaning*, which summarizes many aspects examined till now in this chapter. To grasp this concept, it is worth starting from the consideration that senders are able to arrange a set of different signalling systems to communicate and make public their communicative intention. Besides language that remains the most powerful, flexible and stable communicational medium, exclusive to the human species, there are several other communicational devices to show their own communicative design, like the paralinguistic (or supra-segmental), the face and gestures system, the gaze, the proxemic and the aptic, as well as the chronemic.

Among others, Anolli [3] argued that each of these communicative systems bears its contribution and participates in defining the meaning of a communicative act in an autonomous way. Such multiplicity enhances the freedom degrees of speakers to manifest and calibrate his/her own communicative intentions as related to the situation. However, the generative capacity of each signalling system should be connected to produce a global and unitary communicative action, with a more or less high consistency degree.

Meaning is not connected with a unique and exclusive signalling system but is generated by the network of semantic and pragmatic connections between different systems. Such a process is ruled out by the so-called *principle of semantic and pragmatic synchrony*, set out by Anolli [3], according to which meaning, whatever it may be, is

originated by a non-random combination of different portions of meaning, each of whom produced by a given signalling system. Thus, the meaning of a word, an utterance or a gesture hinges upon its relations to every piece of meaning arising out of each signalling system within the same totality. It has been supposed by Anolli [3] that such semantic and pragmatic synchrony process is ruled out by a general device, dubbed “central communicative processor”.

Modal meaning is the standard outcome of the semantic and pragmatic synchrony process, that is, the prevailing and recursive meaning throughout conventionally given situations within a certain cultural community. As Anolli [59] argued, modal meaning is the preferred (or default) one, regularly predominating in a given set of contexts. However, it is neither necessary nor automatic; rather, in certain situations it may be a subject of negotiation between communicators.

2.3.2 *Meaning stability*

The semantic variability processes taken into consideration in the previous paragraph, if assumed exclusively, risk leading to a perspective of absence of communication and mutual comprehension. In themselves, taken singularly, they would generate a communicative disordered and chaotic situation. We would be compelled to live in a tower of Babel.

Actually, semantic variability phenomena are compensated, completed and balanced by *semantic stability* processes, which make possible and explain the probabilities of order and regularity in the meaning exchange. So, meaning design comes to be a quite complex set of patterns in which the contingent and momentary components are combined with the more enduring and well-grounded ones. Besides, such components of stability are at the base of message intelligibility conditions and of mutual understanding between the communicators. Competence is presumed of that meaning which is considered as shared inside a specific community of participants. In this sense we have to resume the notion of “code” but in a new perspective related to the traditional one.

Semantic stability involves some kind of *convention* between interlocutors, because of their sharing the same cultural belonging. As culture is a mediation system which supplies people with a grid of categories, symbols, values, practices, and mental representations which enable them to read and interpret reality, it also provides the learning and sharing processes of signification and signalling systems. Such processes are to be considered as the outcome of a long, complex and sometimes hard route to obtain consent and devise conventions between interlocutors (*conventionalisation process*). On such a route the *agreement* on how something must be done or said is more significant than what is really done or said.

2.3.2.1 *Some more about code*

Speaking about meaning regularity and stability as connected with context regularity and stability involves, as a consequence, the opportunity of speaking about the *code* notion under a new light. Some inferential frameworks of communication, in particular the relevance perspective proposed by Sperber and Wilson [48], are opposed to the communicative theory of code and have concluded that it is also possible to communicate without resorting to a code. In its wide theoretic sense, a communicational code is an organised set of rules, which enables communicators to associate in a biunivocal manner elements of one system with elements of another system. Referring to a classic example, the verbal code in language enables a competent speaker to associate biunivocally elements of the phonological system (specific sound combinations) with elements of the semantic system (specific mental images corresponding to these sound combinations).

In a traditional standard perspective, referring, for instance, to the mathematical model of Shannon and Weaver [60], the code is conceived and formulated effectively as a mathematical construct and as a normative cognitive ideal, in which the biunivocal correspondence between the elements of the two systems is practically perfect and automatic. In this way the code, by itself, could deal with and resolve every case of communicative indefiniteness and ambiguousness, as well as implicitness and semantic vagueness phenomena. According to such a framework, communication becomes a simple, immediate and automatic process of message encoding (ciphering) and decoding (deciphering).

Concerning this *strong version of code theory*, Sperber and Wilson have correctly argued that it is untenable on a theoretical and practical level, since a perfect code simply does not exist and never will exist. No code is free of faults, interference, noises, and deviations. Nevertheless, it could be dangerous (perhaps, too dangerous!) to assume that communication can exist without any kind of code.

“Communication without code exists”, according to the famous example of the two prisoners of different languages who, breaking stones back to back without seeing each other, succeed in communicating through the rhythm of their hammer strokes [Sperber and Wilson, 48, p.50]. Actually, through the recognisable and shared rhythm of their hammer strokes, the two prisoners generate a local process of conventionalisation, which allows them to convey intentions and meanings. Without some kind of communicative stability, created by sharing a set of regularities and a system of correspondences between the signs and the standard context of use, communication becomes impossible, since it would be totally unforeseeable, confusing and disordered. By nature, in communicative interaction we have to expect some kind of patterns.

Therefore, we have to speak about a “code”. However, the “code” herein underlined should be intended as a limited communicative device that institutes general correspondences between one system of elements and another one. It is to be supposed a *weak version of code theory*, as a necessary but non-sufficient condition in order to carry out communicative exchanges. It needs to be integrated by the interlocutors with accurate inference processes of what is communicated. According to this perspective, the code (whichever code) is not able to “disambiguate” and manage all the semantic combinations and correspondences enclosed in a communicative act.

Such a weak theory of code seems to be particularly profitable, since it is consistent either with communicative processes (in the case of communicative exchange success) or with miscommunication phenomena (in the case of deviations and difficulties or even failure of communicative exchange). In particular, this weak theory of code does not entail a fixed semiotic system, but it presupposes a variable system in terms of power and efficacy referring to different binds and opportunities given by a specific communicative situation.

The more a “code” is powerful and “effective”, the better it can define a correspondence system and impose semantic constraints on the interlocutors. If they want to communicate something with other people, they are not totally free to invent words and expressions whenever and however they like, but they have to keep to a shared and sharable system of meanings, even if variations and deviations from it can be expected. This system is usually provided by the natural language created in each cultural community. But even in the extreme case of the two prisoners who use hammer strokes in order to communicate, meaning segmentation is connected with rhythm variations and intensity of strokes that need to be created, recognised, and shared by the prisoners.

2.3.2.2 Presumptive meanings

Levinson [12], interested in understanding and explaining regularity in communication, proposed the notion of *presumptive meanings*, that is, preferred (or default) interpretations which are carried by the structure of utterances, given the structure of the language. Such preferred interpretations exist and have a life of their own. For this reason, he proposed a three-layered theory, as, in addition to the layers of “sentence meaning” and “speaker meaning” already grounded in the extant literature, he added a third layer dubbed “utterance meaning”. In particular, Levinson distinguished between (a) the *sentence-type meaning* (i.e., the ideal, abstract meaning, defined by a precise set of truth conditions), (b) the *utterance-type meaning* (i.e., the presumptive meaning or preferred interpretation of an utterance via a systematic pragmatic inference based on general expectations about how language is normally used), (c) the *utterance-token meaning* (i.e., the local meaning via a nonce inference within a given context and communicative situation by actual recipients).

Utterance-type meanings are expressed through *generalized conversational implicature*, that is, a default inference, driven by general heuristics, binding in any context unless there are unusual specific context assumptions that defeat it. Such inference is grounded essentially upon three different heuristics:

a) heuristic I: *what isn't said, isn't* (given the assertion: *There's a blue pyramid on the red cube*, licensed inferences are, for instance: “There is not a cone on the red cube”, or “There is not a red pyramid on the red cube”);

b) heuristic II: *what is simply described is stereotypically exemplified* (given the same assertion, licensed inferences are, for instance: “The pyramid is a stereotypical one, on a square, rather than a hexagonal base”, or “The pyramid is directly supported by the cube”);

c) heuristic III: *what's said in an abnormal way, isn't normal; or, marked message indicates marked situation* (given the assertion *The blue cuboid block is supported by the red cube*, licensed inferences are, for instance: “The blue block is not, strictly, a cube”, or “The blue block is not centrally or stably supported by the red cube”).

Within this platform Levinson defined three pragmatic principles to grasp communicative interaction and speech:

1) *Q-principle*

Speaker's maxim: Do not provide a statement that is informationally weaker than your knowledge of the world allows, unless providing an informationally stronger statement would contravene the I-principle. Specifically, select the informationally strongest paradigmatic alternate that is consistent with the facts.

Recipient's corollary: Take it that the speaker made the strongest statement consistent with what he knows.

2) *I-principle*

Speaker's maxim: the maxim of Minimization. “Say as little as necessary”; that is, produce the minimal linguistic information sufficient to achieve your communicational ends (bearing Q in mind).

Recipient's corollary: the Enrichment Rule. Amplify the informational content of the speaker's utterance, by finding the most *specific* interpretation, up to what you judge to be the speaker's intended point, unless the speaker has broken the maxim of Minimization by using a marked or prolix expression.

3) *M-principle*

Speaker's maxim: Indicate an abnormal, non-stereotypical situation by using marked expressions that contrast with those you would use to describe the corresponding normal, stereotypical situation.

Recipient's corollary: What is said in an abnormal way indicates an abnormal situation, or marked messages indicate marked situations.

To sum up, Levinson tries to illustrate the meaning stability resorting to a middle course between semantics and pragmatics, and foreseeing a general heuristic device, able to systematically guarantee preferred interpretations and standard inferences. However, such logical explication, based upon a huge number of linguistic phenomena, does not allow the local understanding of a contingent communicational situation. It does not even seem to respect the semantic variations and changes on an experimental basis. To gain a factual comprehension of meaning from a psychological standpoint, it is worth analyzing the connection between meaning and context as an interesting and effective path to detect the hidden design of meaning.

2.3.2.3 *Meaning stability as context regularity*

A conventionalisation process presupposes the active participation of the communicators, as well as rules, practices, values, and meanings negotiation and sharing, although they may be local and temporary. It ends in working out a set of what Bruner calls *communicative formats* [61, 62], each of which is made of a structured sequence of interactive (verbal and non-verbal) exchanges, which allows communicators to reach a joint aim, follow the same procedures and rule systems, as well as share the meaning of what they are going to say or to do. Many communicative formats show a high and strong regularity structure, such as the greeting exchange, the call for apologies, a university exam, a political debate, and the like. These cases can be called *standard (or default) formats*, and are based on recognising and accepting a shared system of rules and patterns. Usually, words and other communicative signs are “anchored” to a default format that makes their meaning foreseeable and definable. By the way, it is worth remarking the strong similarity between the concept of format and that of pattern, previously advanced.

In particular, communicative formats oscillate from *re-production processes* to *production processes*. This oscillating motion is analogous to the one proposed by Bourdieu [63, 64] for cultural practices. On the one hand, given the nature of re-production processes, communicative formats tend towards repetition and recurrence in an almost stereotypical way, by creating proper “communicative routines” (obviously articulated in sub-routines), and also by establishing a continuity with semantic and communicative past conventions. These recurring and reduplicating processes are at the base of meaning stability and regularity. They are grounded on *context regularity*, as, if it is true that contexts show a great deal of variability and unpredictability, then it is also true that in most cases contexts are structured and regular forms in our everyday experience of the world. On this platform, individuals build and share their scripts with reference to specific situations.

Standard context is the context that presents a high routine regularity in the repetition of interactions, sequence of events and communicative exchanges. In such a way, we can assume that *context regularity is equivalent to meaning regularity*. No communicative act, like an utterance, a gesture and so on, exists without being context related, since it is always indexed in a standard context of use. The meaning of such a communicative act is given by the mental representation of standard context regularity. On the other hand, thanks to production processes, communicative formats are neither totally constrained nor completely determined by the past and by context regularity, but they expect and produce variations and deviations as an effect of contingent conditions and novel unpredictable aspects that every communicative situation potentially brings on itself.

Context regularity is the outcome of a historical and cultural process, not a logical necessity, and the past neither determines nor constrains the present, although the former steers the latter. In this way, contextual variations may always, in theory and in practice, take place related to the *hic et nunc* situation. Given this double process of re-production and production, regularity and variation are two essential constituents of meaning,

reciprocally presupposed and implied. Without regularity there is no awareness of variation and vice versa. That is, *variation in itself does not deny regularity, but demands it*. As the standard communicative format is regular and stable, it contains in itself a range of unpredictability and interpretability conditions of meaning, as well as a set of applicability norms of communicative practices, since it provides the signification and indexing criteria.

2.4 The meaning compositionality

By nature, meaning design is not a homogeneous and univocal representation of reality but has an intrinsically composite character. Such hybrid theory of meaning entails that many aspects of meaning should be explained resorting to different layers and components of communication involving cognitive principles, knowledge factors, subjective experiences, and interactional principles, and no doubt much besides. Grice [65] was essentially correct in thinking of meaning as a composite notion. The full meaning of an utterance may only be captured by considering different kinds of content: what is said, what is conventionally implicated, and what is presupposed.

Such perspective of the heterogeneous nature marked a basilar advance in the theory of meaning. To tell the truth, Frege [16] first had already introduced *the principle of compositionality*, according to which the meaning of a complex expression is a function of the meanings of its parts and its mode of composition. The meaning of each semantic item can be analyzed by a set of meaning components or properties of a more general order. However, the compositionality analysis has followed different courses ending in opposite outcomes, as we are going to show in the following section. Specifically, we will see three distinguishing paths: (a) semantic segmentation via analytic features; (b) semantic segmentation via prototype; (c) semantic segmentation via type-pattern.

2.4.1 Semantic segmentation via analytic features

Feature semantics is a theoretical model grounded on these two assumptions: (a) the semantic features on which the decomposition is based are a set of necessary and sufficient conditions (NSCs) for the definition of meaning; (b) these features constitute a finite list of primitive items. Widely spread and common, compatible with Frege's formulation of meaning as composed by characteristic notes, such a perspective became popular especially thanks to the model of Katz and Fodor [66]. According to the feature semantics, linguistic terms as *man*, *woman*, *boy*, and *girl* may be defined by the following NSCs:

<i>Man</i>	= ANIMATE & HUMAN & MALE & ADULT
<i>Woman</i>	= ANIMATE & HUMAN & NON MALE & ADULT
<i>Boy</i>	= ANIMATE & HUMAN & MALE & NON ADULT
<i>Girl</i>	= ANIMATE & HUMAN & NON MALE & NON ADULT

Feature semantics entails some important consequences, as:

- no feature can be defeasible, being all necessary conditions;
- no other feature can be added, being also sufficient conditions;
- all the features have the same semantic value; as a consequence, the model is non-hierarchical and "democratic";
- meaning, being the outcome of the composition of its features, is never gradual but has clear-cut boundaries; as a consequence, it is fully compatible with Boolean binary (or two-value) logic.

On that account, to define the hidden design of meaning, feature semantics foresees a basic distinction between dictionary knowledge and encyclopaedic knowledge. The former is fundamental for the meaning definition, while the latter consists of accessory and derivative knowledge referring to factual and subjective aspects. Moreover, the key features of meaning are *analytic properties*, which are non-defeasible and unchangeable, necessary in nature, able to define the category membership in positive.

To put in a nutshell, feature semantics is a molecular theory, as there are meaning dependencies but restricted to smaller parts in an unidirectional way. Analytic properties should be intended as primitives and atomic units, through which meaning is composed once for all and for everybody in the same manner. However, such theory is substantially untenable nowadays, because it directly knocks against the linguistic and communicative phenomena of semantic variability examined in the previous paragraphs (see 2.3.1).

2.4.2 *Semantic segmentation via prototype*

Within the categorization process, *prototype* represents a key notion to explain the horizontal organization of a given category. In the *standard theory*, advanced by Rosch [67, 45], prototype was defined as the best representative and the best case of category membership. In such a way, categories are no more defined by a set of necessary and sufficient properties but in a global and synthetic manner, as prototypes constitute the focal points around which the whole category is organized. Moreover, the category membership is ruled out by the resemblance degree of other members to prototypes; then, the category itself is characterized not by clear-cut boundaries but fuzzy ones.

However, the standard theory of prototype turned out to be invalidated by the conceptual equivalence between *category representativity* and *category membership*. Actually, they are two distinct concepts, as one thing is representativity (that is, to possess the typical features of a category) and another thing is membership (that is, to define the criteria through which an item can be accepted as a member of a certain category or not).

To overcome this issue, Givón [42], Kleiber [36], Violi [14] and other scholars have changed the notion of prototype and have developed the so-called *extended theory of prototype*. Within this new point of view, prototype is no more an actual exemplar (or token) of a category but it is a mental construct, insofar as it has become the exemplar with the most significant properties.

Prototype does no longer represent the horizontal structure of a category. It is the set of *prototypical effects*, that is, the salient properties which distinguish a category from each other. Consequently, we have to discriminate between *category prototypicality* and *meaning typicality*. The former concerns the possess of larger (or smaller) number of prototypical effects, while the latter regards the notion of average value, insofar as the prototypic eagle is not a special kind of eagle but the one that, better than others, possesses the average values of properties typical of its category. Thus, meaning typicality refers to the regularity of situations, and enables to recognize the salient properties which characterize a given meaning.

How such meaning typicality is built up? According to Violi [14], it is worth distinguishing between *essential properties* and *typical properties*. The first ones are the common features for all the members of a certain category, as, for instance, being oviparous and having a beak for the natural category of *bird*. Essential properties, as such, provide us with a negative membership criterion, as they allow to exclude all exemplars that do not possess such properties. For instance, those animals which, jointly, are not oviparous and do not have a beak, cannot belong to the category of *bird*. Albeit they are, by nature, conventional, essential properties have a strong semantic thickness and, as a result, they are resistant over time. For instance, as noted above, in the case of whale, the

discovery that, although living in the sea, it is not a fish but a mammal led to erase the property “fish” and to replace it with the property “mammal”. That means that there is not any natural ontology, able to permanently fix the essential properties but only cultural criteria, able to define a given category from time to time.

Conversely, typical properties are the additional and specific properties which add semantic portions to a word or an utterance. By definition, they are defeasible and do not determine membership. For instance, as previous mentioned, in the meaning of *bird* a set of features are typical like flying ability (there are birds that do not fly, like ostriches), feathers (there are birds without feathers, like penguins), and wings (there are birds without wings, like kiwis).

However, semantic segmentation via prototype is quite difficult and exacting, as for each linguistic item it should be carry out a deep linguistic analysis to find the essential and typical properties and to detect the hidden design of meaning. Such analysis has been well done for the item *bird* by Geeraerts [35] as exemplary study, but it should be repeated for each other word. We may question whether this way might be covered for natural kinds of words (like *cat*, *dog*, and so on) and, especially, for abstract and cultural kinds of words (like *liberty*, *justice*, *love*, and so on). For these latter, which are the essential properties and the typical ones? As a matter of fact, their meaning changes by changing the referring culture. Provided that semantic segmentation via prototype is achievable and tenable on theoretical basis uniquely for the linguistic domain, it is quite unfeasible on an empirical level. Furthermore, such kind of segmentation is unviable for the analysis and interpretation of non-verbal aspects which, as we have considered previously in deepening the principle of semantic and pragmatic synchrony, concur in an essential way to define meaning of a word, an utterance or a gesture. Summing up, semantic segmentation via prototype is confined only to the linguistic aspects of meaning.

2.4.3 *Meaning compositionality via Type-pattern*

Another way to analyze meaning compositionality consists in detecting the semantic patterns through which it is composed in an all-inclusive way. The issue is to find regularity in the flow of experiential events. We have already seen that, given the cultural and conventional origin of meaning, context regularity is a basic premise for meaning regularity. Preferred (or default) interpretation is grounded on this experiential platform. In such a way, the detection of meaning components is an *empirical* matter, insofar as, if we have at our disposal a research device able to find regularities in the flow of events, we can detect the essential features of an expression, as well as the typical ones. Furthermore, in such a way it is possible to cope with and overtake an actual difficulty of meaning compositionality. As Dekker and van Rooy [68] argued, we are not able to systematically determine the semantic content of a sentence in a compositional way based on its syntactic structure, without making reference to the attitudes of speakers and hearers.

In particular, the goal is to ascertain the similarity of the semantic design in the stream of events. Similarity is not given by explicit criteria, as in the explicit definitions of identity like those valuable for triangles (i.e. closed figures having three angles, or internal angles that sum to 180° and so on). Similarity is given by comparable patterns which, jointly, have these properties: (a) the patterns have an analogous number of components; (b) the components organization assumes a corresponding shape; (c) the patterns are recursive in nature. From this standpoint, it is not necessary that components involve simple binary truth values; rather, they can have graded degrees to match themselves.

To obtain the semantic patterns of modal meaning, the *Type-pattern* (T-pattern) model, recently advanced by Magnusson [69, 4, 5, 6], seems to be a very important and useful device, as, being empirically operationalized by a specific software dubbed THEME, is

strictly adhering to each situation to be analyzed and interpreted (for an explanation of THEME and its rationale see Magnusson, chapter 1 of this book). As a starting pointing, we may assume that, as we have previously seen, in any case the design of meaning includes some hidden elements, due to the huge complexity of the meaning itself. We may also assume that these hidden elements are not at random; rather, they are organized by means of a rather consistent network of real-time relations in some way, although such organization is not immediately manifest.

The T-patterns definition entails to abstract some of these relations to create an algorithm for the detection of hidden semantic patterns of a word, an utterance, or a gesture. Over the repeated occurrences of a particular T-pattern in a given communicative interaction, its semantic components occur in the same order each time and by respecting in a relatively invariant manner the consecutive time distances.

By means of the THEME procedure, it is possible to ascertain both the variable and stable components of meaning design, given a contingent situation of communication. As a matter of fact, the modal meaning of an utterance or a gesture may be detected by observing regularities and similarities in the stream of events, as the empirical detection of systematic and well-founded connections between certain occurrences and other ones enables to find out how communicators communicate each other in a foreseeable and intelligible way within a given circumstance or comparable circumstances. At the same time, it is possible also to recognize how the detection of T-patterns is adhering to the semantic variability in a specific communicative situation. Within this domain the T-patterns procedure is viable and tenable in every kind of semantic process, starting from the fuzzy boundaries of an utterance or a gaze and the semantic gradualness till to radial categories, semantic polysemy and literal vs. non-literal meaning.

The detection of T-patterns enables to appreciate the hidden design of meaning encompassed in an utterance or in a nonverbal item not generally and in an abstract way but locally and in a contingent manner. The attention is focused on the local management of meaning, as each moment communicators have the opportunity of organizing, regulating, managing and monitoring their communicative interaction. They have the strategic possibility of choice between different semantic routes. As a matter of fact, the definition of T-patterns is properly the detection of such routes as a basic premise for their understanding and interpretation. Different instances of THEME application regarding the detection of hidden patterns of meaning are shown in the following chapters of the book.

2.5 Conclusion

Meaning design is a complex affair both at a given moment (synchronically) and in the sequence of real-time interactions (diachronically). The creation of the new T-pattern model with corresponding detection algorithms enables to reach more relevant insights into the hidden folds of meaning both synchronically and diachronically. Obviously, besides an interdisciplinary collaboration, such new line of study demands further steps both at a theoretical and at an experimental level in the linguistic and extra-linguistic domains of meaning.

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