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Contributions of Linguistics to the Study of Aphasias: Focus on Discursive Approaches

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Abstract

The chapter aims to present and discuss the contributions of Linguistics to the study of aphasias, especially regarding the power of discursive theories to subsidize language assessment and therapeutic follow-up with aphasic individuals. Jakobson, in 1956, based on Saussure's approach and on Luria's neuropsychological theory, was the first scholar to call for the participation of linguists in this field, once "aphasia is a problem of language". Nonetheless, aphasia does not disturb only linguistic formal levels – phonetical-phonological, syntactic, lexical-semantic –, but also pragmatic and discursive aspects of language that are constitutive of meaning processes involved in the social use of language. Unfortunately, more traditional approaches to language assessment and to the follow-up work are exclusively based on metalinguistic tasks, which do not take into consideration the subjective and contextual aspects of language functioning. The experience we have acquired over more than thirty years within the field of Neurolinguistics has shown that qualitative longitudinal researches – mainly case studies – are a privileged locus to seek for evidences of how the linguistic levels are impacted in the several forms of aphasia. Such understanding, in turn, favor the therapeutic work towards more contextualized activities, in order to help the individuals to reorganize their linguistic-cognitive processes.

Keywords: aphasia, language, Neurolinguistics, language assessment, language therapeutic follow-up

1. Introduction

The study of aphasias by linguists started only after 1956, when Jakobson [1]—a disciple of Saussure [2]—summoned them to engage in research in the field. Also influenced by the works of Luria [3–6] in Neuropsychology, Jakobson was intrigued by the fact that scientists from different areas were interested in aphasia phenomena, while Linguistics passed over them in silence. The author blamed the linguists for "the delay in undertaking a joint into aphasia" ([1], p. 56). He was very emphatic about this issue, as we can read in the following excerpt:

(...) In most cases, this valid insistence on the linguist's contribution to the investigation of aphasia has been ignored. For instance, one book, dealing to a great extent with the complex and intricate problems of infantile aphasia, calls for the

coordination of various disciplines and appeals for cooperation to otolaryngologists, pediatricians, audiologists, psychiatrists, and educators; but the science of language is passed over in silence, as if disorders in speech perception had nothing whatever to do with language. ([1], p. 56).

Only a year after Jakobson's work, Noam Chomsky [7] published his famous book entitled *Syntactic Structure*, where he postulated the basis of Generative Grammar. It is important to mention that, given the context, Chomsky's theory had strongly influenced the first linguistic studies of aphasia. Indeed, most of the researches developed in the 80s settled syntax at the center of componential models and in the attempts to explain the linguistic phenomena. Agrammatism, more than any other clinical category, had gained a very special attention, once it was believed to be the result of a selective impairment of the syntactic component of language [8]. With time, investigators from other fields of Linguistics and Neuropsychology provided different explanations to agrammatism and to telegraphic speech, relating the phenomena, on the one hand, to a phonological impairment [9] or, on the other hand, as a lexical-semantic retrieval difficulty [10]. Other authors called the attention to the fact that the phenomenon is multi-componential; that is, resulting from impairments in various components and sub-components of language processing [11]. Although it has been recognized that such complex phenomena could not be approached from a single point of view, nor seen as a set of independent components, the given explanations hitherto support those theoretical models that do not account for the fact that linguistic levels are theoretical categories and, as such, are evidently of abstract nature. In other words, whether dealt within in the linguistic functioning, the linguistic levels are all intertwined and, therefore, constituents of a very complex system [12–14].

Both structuralist and generative theories, respectively postulated by Saussure and Chomsky, influenced neuropsychological models that ground most metalinguistic assessment tasks that, in turn, guide research as well as the clinical work in the field of aphasia. Thus, although such approaches may enlighten mechanisms involved in language processing, for the development of theoretical models, they do not take into consideration important aspects of language functioning – of pragmatic and discursive nature – that are relevant to shed lights on the understanding of language alterations in each concrete case of aphasia and, still more relevant, to provide adequate intervention in the rehabilitation procedures [12, 13, 15]. We will approach this topic closer, as we advance in the chapter.

On the other hand, from the 60s, a variety of currents started being developed in Linguistics aiming to account for the aspects that were downplayed by the formal theories – such as Enunciative Semantics, Pragmatics, Discourse Analysis, Conversation Analysis, among others. Such pragmatic-discursive theories turned to the individual and subjective features that take place during the social and effective use of language. Therewith, units such as “phrase”, “clause” or “sentence” gave place to the concept of “utterance” [16–19].

Corollary of these new approaches to language studies, Enunciative-Discursive Neurolinguistics (henceforth: Discursive Neurolinguistics or DN) was born in the 80s at the Institute of Language Studies, due to the inaugural work of Coudry [15]. Since this is the field in which we inscribe our works, a subsection of the chapter will be dedicated to put forward, in some depth, its main theoretical-methodological principles, drawing from two data that emerged within dialogical episodes with an aphasic young woman, held at Centro de Convivência de Afásicos (henceforth: CCA) – a Center for Aphasic Individuals. Whereby, we hope to be able to explicit how pragmatic-discursive analyses come into play as an important theoretical blueprint in detecting the linguistic difficulties and alterations in each case of aphasia. Furthermore, it will have become clear how such methodology may help

aphasic individuals in developing alternative processes of signification that include non-verbal utterances, especially in severe cases of non-fluent aphasias.

2. Linguistics: a brief history of the field

This section, where we will present a very brief history of the development of Linguistics, will be divided into two subsections, aiming to highlight some concepts that, somehow, run through most contemporary studies of aphasia in Neuropsychology and in Neurolinguistics.

We start subsection 2.1 pointing to a complex definition problem, which might interfere with the understanding of the main propositions of the present chapter: that is, how the word “language” should be understood along the discussion. Next, we present the main features of formal theories postulated by Saussure and by Chomsky that underlie and support, respectively, structural or componential models that have impinged on most of the studies of aphasia phenomena. Additionally to these theories, in 2.1.1, we will bring, briefly, the main contributions of Jakobson [1] to the studies of aphasia.

In 2.2, some relevant issues that ground pragmatic-discursive approaches will be addressed, driving special attention to those that subsidize our work in the field of Discursive Neurolinguistics, either in research, as well as in the language follow-up with aphasic individuals.

2.1 Formal theories and the establishment of models

When Saussure inaugurated the so-called “scientific study of language”, in the beginning of the twentieth century, he distinguished ‘*langue*’ from ‘*langage*’. By the first term, present in several Latin languages (in Portuguese: *língua*, Italian: *lingua*, Spanish: *lengua*), he meant “the structure of a particular idiom”. Whereas, the conception of ‘*langage*’ (in Portuguese: *linguagem*, Italian: *linguaggio*, Spanish: *lenguaje*, is broader than the first, referring to a very complex human activity, “heteroclitic and multifaceted”, being at the same time physical, physiological, psychological [2]. According to Saussure, the study of language, as a human activity, demands knowledge from different areas, such as Psychology and Anthropology among others [20].

In a saussurean stance, the *langue* is understood as one of the manifestations of the *langage*, and conceived of as a system of signs: a set of units that are related to each other within a whole. Besides this distinction, another dichotomy posed by the author is ‘*langue*’ *versus* ‘*parole*’ – the latter meaning ‘speech’ –, related to the individual usage of the ‘*langue*’, including its motor activity, dialect variations, among other features. So, the ‘*langage*’ would be constituted by ‘*langue*’ + ‘*speech*’. The scientific project of Saussure defined the study of the ‘*language system*’ (the ‘*langue*’ itself) as the scope of Linguistics, having the objectivity as the central epistemological aspect. In the words of the author: “Whereas speech is heterogeneous, the *langue*, as defined, is homogeneous. It is a system of signs in which the only essential thing is the union of meanings and sound-images, and in which both parts of the sign are psychological” ([2], p. 15). Throughout the chapter, the distinctions between ‘*langue*’ and ‘*langage*’ will be recalled, when necessary.

Most of the linguistic approaches born later in the twentieth century disagreed with the distinctions posed by Saussure – mainly concerning the dissociation between *langue* and *parole*. Nevertheless, such programmatic ideas hitherto persist and abound, for instance, in didactic school materials and also in clinical contexts – grounding the formulation of language assessment tests, as well as of therapeutic manuals, privileging isolated units as “words” and “phrases”. We will

turn to this issue, in more detail, while presenting the core concepts of Discursive Neurolinguistics – in Section 3.

Another formal theory that has strongly impacted neuropsychological works regarding language functioning was inaugurated in 1954 by Chomsky [7], and is known as Generative Grammar. The approach spawned a new dichotomy in Linguistics – ‘competence’, by one hand, and ‘performance’, on the other. Whereby, the scientist defined ‘competence’ as the innate and implicit set of mental knowledge that a speaker of any natural language has at his/her disposal; that is, a species-specific capacity. From a set of limited grammar rules, the speaker generates an infinite number of grammatical sentences and is able to recognize those that would be agrammatical. This theoretical principle works also as a methodological tool for Neuropsychology and Neurolinguistics, and derive, for instance, the grammaticality judgment tests so well known in the studies of agrammatism and telegraphic speech [12].

The concept of ‘performance’, in its turn, would correspond to the linguistic behavior that results not only from the implicit knowledge of the language, but also from extra-linguistic factors, such as social conventions, beliefs, emotional attitudes from the speaker, assumptions about the interlocutor’s attitudes, besides psychological and physiological processes involved in language production [20].

Despite not been formulated with the specific aim of grounding studies on language acquisition nor on language pathologies, very quickly Chomsky’s theory started being applied to these fields, exploring the concepts of ‘competence’ and ‘performance’, as well the distinction between the ‘principles’ and the ‘parameters’. The ‘principles’ are universal and would correspond to the innate set of grammar rules that a speaker has, independently of his language (the ‘langue’), while the ‘parameters’ would be the features (syntactic and lexical-semantic) acquired along the experience of the individual with a specific language.

Due to the belief in the independence and primacy of syntax, Chomsky’s followers started postulating a great number of models aiming to lay bare how the different subcomponents of syntax operate and/or interact, in order to produce grammatical sentences. The Generative Grammar is a very strong theory in contemporary Linguistics and also guides a substantial amount of works in Neurolinguistics, which are interested in the various linguistic-cognitive processes, such as lexical retrieval, agrammatism, word-finding-difficulties, and the like [13]. Many of such syndromes or symptoms are approached considering they are either the result(s) of an impaired component, which would disturb the linguistic ‘competence’ [8, 11] or as the consequences of adaptation processes when the individuals need to face their linguistic difficulties. Language models in Generative Theory are computational, and, therefore, also exclude its social and contextualized use.

In the next subsection, we will present – even if briefly – the contributions of Jakobson [1] to the studies of aphasia. The author is also placed in Section 2, not only because we are considering the strong influence of Saussure’s structuralism on his theory, but especially because he established the linkage between the language system and its functions [21]. In other words, he started a functionalist approach to language, which he applied to the study of aphasia; and, furthermore, that we also articulate in our methodological procedures of analysis.

2.1.1 Jakobson: contributions for the studies of aphasia

If aphasia is a language disturbance, as the term itself suggests, then any description and classification of aphasic syndromes must begin with the question of what aspects of language are impaired in the various species of such a disorder. This problem, which was approached long ago by Hughlings Jackson (1915), cannot be

solved without the participation of professional linguists familiar with the patterning and functioning of language ([1], p. 3).

Jakobson's approach to language may be conceived of as a functionalist structuralism and, therefore, it is also somehow limited for explaining the complex discursive nature of language, as we will point later in this chapter. The author aimed to explain the "two aspects of language" that, when impacted, generate the "two (main) types of aphasia" [1]. His approach to aphasia was strongly influenced by the Lurian Neuropsychology, author that also grounds our work in Neurolinguistics. We highlight Jakobson's project of applying linguistic theory to aphasia problems, citing his own words:

Speech implies a selection of certain linguistic entities and their combination into linguistic units of a higher degree of complexity. At the lexical level this is readily apparent: the speaker selects words and combines them into sentences according to the syntactic system of the language he is using; sentences in their turn are combined into utterances ([1], p. 5).

Based on the two different operations postulated by Saussure [2]: 'selection' and 'combination', Jakobson sought to explain the main difficulties present in two opposite types of aphasia: *agrammatism* and *jargonaphasia*.

Agrammatism, on one hand, is produced due to an impairment of the operation of combining linguistic units into the syntagmatic/metonymic axis of language, generating, for instance, the telegraphic speech. Jargonaphasia, on the other hand, results from difficulties related to the selection of a specific unit from a set of other possible concurrent possibilities, in the paradigmatic/metaphoric axis of language, deriving, for example, the production of a paraphasia: the substitution of a target word by another, semantically or phonologically related. Jakobson points out that the majority of real cases could be placed between the two extreme ends of the axes, once the axes are projected over each other during the production of an utterance. In such a way, the author, indeed, criticized Saussure for his belief in the linear nature of language production [1].

It is relevant to point that Jakobson expanded many of Saussure's principles and dichotomies. It is worth mentioning that he made explicit the relationship between the system and the context of its production, contributing to develop the previous existing models of the so-called "Information Theories", which postulated the roles of "the speaker", of the "receiver", of the "code" and of the "channel" in the schemes that represented the interaction between two participants. Jakobson highlighted that, besides being used to denote and name objects and their relations (the *referential* function), language also has the role to communicate something to someone – a message, a feeling, or even a thought – (the *communicative* function), to establish and/or maintain a social contact (the *phatic* function), to show social position, to manipulate a situation or someone, to convince people, and the like (*connotative* or *appellative* function). The emphasis also can be cast on the speaker (emissary) himself, to his motivation to speak (*emotive* or *expressive* function). The other functions postulated by Jakobson were the *poetic* – when the focus is the on the message itself, on its different possibilities of saying something and, finally, the *metalinguistic* function, when the emphasis is on the linguistic code [21, 22].

The latter, which is specially explored for the elaboration of language assessment tests and for therapeutic follow-up manuals, is, therefore, only one of the linguistic functions, which refers to the possibility to pinpoint a specific part of the discourse – a word or a grammar feature – to describe it, and to explain it. It is, in other words, the use of language to talk about itself. Although the metalinguistic aspect is relevant and

constitutive of language functioning, it should by no means be conceived of as the representative of the underlying complexity of linguistic-cognitive functioning [15, 23].

Another concept developed by Jakobson, regarding aphasia phenomena, is the one of “translation”, which has been mobilized by Discursive Neurolinguistics and concerns the fact that aphasic individuals frequently recur to non-verbal signs (body expressions, drawings or deictic gestures) in order to refer to the verbal signs that they cannot select and/or combine while trying to produce meaning within interactional and dialogical processes [24].

Despite some criticisms made to Jakobson’s structural view of interactions, as beforementioned, we argue that the author needs to be recognized for his enormous contributions to the understanding of the functions of language – which would be lately developed by other linguistic approaches, such as the Discursive Functionalism [25] – and, evidently, for proposing a linguistic explanation to aphasia and to its semiology.

In the next subsections we will present and discuss some theoretical-methodological principles to which we recur in order to argue in favor of a discursive approach to aphasia and, also, to ground our criticisms towards most language assessment and follow-up tasks with individuals in this pathological condition.

2.2 Discursive approaches: focus on the social use of language

As we have seen in the previous section, for formal theoreticians Linguistics should focus their studies on the ‘langue’, on the system itself, as postulated by Saussure, or as a mental knowledge of grammar rules – the competence of the speakers –, as posed by Chomsky, leaving aside any extra-linguistic factor to describe it and explain it.

Possenti [14], when criticizing the structuralism, stated that such project cannot be achieved once that, even seen from its interior, language (the langue) is not a plain surface, a perfect object, whose functioning “could be calculated independently from the factors that would affect it from outside, in determined conditions” ([14], p. 20). Languages are not internally uniform; they vary in practically all domains (phonology, morphology, syntax and lexicon). Despite the recognition of such levels according to specific laws, they cannot be conceived of as independent and, in a certain way, not completely different from each other. In the words of the author:

A phonological change may affect the morphological level immediately; the attribution of one or another meaning to a word may implicate in a different syntactic organization; the simplification of a verbal inflectional system may, for instance, produce a syntactic change (obligatory subject role). This means that the fact of a problem being typically dealt with within one level does not imply that only such a level results affected ([14], p. 21).

Furthermore, languages as systems are opaque. The interpretation of linguistic units will always depend on a certain amount of implicit and redundancies that are present in concrete utterances. There is no guarantee of a controlled and unmistakable interpretation of any linguistic production. On the contrary, “interpretations are the result of a complex calculation of linguistic and pragmatic-discursive factors” ([14], p. 20).

For Bakhtin [18, 19] – another critic of Saussure’s structuralism – even if one takes words as isolated units we must consider that they are, in general, polyphonic. The real unit of communication, for the author, is the ‘utterance’ that emerges only in dialogical contexts. This issue will be more explored in the next section, when we approach the field of DN.

As for Pragmatics, its inaugural work is considered the publication of the first edition of the *Journal of Pragmatics*, in 1977, by Haberland & Mey [26]. The authors define the field as the study of the concrete use of language, with emphasis on the linguistic practices by its users. Pragmatics is the Science of Language Use [27, 28], and, therefore, broadens the interests of Linguistics to the ‘langage’, rather than restricting it to the ‘langue’.

Thus, Pragmatics seeks to lay bare the relationship between the structure of a specific language and its use, within the context of social production [28]. Concepts of ‘society’ and of communication’, backgrounded by formal models, gained special attention, and non-conventional elements were included in the explanation of linguistic facts [27, 28].

Among the most important researchers in the field, Austin has to be underlined, for his theory of the Speech Acts that, in brief, relates what is said to what is done – that is, what we say by doing and what we do by saying. Language is understood as an activity constructed by the interlocutors. It is impossible to discuss language without considering the act of language itself, the act of speaking. Language is not the description of the world, but the action itself [29]. Pragmatics is a field that holds a great diversity of interests and has sheltered authors such as Benveniste [16], and Grice [30], spawning the inauguration of other fields, such as Argumentative Semantics and Conversation Analysis. It is worth mentioning that Peirce [31], author who is most known for his works in Semiotics, was the first to use the word “Pragmatics”, in 1878, in his work “How to make our ideas clear”. The author explored the relationship between the signal and its reference (object) and also related the sign to his interpretant – that is, to whom the sign means. Later, in 1969, it was the work of Searle [32], in *Speech Acts*, that mostly influenced Linguistics.

Of all the principles pointed by Searle, we underline that of “cooperation” that guides the interaction and which is very relevant for the establishment of meaning in dialogical episodes with aphasic individuals, as we will point out in our data analysis.

At this point, it is relevant to make clear that when we state that our approaches are oriented by discursive theories, we refer to this wide range of works that include Enunciative Semantics, Discourse Analysis, Conversation Analysis and Pragmatics. All of them have in common the fact that the linguistic analysis cannot refer to the language as an independent structure, free of the participation of speakers and their very specific contexts of production.

Needless to say that Linguistics, as a scientific field, has been very fruitful, especially because of interdisciplinary interests, among them Neurolinguistics. The aim of bringing some of the concepts and main theories to this chapter was, as previously mentioned, to highlight the contributions of Linguistics to different approaches to aphasia, either for researchers who work with processing models and explore formal language theories or to those who conceive of language as an activity in which the subjects have the main role of ‘work’ on the linguist resources to produce meanings [17, 18, 33].

3. Discursive neurolinguistics

As it has been already made explicit in the beginning of the chapter, Coudry [15] criticizes the fact that many researchers try to understand language in aphasia by looking through the slit of formal theories, what considerably reduces its complexity. The direct application of what the author calls the “frozen knowledge of linguistic concepts” by Neurolinguistics and Neuropsychology fulfills the psychometric demands of those fields [34]. The focus of such approaches is put on isolated words and sentences evaluated strictly by means of metalinguistic tasks –, which, in its

turn, influence the semiology, the diagnosis and also the therapeutic follow-up in pathological conditions. As models, they are acceptable and may give indices of how some aspects of language have been impaired due to a brain lesion, but they cannot be directly related to the language complexity in its social and concrete use. As Bakhtin argued, if someone attempts to use a model to represent the “whole” of language functioning, such enterprise would be “science fiction” [18, 23, 35].

Coudry provided an inventory of metalinguistic tasks that usually compound the language assessment batteries, which involve isolated linguistic units as phonemes, words, sentences, letters, syllables, and the like; as we can see in the following summary: repetition of phonemes or monosyllabic words (after the investigator or from a printed list); repetition of logatomes (non-words in the language, but which follow its phonological pattern); spelling and repetition of words; discrimination between minimal pairs; forming words from initial phonemes; naming objects orally or by written form; identifying an object among others in pictures; making lists following a particular order (months of the year, days of the week, etc); checking verbal fluency (through lists of names; animals, flowers or any other category within the time lapse of one minute); defining words given by the examiner; describing a picture; understanding simple or compound sentences; explaining proverbs; reading aloud (words, sentences or paragraphs); copying words or sentences; writing under dictation; etc. [15, 35].

According to Coudry “the success or failure of the aphasic subject in one or more of the aforementioned tests serve as criteria to classify the individuals into a type of aphasia” ([15], p. 9). Despite the statistical correlations established by empirical studies, the author emphasizes that, for certain purposes, the tests could serve to the typological diagnosis, but “only for the diagnosis”. A symptom or a group of symptoms allows a classification but does not explain the underlying processes of a phenomenon and, even more important, does not provide clues for the reorganization of language, as meaningful and contextualized activities [15, 35]. These claims are bounded up with a dynamic concept of language. Franchi [33], a linguist who influenced in a very important way the Neurolinguistics developed at IEL, described language as a ‘constitutive activity’. It does not only constitute the individuals, but also the language system (the langue) itself. Subjects continuously “work” on the language material resources (phonemes, words, morphemes, grammar rules) to produce their discourses (concrete utterances), within a determined social-historical-cultural background [17, 18, 33].

Still on linguistic-cognitive assessment, it is noteworthy to point that, based on the results of psychometric tests, aphasic individuals are classified also into broader categories, such as “fluent” or “non-fluent”. A classic example is the famous “Cookies Theft picture” [36]: a description task in which the subject is supposed to describe the scene given in a card, within the time lapse of one minute. The score is established by the number of words produced by the individual, irrespective of whether the utterances are or not understandable and/or comprehended by an interlocutor. Such methodological approaches have been of concern to DN and been criticized since the inaugural work of Coudry [12, 13, 25, 33, 35, 37]. As for the (non-)fluency classification to aphasia, we have claimed that, as argued by Scarpa [38, 39], fluency is a myth; an abstract concept, usually compared to the written and finished form of a text or to the production of an “ideal subject”. Hesitations, word finding difficulties, and TOT phenomena, for example, are present also in the speech of non-aphasic individuals, to different degrees, and are always related to pragmatic aspects – such as the speech genre, the asymmetric conditions established during an interaction, the motivation to speak, the knowledge of the participants about the discursive topic, the shared knowledge between the interactants, and so on [38–42].

It has yet to be stressed that Discursive Neurolinguistics, since its inauguration, sets out to explain the phenomena by addressing inter-subjectivity as a primordial aspect in the constitution of linguistic-cognitive functioning. In this respect, Mazuchelli [43] clarifies that since the majority of studies still assume an epistemological dissociation of brain, body, and subjectivity, one of the most challenging theoretic-methodological aspects of this approach is to address the complexity of a non-idealized subject.

Therefore, the investigations go beyond its constitutive sciences – Neurosciences and Linguistics – and articulate interdisciplinary assumptions held by different scientific fields, such as Psychology, Anthropology, Philosophy, Philosophy of Language, Semiotics, Public and Community Health, Demography, Sociology, among others [44]. It goes without saying that there is much more to set out about the theoretic-methodological assumptions of our socio-historic-cultural perspective. However, since space limitations precludes a detailed discussion of all these features, before rounding off this topic, we would like to address just one more central aspect of our approach to aphasia – the relevance of qualitative methodology.

In the beginning of the 80's, when settling the principles for Discursive Neurolinguistics, Coudry stated that only longitudinal and qualitative approaches, which take into consideration the aspects that are preserved in the language system, as well as the subject's pragmatic and discursive competence, are adequate to cast light on the complexity of aphasia phenomena [15, 35, 45].

Contrary to what it may seem, “qualitative analyses demand rigorous control and frequent verification; it consists of a continuous process in order to look for cases to contradict findings as well as evidence to support them (...)”. “Results are not simply interesting observations; they are carefully verified cumulative outcomes negotiated across multiple sources and perspectives” ([46], p. 685). A last feature of qualitative approaches to be highlighted is that research “unfolds as data are collected and analyzed resulting in a cyclical and flexible process”. In such approach, “the investigator collects, analyzes and verifies data, identifies phenomena of interest, then continues to collect and analyze data to progressively narrow the investigation and hone in on phenomena of interest” (...) and, thus, “seeks to discover whatever emerges as important to the understanding of the phenomenon under study” ([46], pp. 682–683). Our data and analysis, in the next section, aim to illustrate closely these issues brought by the authors and so far emphasized in this chapter.

4. CCA: a center of interaction for aphasic individuals

We start this section defining the locus of our work with aphasic individuals and presenting some principles that ground its foundation. Afterwards, we will bring data of two dialogical episodes with an aphasic individual – referred by means of the acronym GB.

CCA is fruit of a partnership established in 1989 between the Institute of Languages Studies (IEL) and the Medical Sciences Faculty (FCM) at the University of Campinas, São Paulo, Brazil, aiming to help individuals to surpass the conditions imposed to them by aphasia. It is a center for interaction among aphasic and non-aphasic subjects: researchers, caretakers, families, therapists, under-graduate and post-graduate students. It is an institutional alternative to integrate aphasics in their social groups [15]. Indeed, the acronym CCA stands for “Centro de Convivência de Afásicos”, being “convivência” a word that does not have an exact correspondence in English, and that means “to live with” or “co-living”.

There are three CCA groups at the moment, under the supervision of the professors who respond for the field of Neurolinguistics, in the Department of Linguistics. Each group is very heterogeneous regarding the individuals that participate of the activities, their types of aphasia and the degrees of severity. It is important to mention that the subjects are not classified into a clinical category, neither according to etiological causes, nor to oral or written production/understanding impairments. In our approach, heterogeneity is constitutive of human relations and is, in fact, what mostly enriches our interactions [35].

Concerning the reorganization of language, the individuals are encouraged to talk about themselves, and about a great diversity of quotidian themes (routines, life in family, national and/or international news, soccer or other sports, politics, and the like). The activities usually involve the use of different speech genres (narratives – autobiographic, fables, jokes –, argumentation, poetry, proverbs, letters, journalistic language, charges, among others). “By doing so, at the same time they expose their linguistic-cognitive difficulties – as everyone has a turn to express an opinion, bringing up something to share – they are oriented/helped in order to (re)organize language, memory, attention” ([35], p. 237).

Conversation is the social situation in which people do most of their talking [47]. The absence of conversational success is a primary determiner of negative social stigma and handicap. Qualitative approaches “have highlighted the importance of collaboration within the conversational interactions of dyads that include an individual with aphasia and an individual without aphasia ([47], p. 668)”. Conversation is a collaborative operation carried out by two or more participants; it is social and collaborative in character. During a conversation, utterances are produced in response to – or in relation to – a prior one, organized in a turn-by-turn sequential basis, which is not a mechanical structure. The interlocutors within the dyads overcome problems that emerge along a conversation in a cooperative way, and the aphasics are encouraged to proceed to self-repair, which makes it evident that they preserve a communicative competence.

All the sessions of CCA individual or in the group meetings are video-recorded and the utterances are afterwards transcribed (discursively and/or phonetically, depending on the type of aphasia and the specific needs of each research) or described, when the meaning is made up of non-verbal strategies. The data are analyzed having the microgenetic paradigm as a parameter. Besides being a methodology to help the individuals (re)organize their linguistic-cognitive abilities, the analysis lead to the discursive theorization about aphasia [35].

Aiming to illustrate our theoretic-methodological approach, we bring two episodes of the same aphasic individual — GB — from two different moments of her participation at CCA: (i) when she attended the meeting for the first time, in 2016 [25] and (ii) more recently, during an online meeting, held in 2021 [48]. After presenting both data, we will proceed to the analysis and to our final considerations.

Needless to say that the episodes are rather long, due to the discursive perspective of ‘building meanings in cooperative processes’, in a dyad of an aphasic individual and a non-aphasic one. We argue that episodes 1 and 2 (**Tables 1 and 2**) are comparable, not only because they refer to the production of the same aphasic individual (GB), but also because they verse about the same topic – the day that GB had the Cerebral Vascular Accident (henceforth: CVA), which was reported to different interlocutors, after a lapse of time of more than four years. During all this period (from 2016 to 2021), GB has been participating of individual and group sessions of CCA, where the linguistic processes impaired by aphasia were substantially reorganized. It is worth mentioning that stories about the neurological episode have been described in literature as highly reportable [49], as we also have noticed in many of our CCA participants.

i. GELEP database - [GB_23/08/2016:_Narrating the neurological episode at the first interview] – time lapse: 04’27”			
Turn	Interlocutor	Utterances by GB and Imp	Comments
01	Imp	Tell us a bit about yourself, GB. What did happen to you?	
02	GB	*No, uh: car: no, look! [GB shows three fingers in her hand] three:: seat down [makes gesture indicating distance with her hand] far away. #Refife>	# Recife, capital of Pernambuco, Brazil.,
03	Imp	<Recife!, that’s right Wow! Did you go by car?	*
04	GB	Yep!	
05	Imp	That’s why you showed here [point to the word “Recife” written on a sheet of paper] for me, right? Recife is in?	
06	GB	Pernambuco No, look! [GB wrote the word “#Ceará” on a sheet of paper]	# Ceará is a brazilian state
07	Imp	Ceará? Who is from Ceará?	
08	GB	Father.	
09	Imp	Your father?	
10	GB	Yep! *Drove; later:: >	
11	Imp	< First, you went to Ceará! >	
12	GB	<Yep! Me too:: >	
13	Imp	< Wow, you too! Did you share? Your father and you driving?	
14	GB	Yep	
15	Imp	Right; Ceará And, from Ceará you went to /re...	
16	GB	*fife*>	Recife
17	Imp	<Recife! So, you were traveling a lot!	
18	GB	Oh:: Yep!	
19	Imp	And then, you got in Recife:: >	
20	GB	< *Beach:: sea:: [writes down the word “Saturday” on the sheet of paper], right!?	
21	Imp	Ok, Saturday?	
22	GB	Yep! *Morning [writes down the word “morning” on the sheet of paper] morning:: *eated... [points towards herself with her finger]	* Mistaken form of the verb.
23	Imp	<You?	
24	GB	Yep.	
25	Imp	So, woke up early: ate. And then?	
26	GB	*“Mother, look:: to sleep” [make gesture as if she was sleeping by laying her head on her hand]” “- It’s nice”: right?	
27	Imp	Woke up too early: so went back to bed.	
28	GB	[makes a gesture as if she were drawing a board on air] tevilision* [writes down the word “TV” on the sheet of paper] “-Please!” [she makes gesture as if she was pressing the buttons of the remote] >	*for television

i. GELEP database - [GB_23/08/2016:_Narrating the neurological episode at the first interview] – time lapse: 04’27”			
Turn	Interlocutor	Utterances by GB and Imp	Comments
29	Imp	< turn on?	
30	GB	Yep! [gestured as if she were trying to hold something] *Mouth, nope! [pointed towards herself with] *Speech [pointed towards herself] nope! [head shaking]	
31	Imp	Suddenly!?	
32	GB	Suddenly!	
33	Imp	Didn’t you feel anything?	
34	GB	*Hey, look:: head, pain!	
35	Imp	I see, so you had a headache?	
36	GB	Yep:: Fat!	
37	Imp	Were you overweight?	
38	GB	Yep.	
39	Imp	But, the headache, were you in pain since the day before?	
40	GB	Yep. Ouch, a lot!!	
41	Imp	So, it was really painful?	
42	GB	Yep.	
43	Imp	So, you “woke up” normally, had breakfast >	
44	GB	<Yep	
45	Imp	And then, when you tried to turn on the TV you could no longer move yourself. And then, really fast, you went to the hospital?	
46	GB	Yep	
47	Imp	How about when you got there?	
48	GB	*Ouch! Questions: no, look: mother!	
49	Imp	Ok, they asked to your mother And, did they suspect that you were having a CVA, when you got there?	CVA: Cerebral Vascular Accident
50	GB	No!	
51	Imp	Didn’t they?::	
52	GB	No!	
53	Imp	But, were you waiting?	
54	GB	*Later:: another:: hospital	
55	Imp	Ok, changed the hospital and went to another one?	
56	GB	Yep GP!	GP: General Practitioner Center.
57	Imp	All of it, on Saturday?	
58	GB	Yep.	
59	Imp	First, you came over to GP and later to a hospital?	
60	GB	Yep.	
61	Imp	But, at the hospital, did they figure out that you had had a CVA?	

i. GELEP database - [GB_23/08/2016: _Narrating the neurological episode at the first interview] – time lapse: 04’27”			
Turn	Interlocutor	Utterances by GB and Imp	Comments
62	GB	No, look! [gestured “something slow” with her hand]	
63	Imp	But, did you get hospitalized soon?	
64	GB	Ouch! yep!	
65	Imp	But, was it right on Saturday?	
66	GB	Yep.	
67	Imp	So, you mean that they examined you and then reached the conclusion that you’d had a CVA	
68	GB	Yep [pointed towards her exam results and, later, towards her head].	
69	Imp	Did they do tomography? Was it tomography, wasn’t it?	
70	GB	Yep.	
71	Imp	When you arrived at this hospital, did they immediately give any medication to you?	
72	GB	Yep:: on a drip, right?	
73	Imp	Which medication?	
74	GB	Do not know	
75	Imp	That’s ok.	
<i>Notes about the transcriptions:</i> <i>The signs “>” and “<” correspond to the moments when one utterance overlaps, interrupts or crosses the other person’s production.</i> <i>The symbol “.” means there was a short pause, while “::” means a longer pause.</i> <i>The symbol “*” stands for agrammatical utterances or for paraphasias produced by GB.</i> <i>The symbol “#” refers to places in Brazil, identified in the comments.</i> <i>Descriptions given in brackets correspond to GB’s non-verbal utterances.</i> <i>The acronyms “Imp” and “Iar” stand for the non-aphasic interlocutors, whereas GB is the acronym for the aphasic individual.</i>			

Table 1.
Episode 1: dialogical process between Imp and GB.

The transcription given above of a conversation with GB, first of all, allows us to notice the predominance of telegraphic style utterances, considering that, in most of her turns, they consist of a single word or by the combination of a few content words from open classes: nouns, adjectives, verbs, whereas they lack functional words from closed classes (prepositions, articles, conjunctions, connectors) and also bound morphemes, such as noun and verbal inflections.

GB’s utterances are mainly produced to agree or disagree with the interlocutor Imp. For instance, she answers using only the word “yep” in 21 utterances from the total of the 36 turns: 04, 10, 12, 14, 18, 22, 24, 30, 36, 38, 42, 44, 46, 56, 58, 60, 64, 66, 68, 70 and 72. She uses the single-word “nope” in utterances 50 and 52. In all of them, she agrees with the information given by Imp. In some of these utterances, however, she expands the answers with telegraphic style utterances, like in turns: 10, 12, 22, 30, 36, 56, 68 and 72. Sometimes the expansion is done with a gesture or by writing a word related to the answer that she wants to give, such as in 02, 06, 22, 26, 30, 68 and 69. Sometimes GB answers with a monolexematic word or by saying very short utterances: 08 (father.), 10 (drove: later::), 12 (mee too::), 17 (Recife!), 20 (*beach:: sea::), 26 (mother, “look:: to sleep” it’s nice”::, right?), 36 (fat!), 56 (GP) and 72 (on a drip, right?). It is interesting to notice that in turns 28 and 68, for

instance, GB’s answers are produced almost exclusively with gestures, which we also consider as utterances, grounded by Bakhtinian theories.

It is relevant to mention that Imp, a speech therapist from CCA, had already been told a lot about GB’s neurological accident from the anamneses carried out with GB’s mother, two weeks before the session in which episode 1 took place. That is the reason why Imp is the one who provides most of the information concerning the narrative: *when* it happened, *how* it happened, *where* she was, *who* was with her, *which* were the symptoms, *what* they have done to help her, and so on.

Although GB’s utterances are mostly monolexematic, as already pointed, she was very cooperative and contributed substantially to the process of meaning construction, producing telegraphic speech or recurring to face expressions and deictic gestures.

Recurring to Jakobson’s explanation of aphasia, we notice she had either a problem to select words to express her speech will, as well as difficulties to combine them into a grammatical utterance. GB, while in the group sessions, often used to say that she was aware that another word would come into the place of the one she wanted to utter. Such situations made her feel ashamed to speak. We oriented her to say whatever word that would come, even it was not the desired one, because in this way we also could have a hint about her *speech will* and could help her in the process of building signification. As Luria has pointed, paraphasias produced by aphasic individuals are usually produced by semantic or by phonological ties.

After presenting the second episode, we will proceed to the comparative analysis of both narratives and, right after, will bring our final considerations concerning the contribution of a discursive approach of language to the understanding of aphasias.

i. GELEP database - [GB_12/05/2021: _Narrating the neurological episode to Iar] Time lapse: 06’53”			
Turn	Interlocutor	Utterances by GB and Iar	Comments
01	Iar	[...] can you tell me what happened on the day you had the CVA? Because I do not know this story. What happened?	
02	GB	Yep... see. I traveled:: >	
03	Iar	< And	
04	GB	*Traveled. Then, three days, car. Right?	
05	Iar	Where did you traveled by car?	
06	GB	# Matão to #Ceará.	Matão, the district where GB lives. Ceará, a Brazilian state
07	Iar	You went from Matão to Ceará?	
08	GB	Ceará, Tauá >	Tauá, an inner in Ceará.
09	Iar	< Tauá?	
10	GB	Tauá, three days. So, I: ate too much:: You know? *Sleeping.	
11	Iar	Eating and sleeping!	
12	GB	Yep:: Then, Ceará, Tauá: Stayed twenty days:: Huum, I do not know. *Then, my aunt. Mother sister. “Let us go Recife?” It’s quite close, is not it? Kind of close, right? Eleven hours!	Mother’s sister
13	Iar	So, did you travel from Ceará to Recife?	
14	GB	Yep!	

i. GELEP database - [GB_12/05/2021: _Narrating the neurological episode to Iar] Time lapse: 06'53"			
Turn	Interlocutor	Utterances by GB and Iar	Comments
15	Iar	Who was driving?	
16	GB	Father.	
17	Iar	And...	
18	GB	It's because:: I: drive too. But:: very dangerous, you know?	
19	Iar	Ok, got it. Then, did you all go to Recife?	
20	GB	Yep. *Then, Monday, arrived Recife:: Then, Saturday, ten o'clock:: Before: nine o'clock. Recife, Saturday, happened the CVA.	
21	Iar	So, you all arrived on a Monday and spent a week >	
22	GB	< Yep! >	
23	Iar	< So, in the weekend, on Saturday, that you had the stroke?	
24	GB	Yep!	
25	Iar	But, were you already feeling unwell?	
26	GB	*Much pain, pain in: in: <i>Dipirona</i> no! Much:: Oh my Gosh:: Pain, <i>Dipirona</i> is a painkiller you know? Pain, pain. Strong pain, indeed! >	
27	Iar	< Where was such a pain?	
28	GB	Head, you know?	
29	Iar	Ok, you got a strong headache. But was it on the day or you had been in pain days before?	
30	GB	Before. Three days: *"Mom, see, strong headache", you know?	
31	Iar	Yep, got it!	
32	GB	Then, <i>Dipirona</i> ! I was also stubborn, right?	
33	Iar	Stubborn? Why stubborn?	
34	GB	Well, because:: drugstore, you see? (they) told GP, you see?	
35	Iar	But did not you check your blood pressure, nor anything else in those days?	
36	GB	Nope! <i>Dipirona</i> only!	
37	Iar	So, what did happen on Saturday? What did you feel specifically?	
38	GB	*Well, arm, TV: Then, the zapper, held it:: How can I say? Flipped through the shows, you know?	
39	Iar	Did you switch the channel?	
40	GB	*Yes! Then, hand weak, you see? Leg weak. Then, voice I no longer had. Then, my mother held me.	
41	Iar	So, this was the moment you realized that you were feeling unwell?	
42	GB	Really unwell! And, detail: *Aunt Mary, you do not know her. Apartment! >	
43	Iar	< Apartment? >	
44	GB	< Apartment, high!	
45	Iar	Ouch! How did you get downstairs? In the elevator?	
46	GB	No! on the stairs! Cousin held me: mom also held me, you see? Ouch, a real hassle!	

i. GELEP database - [GB_12/05/2021: _Narrating the neurological episode to Iar] Time lapse: 06'53"			
Turn	Interlocutor	Utterances by GB and Iar	Comments
47	Iar	I can imagine! Luckily, it's now behind you, phew!	
48	GB	*Then, cousin: GP: After hospital	
49	Iar	So, did you go to the GP and later to the hospital?	
50	GB	Yep!, then it took too long, you know?	
51	Iar	Phew, luckily everything got fine!	
52	GB	Indeed! I'm speaking, it's good!	

Table 2.
Episode 2: dialogical process between Iar and GB.

Despite the fact that Iar – a linguist, non-aphasic interlocutor – was acquainted with the narrative produced by GB in 2016 [25], the topic was brought up again as a methodological tool, seeking to understand how GB had organized her linguistic processes after being a participant of CCA. Many activities were developed with GB aiming to help her to expand her utterances. In our point-of-view, the language reorganization is evident in the analysis of her utterances. In the second episode, only in a few of them she answers “yep”, as in turns 02, 14, 22, 24, 31, 40, 46 and 50 and “nope” in turns 36 and 46. However, they are followed, in almost all of them, by additional and new information, even if by means of monolexematic utterances.

Despite the presence of some agrammatic utterances, as in turns 4 (*Traveled. Then, three days, car. Right?), 10 (So, I ate too much:: You know? Sleeping.), 12 (Then, my aunt. Mother sister. “Let’s go Recife? It’s quite close, isn’t it?” Kind of close, right?), 20 (Then Monday arrived Recife:: Then, Saturday, ten o’clock:: Before: Nine o’clock. Recife, Saturday, happened the CVA). Similar processes take place in turns 26, 30, 34, 38, 40, 42, 46, 48 and 50.

Some linguistic elements that were completely absent in the first episode, such as prepositions, in the second episode came up, as in turns 4 and 6, as well as the accurate finite forms of the verbs, in turns 2 and 4 (traveled), 10 (ate, sleeping), 20 (arrived), 34 (told), 38 and 40 (held), 50 (took) and 52 (speaking). There also connectors, as in turns 20 and 40 (then), as well as in turn 52 (and).

Differently from the first episode, in this dialogical process, GB is the more informative interlocutor, insofar as Iar helps her to organize the events in her narrative. We highlight, in the table below (**Table 3**), some of the following telegraphic style utterances, where GB constructs her narrative exploring the ‘word order’ of the content words, revealing a great improvement in the processes of selecting and combining the linguistic elements. In other words, we can claim that GB became a much more competent narrator.

02	Yep... see. I traveled:: >
04	*Traveled. Then, three days, car. Right?
06	# Matão to #Ceará.
08	Ceará, Tauá >
10	Tauá, three days. So, I: ate too much:: You know? *Sleeping.
12	Yep:: Then, Ceará, Tauá: Stayed twenty days:: Huum, I do not know. *Then, my aunt. Mother sister. “Let us go Recife?” It’s quite close, is not it? Kind of close, right? Eleven hours!
18	It’s because:: I: drive too. But:: very dangerous, you know?

20	Yep. *Then, Monday, arrived Recife:: Then, Saturday, ten o'clock:: Before: nine o'clock. Recife, Saturday, happened the CVA.
26	*Much pain, pain in: in: Dipirona no! Much:: Oh my Gosh:: Pain, you know? Pain, pain. Strong pain, indeed! >
30	Before. Three days: *"Mom, see, strong headache", you know?
32	Then, Dipirona! I was also stubborn, right?
38	*Well, arm, TV: Then, the zipper, held it:: How can I say? Flipped through the shows, you know?
40	*Yes! Then, hand weak, you see? Leg weak. Then, voice I no longer had. Then, my mother held me.
42	Really unwell! And, detail: *Aunt Mary, you do not know her. Apartment! >
46	No! on the stairs! Cousin held me: mom also held me, you see? Ouch, a real hassle!
48	*Then, cousin: GP: After hospital
50	Yep!, then it took too long, you know?
52	Indeed! I'm speaking, it's good!

Table 3.
Telegraphic style utterances taken from Episode 2.

The dialogical work in dyads, as we have been arguing, allows the aphasic individual to achieve his/her speech will or, in some cases, to get closer to it. The qualitative approach, as already pointed, demands a rigorous analysis of data in order to investigate the phenomena of interest. The microgenetic analysis grounded on the postulations of Vygotsky [50, 51] allowed us, concerning the two episodes above, to pinpoint the elements that reveal the processes that underlie GB's difficulties and also the alternative resources she articulates (verbal and non-verbal) in order to achieve her speech will. Aiming to understand the dynamics of a process, Vygotsky argued that it is necessary to find the 'genesis' of a given phenomenon and observe its development. The paradigm is known as "microgenetic" because it is oriented to "indicial details" and not referring to the short duration of the events. It is 'genetic' in the sense of being historical, by focusing on the movements that take place during processes and because it seeks to relate singular events with other plans of culture, social practices, circulating discourses, institutional spaces, etc. [52].

Bounded up with our discursive musings, such a paradigm is the most appropriate one to account for data that come up in interactions among socio-cultural and historically situated individuals. Concerning aphasia, it is evident that the etiology and the local of the lesion should be considered in the genesis of the linguistic processes and impairments. However, together with organic features, there are socio-cultural aspects that constitute the individuals, usually disregarded by traditional approaches [35].

5. Final words

Observing aphasia in real interaction episodes is like seeing a movie in slow motion, as it allows us to uncover aspects of language functioning that could not be detected and recognized in normal speech and in its complex dynamics. Coudry's work aimed, at first, to confront hegemonic aphasiology and speech therapy, especially regarding the methodology of language assessment and therapeutic follow-up [15], as we have tried to show along the chapter.

We agree with Possenti [14], when the author states that the relationship between two interdisciplinary fields is often problematic and, certainly, asymmetric. A sociolinguist, for instance, presumably studies more Linguistics than

Sociology, while a sociologist probably does the opposite. About the field of Neurolinguistics, Possenti [14] raises the following question: Would it be possible for a neurolinguist to have a balanced comprehension of Neurology and also of Linguistics? He does not believe so; neither do we. To begin with, each field is substantially complex and, furthermore, our interest is more turned to one or to the other field. According to the author, this fact does not mean, however, that it would be impossible to postulate relevant problems in each field, even within asymmetric specializations. The author emphasizes that the phenomena are too complex to be approached from a single point of view. No theory or model would account for all its relevant aspects, as we have discussed.

Aphasiological tradition and Neurolinguistics restricted their efforts to assess language in aphasia to some aspects of metalinguistic knowledge, which influenced the semiology, the diagnosis and also the treatment of language pathologies.

Explanations for most neuropsychological language disturbs have been limited to how brain episodes impact the linguistic levels (phonological, syntactic and lexical-semantic), although Hughlings Jackson [53], in the beginning of the twentieth century, and Luria [5] had already detected pragmatic and discursive aspects of such alterations. At that time, such problems had been noticed and related to 'problems of thinking', once Linguistics would be restricted to the scope of the language system – the langue [54].

We would like to end this chapter mentioning that the latest works sheltered by the Group of Studies of Language in Aging and in Pathologies (GELEP), to which we belong, have contributed to the understanding of clinical categories [12, 25, 35, 37, 44, 48] and other phenomena in aphasia, from which we underline the tip-of-the-tongue (TOT) [55], the production of paraphasias [56] and paralexias [57], the analysis of language in aging, along with the discussions of linguistic prejudice against communities with vulnerabilities [43].

Ethical issues, along all those theoretical-methodological questions presented and discussed along the text, have a very central role in our research in Discursive Neurolinguistics and in our extension works at CCA. For this reason, we end this chapter citing the valuable words of Lyon:

Treatment should not be a process of a person, but of people. It should not be a process of just language and communication repair, but of facilitating purpose and meaning in life and strengthening ties with others in those natural life contexts that matter the most ([58], p. 689).

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