Say not to Say:
New perspectives on miscommunication
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1 MaCHT - Miscommunication as CHance Theory: Toward a unitary theory of communication and miscommunication

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Abstract: Traditional psychology considers communication in terms of *semantic and intentional transparency*. This idea should be overcome, since the borderline between what is communicated and what is miscommunicated cannot be split up and partitioned in two separate and discrete domains.
The starting point of this chapter is based on the assumption that a viable theory of communication has also to explain miscommunication in its different forms. In this perspective, communication sets up a unique and global category, including miscommunication phenomena, coming to the eventuality of not communicating. In particular, our aim is to outline some general principles that might connect communication and miscommunication processes to each other in a global, parsimonious and coherent theoretical perspective.
This chapter intends to sketch out a *miscommunication as a chance theory* (MaCHT). The purpose is to suggest a new definition of miscommunication as "say not to say". In this perspective, the problem at issue is to overcome the traditional concept of miscommunication as a lack, fault and violation of rules, considering not only its negative aspects, but also the positive ones.

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1.1 The reasons for studying miscommunication

Nowadays miscommunication has become a significant topic in linguistic and communication psychology, because it is a subject of interesting debate in the border area between semantics and pragmatics with strong relational implications. Among other scholars, we can mention Cupach and Spitzberg [1], Fraser [2], Mortensen [3], Parret [4], Young [5], Markova, Graumann, and Foppa [6].

Certainly, it is a truism to assume that communication can be successful without being explicit, perfect and evident. People can satisfactorily communicate with each other without being aware of the full transfer of information and without being capable of fulfilling completely their communicative intentions. Moreover, to understand the meaning of an utterance, it is not only sufficient to understand the transparent semantic content on the basis of its truth-conditional features. The common-sense idea of communication in terms of *semantic and intentional transparency* should be overcome, since communication is always a risky activity. According to folk psychology, persons are characterized by a "natural stance" towards language, as if communicating were a natural gift, grounded on the transparency of signs, as if communication were a datum, not a process in which the assumptions are neither totally foreseeable nor deducible from the preceding interaction. The idea of a natural attitude towards language ends up by not recognizing the personal responsibility of the communicator, given that the message would be automatically guaranteed by objective conditions.

The borderline between what is communicated and what is miscommunicated cannot be split up and partitioned in two separate and discrete fields. This territory is rich in mystery, and is a challenge for any and every communication theory. In fact, miscommunication is everywhere, because it belongs to the communicative exchanges of everyday life.

So, we need to specify the theoretical perspective within which we take the meaning of "miscommunication". We intend "miscommunication" in a broad sense as a very large set of communicative phenomena and processes. According to this perspective, it not only includes its standard meaning such as a lacking, defect and violation of communicative rules [3], and "the dark side of interpersonal communication" [4], but also mismatching interpretation, as well as misrepresentation of information. Miscommunication also covers misunderstanding between speaker and addressee when they do not share the same culture and have different interpretative patterns [5].

Fraser [2, pp. 144-145] widens the meaning of miscommunication, to the extent that it comprehends a set of communicative acts like exaggerating, flattering, insulting, joking, kidding, lying, speaking sarcastically, euphemistically or metaphorically, defaming with innuendo, fabricating, dissembling, misleading, understating and so on. Concerning this, he introduces the notion of *infelicitous communication* for cases of misrepresentation of the message. In turn, Parret [4], although claiming to hold a standard view of miscommunication, gives more significance to the pretending to communicate, that tackles a range of communicative phenomena like seduction, simulation, deception and manipulation which could belong to the miscommunication field.

However, according to the point of view herein adopted, it is necessary to enlarge the meaning of miscommunication and take into consideration not only its negative aspects, but also the positive ones. Miscommunication is not plainly a defect or a mismatch; actually, it is also a *chance*, because it enhances the degrees of freedom available to the communicators in their interaction. Communication is almost always a mixture of explicit and implicit aspects, because the meaning of any communicative act is not a mathematical formula but a cluster of semantic pieces more or less connected to each other and more or

less consistent with each other. In this sense, it is not an exaggeration to say that miscommunication is a question of luck, since it makes the communicative flow among the participants interesting, and sometimes intriguing. Roughly put, miscommunication has to be conceived not only as a simple minus but also as a plus and as a powerful device in the hands of the communicators.

The starting point of this chapter is based on the assumption that a viable theory of communication must also explain miscommunication in its different forms, starting from figurative language to ironic and deceptive communication, arriving at pathological communication such as the schizophrenic one. In fact, processes and mechanisms which explain miscommunication cannot be different from those that explain communication. In this perspective, communication sets up a unique and global category, including miscommunication phenomena, reaching as far as the eventuality of not communicating. But, to not communicate, one should communicate that one does not want to communicate.

Crudely put, we do not believe that miscommunication is simply a *communication failure*, since, in our opinion, a failure involves a sort of arrest of the communicative exchange. But, by default, communication can neither fail nor be silent. It consists in a continuous and articulated system of processes and phenomena which vary in a changeable and flexible manner in terms of participants' conditions as far as the context of use allows.

In the past, scholars have focused their attention on two main theoretical domains, unrelated to each other, as if they had tackled different communicative phenomena and processes. On the one hand, some scientists have been engaged in the philosophical or experimental field; on the other, many others have referred to clinical psychology or psychiatry.

Within the first group, some scholars were extremely interested in the analysis and study of the so-called "default (or standard) communication". They intended to examine and understand the patterns and structures involved in communicative exchanges between "normal" speakers in everyday life according to the cultural standards and models of a specific community, although using and following different points of view. They devised different and interesting frameworks, among which it is worth mentioning herein the mathematical theory of communication proposed by Shannon and Weaver [7], the ethnomethodological perspective (based on everyday-conversation) advanced by Cicourel [8], Garfinkel [9], Sacks [10], and Schegloff [11, 12], Goffman's theory of social interaction [13, 14, 15], Grice's theory of conversational implicatures [16], the speech act theory developed by Austin [17] and Searle [18, 19], as well as the relevance theory of Sperber and Wilson [20].

The assumptions of this basic, broad line of thought claim that default communication is the standard, and miscommunication processes take place because of a deviation, or a violation - more or less significant - of this standard paradigm in any part of the communicative process and sequence. For instance, in Shannon and Weaver's model [7] it is expected that noise as an interference could hinder or impede – in part or as a whole – signal transmission from the sender to the receiver. According to McCornack [21], Jacobs, Brashers and Dawson [22], and Jacobs, Dawson, and Brashers [23], in Grice's theory [16] the violation of one or more maxims can lead to the appearance of communicative distorted forms, like deceptive communication. Similarly, in Sperber and Wilson's paradigm [20] the lack of consideration of the relevance principle produces reiterative, trite and sterile communicative acts, with no additional information, and under given circumstances, it generates problematic communication.

On the other side, many clinical psychologists were extremely interested in the analysis and study of the so-called "pathological communication", which reveals disturbed patterns in communication and interaction. These patterns are forms which have more or less deviated from the cultural models of a determinate society, and are involved in different kinds of psychological disease. Among the different frameworks proposed to explicate the link between communicative patterns and psychopathological disturbance it is worth mentioning herein the double bind theory, advanced by Bateson [24, 25], Bateson, Jackson, Haley, and Weakland [26], the structural family therapy treatment approach, developed by Minuchin [27], Minuchin and Nichols [28], the systemic model of family therapy, proposed by Selvini [29], Selvini, Cirillo, Selvini, and Sorrentino [30], Satir's model of family therapy [31]. On the whole, these researchers had determined to identify the pathological phenomena of communication involved in psychological disorders, and to treat the former as the cause of the latter. These scholars were not really interested in the study of communication as a standard process.

With reference to these two basic lines of thought, divergent from each other, our aim is to examine the communicative act as a whole, trying to explain the continuity of communicative processes, from the understanding of literal meaning to pathological forms of communication. As a principle, we think that the mechanisms and processes involved in default communication design are not different from the ones involved in miscommunication design.

In particular, the aim of this chapter is to outline some general principles that might connect together communication and miscommunication processes in a global, parsimonious and coherent theoretical perspective. The purpose herein is to suggest a new definition of miscommunication as *"say not to say"*. In this perspective, as already said, the problem at issue is to overcome the traditional concept of miscommunication as a lack, fault, and violation of rules [3], and as the "dark side of interpersonal communication" [1]. This standard view can be integrated with the concept of miscommunication as a communicative chance in everyday interaction. It could also be an *opportunity* in the interaction between the participants both in the Machiavellian sense and in a more positive perspective as an enhancement of the communicative possibilities available to the participants. Within this framework we are in line with the paradigm of the "staged communication act" proposed by Clark [32] and pursued by Gibbs [33]. The key ingredient in staged communication and miscommunication acts is *pretence* as the basic condition in ironic, deceptive or evasive communication.

This chapter intends to sketch out a *miscommunication as a chance theory* (MaCHT). In order to delineate this theoretical model, the following subjects will be tackled and analyzed: a) the overcoming of the explicit and transparent communication ideal, suggested by the standard communication conception; in this topic we will examine the flexibility and variability of meaning as a source of communication and miscommunication; b) the analysis of context regularity as an assumption of meaning regularity; such regularity has been intended as a source of mutual understanding also in miscommunication conditions; c) the multiplicity of communication systems as a condition for stressing or weakening the communicative meaning according to the speaker's intention, the interaction with the addressee, and the context of use; in fact, in every communicative act we can determine and find out different verbal, prosodic, mimic, and gesture signaling systems; however, this multiplicity is co-ordinated by a central system, like a "central communicative processor", in order to guarantee the necessary semantic synchrony among the different signaling systems as a condition to get an unitary and consistent message; d) the intentional "game" between the participants; in this topic

we will examine the intentional convergence between the speaker and the addressee, because intentional stance expresses itself in a graduated manner in the former, and in a multiplicity of interpretations in the latter. On this ground we will analyze the communicative synchrony process as a general condition to participate effectively in communicative interaction.

1.2 Beyond the communicative transparency ideal

Shannon and Weaver [7] have elaborated a mathematical model of communication as mere information transmission from a source to a receiver by means of coding-encoding processes. This framework presupposes a substantial semantic transparency, because the message, defined by the source is, in theory, the same as the one that reaches the receiver. Ideally and by default, the message received is a reliable and faithful photocopy of the one sent. Noise (i.e., the interference with another message that is going along the same channel) and a filtering activity (i.e., selection of signals as they reach the receiver) are the main risks for this information transmission process.

The assumptions of the communication engineering of Shannon and Weaver [7] are given by the truth-conditional conception of meaning proposed by the Vienna Circle, in particular by Frege [34, 35] and Carnap [36, 37]. According to truth-conditional (objectivistic) semantics, thought and language reflect the real world (or a possible world), and concepts are mental representations of objects and events in the world. As a consequence, linguistic expressions get their meaning only via their capacity to correspond to the real (or possible) world in a fixed and objective manner, independent of individual cognition. Meaning is grounded on truth conditions as objective features which a certain state of affairs in the real world (or in a possible world) must have, so that a certain sentence is true in that world. In this way meaning is independent of individual minds and it is built up by a complex of necessary and sufficient conditions, constant and formally codified (as definitional knowledge) by dictionaries which describe lemmas in a natural language. This is a perspective based on semantic clearness as the expression of an objectivistic point of view of reality (a kind of "God's eye" according to Lakoff's metaphor) [38, p. 164].

Austin [17] pointed out how this theoretical point of view seems quite unsustainable, by introducing the concept of *descriptive fallacy* for what pertains to the representation of a state of affairs: utterances are not a tool for reality description and cannot be analyzed and valued in terms of truth-conditions. They set up a locutionary act (of saying something), an illocutionary act (in saying something) and a perlocutionary act (by saying something). However, in his speech acts theory, Austin [17] maintained semantic transparency for what concerns mental states, since his framework has become an important device to study and value such states.

In turn, Grice [16] has criticized semantic transparency in its objectivistic version, and has underlined the semantic indeterminacy of language. One thing is what is said, another is what is meant (that is, what it is intended to say), since the second one is more extended than the first one. The distance and, sometimes, the discrepancy between what is said and what is meant are overwhelmed by the so-called "implicatures", i.e. "authorized" inferential processes based on linguistic indexes [16]. To determine what a speaker means, a listener must go beyond his/her understanding of what that speaker simply says.

Furthermore, he has oriented scholars' attention towards the comprehension of meaning as an assumption of any communicative interaction in a deeply different perspective in

comparison with the Vienna Circle one. In fact, Grice [16] has considered meaning in a subjective manner as what the speaker means, that is, his/her communicative intention. According to him, communicative exchange is a process in which a speaker has the intention to cause the receiver to think or do something, in such a way that the latter may, at the same time, recognize the former intention to cause that thought or action. This process of mutual and shared knowledge is based on the *Co-operative principle* ("Make your conversation a contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged"). This principle carries with it four conversational maxims:

> *Maxim of Quantity*: Make your contribution as informative as is required, but not more so, for the current purpose of the exchange.
> *Maxim of Quality*: Do not say anything you believe to be false or for which you lack adequate evidence.
> *Maxim of Relation*: Say only what is relevant for the current purposes of the conversation.
> *Maxim of Manner*: Be brief, but avoid ambiguity and obscurity of expression.

But in this way, even if the semantic transparency is conceptually overcome, the risk emerges of an *intentional transparency*. In fact, the Co-operative principle involves a conscious sharing of the speaker's communicative intention (so called *m-intention* as the speaker's intention to produce an effect in the listener by means of the hearer's recognition of that intention). P knows that A knows that P knows that A knows (and so forth endlessly) that P has a definite intention. In such a way, according to Clark and Clark [39], the listener successfully recognizes the speaker's intention ("authorized inference"). The Grice [16] account of communication involves mutual awareness between the speaker and the listener. This is not an awareness of the physical presence of each other, but an awareness of the mental state of each partner involved in the communicative act, that is, an awareness of the other's awareness. In the opinion of Gómez [40], this mental situation has the same mutually embedding structure as two mirrors confronted: each mirror reflects the other reflecting the other's reflection, ad infinitum. Within this perspective the Gricean maxims lead to an open, transparent, clear and explicit communication.

Moreover, according to Grice [41], "communication is a complex kind of intention that is achieved or satisfied just by being recognized". That is, communication consists of a sender intending to cause a receiver to think or do something just by getting the receiver to recognize that the sender is trying to cause that thought or action. Within this theoretical perspective, communication is like a dance where one partner leads and the other follows.

The relevance theory, outlined by Sperber and Wilson [20], also assumes that a single perspective, i.e. the speaker's thought and intention, is privileged in the interpretation of utterances. Speaker and addressee assume the speaker's thought as a common baseline, so that the addressee's inferences will converge with the speaker's thought.

But this theoretical perspective does not seem to explain the dynamic and contingent nature of meaning-making. In particular, this communicative transparency ideal, both at semantic and intentional level, has been questioned by many researchers who have underlined communication complexity and difficulty. They have emphasized a set of communicative phenomena and processes, such as semantic opacity and condensation, meaning ambiguity and indeterminacy, vagueness and fuzziness, intentional gradation, the contingent nature of meaning-making, intertextual thematic systems and the like.

1.3 Semantic instability as communicative flexibility and a source of miscommunication

In principle, any communication theory must face and solve the dilemma of opposition between *meaning stability and meaning instability* of a word, an utterance, or a gesture and the like. In the present paragraph we intend to analyze some significant aspects concerning *semantic instability*, deferring the analysis of meaning stability to the next paragraph.

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 a large variability – of a word or an idiom. Very many communicative phenomena are implicated in this process.

The meaning of a word or an utterance is not an easy, simple, not further decomposable (meaning as a semantic atom) reality, but a complex reality, articulated in features and decomposable in a limited number of semantic traits. Katz and Fodor [42], by following the method of Componential Analysis applied by Trubeczoij to the phoneme analysis, considered this limited set of semantic traits as a whole of *necessary and sufficient conditions* (NSC) in order to define the meaning extension to a real world (or to a possible world). Such NSCs are governed by some basic principles: a) no trait can be cancelled, b) no trait can be added, c) every trait has the same semantic weight (absence of hierarchical relations within the semantic space), d) meaning is never graduated, but has clear-cut borders (according to binary logic). As a consequence, meaning either exists in its totality or it does not exist. This framework, which also follows the Hjelmslev's [43] structuralist analysis of meaning, involves a neat separation between *dictionary knowledge* (as meaning constitutive properties) and *encyclopaedia knowledge* (as secondary and additional properties). Such a separation leads to the further sharp distinction between necessary (analytical) features and accidental ones: the former are essential and not cancelable, while the latter are contingent and factual. Within this perspective of trait semantics, meaning is conceived as a univocal, absolute, and fixed structure in its constitutive components. It seems to be a mathematical, discrete, and defined unit which can be combined to compose an utterance and build a discourse according to an additive logic. Moreover, meaning is understood as an objective entity, completely context-free and independent from speakers' use in contingent situations. In fact, truth-conditions, with which meaning is identified, are objective features of a world (real or possible one).

In actual fact, subsequent studies have pointed out that the NSC model cannot be sustained any longer, and have underlined semantic and communicative processes that lead to meaning variability and instability. Meaning is not taken in a fixed and automatic way, once and for all, but meaning-making can be thought of as a heterogeneous, contingent and dynamic activity in the world between two or more participants. Many different components which are involved in this process, such as semiotic choices, discourse genre and conventions, the aims of the interlocutors and the like, mutually affect each other in real-time to produce the emergent communicative act.

1.3.1 Some determinants of semantic instability

In order to uphold the MaCHT herein proposed, we need to point out some significant processes and phenomena of semantic instability and flexibility. In fact,

miscommunication involves, by default, the possibility of continuous variations and shades of meaning. Without this semantic plasticity participants cannot “play” with the meaning, and fit their communicative expressions to their intentions and desires, as well as to contextual constraints.

1.3.1.1 The possibility of canceling semantic traits

Following Cruse [44] and Violi [45], we firstly take into consideration the *possibility of canceling semantic traits* or *defeasibility*. Putnam [46] already suggested that it is not possible to determine semantic definitional features for natural categories or for artifacts, and that the NSC model cannot explain individual exceptions and variations. 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 [47], Kleber [48], and Violi [45] 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 distinguished by diagnostic test of the adversative *but*. For instance:

(1) ** It is a bird but it flies*
(2) *It is a bird but it does not fly*

There is a semantic anomaly in (1) but not in (2). Within this perspective, for instance, in the meaning of *bird* there are typical features – and therefore cancelable 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) [47]. 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 canceling semantic traits is based on the *conventional nature* of meaning as a historically and culturally defined entity, and involves the overcoming of every ontological and natural conception of meaning. As for being conventional, it can also be negotiated, modified and culturally transformed.

1.3.1.2 The fuzzy boundaries of meaning

Even the NSC model assumption that meaning has clear-cut borders as a discrete semantic unit has been criticized. After several studies, among which those worth mentioning are the ones proposed by Labov [49], and Lakov [50, 51], it is already recognized that many meanings are characterized 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 these cases quantifiers and qualifiers allow us to carve the meaning of an expression more or less intensively and with a certain semantic shape. Within this perspective, according to Zadeh [52] and Zhang [53] among others, meaning consists of 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 fuzzy reading. For instance, *three o'clock* is precise, but it becomes fuzzy when combined with *around*, as

in: *around three o'clock*. Hedges like *about*, *almost*, *or so* 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 fact, *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.

Likewise, a word can have a meaning with fuzzy boundaries. In a classic study by Labov [49], based on the analysis of words referring to material artifacts like *bowl*, *cup*, *mug*, and *dish*, which compose the semantic field of "domestic containers for food and drink", the results shown that the meaning of these words varied considerably in relation to the presence and relevance of some perceptual features like depth, breadth, height, presence of a handle and the like, as shown in figure 1.1. As things deviate progressively from a standard (or prototypical) 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.

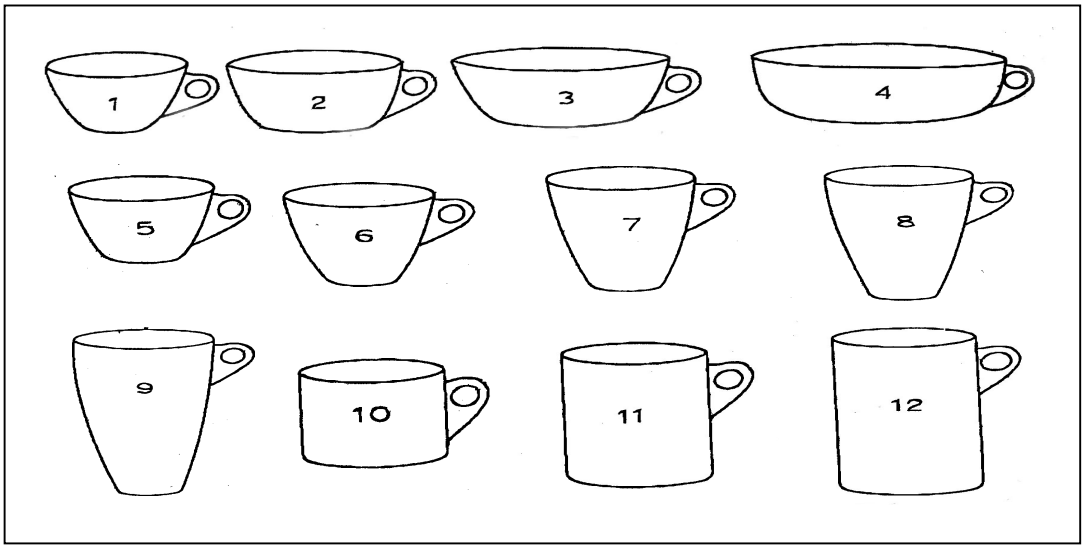

Figure 1.1. Series of cup-like objects. Adapted from Labov [49]

Semantic fuzziness phenomena were studied in depth with the prototypical framework of meaning, proposed, among other scholars, by Givòn [54], Kleiber [48], Posner [55], and Rosch [56, 57]. Lakoff [50, 51], 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 [48], and Geeraerts [47, 58], meaning in many circumstances does not symbolize 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 [59]. 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". [p. 66]

In this framework the meaning of *game* is not described by a complex of common and necessary traits 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.

1.3.1.3 Radial categories and semantic polisemy

Referring to this perspective, Lakoff [38] has given an accurate analysis of the linguistic categorization system of Dyirbal. 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 categorization 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 [38] stresses that these categories are neither arbitrary nor random but they are regulated by a set of local similarities in terms of Dyirbal 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 conventionalized variations on it which cannot be predicted by general rules" [38, 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 *polisemy*. The polisemic word refers to a number of different meanings, semantically related to each other, each one, however, having its own autonomy. First of all, it is a matter of *semantic polisemy*, in which a word takes different levels of meaning. For instance, the Italian word *fresco* (literally in English "fresh") implies three different meanings along three different levels of sense [45]:
a) temporal level of sense ("new, recent, just given": for instance, *it is fresh news*, *it is a fresh vegetable*),

b) positive state level of sense ("pure, uncontaminated, in optimal conditions": for instance, *it is fresh fruit*, *it is fresh fish*, *fresh mountain air*),
c) thermal level of sense ("not warm": for instance, *this room is fresh*, *fresh air this morning*).

As we can see, there is a partial overlapping area between a) and b) (fruit and vegetables) and between b) and c) (air). In this example, because of the plurality of different meanings the partially overlap, *fresh* constitutes a polisemic category and cannot have a single prototype, because a central case is not expected. In fact, polisemy provides for a basic meaning, which includes different courses of meaning.

But there is also the *analytic polisemy* phenomenon, according to which a lexical category, still maintaining a basic intuitive unity, refers to many different referents [47]. For instance, the word *bird*, although constituting a univocal category with precise boundaries, refers to referents whereof each one is very different from the others (like sparrow, eagle, chicken, penguin, kiwi etc.). The great number of meaning routes of a polisemic word cannot be expected a priori, but can be explained only afterwards, with the connection between its basic meaning and secondary (derived) ones.

1.3.1.4 The gradability of the meaning

The assumption of parithetical value of the semantic traits expected by the NSC paradigm appeared to be unfounded too, according to a cluster of subsequent studies that have underlined the *semantic gradability* phenomenon. That is, the semantic traits of a word do not share the same semantic weight: there are 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 distinguish them from other members of the same category). The essential properties are *criterion traits* [44], 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 [20], 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 [60], 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.

1.3.1.5 The problem of literal meaning

This semantic gradability allows us to overcome the distinction between the "literal" and the "nonliteral" meaning of a word or an utterance. According to the standard pragmatic theory, the former concerns the *linguistic meaning* as the combination of meanings of single words and it is the outcome of linguistic operations such as phonological, lexical, and syntactic operation. 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. In 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 [61] has pointed out.

On the contrary, the *figurative (or nonliteral) meaning* is derived from the literal one and can be discovered by resorting to semantic substitution mechanisms (i.e. when nonliteral 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", such as the metaphor, metonymy, hyperbole, oxymora and the like.

This standard theory is also shared by Grice [16] 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".

But such a distinction between literal and figurative meaning is not unproblematic and the concept of "literal meaning" has become a subject of theoretical revision upheld by the work of Gibbs [61] and Glucksberg [62]. The standard logic of the 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, nonliteral meaning that does make sense in the context* [62, p. 10].

This standard model involves 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 nonliteral meaning be attempted. Third, literal meaning is derived automatically, generated easily by the linguistic input (without conscious control), while nonliteral 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 [62] has pointed out.

First of 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 already seen, context dependence especially concerns logical connectives, quantifiers (like *some, few, many*, and so on), deictic terms, qualitative adjectives, and pronouns. As Horman [63] 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 on the context, both literal and figurative meaning have the same time of comprehension, as it results from the researches of Onishi and Murphy [64], and Pynte, Besson, Robichon, and Poli [65]. It is also unnecessary to understand literal meaning before proceeding to derive the nonliteral 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 [66] pointed out.

As a consequence, 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). Such assumptions are not semantic in their nature but they belong to our *knowledge encyclopedia*, since they are derived from our experience within the culture of reference. Besides, these assumptions are not fixed, since each assumption involves 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 (see below section 1.6.2). In this respect, so-called "literal meaning" is one of such possibilities.

Actually, what people are interested in first of all 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, as a consequence, they are able to understand the variations, and also the nuances, of the meaning of an utterance.

1.3.1.6 The referring context

Finally, the meaning of a word or an utterance or a gesture does not depend so much on a universal, abstract and fixed semantic system, isolated from the context, but it is strictly connected with the *referring context*. No meaning is totally foreseeable or definable a priori, because it depends on the context, defined by Searle [67] as *background*. Neither can meanings exist isolated from the context or without a context. In particular, the context calls attention to some specific properties of the meaning and, at the same time, it "narcotizes" other properties.

Likewise, people's interpretations of their own and other people's expressions are not necessarily stable or constant over a period of time, but they can change as the context changes. For instance, the semantic features of *book* radically change according to the contexts, as in the following examples:

(3) *Peter is reading the book for the exam with attention (book as an object of study);*

(4) *Mary has lost the book that George gave her as a present (book as a souvenir in an inattentive and affective context);*

(5) *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).*

Within this perspective, the context performs a selection and determination of semantic traits, which can and must be activated in a specific communicative interaction, while it "narcotizes" other semantic traits, which can be activated in a different circumstance.

The communicative phenomenon herein described is also involved in the so-called *contextual risemanticization* [45, p. 149]. In this 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 can call *chair* a table, an empty chest, a pile of books, if there are no free chairs, and we can also say: "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 risemanticization stresses the great plasticity and high flexibility of the meaning, allowing a wide range in its use as the result of accurate processes of semantic adjustment.

The whole of the semantic phenomena above mentioned enables us to criticize both the all-or-nothing dichotomous concept, and the notion of meaning as a fixed and objective entity, with clear-cut boundaries. Moreover, in the past this standard paradigm has deeply influenced the distinction and opposition between default communication and miscommunication. The latter was considered as an exception and a deviation from default values. On the contrary, the dynamic conception of meaning as a fuzzy set and gradable entity allows us to explain both communicative phenomena by default and those involved in the miscommunication domain. In particular, it encourages us to continue to view the miscommunication notion as a communicative chance, as MaCHT foresees.

1.3.2 Meaning as inferential outcome

Semantic instability and plasticity phenomena emphasize the fact that communicators, in order to understand each other, have necessarily to resort to some inferential processes. Meaning 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. Rather, it is created between the two communicators in a dynamic manner.

Moreover, meaning is referred to a mental and cultural pattern that involves an inference process from the interlocutors, since it shows a specific point of view of 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.

In fact, words, utterances, gestures and other non verbal 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 σημεϊον) 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 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 realization. In particular, from a realistic point of view, the meaning of a word, utterance or 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. In contrast, 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. Linguistic semantics and, more in general, communication are essentially based on our experience of the world, and, as a consequence, they will be influenced and guided by perceptual, cognitive and emotional constraints which control and manage the interaction with reality. Within this perspective, meaning involves a remarkable amount of instability and 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 instability is at the basis of the *meaning plasticity* that allows speakers to use these meanings flexibly, according to their communicative intentions. In this way, we can observe a process of continuous remodeling 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 contingent situations of interlocutors. Within fairly wide limits, meaning can be stretched, expanded or reduced according to the expectancies, beliefs and goals systems of the 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 random. In theory and in practice, it is consequently always possible to re-define and re-negotiate meanings in communicative interaction.

On the other side, this semantic instability allows us 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 instability concerns not only what is communicated but also what is said (Reboul, chapter 2; this volume). As a consequence, lexical and semantic ambiguities are common; sometimes, conversations are characterized by incomprehension and misunderstanding as well as confusion phenomena. Communicative games often appear and they make the conversation more interesting and intriguing.

1.4 Meaning stability as context regularity and a source of mutual understanding

The semantic instability and 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 instability phenomena are compensated, completed and balanced by *semantic stability* processes, which make possible and explain the probabilities of order

and regularity in meaning exchange. They are at the base of message intelligibility conditions and of mutual understanding between 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 the interlocutors, because of their sharing the same cultural identity. 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 signaling 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 (or *conventionalization 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.

1.4.1 Context regularity and production vs. re-production processes

A conventionalization 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* [68, 69], 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 recognizing 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.

In particular, communicative formats oscillate from *re-production processes* to *production processes*. This oscillating motion is analogous to the one proposed by Bourdieu [70, 71] for cultural practice. 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*, since 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.

The *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 that is context unrelated, 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. These variations usually involve a signaling action and a communicative re-adjustment and re-negotiating process between the participants.

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.

1.4.2 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 [20], are opposed to the communicative theory of code (see Reboul, chapter 2; this volume) and have concluded that it is also possible to communicate without resorting to the code.

In its wide theoretic sense, a communicative code is to be intended as an organized set of rules, which allows 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 allows 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 model of Shannon and Weaver [20], 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 to 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 pointed out 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 [20, p. 52]. Actually, through the recognizable and shared rhythm of their hammer strokes, the two prisoners generate a local process of conventionalization, 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. The scenario would be a chaotic tower of Babel.

Therefore, we have to speak about a "code". However, the “code” herein underlined must 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 fact, this weak theory of code does not involve a fixed semiotic system, but it presupposes a variable system in terms of power and efficacy. 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, recognized, and shared by the prisoners.

However, in order to avoid possible ambiguities or misunderstandings, in this study we will use the expression *signaling system* instead of code.

1.5 The plurality of signaling systems and semantic synchrony

According to MaCHT assumptions, outlined in this paper, miscommunication is neither a collection of abnormal communicative phenomena nor does it depend on the violation of an ideal model or of a standard system of communication. Miscommunication is a widespread phenomenon, and it belongs to the communicative exchanges of everyday life. It is enough to consider figurative and metaphoric speech, the ironic, deceptive, and seductive communication, as well as communicative games in general.

In order to understand miscommunication, we should to bear in mind the continuous variation of meanings between stability and instability, as we said in previous section. We should also take into account the range of signaling systems, and the plurality of expressive means available to the communicators in order to express their communicative intention. In this paragraph we will focus our attention on the *semantic synchrony* process, intended as the speaker’s competence to organize, co-ordinate, and make the different

communicative systems converge on each other in order to make explicit the meaning of one's own communicative intention in a unitary and coherent way.

1.5.1 The plurality of communicative systems

The starting point is given by the observation that, according to Anolli and Ciceri [72], in order to communicate, the communicator has at his disposal a *plurality of signaling systems*, verbal and non-verbal, as shown in figure 1.2.

In the first places, language has a prominent position, as it remains the most powerful, flexible and stable communicative device and medium, exclusive to the human species. It allows an articulated and efficient expression of thoughts, beliefs, emotions, desires and the like through effective variable, and extensive semiotic and symbolic devices.

1.5.1.1 The paralinguistic system

First of all, associated and concomitant with language, we have vocal communication, which includes both extra-linguistic characteristics and paralinguistic features.

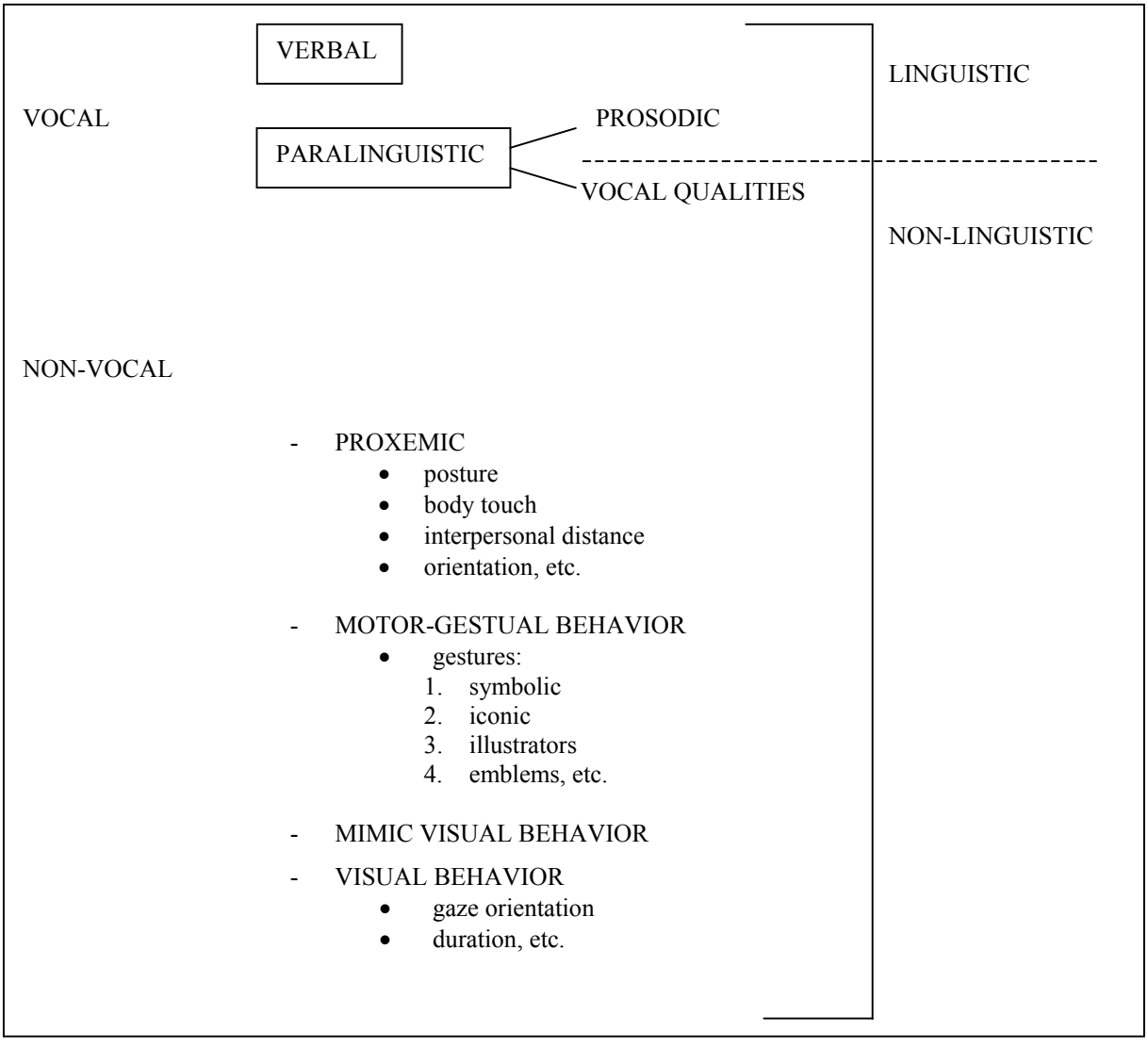

Figure 1.2. The plurality of signaling systems. Adapted from Anolli and Ciceri [72]

The first ones consist in the whole range of phonic qualities of the voice, which depend on the phonatory organ of the subject. The *paralinguistic* (or supra-segmental) *system* allows us to organize in discrete patterns and categories the correspondences between elements of the content level (cognitive and emotive states, ironic intention etc.), and elements of the expression level (prosodic modulation of the pronounced utterance). The supra-segmental and prosodic pattern of joy is one thing; that of anger or contempt is another, as shown by Anolli and Ciceri [74], Scherer [75, 76], and van Bezooyen [77]. The paralinguistic system can create continuous variations of intensity, rhythm, and sound qualities inside the same category. For instance, inside the "family" of supra-segmental displays of “anger”, it ranges from prosodic patterns of irritation and grudge to those of anger, increasing to an explosion of rage.

The second ones consist in the supra-segmental organization of pitch variations, voice intensity and speed. As Sapir [73] already pointed out, it is not possible to pronounce even a simple word like /horse/ without giving it some form of interest and some prosodic variation. There are not clear and plain words or utterances, spoken in a neutral linguistic way, but they are always pronounced in a certain manner and with a specific prosodic configuration. The "pronounced word" as a synthesis of vocal verbal and vocal non-verbal aspects, is a powerful communicative device, that can regulate and manage the expression of one's own communicative intention flexibly and progressively.

The distinction between graded and discrete remains problematic. A repertoire is graded if signal variation is continuous, lacking clear acoustic boundaries for demarcating one signal category from another. Such acoustic continuity, however, can be broken up by a perceptual system, creating categorically distinctive classes of sound. According to Hauser, discrete repertoires consist of featurally bounded signals with no intermediates between signal types [78: p. 54]. Human speech and acoustic elements of other species' repertoires represent systems that exhibit gradedness on the production end, but discreteness on the perceptual end, which serves as an efficient categorization device.

In comparison with co-occurring linguistic elements the paralinguistic system is characterized by its own semantic independence, since it has the power of conveying emotional experiences, cognitive states (certainty, doubt, hesitation, etc.), irony, humor and the like autonomously. It may refer to the same utterance in order to express joy, love and hate, tenderness and anger, fear and sadness, shame and pride, conviction and doubt, tiredness and desire etc., as shown by Anolli and Ciceri [74: pp. 329-337], Scherer [75, 76], and Pittam [79].

For example, let us take the sequence of sounds /go out/. According to the occasion, it can assume very different meanings, as in the following situations:

(6) *"If you go out, take an umbrella with you" (informative and descriptive utterance, which indicates the action of going out concomitantly with the risk of rain)*

(7) *"Is it necessary for you to go out just now?" (interrogative utterance of surprise in the case that the interlocutor should go out in an unexpected way)*

(8) *"GO OUT!" (imperative utterance, often as display of anger and with the meaning of "have done with it")*

(9) *"Do you go out this evening?" (requestive utterance with a desire meaning of: "do you leave me alone this evening? Please, stay with me!")*

(10) *"Do you go out this Sunday afternoon, too?" (regret utterance with a reproach meaning: "stay at home and do not leave me alone this Sunday afternoon, too").*

It is worth noticing that the linguistic input /go out/ remains unaltered, since the same phonemes are repeated in the same sequential order in each utterance. Changes refer especially to the prosodic and supra-segmental configuration whit which each utterance is pronounced, but these changes greatly alter and modify the meaning from one utterance to another.

1.5.1.2 The face system

The *face* is also a powerful semiotic system that can convey simultaneously a large set of non-verbal signals, both static and dynamic. In particular, facial mimics constitutes an important kinetic system, which has been considered since ancient times and which has been experimentally investigated since the mid-nineteenth century firstly by Duchenne [80]. It is a variable system, clear, progressive, able not only to create unitary and discrete patterns of facial expressions as a whole, but also able to graduate their intensity and shading continuously.

Among different techniques of analyzing facial mimics elaborated so far, the *Facial Action Coding System* (FACS) proposed by Ekman and Friesen [81] is the one that today has obtained a great scientific consensus. Built up using the components method, FACS is a system of observing and describing analytically every visible facial movement in relation to its anatomic-physiological corresponding components. It proceeds to partition the undifferentiated continuum of facial movements in 44 facial Action Units (AU), through which it is possible to investigate over 7000 facial movements and expressions in all their combinations.

a) Relationship to speech			
Gesticulation	*Pantomime*	*Emblems*	*Sign Language*
obligatory presence of speech	obligatory absence of speech	optional presence of speech	obligatory absence of speech
b) Relationship to linguistic properties			
Gesticulation	*Pantomime*	*Emblems*	*Sign Language*
linguistic properties absent	linguistic properties absent	some linguistic properties present	linguistic properties present
c) Relations to conventions			
Gesticulation	*Pantomime*	*Emblems*	*Sign Language*
not conventionalized	not conventionalized	partly conventionalized	fully conventionalized
d) Character of semiosis			
Gesticulation	*Pantomime*	*Emblems*	*Sign Language*
global and synthetic	global and analytic	segmented and synthetic	segmented and analytic

Table 1.2. Synoptic of relations between gestures and other communication aspects [85]

1.5.1.3 The gestures system

The whole range of *gestures* also represents another important communicative system of signaling, although organized in different subsystems like gesticulation, pantomime, emblems, and sign language, as Feyereisen [82, 83] and McNeill [84, 85] pointed out. Such subsystems are related with other communicative systems and properties in different way as reported in table 1.2.

In particular, *global* property refers to the fact that "the determination of meaning in gesticulation proceeds in a downward direction. The meanings of the 'parts' are determined by the meaning of the whole. This contrasts the upward determination of the meanings of sentences" [85, p. 5]. Likewise, *synthetic* feature refers to the fact that "a single gesticulation concentrates into one symbolic form distinct meanings that can be spread across the entire surface of the accompanying sentence" (*ibidem*).

While sign language is conventionalized, segmented, analytic, and shares language features, "gesticulation accompanies speech, is non-conventionalized, is global and synthetic in mode of expression, and lacks language-like properties of its own. The speech with which the gesticulation occurs, in contrast, is conventionalized, segmented, and analytic, and is fully possessed of linguistic properties. These two contrasting modes of structuring meaning coexist in speech and gesture, a fact of profound importance for understanding the nature of thought and language in general, and how they function in communication" [85, p. 6].

1.5.1 Some provisional conclusions

At the end of this section, it is worth pointing out some consequences of this subject in order to better understand miscommunication processes and to outline the MaCHT more precisely.

First, the different signaling systems herein mentioned have a different weight and significance of communicative efficacy in relation to their power, flexibility, sharpness, stability and versatility in meaning-making. In particular, language appears to be prominent in comparison with every other communicative system. As Levinson [86, p. 8] suggests referring to Sadock's and Jackendoff' work, "phonology, syntax, and semantics are areas each with their generative capacities, and there are significant mismatches between the structural strings in each representation that, in the end, come to be associated with one another".

Second, although they possess a different semantic strength, they show a relative degree of autonomy, since each of them is able to convey by itself meanings or pieces of meaning, and to refer to determinate aspects of reality.

Third, these different systems of communication, although autonomous, are not disconnected from each other, but they are mutually connected by interdependence links. The outcomes of such interdependence are various: a) first of all, a great degree of freedom is offered to the speaker in order to manifest and calibrate his/her own communicative intention as related to the context; in this way, he/she can regulate and shade what he/she intends to communicate to the interlocutor, being able to resort to different communicative registers; b) the different signaling systems converge in a global and unitary communicative action, with a more or less high consistency degree; c) meaning is not connected with a unique and exclusive signaling system, but it is constituted by a network of semantic co-relations between different systems; d) the connection between different and distinctive signaling systems allows us to explain how

possible conflicts and contrasts can appear between them, generating semantic loosening, and how, in extreme cases, semantic contradictions can arise when meaning portions conveyed by one specific signaling system are opposite to those transmitted by another signaling system, so that meaning tends to be confused or even null. Incidentally, concerning these phenomena, we may think about the antiphrastic communication in irony, wherein supra-segmental aspects communicate an exactly opposite meaning to the linguistic expression. Or also we may think of schizophrenic communication, in which nonverbal elements negate the linguistic contents, producing an unintelligible message.

The plurality of signaling systems, herein mentioned, together with meaning stability and instability, contributes to explain the wide range of different communicative phenomena in a reasonable and viable way. In the case of default communication, we have communicative acts provided with coherence and unambiguousness, given that the meaning portions of a signaling system are consistently and univocally connected with the meaning portions of other systems. Instead, in the MaCHT here outlined, the existence of conflicts and contrasts between meaning portions conveyed by different signaling systems helps to explain different miscommunication forms, like ironic, seductive or deceptive communication. In the end, the open contradiction between different parts of meaning that are active in different signaling systems can involve a pathological communication when this contradiction brings about the cancellation of the meanings themselves.

1.5.2 Semantic synchrony

The assumption of a plurality of communicative systems involves the necessity of examining how they may be related to each other and how they can make up a unitary totality. In fact, meaning, whatever it may be, is unique and univocal in itself, although different meaning ascription is allowed, as we shall see in the next paragraph. What is needed is an attempt to explain how different signaling systems come to produce a communicative act that is coherent in itself, even if complex and articulated, since it displays a determinate communicative intention.

1.5.2.1 The "central communicative processor" hypothesis

Such a process of combining and unifying these different signaling systems may be defined as *semantic synchrony*, since their non random combination and interdependence allow the production of a specific meaning of the communicative act. Therefore, we must explain this process of synchrony. With this aim, it could be useful to advance as a hypothesis the existence of a *central communicative processor* (CCP), similar to what many scientists have already supposed for the co-ordination and management of attentional resources. In this last field, an "attention supervisor system" has been hypothesized by Shallice [87], also an "operative system" by Johnson-Laird [88], and a "central processor" by Mandler [89], Posner [90], and Umiltà [91] to explain unitary and focal action of attention and consciousness, although they are distributed in the central nervous system.

First, it is essential to underline the fact that there is a strong liaison between communication and attention processes. In fact, communication is to be conceived as a flow of basically conscious acts, which can vary in complexity and in employment of mental resources (cognitive or emotional). In fact, an unconscious act, under the effect of drugs or in a particular biological condition (for instance, high fever), cannot be

considered as communicative, even if it is speech. In this last case we speak of delirium, as we will see further.

Nevertheless, communicative acts are not always conscious in the same manner. We can range from routine and automated communicative acts (like greetings exchange or common questions) to really complex and demanding ones (like giving a report in front of a critical public, lying in an official context and so on). In the first case, an automatic processing of communication resources is enough, supported by an oriented attention condition; in the second one, a controlled processing of communication resources becomes necessary thanks to a kind of continuous focused attention.

Variability and flexibility, as well as predictability of communicative acts involve – at least in a theoretical way – the action of a CCP as a distributed system, able to have a complete representation of the outside world and of the speaker's intentions. It can be hypothesized that such a CCP does not exert a direct, but an indirect control on different mental operations, taking part in the selection and activation of a communicative route that is privileged in respect of others. According to Umiltà [92, p. 245], most mental operations cannot have access to consciousness, since they are processed in an automatic way. Instead, it can be thought that a CCP exerts a conscious strategic control on the communication outcome, since it consents and favors the selection and activation of one specific sense route rather than another. That is, a CCP takes on the function of regulation between different communicative systems.

Such a notion of CCP seems to be in line with the suggestions of Jackendoff [93] about the "architecture of language faculty": the associations between phonological, syntactic and semantic representations are ruled by a system of correspondences which are not deterministic in character, but such correspondences may be partial and not one to one.

Moreover, the CCP hypothesis is supported by the notion of *default reasoning* advanced by Bach [94]. This kind of reasoning is governed by a "taking for granted principle" and proceeds to the first unchallenged alternative, i.e. to the first sense of the utterance that springs to the hearer's mind. Default reasoning is automatic; it relies on generalizations and stereotypes of everyday life and on the scripts of his/her own experience. People normally take it for granted that the interpretation that springs to mind is correct; no further reasoning is involved. According to Bach [94, p. 45], "I take for granted that the first thought that comes to mind is the right one – unless some reason against that or some alternative comes to mind".

1.5.2.2 "Central communicative processor" hypothesis in respect of similar frameworks

The CCP hypothesis is similar to other frameworks which are interested in explaining global processing of information and communication design. First, we may think that the CCP action is rooted in a *parallel distributed processing* (PDP) architecture of cognition, advanced by Rumelhart, McClelland, and the PDP Research Group [95]. PDP or connessionist model assumes that the mind is comprised of complex networks of interconnections that operate on parallel. We may represent a communicative goal as a pattern of activation over many units, where each unit represents the degree of presence or absence of a specific thought (or concept). Units are connected to one another by modifiable, weighted connections. Information is represented in the network as vectors of activation values across input and output units. The inputs effect the outputs by propagating their activation through the network of weighted connections.

In this way the hypothesized model of the CCP has different properties, interesting for our purpose: a) while in a standard communicative and symbolic model an item of thought

is represented by an atomic and discrete token (meaning) residing at a specific address in memory, in the CCP model an item is represented by a pattern of activation over many units, where each unit represents the degree of presence or absence of a certain meaning and thought; this processing allows items in memory to be content addressed, since one can recall a memory plainly by activating parts of the memory; b) while in a traditional communicative model a meaning is either present or absent in an all-or-nothing manner (see the NSC paradigm above mentioned), in the CCP model graded variations and continuous shadings of meaning are possible; c) while in a traditional cognitivist model the context of a meaning is provided by other meanings (or symbols), the context of a CCP meaning is a part of the internal structure, the distributed pattern of activation which is the representation of the meaning itself; d) in the end, in the CCP model learning is possible from single examples and a generalization process allows us to apply their meaning to novel inputs.

Likewise, the CCP hypothesis can fit suitably with the *global workspace* model suggested by Baars [96, 97]. According to such a perspective, conscious experience is the outcome of a nervous system activity in which multiple input processors compete for access to a transmitting capability: the winning processor can disseminate its information globally throughout the brain system. The main assumptions of the global workspace are basically the following: a) the existence of specialized semiautonomous processors; b) the global workspace, a memory that, like work memory, can be accessed by input processors; and c) goal contexts that influence the possibility for an input processor of accessing the global workspace. This architecture can be informally described as a “working theatre”, where focal consciousness acts as a “bright spot” on the stage, directed by the selective “spotlight” (or focusing) of attention.

Because such an architecture involves both conscious and unconscious events, it deals directly with subjective experience. One dramatic contrast is between the vast number of unconscious neural processes happening in any given moment, compared to the very narrow bottleneck of conscious capacity. This narrow limit has a compensating advantage: consciousness seems to act as a gateway, creating access to essentially any part of the nervous system. Conscious experience creates access to the mental lexicon, to autobiographical memory, as well as to voluntary control over automatic action routines. The “contrastive analysis”, that is a set of paired comparisons between similar conscious and unconscious processes, provides evidence in supporting of the global workspace theory of Baars [96, 97].

The CCP perspective here mentioned is similar also, in some way, to the message generation model as *local management of situated beliefs*, proposed by O'Keefe and Lambert [98]. They followed the framework of speech production elaborated by Herrmann [99]. As figure 1.2 shows, the representation of situation contains information about relevant situation parameters as well as declarative and procedural knowledge retrieved by the situation-interpreting program.

This declarative and procedural knowledge creates the *propositional base* of the utterance, that is, the foundation of what is meant, including what is perceived, imagined, inferred, presumed, etc. by the speaker. In turn, the *semantic input* is the foundation of what is said, and it is a selection of what is meant: people verbalize according to *pars pro toto* principle, saying only a part of what they have in their mind, i.e., what they "mean". Generally speaking, when communicators say something, they find themselves committed to much more, by virtue of choices between all the ways they could have said it. In an ideal Gricean communication act, the semantic input is informative, clear, relevant,

truthful and so on; in an actual communication exchange the semantic input generation depends on the specific and contingent features of a certain situation.

According to the CCP model and MaCHT, in line with the global workspace model of Baars [96, 97], the "situationalist" approach of Herrmann [99], and the local management model of O'Keefe and Lambert [98], the communicator has, moment by moment, the possibility of organizing, regulating, managing and monitoring his/her own communicative act related both to his/her intentions and the particular conditions of the context, thanks to
semantic synchrony. He/she has the direction and strategic possibility of choice between different communicative routes in the single exchanges with the interlocutor. In this way he/she can orient his/her message even in terms of miscommunication, if he decides that it is suitable, advantageous and favorable for him/her to take this line.

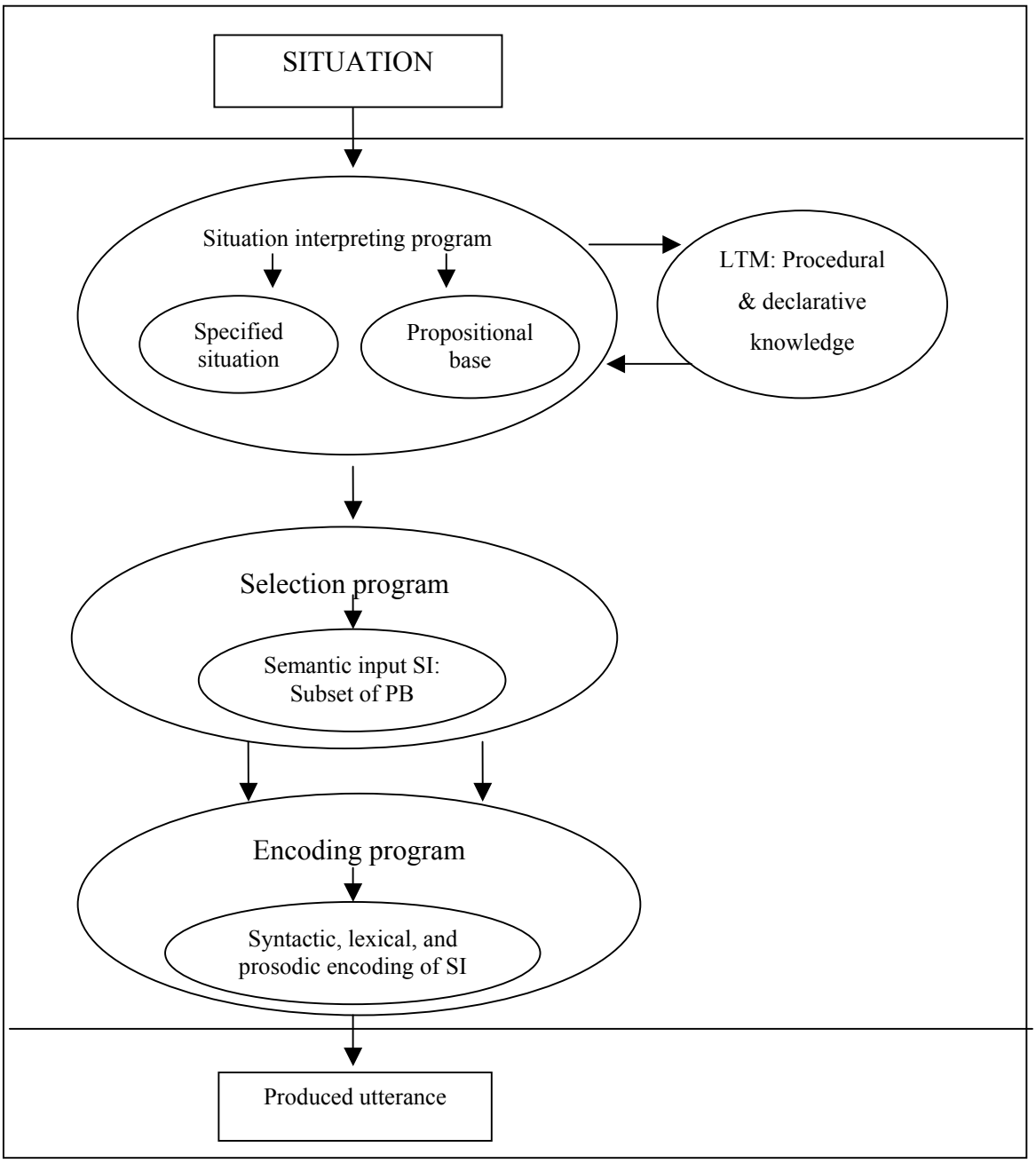

Figure 1.2. Herrmann's Speech Production Model. Adapted from Herrmann [99]

Therefore, according to these principles of the MaCHT, miscommunication can no longer be intended as a simple deviation or exception related to fixed default patterns of communication, but it provides the communicative devices for the communicator to calibrate his/her own input and optimize the chances at his/her disposal.

1.6 The intention design and communicative synchrony

As is well known, since ancient times it has been accepted that intention plays a fundamental role in people's communicative exchanges. Describing communication in terms of intention and interpretation allows us to use another theoretical device to explain communication and miscommunication simultaneously, as well as to give further support to the MaCHT.

As Searle [19] pointed out, intentionality is a property of certain mental states. If individuals had no mental states, they would have no intentionality and no intentions. Dennett [100] pointed out a general *intentional stance* as an attitude to interpret the behavior of an entity (newborn baby, animal, artifact) by treating it as if it were a rational agent whose actions are ruled and managed by considering its beliefs, desires and goals. People cannot ignore the fact that speech, gestures, texts and the like arise from human activities that have intentional purposes.

This general attitude concerns not only the speaker in producing his/her communicative act but also the addressee in recovering and interpreting the meaning of the speaker's message, attributing to it a specific intention. In this way, as, among other theorists, Anolli and Ciceri [72] have proposed, the communicative exchange is created and governed by a reciprocal game between the communicators: the display and ostension of a given intention by the speaker ("intentionalization" process) and the ascription and attribution of a certain intention to him/her by the addressee ("re-intentionalization" process). The unavoidable gap between these two positions contributes effectively to explain both communication and miscommunication processes, as well as to sustain theoretically the MaCHT.

1.6.1 Intention from the speaker's point of view

The pragmatic approach in analyzing communication processes underlines the significance and essential role of communicative intention, so that we can speak about "communicative exchange". If there is no intention, we are not in the presence of a *communicative* act, but only of an *informative* one. For instance, speech said in a delirium condition (cause by high fever or drug assumption) is informative but not communicative, since it does not communicate the speaker's intention.

1.6.1.1 Toward an intention definition

Scientists usually make a distinction between two different meanings of intention: a) intention as a propositional character of a mental state (an action performed on purpose), and b) intention as an act concerning and directed at some state of affairs in the world. In the first sense, individuals deliberately perform an action in order to reach a goal. In this theoretical field some scholars – Anscombe [101], Searle [19], and Bratman [102], among the others – make a further distinction between *intention-in-action* and *prior intention*. The former means: "We do things intentionally", while the latter means: "We intend to do things". "All intentional actions have intentions but not all intentional actions have prior

intentions. I can do something intentionally without having formed a prior intention to do it, and I can have a prior intention to do something and yet not act on that intention" [19, p. 85].

The second sense of intention takes up the idea of meaning proposed by Brentano [103] and, then, by Husserl [104, 105] as an act of consciousness directed toward an object. Intention, from Latin etymon *in-tendere*, means to speak *about* something and it concerns the "aboutness" or "directedness" of mental states. In such a perspective any subjective, conscious experience – no matter how minimal – is an experience *of* something. Intentionality is a basic feature of consciousness, which aims beyond itself at an object.

Unlike desires, intentions are self-referential, since the satisfaction conditions of intentions refer to the same intentions [16]. Unlike beliefs, intentions involve a willingness to change a certain state of affairs in the world.

Both of these meanings of intention operate and are effective in communicative interaction. In particular, as we have already seen, Grice [16] pointed out a certain "intentional clearness" in the sharing of the same communicative intention by the interlocutors thanks to the Co-operative Principle. He distinguishes on purpose between "what is said" and "what is meant"; the communicative distance between these two semantic layers is filled with implicatures. Even Sperber and Wilson [20] distinguished between *informative intention* (the content which is communicated) and *communicative intention*. The latter has been defined as making it "mutually manifest to both audience and communicator that the communicator has this informative intention" [20, p. 61].

Nowadays, the topic of intention has become very important. Beyond the informative and communicative intention, Jaszczolt [106, p. 52] proposes the "Primary Intention Principle" (its role "is to secure the reference of the speaker's utterance") and deepens the notion of *referential intention* proposed by Bach [107, p. 140]: "what is said, to the extent that it is not fixed by linguistic meaning, is determined by the speaker's intention, which itself can include the intention to refer to what one is demonstrating".

In this way intention seems to be a borderline and a cross-road in a synthesis process which is interposed between the inner world of the speaker (what he/she intends to say and display to the interlocutor), the outer world (the "aboutness" above mentioned), and the produced message (what is said or expressed through the signaling systems).

1.6.1.2 The intentional gradability

Intention does not constitute by itself an "on–off" process, but it is characterized by an articulated graduation and differentiation within itself. First of all, in everyday life, intentionality (as an attitude to produce distinct and specific intentions), in the same way as consciousness and attention, is regulated by continuous variations of intensity and precision. This *intentional gradability* allows communicators to manage the focusing of different communicative acts during everyday life. Next to plain (common and ordinary) communicative acts, in which the intentional process is almost automatic, there are complex communicative acts (like seductive, ironic or deceptive communication) in which the communicator has to be attentive and conscious of the communicative intention that he conveys to the interlocutor. The strength of intention seems to be directly proportional to the informative content of the message [107, p. 68], to the interlocutor's significance, as well as to the nature of context (public or private).

Moreover, a single communicative act can be governed by a plurality of intentions, embedded in each other and hierarchically organized. Such is the case of a prepared (packaged) lie, in which, as Anolli, Balconi, and Ciceri (chapter 6, this volume) have

underlined, different layers of communicative intentions are at work: a) a *hidden (covert) intention* (the speaker intends to deceive the addressee by manipulating the information); b) an *ostensive (overt) intention* (the speaker intends to convey the information manipulation to the addressee). This second intentional layer is, in its turn, twofold: b1) *informative intention* (the speaker wants to give the addressee the manipulated information as if it were true); b2) *"sincerity" intention* (the speaker wants the addressee to believe that what he has said is true, in order to respect the Sincerity Rule of Searle [108]: "I want you believe that I believe what I am saying to you").

But without also resorting to deceptive communication, in everyday conversation a speaker has to select and choose an intentional layer to convey what he/she has in mind. Here we may come back to the *pars pro toto* principle, since in the production of a communicative act a speaker can only express a part of his/her mental content. Among other conditions, this process has a physical constraint, since phonetic articulation is a bottleneck in a communicative system that could otherwise run about four times faster [88]. As a consequence, the speaker is obliged to follow only one of the different meaning routes he/she has at his/her disposal for conveying what he/she has in mind.

Such a choice and continuous *gradation of communicative intentions* make the communicative act particularly complex, since, on the one hand, it needs a precise cognitive and emotional direction; on the other, it can give rise to communicative uncertainties and difficulties. One intention is usually embedded in another which surpasses and includes the first one: in the case of the prepared lie, the hidden intention, for instance, subsumes and explains the manifest intention.

This situation is more widely diffused more than is thought. After an episode of serious marital conflict, when one partner tries to make peace with the other and asks him/her, for instance, for a glass of water, this request carries at least two different intentions at the same time: a) to make the explicit (direct) request of obtaining a glass of water; b) to make the first step toward reconciliation in an indirect and implicit manner. A similar communicative condition is the ironic communication, as Anolli, Infantino and Ciceri have pointed out (chapter 6, this volume).

The communicative outcome of this intentional articulation and embedment is the possibility of selection by the speaker of a certain route of sense instead of another one. It greatly increases the degree of communicative freedom at the disposal of the communicator. But in such a way, intention plurality and graduation entail, as a consequence, an *intentional opacity*, since in many cases communicative intention, embodied in an utterance or gesture, is shaded and changeable.

In the end, these considerations about intention plurality and gradability strengthen and shed some light on the continuity assumption between communication and miscommunication. If the intention field is organized and processed like this, it becomes impossible to decide where communication ends and where miscommunication begins. In the same way these considerations give further support to the MaCHT.

1.6.2 Intention according to the interlocutor's point of view

As we have already said, in the standard traditional framework communication is conceived as the transmission of a message from a source to a receiver, and the communicative exchange is considered as having happened if this passage has been concluded. Within such a perspective the addressee is represented as a passive “terminal”.

1.6.2.1 The recovery of speaker's intention

In modern times, with the radical change produced by Grice's [16] and Sperber and Wilson's [20] contributions, the notion of *reciprocity* in the communication has been strengthened. In order to succeed, the communicative exchange has to be characterized not only by the producing of a communicative intention (*m-intention*) in the speaker, but also by its *recovery* by the addressee. The recovery act involves a precise and conscious activity and the participation of the receiver in the meaning elaboration, since meaning is defined only when the addressee recognizes the speaker's communicative intention. In this sense meaning can be considered as the outcome of a two-person-construction, and the addressee's intervention is as significant as that of the source.

A basic assumption to explain the notion of intention reciprocity is given by social psychologists like Cooley [109] and Mead [110], according to whom the addressee's understanding of the speaker's intention rests on a special source of knowledge that is not available in other fields of knowing: *the analogy to the self*. The implicit and practical reasoning of the comprehension of the other's intention is based on the principle: "you are like me". As a consequence, I am in a condition to grasp your intention.

To seek understanding of the speaker's intention is to assume that his/her action has a meaning, and make an effort to discover it. As a fundamental condition to reach a so defined communicative exchange a cognitive environment, mutually know, is requested where every manifest hypothesis is mutually manifest [20]. Such a condition allows a valid and reliable degree of co-ordination between individuals in order to communicate. The speaker's communicative aim is that of modifying the cognitive environment of the receiver.

The idea of recovery as an act of recognizing the source's communicative intention certainly assumes a bi-directional conception of communication, but its nature also entails an asymmetrical direction, like in a dance where one leads and the other is led. In this sense the speaker appears more significant than the hearer. The former takes a more important position as a source; the latter has only to carry out the recovery as accurately as possible. The more precise the hearer is in this activity, the more suitable he/she is in the communicative exchange and the better he/she does his/her communicative task.

But in this perspective the intention recovery by the addressee presents a sort of *semantic dependence* in respect of the speaker. In fact, the former's task consists of a "philological work" of semantic interpretation of the latter's intention. Needless to say, in this task the addressee may make mistakes of over- or under-interpretation, since he/she may add or take away parts of meaning in the recovery of the speaker's communicative intention.

This semantic swinging in the addressee's interpretation shows up the existence of a gap between the speaker's intention and the hearer's recovery of this intention. We are faced with an impossible task, given the *intentional opacity* of the speaker's mind. In fact, even in the highest conditions of mutual awareness it is impossible to read directly into the other's mind and to access directly the other's intention. All "mind reading" is always indirect, mediated by a complex and fragmentary system of communicative devices, cues and expressions, both linguistic and extra-linguistic.

Given the impossibility of the direct accessibility of an intention, any interpretation of the source's intention is partial and limited, since it necessarily follows the *totum ex parte* principle. The addressee ascribes a complete and consistent intention to the speaker's communicative act on the basis of a small and restricted set of communicative cues and hints.

1.6.2.2 The ascription of speaker's intention

As we have already seen, the recovery act appears to be insufficient to explain the interpretation activity of the hearer in relation to the speaker's intention. We need to add the idea of *intention attribution* (or *ascription*) to the former position with regard to the latter's message. This means that the addressee attributes a certain intention to the source's communicative act. This intention ascription in the hearer is the "other face" of the intentional stance and is the equivalent of the intention production in the speaker. Such a process is characterized by different features: a) it is an autonomous process, carried out only by the addressee; b) it is an active and subjective process, because it depends completely on the addressee's abilities as well as on the perspective he/she chooses to follow.

Needless to say, there is a great difference between intention recovery and intention attribution. In fact, the latter includes rules and manages the first one. By making an intention ascription, the addressee may recover the source's intention in a reliable and precise way, but he/she may also ascribe a totally different intention to the speaker's message. For instance, the addressee might perceive an ironic and sarcastic intention in the speaker's utterance, while the latter had only a plain, narrative intention to say something in describing a given situation.

It is worth remarking that we are faced with an essential condition of communicative interaction, because the speaker and the hearer have different points of view about the same events and objects as topics of communication, even if they share a mutual cognitive background and mutual, culturally defined knowledge. Such a difference in their points of view, that can be radical in some circumstances, involves and presupposes in any case different interpretations and meaning-making in the speaker and the hearer with reference to the same episodes and facts. They possess a different encyclopaedia of knowledge, because they have a different amount of experience in qualitative and quantitative terms. Moreover, they may refer to different beliefs and values systems, as well as being guided by different desires and goals.

In such a perspective it is obvious to expect a *plurality of interpretations* in the intention attribution from the addressee to the source's message. This plurality is not to be considered as a pathological accident, but it is the standard activity of the addressee. Given the plurality of interpretations as a matter of chance in the hands of the addressee, concepts like "literal meaning" or "authentic interpretation" have to be considered in a different light. These concepts seem to be a residual of an ideology based on the natural stance to communication. The literal or nonliteral (figurative) meaning of an utterance depends on the intention ascription operated by the addressee, and the so-called "literal interpretation" may be only one (and perhaps the weakest!) among many other possible solutions. Note that all these interpretations can be plausible and justified, and that the literal meaning, by its nature, does not possess an outstanding or privileged position.

By analogy, the "authentic interpretation" is a matter of approaching the actual intention of the speaker through a gradated approximation. There are very often corrections and negotiations in this approaching and sharing of communicative intention. We actually understand each other, but this mutual understanding is not automatically guaranteed by the structure of linguistic or extra-linguistic tools or devices. Intention ascription is an open field, and the addressee is allowed a broad space to justify his/her interpretative choice, connected with some cues of the communicative act.

1.6.2.3 "Taking for granted" principle and the intention interpretations

In a standard condition, however, during the fast flow of communicative exchanges, intention ascription seems to be a default and immediate process. It clearly includes the "taking-for-granted" principle stated by Bach [94] and above mentioned, which says that one has to accept the first sense of a communicative act that springs to the interlocutor's mind and that is not immediately refuted by another meaning. This default process of intention ascription is rooted in context regularity and in the routine exchanges we saw previously in meaning stability phenomena. A script-like structure of communicative interaction affords, in fact, the possibility of foreseeing the speaker's communicative intention. In this sense Levinson [86] has emphasized the notion of "presumptive meaning" or preferred interpretation.

But in many other circumstances intention attribution may be a significant and subtle communicative task for the addressee. In these cases the fundamental questions may be the following: "*Why* does he/she tell me such and such a thing? *Why* does he/she use this voice intonation?", and the like. It is not only a paranoid problem. It is an issue for anybody who tries to understand the actual intention of the speaker. We are not interested in limiting our communicative understanding to the apparent, surface intention; we are usually interested in grasping the profound, actual intention of the speaker. If the addressee confines him-/herself to taking into consideration only the surface intention, he/she is quite likely to go wrong sooner or later; in any case, he/she does not seem a very competent communicator. However, the actual intention is often implicit, not directly said by the speaker, but made understandable by means of sufficient leakage cues. In this sense miscommunication is a borderline in relation to communication.

Moreover, such an intention ascription involves a shift from "message philology" to "intention interpretation" in communicative interaction. The former is centered on the literal meaning and what is said; the latter is focused on the speaker's thought, what he/she intends to communicate. Nevertheless, the discovering of the actual intention involves a precise, clever inferential process in the addressee. It is an issue of practical reasoning, often based on heuristics and biased by previous patterns of interaction with the interlocutor. Sometimes a few weak clues are sufficient to produce a large inducing process and to reach significant conclusions, which are not always correct.

Such logical biases, driven by what Simon calls a "bounded rationality" [111], are usually rooted in past experience with the partner, especially in close relationships, characterized by learning set and communicative patterns. In any case, these logical and psychological conditions allow the addressee to reach not the perfect ("Olympian") interpretation but only the local and temporary best one.

It is needless to say that, given the significance and the relevance of his/her intention ascription, the addressee is as important as the speaker in the communicative exchange. They are both on the same parithetic level and share the same responsibility in the construction of the communicative act.

For this set of reasons intention ascription is indeterminate, since it can take different routes, none of which is either privileged or foreseeable. Such vagueness in intention attribution by the addressee adds to the opacity in intention production by the speaker. The connection between these two aspects effectively helps to explain the continuity between communication and miscommunication phenomena. There is not a fixed sharp borderline between them, but indefiniteness both in intention production and in intention ascription makes them fuzzy and graded by nature.

As a consequence, communication seems to be an unforeseeable route, not deducible from previous exchanges. It is a game played by the participants, hand by hand and move by move. Within this route there is room, of course, for an extended range of miscommunication phenomena, as expected according to the MaCHT.

1.6.3 Communicative synchrony

In the processes of intention production and ascription, speaker and interlocutor are at the same level and share the same responsibility in communicative exchange-making. Communication presupposes and involves *participation*, since speech is the product of a collaboration between communicators. As Cohen and Levesque [112] have pointed out, "the joint action of dialogue claims that both parties to a dialogue are responsible for sustaining it. Participating in a dialogue requires the conversations to have at least a joint commitment to understand one another". Moreover, a participation framework implies a mutual process of co-constructing and sharing meaning in a continuous stream of communicative exchanges, as shown by Duranti [113].

When people communicate, according to Burgoon [114], they have to "adapt their interaction styles to one another. For example, they may match each other's behavior, synchronize the timing behavior, or behave in opposite ways". Actually, it is well understood in common observations as well as in the scientific field that participants in communicative interaction are usually engaged in a common rhythm. As Cappella [115] points out, "co-ordination in social interaction means that people adjust their actions to those of their partners". The notion of interactive co-ordination and mutual adaptation in communication covers a broad range of processes, such as synchrony, mirroring, matching, reciprocity, compensation, convergence as well as divergence. Some of these phenomena have more to do with the temporal co-ordination of the interaction, whereas others focus on the reciprocal adaptation of communication styles in terms of converging vs. diverging from one's partner's style.

In the MaCHT perspective we collect all these processes under the label of *communicative synchrony* as a global and basic property of communication, that has been developing since birth in newborn babies through the interaction system with their caregivers.

From a sociological point of view, different scientists have drawn special attention to time patterns in organizing communicative exchanges. The notions of "synchrony of rhythms" proposed by Goffman [116] and "temporal symmetry" advanced by Zerubavel [117] are in this sense. Schutz [118] has widened the concept of a *mutual tuning-in relationship* as a theoretical extension of the notion of mutual sharing of Cooley [109] and Mead [110]. The "mutual tuning-in relationship" involves, in a particular way, the organization of interaction sequences between partners in a temporal succession.

Within the psychological field, among others scholars, Giles [119], Giles and Powesland [120], and Giles and Coupland [121] deserve attention for their proposal of the *Communication Accommodation Theory*. According to the CAT, attuning and accommodation strategies consist of a broad set of linguistic and extra-linguistic signals which enable us to adapt our communicative acts to those of our partners, shifting them along a convergent or divergent direction in the sequence of exchanges. In the first case, the communicative styles of the participants become more similar and assume a homogeneous shape; in the second one, the differences become greater, creating a process of schismogenesis. The CAT has been supported by experimental results, since it has been verified that pronunciation [119], speech rate [122], utterances and length of pauses [123],

vocal intensity [124, 125], as well as vocal fundamental frequency patterns in childish babbling [126] vary in a sequence of communicative exchanges in conformity with mutual adjustment and attuning.

More recently, Gregory [127], Gregory and Webster [128], and Gregory, Dagan, and Webster [129] have analyzed the accommodation of vocal long-term features, showing that communicators are able to mutually co-ordinate their speech styles in a subtle way, by assuming and maintaining the same specific range of vocal pitch.

The emergence of this synchronized and adapted pattern appears to be of crucial importance in ensuring efficacy and comprehensibility in communication, and in determining the perceived quality of the relationship, effectively managing relational and communicative distance. This topic has been stressed by Grammer [130], and Grammer, Kruck, and Magnusson [131] in investigating the role of communicative synchrony in seduction interaction among people who meet for the first time. In fact, rhythmed co-ordination is fundamental in determining the development of interpersonal attraction and a higher degree of satisfaction about the relationship (see Ciceri, chapter 4, this volume; Mantovani, chapter 10, this volume). patient satisfaction in the physician-patient relationship is also highly related to interactive and communicative synchrony, as shown by Koss and Rosenthal [132].

This communicative synchrony constitutes another significant theoretical device in support of the unitary framework of communication and miscommunication phenomena, as well as the MaCHT. In fact, communicative attuning and synchrony allow communicators to decline their communicative competence in a practical way for convergence or divergence, and create a broad set of chances for different solutions, ranging from direct and open communication patterns to indirect and cryptic ones.

1.7 Conclusions: toward a “re-definition” of miscommunication

At this point, it is worth proposing a definition of miscommunication in agreement with the MaCHT. According to the standard model of communication, miscommunication is associated with forms of misinterpretation that promote a wide spectrum of disagreements and misunderstandings [3]. Within this traditional perspective, miscommunication includes communicative phenomena like disruption, relational instability and mutual misconstruction, misunderstanding, contradiction and the like. According to other theorists, miscommunication concerns the very elusive, enigmatic and inscrutable aspects of communication and the "maze of messages" [1].

In this contribution, within the MaCHT perspective we propose a more optimistic notion of miscommunication. In fact, for us "say not to say" is not an empty say, that is, say nothing. Instead, *say not to say* is saying something in a different manner, that is, in an implicit (unsaid) and indirect manner. Miscommunication is an “oblique” communication with the purpose of optimizing interaction with the partner. In this light we can go back to the *convenience principle*, according to which "say what is good for the relationship", as underlined by Turner, Edgley, and Olmstead [133]. This principle must not be intended in a utilitarian way, but as a criterion for optimizing the cognitive, emotional and relational resources of the communicator.

The notion of miscommunication as a chance increases greatly the degree of freedom at the disposal of communicators. The communicative space created in such a way by the miscommunication process makes a concrete contribution to the framework of the local management of message design, advanced by O'Keefe and Lambert [98] and above

mentioned. Such a local management model could risk indicating a general and suitable principle, but without examining the actual and operating mechanisms underlying it.

According to the MaCHT perspective, communicators enjoy *the opportunity of managing their communicative focus in the best possible way*, given the contextual constraints and their respective encyclopaedia of knowledge. *Communicative focus* is concerned with how the speaker lets the addressee know what in particular he/she notices about the prominent aspect of the communicative act. Through his/her choice of specific linguistic and extra-linguistic hints and clues, like intonation, the word order in an utterance, an extra stress and so on, the speaker can convey different meanings, as in the following sentence:

(11) *YOU'RE not mad with me*
(12) *You're not mad with ME*

Likewise, the order of the words in a sentence can change the communicative focus, like in:

(13) *It was John that went to the party*
(14) *It was the party that John went to*

In (13) "John" is the focused information, while in (14) it is the "party". While the communicative topic presents the entity "about" which the predication affirms something in the given context, the communicative focus represents what is relatively the most important and salient information in the given context. Focusing is an active, mutual process, engaged in by the participants, of concentrating attention and interest on a subset of their shared reality. It not only involves attention on what is said and meant, but is also a perspective on these aspects. A communicative act arises as the focus moves through the field of structures of beliefs, driven by the communicator's goals and guided by thoughts and communicative devices.

Within the MaCHT perspective, any communicative act can be given multiple characterizations, some of them mutually incompatible, and all of them equally justified. The theoretical framework herein outlined, grounded on the fundamental processes of communication such as meaning stability and regularity vs. meaning instability and flexibility, plurality of signaling systems and central communicative processing, communicative intention production (in the speaker) and ascription (in the addressee), intention gradation and articulation, semantic and communicative synchrony, can shed some light on communication and miscommunication phenomena. They are not to be thought of as discrete and separate categories, but as a unitary structure, although differentiated within itself.

In such a way, the MaCHT provides some suggestions to overcome the Gricean distinction between “what is said” and “what is meant (or implicated)”. The essential thing is “*what is communicated*”, and this cannot be conceived simply as the sum of “what is said” plus “what is meant”. What is communicated subsumes both what is said and what is meant, but it is also more than that and different from that. We ought to overcome the distinction between sentence-meaning and utterance-meaning, since meaning, in any case, is a unitary totality of what is communicated, though it is neither monolithic nor rigid, but composite and flexibly organized within itself.

The MaCHT is a preliminary attempt to sketch out a new perspective on the communication field, from a psychological point of view. Here is a challenge to develop

this unitary and parsimonious perspective, by proceeding to its experimental control and theoretical expansion.

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