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COGNITION, COMPLEXITY AND CONTEXT AS OTHER MINDS: A TRIBUTE TO T. GIVÓN

Afterword by Sebastião Votre

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FACULDADE DE FILOSOFIA,
LETRAS E CIÊNCIAS HUMANAS
UNIVERSIDADE DE SÃO PAULO

**COGNITION, COMPLEXITY AND
CONTEXT AS OTHER MINDS:
*A TRIBUTE TO T. GIVÓN***

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FOREWORD

Linguistics is made up of great individuals. Throughout its not so long history as compared with other sciences, linguistics boasts many remarkable contributors who paved the way for human language study and thus led us into exploring the rising, development and evolution not only of natural languages, but also that of our own species. This book is a tribute to one of those great contributors to linguistics, T. Givón. As he argues for an evolutionary approach to communication and language, Givón has covered various research fields in linguistics such as morphosyntax, semantics, pragmatics, discourse and text, second language acquisition, pidgins and creoles, language universals, grammaticalization, and cognitive science.

Of no less significance are those currently dedicated to doing remarkable research work in linguistics. Linguists all over the world are committed to studying several phenomena in different languages to help us understand, support, enhance or invalidate linguistic assumptions and thus find new ways and shortcuts to unraveling human language. In this book, which is divided into two parts, we present some of the ongoing research done or advised by Brazilian linguists along the lines of Givón's theoretical framework, especially those conducted by the research group "Language & Cognition"¹ (LinC, USP). The research works in this book focus on the Portuguese language as spoken in Brazil (Portuguese from Brazil – PB) with a view to explaining different phenomena in its usage.

1 Language & Cognition (LinC) is a University of São Paulo research group established in 2006. Website: <https://linc.flch.usp.br/>.

In Part I, **JOINT ATTENTION SPACE UNDER CONSTRUCTION**, the opening chapter, *Having some coffee in the kitchen* (chapter 1), invites the reader to come into the kitchen of Brazilian linguistics and become familiar with its intriguing details, characters, and close relationship with Givón's functionalism. This chapter unlocks the door to Brazilian universities, where the reader is introduced to both functionalist researchers and Portuguese from Brazil, the language we speak, while a cherished conversation develops with Givón (1995), our interlocutor, about Dutch linguist Simon Dik's cross-disciplinary functionalist model and his proposition that pragmatic, psychological and typological adequacies should be attached to linguistic analyses.

In chapter 2, *Brazilian linguistics research and the contact with Givón*, the reader is taken back to the 1970s when studies on the languages spoken in Brazil had a major boom. Based on Labov's variation theory, these studies boosted the interaction between Brazilian, European, and North American linguists, and eventually led us to Givón. A closer approach to Givón's works encouraged Brazilian linguists who, just like us, were inclined to thinking outside the box and strengthen their ties with psychologists, psychiatrists, neuroscientists, engineers, and phonoaudiologists towards deeper theoretical knowledge and more developed ways of studying language.

Once these doors are opened to Brazilian linguists, the reader can now step into chapter 3, *Building up non-typical interaction*. Here, the reader is presented to Givón's *Context as other minds* (2005) along with issues such as integrating body and language, relating phylogeny to ontogeny, and the functionalist approach based on two principles: (i) markedness, and (ii) iconicity. These two key principles are then revisited by the eyes of researchers who are now familiar with cognitive linguistics postulates and neuroscience advancements. Other fields such as anthropology, psychology, and artificial intelligence are also explored in order to find an explanation to several linguistic phenomena. From

this perspective, the principle of markedness is approached as a strategy to setting the focus on linguistic coding and, more important, as a key cognitive function for human species evolutionary adapting and sociocultural insertion of each individual. The principle of iconicity, in turn, is discussed in terms of its dependence on sociocultural logics that results in a habit (or steady behavior) in symbiotic interactions with language users' minds until it eventually settles down in the grammar of their own language. In this sense, comparison, analogy, and frequency are deemed as key mechanisms in monitoring and organizing language input according to conventionalization (i.e., grammaticalization) and markedness degrees. In other words, the more often a construction is used, the greater its social adherence and productivity within various contexts and roles will be, and the sooner its automatic use will settle down. This implies less cognitive effort and less commitment to attention.

In Part II, **SETTING THE FOCUS ON OBJECTS**, the reader will be familiar with several research works based on functionalist principles and theories, according to which language structure reflects the structure of *the human mind* (Givón, 2018 [1979]). Along these lines, the fourth and last chapter of this book, *Acquisition, usage, and language loss processes* (Chapter 4), includes some functionalist perspectives grouped into five subchapters where this key principle underlies the research presented.

In *Linguistic complexity in language acquisition*, it is claimed that phylogeny and ontogeny are correlated. A baby's evolution since his birth has been observed, examining the gradual acquisition of more complex communication forms to provide evidence that "although it might appear somewhat unwise to compare all the events a human baby undergoes in its ontogeny with the evolutionary events experienced by human species, it would be likewise unreasonable not to acknowledge the huge similarities between human ontogenetic and phylogenetic evolutionary paths. This is

particularly so in the study of pre-linguistic communication and language acquisition.”

In *Linguistic complexity and pragmatics*, excerpts from argumentative essays written by teenagers in stressful situations have been examined, to find out that there is a relation between the amount of information and syntactic complexity. The subchapter basically points out that (i) complex forms with a low complexity degree entail information amounts in pragmatic forms that are likewise little complex, and (ii) a higher amount of information and form allows the access to more complex expressions in grammar mechanisms.

In a study on verb-based discourse markers (DM) such as *quer saber?* (“[do] you want to know?” or “you know what?”) and *entendeu* (“you got it?” or “you know what I mean?”) etc., it is maintained that an analytical approach to these constructions should include the principle of markedness. The study compares unmarked to marked verb-based DM to provide evidence that the latter are more cognitively complex and less frequent. The role of aspect and voice in functional interactions where verb-based MD are used is also highlighted.

Studies on articulated clauses, as presented further in this book, will reinforce this assumption. Research on clauses including *quer dizer* (“I mean”) and *acontece que* (“but then”) phrases illustrates the grammaticalization pathway of argumentative forms by showing changing processes that occur gradually and emerge out of pragmatic-discursive motivations. As they result from grammaticalization processes, *quer dizer* and *acontece que* are phrases that enable setting up longer and more complex utterances in cognitive, syntactic, semantic, and pragmatic-discourse terms.

In *Complexity in cross-cultural studies*, politeness in the Korean, Mandarin, and Portuguese languages is explored. This research provides evidence that more formal and polite forms are longer and more complex in linguistic coding as compared to less polite and more informal ones.

We also present the outcomes of a research on the motivations for using gerunds in Portuguese varieties as spoken in Brazil, Macao, and Portugal, suggesting that the cognitive and communicative motivations for that can be explained on the grounds of the iconicity principle as well as the functionalist assumption on linguistic complexity.

In *Chinese-Brazilian names and hybrid parallels*, the iconicity subprinciples are applied to note that choosing names for younger generation Chinese-Brazilian citizens “has a well-defined goal driven by wishes of good luck and success, and has gradually been ritualized in nearly all cultural cycles.” It is observed that the more information is embedded in a name, the larger is the form used, and the more complex a name is, the more complex constructions will be recruited in assigning names.

In the following subchapter, historical data in Portuguese from Brazil history is reviewed to explore the stigma inflicted on the gypsy community. It is claimed that migrations entail unequal contact between cultures and that given [gypsy] intense geographic mobility, gypsies are usually regarded as weird subjects and therefore face discrimination against their community. It is stated that the gypsy community assessment chain – i.e., the manner in which assessment of these community members is expressed and how such assessment is echoed in general discourse – denotes a highly discriminating attitude towards them. Applying the iconicity principle tools to data analysis, it is concluded that both linear ordering and idea integration of these discourses bear an embedded cognitive complexity that emerges from apprehending complex syntactic structures and comprehensive meaning concurrently.

Further in this book, research contrasting Portuguese from Brazil *será que* (“I wonder if”) to Nheengatu *será* shows that the latter is a grammatical mark applied in Nheengatu yes-no questions, while the former is a marked construction used to emphasize uncertainty or eventuality in interrogative clauses. Although both forms are used in

languages spoken in Brazil, and stem from grammaticalization and linguistic complexification processes, the hypothesis that *será* emerged in Nheengatu as a structure directly borrowed from Portuguese is rejected. As the study points out, *será* actually derives from Tupinambá *serã*. Nonetheless, a question that remains open to debate is posed: Has *serã* derived from grammaticalization in the Tupinambá language or has it emerged as a product of the contact with the Portuguese?

The last subchapter, *And then having coffee in the kitchen no longer means intimacy: the pathologic ageing of language*, wraps up this book by looking at language decline processes. As opposed to young age, when new experiences continually rearrange myriad neurons and hormones, the body and brain of the elderly have already settled down old habits, customs, and routines. Physically and cognitively noticeable lifetime traits can eventually affect language as one grows old. It then follows that natural aging can bring along pathologic aging with a resulting flawed memory, as is the case of Alzheimer dementia (AD). It is estimated that 50-60 percent of all dementia patients worldwide are currently living with AD.

Based on the assumption that music could be a favorable factor while treating elderly AD patients, the research examined linguistic patterns in these patients' interaction contexts and found evidence that language decline is a partial phenomenon associated with various brain degeneration degrees. These findings suggest that elderly AD patients' linguistic consciousness (language) is somehow numbed by their disease but can be later awakened by music. In this sense, music is the lexical repository of "our culturally-shared view of the external, mental and social world." (Givón, 2009, p. 22)

The reader will then reach the end of the last chapter, but not the end of the book. The book closes with an afterword by one of the most renowned scholars who first brought functionalist research to Brazil: Sebastião Josué Votre.

Enjoy yourself! *Boa leitura!*

PART I

JOINT ATTENTION SPACE UNDER CONSTRUCTION

Introduction – Portuguese from Brazil (PB): the language we speak

Portuguese is a pluricentric language. Thus, each geographic region that manifests this language adds typical sociocultural characteristics to it. For this reason, in this book the preposition “from” carries a political connotation, since it reflects the displacement of the language spoken by the different groups between spaces. In view of this, we adopted the term “Portuguese from Brazil” (PB), instead of the traditional “Brazilian Portuguese” or “Portuguese of Brazil”.

Until the 16th century, Brazil was a land entirely owned by indigenous peoples. There were as many languages and cultures as settled communities in the whole territory. Many of those languages were wiped out by their speakers’ death (out of foreign diseases or slaughter by invaders and the so-called “colonizers”) and lack of family descent in isolated indigenous communities. When the Portuguese arrived in Brazil, they gradually identified trading values in Brazilian lands, still without a colonizing agenda. Later on, without any agenda for the education in Brazil, despite already in a colonizing context, a new Portuguese language emerged, with lexical inheritances from the people who were also enchanted by the natural beauty of the land where they arrived.

Throughout an endless struggle for power originating from the greed for natural resources (minerals, fruit, and wood among others), people came to Brazil from all continents, whether individually or in

groups, guided by their own private goals. Some were looking for a new place to live in (e.g., Spanish, Portuguese, French, Dutch, Chinese, and people as varied as Jews, Catholics, Spiritualists, Buddhists, and others), whereas others were carried along by a deceptive misleading project of temporary stay and later return to their own country (such as the Japanese, Germans, and African peoples). These moving dynamics never ceased. More and more diversified people came to Brazil and made up their own families. It then results that Brazil is a huge patchwork nation with a special detail in each piece. Until mid-20th century, even though the *Academia Brasileira de Letras* (Brazilian Academy of Letters) had already been founded in the 19th century, the language spoken in Brazil was referred to as a “tentative kind of Portuguese,” since it stemmed from communication attempts with the Portuguese people. Written language was the baseline for setting spoken language standards. Nevertheless, a new era of great change was dawning.

In the 20th century Brazilians became more vocal as they started claiming their own identity. This led to a debate on the Portuguese language. They tried to label it as “Brazilian”, but never succeeded in doing so. A new language – Portuguese from Brazil (PB), Portuguese of Brazil or Brazilian Portuguese – emerged and gained status on the grounds that its extensive territory has the largest number of speakers. Some of the works that explain how this poorly publicized history evolved include Ilari & Basso (2013), Bortoni-Ricardo (2021), Castilho (2009), Bacellar (2009), Rodrigues (2009), Brito (2009), Lima-Hernandes (2009a, 2009b), Dias (2009), Oliveira (2009), Calindro (2012), Carvalhinhos (2012). The *Projeto História do Português Paulista* project (on the Portuguese spoken in São Paulo state), as well as other similar projects performed in each Brazilian capital city project, yielded a massive amount of significant works and publications.

Chapter 1. Having some coffee in the kitchen

The title of this chapter refers to an old habit nurtured by close friends in Brazil. Having some coffee in the kitchen while going over some important matter is something only close friends will do. The kitchen table is the spot where intimate or family matters are discussed. The kitchen is the place where one will take advantage of cooking time to iconically gain time and cautiously bring about more dramatic issues. Family decisions will be made when people are gathered in the kitchen and are having some coffee. Talking about where we come from implies saying who we are. This will build intimacy and there is no intimacy without a coffee bottle on the kitchen table.

In Portuguese from Brazil (PB), the conjugated verb form *vimos* has an ambiguous meaning: it can either refer to one's act of walking (verb *vir* [come], which implies a place from which one has come) or the perceptive movement captured in one's visual field (verb *ver* [see], which implies a place from which one can see something). It also has a more abstract meaning such as *perceive* (thus implying one's perception moment, as synonymous with *conceive*).

In Brazilian public universities where functionalism is taught, students are encouraged to drive their focus to what occurs between meanings and between intentions. Much of what has been published in this sense results from key contributions by functionalist researchers. Renowned authors have been pivotal to the advancement of Brazilian functionalist linguistics, some of which have had a close relationship with *LinC* (Language & Cognition) research group, namely Maria Luiza Braga (Rio de Janeiro Federal University), Maria Helena de Moura Neves (São Paulo State University), Ataliba Teixeira de Castilho (University of São Paulo), and Sebastião Votre (Universidade Federal Fluminense). These linguists and their followers have advised a new generation of students and researchers in both doctoral and post-

doctoral programs. Some of them have contributed with their own chapters to this book.

Of all cross-disciplinary functionalist models back when the communicative system was conceived, Dutch linguist Simon Dik’s model¹ is worth noting here. This is particularly so because this model is based on the linguistic task of providing some sort of explanatory adequacy that has never been considered by linguistics, including functionalist linguistics:

Explanatory adequacy	Focus
Psychological adequacy	Attention
Pragmatic adequacy	Intention
Typological adequacy	Other sociocultural realities

Table 1: Dik’s explanatory adequacy (1981)

Dik suggests approaching interaction not as an isolated fact, but rather as something bound to a situation (*in situ*). In that sense, it is important to point out that every situation is bound to production contexts. Therefore, the more traits and features one can identify in a communicative scene, the better one will understand the intentions entailed and the resulting comprehension between the subjects. Let us review the standards of adequacy that linguists should take into consideration:

- **Psychological** → a descriptive study should include the way expressions are perceived, interpreted, processed, stored, retrieved, and produced.

¹ “a functional grammar should conform to the standards of adequacy (in particular, descriptive adequacy)” (Dik, 1981, p. 41)

• **Pragmatic** → a descriptive study should include the features of linguistic expressions as related to verbal interaction guiding rules, with a special focus on intentions.

• **Typological** → a descriptive study should include a comparison between systems, i.e. check out similarities and contrasts between different linguistic systems from the same language tree or from different linguistic families (crosslinguistic study).

While approaching each of these adequacy standards, linguists should consider some functional relations and assign them the right priority according to their relevance:

a) **Semantic relations:** The role played by referents, their outstanding features in context usage, their meaning, and their potentialities in each use.

b) **Syntactic relations:** Performed functions, presumed collocations, potential word order in traditional syntactic tests and plausible replacements.

c) **Pragmatic relations:** All intentions entailed (and duly verified by turn-taking conversation pairs), the informational status of constituents in the context, and the effects achieved by means of rules or conversational maxims.

In linguistics, functionalism embraces some principles that will work if they are applied correctly to controlled contexts in data analysis. Although there are times when authentic spontaneous data do not fit into such principles in a coherent fashion, they are a good starting point to outline the stage where a language dynamics pathway has or must have probably started:

- *Language is a sociocultural activity.* Language (both in its broad sense as the human ability to produce verbal language, and also with reference to each particular language as spoken by a community) is sensitive to speakers' sociocultural activity pressures. This means that

some grammar components can be considered as language universals (i.e., they work for each specific language, but not for language in a broad sense) while other components are related to a cultural framework that is either locally inherited or used as a starting point for an upcoming change.

- *Construction² is subject to cognitive and communicative functions.* There is no voluntary speech or writing without underlying cognitive functions, as language processing (in both its broad and specific senses) is executed by means of neural synapses. These connections comprise one's communicative – or rather interactional – grounds.

- *Construction is motivated and iconic – and therefore is not arbitrary.* If one assumes that construction is arbitrary, it means that one cannot yet explain the role played by motivation maybe because it has been lost somewhere in language usage history or because a synchronic approach hinders one from doing so. However, under no circumstance should one ascertain that motivation does not exist. Each and every construction is motivated, and iconicity is the ruling force that guides this principle.

- *Change and variation are always present.* Given that generations come along in different contexts, usage motivations are likely to reflect new cognitive proposals. New text types come to life and bring along their own communicative motivations. Novel discourse bonds stem from old usage and become competitors to current ones until the latter eventually die out. This competition is a variation stage. If only one of the competing forms survives, we can say a change has taken place in language. A close look at the way younger generations use language

2 The functionalist model refers to *structure* rather than *construction*. We will nevertheless use *construction* because we believe that *structure* is less comprehensive as it is set apart from cognitive knowledge and refers solely to linguistic form. In contrast, *construction* encompasses both linguistic form and pragmatic features arising from usage context.

nowadays will show us that some trends and changes are actually occurring right now. Therefore, it is possible to monitor change in progress.

- *Meaning is utterly dependent on context and is not isolated.* For 21st century linguistics, it makes no sense to state that the meaning of a word as shown in a dictionary is the sole prevailing meaning to be applied in didactics and pedagogy. Meaning emerges from usage, hence the importance of taking context into consideration. There are social niches in which meaning is negotiated on a restrictive basis within specific inaccessible contexts, and will remain as such until these groups engage in contact with one another.

- *Categories are not discrete entities.* Traditional school practices have contributed to reinforcing the myth of established word categories. Moreover, people tend to believe that the ten Portuguese parts of speech should be enough to classify all current words. This is not true, though. For instance, prescriptive Portuguese grammars categorize a verb as main or auxiliary. However, authentic spontaneous utterances will show that there is a wide range of verbs that will not fit into either category and could maybe stand somewhere between those two categorizing labels. This is the case of quasi-auxiliary verbs, serial verbs, and supporting verbs. Likewise, some conjunctions are no longer regarded as sentence linking forms, as is the case of *entretanto* [however], *no entanto* [however], and *por conseguinte* [therefore]. These as well as other so-called connectors are now seen as connecting tools between utterances and paragraphs, i.e., structures that are actually longer than sentences.

- *Construction is flexible.* Communicative environments have an impact on behavior and construction selection, thereby undermining their fixed status. Because each pragmatic-discourse intention is subject to these impacts, the way we organize underlying traits in speech will vary according to our communicative goals. A non-canonical subject, for

instance, is expressed with a negative trait for its position or outline. Like so many other functions, subject construction is therefore flexible.

- *Grammars are created on an ongoing basis* – For each new generation in a community, new usages will be integrated. An emerging new supporting verb, i.e., a verb that includes in itself its own object or adverb is a newly created conception as compared to prescriptive grammars and categorizing process usually taught at school. We can therefore state that new usage has emerged.

- *Grammar rules derive from usage and usage derives from communicative intentions.* Each intention is expressed syntactically and syntaxis is governed by usage rules. However, innovative usage will eventually set forth new rules. Let us take the percentual subject (“One percent of Chinese speakers”) as an example – this construction did not exist until the 20th century. A new verb agreement rule emerged in order to establish a normative rule for this novel usage.

- *Language outlining somehow reflects experience structure.* We are inclined to conceiving new iconic forms as we seek to address communication. We tend to express longer periods of time by applying longer speech constructions with heavier syllables. In the discourse level we are likely to set up the ground before we introduce a figure because we want to ensure overall comprehension by means of a previously established background or context in which the scene will take place. We are likely to drive more relevant information to initial positions in a sentence. That is the very reason why we start utterances with politeness forms so that the hearer – herein assigned a more important role in decision making – will do as required.

If we invited Givón (1995)³ to join this conversation, we would certainly hear him say that what binds functionalists together is the faith in these assumptions, although they might not work thoroughly

3 Cf. 1.2 From faith to theory (Givón, 1995, p.9 et seq.)

in all research groups. As a matter of fact, the ultimate goal of some of these assumptions is to ensure that functionalists and generativists (formalist Linguistics) are distinguished from each other. He is right in doing so – we must count on faith as a safe harbor for each research project we start, especially in Brazil, where poor investment is driven to Humanities and where researchers take years to validate foreign theories. This faith is the underlying moving force that encourages all of us to pay a tribute to a renowned linguist who so many times made us see (*look at, perceive*) things that we had overlooked in our research work.

This book brings together contributions by the University of São Paulo LinC (Language & Cognition) research group along with partners with whom we have shared and discussed research themes: LATEC (Literacy, Reading/Writing, Digital Technology, and Cognition) research group of the Federal Rural University of Pernambuco (Universidade Federal Rural de Pernambuco, PE/Brazil), PorUs (Center for Linguistic Studies on Portuguese in Use) of Federal Fluminense University (Universidade Federal Fluminense, Niterói, RJ/Brazil), and the Language Studies Group of the Federal Institute of São Paulo (Instituto Federal de São Paulo, SP/Brazil). Each of these groups wished to give a voice to their own research studies on the grounds of Givón's various theories but was hindered by the difficulties posed by the long COVID-19 pandemic. We then took a daring step towards setting up the 4TH LINCOG - International Symposium on Language and Cognition, in partnership with the Macao Polytechnic Institute in China. We were all extremely excited as Givón was promptly chosen as the keynote speaker to this online event, however he kindly turned down the invitation because he is currently dedicated to a reclusive life in his farm (he never ceased to produce research on linguistics, though). But that's all right – Givón is great enough to be among us in the event without being “physically” present through his computer screen. His teaching is largely referred to in texts written by all those

who are eager to include cognitive studies in linguistics by thinking outside the box.

In this tribute to Givón – and likewise to all Brazilian linguists who made it possible for us to reach Givón theories – we shall take hold of some of his assumptions to apply his arguments and beliefs and boost research works on PB. Let us start with a brief explanation on the language we speak in Brazil.

Chapter 2. Brazilian linguistics research and the contact with Givón

In the 1970s, Brazil staged a phenomenal boom in the study of spoken languages. These studies were driven by dialectology and sociolinguistic guidelines. Labov's quantitative method and the search for a less subjective algorithm caused a huge amount of sociolinguistic works to be published in Brazil, particularly under the guidance of Rio de Janeiro researchers who had found resources in Gillian Sankoff's and William Labov's works. These authors' methodologies were soon embedded in several spoken language projects in Brazil, including Mollica (1992), Mollica, Silva & Scherre (1996), and Mollica & Braga (2003). At that moment, Rio de Janeiro was highlighted as the sociolinguistic study center in Brazil. The outcomes from those studies and the thousands of publications that followed thereafter encouraged us to search more deeply for Brazilian roots in several studies, of which we have selected a small part for a state-of-the-art review.

In this endeavor to spotlight current research, we gradually achieved a better understanding of the language that we actually speak and that is so heterogenous in itself (Dias & Costa, 2010; Martelotta, 2010; Moura Neves, 2010; Lima-Hernandes, 2011; Castilho, 2012; Dias, Abraçado & Lima-Hernandes, 2017; Gonçalves & Wiedermer, 2017; Camacho, 2017), as well as local languages (Aguilera, 2002; Aragão, 2002; Cunha-Henckel, 2002; Lima-Hernandes & Ferreira Netto, 2002; Mollica, 2002), root languages (Megale, 2005; Teixeira

e Silva, Lima-Hernandes & Santiago-Almeida, 2012), and heritage languages that coexist with current language (Lima-Hernandes, 2005; Lima-Hernandes & Ciocchi Sassi, 2005; Silva, 2005; Megale, 2005; Lira & Riccioppo, 2020)⁴.

As a result, there was an outstanding production of relevant research on similar subjects, which allowed for comparison and progress in the field of Conversation Analysis as associated with the sociolinguistic model to approaching data. As a merit to this constructive period came the sound acknowledgement of two modalities of the same language, and the conclusion that such modalities are concurrent and interconnected in some discourse-text types (Marcuschi, 2001; Castilho, 2004). Not only did these works have an extremely positive effect on didactic-pedagogical practice, but also had enormous impact on the following research in Brazil.

Though exceedingly brief and summarized, this background of Brazilian linguistic research enables us to approach some issues that emerged in the language study field, more specifically insofar as spoken and written language production contexts are concerned. Research work in this field witnessed great progress in the 20th century, first by resorting to European linguistics works and later to US linguistic findings. This interaction with European and US linguists grew stronger and to such an extent that nowadays few foreign linguists think that Spanish is the language spoken in Brazil (this used to be a widespread misconception until not so long ago). No, we do not speak Spanish, but people living by the Brazilian borders with other South American countries do speak *portuñol*. We are comprised by diversity and live in superdiversity (Vertovec, 2021) among the various

4 Many other research papers could be included in these references, as the Brazilian linguistics movement was like a true nationwide *tsunami*. Unfortunately, research works published in Portuguese language are not as widely known as they should be.

sections of the Brazilian linguistic landscapes (Melo-Pfeifer & Lima-Hernandes, 2020).

2.1 Brazilians “go Givón”

In Brazil, Givón’s approach was more widely publicized by the leading role of Sebastião Votre and later by his follower Mário Eduardo Martelotta as he described the Portuguese spoken in Rio de Janeiro. It was not until some years passed by, when we looked more closely at grammaticalization processes (Gonçalves, Lima-Hernandes & Casseb-Galvão, 2007)⁵, that we came to meet Givón *vis à vis*. Since then, we never stopped following his publications. As we compulsively studied his works, we managed to know the official Brazilian language – i.e., PB – deeper and deeper in all its diversity.

2.2 Let us first practice how to think outside the box

The university provides us with a “box” in which every linguist will find his/her guiding tools. Little by little we take in theories that are closely associated with a way to approach and analyze linguistic data. As we feel comfortable inside this “box”, we grow more and more confident to unravel our research outcomes and develop our own expertise. This is like a long carpet that is slowly unrolled to show us the way as we make progress in our work.

But as time passes by, we may find that the knowledge we master is no longer sufficient to explain all the horizons ahead of us. Actually, it is as though our eyes could reach further horizons along the time. Some researchers will apply the same analytical approaches until they

5 Researchers who shared the theories of Maria Luiza Braga gathered to pay tribute to her and publish a book that turned out to be a sound reference for grammaticalization from a functionalist perspective. These researchers were Cristina Carvalho (UNEB-Bahia), Sanderléia Longhin Thomazi (UNESP- São Paulo), Nilza Barrozo Dias (UFF-Rio de Janeiro), Angélica Rodrigues (UNESP-São Paulo), Sebastião Gonçalves (UNESP-São Paulo), Vânia Galvão (UFG-Goiás), and Maria Célia Lima-Hernandes (USP-São Paulo).

fade away or wilt like dying flowers (the entropic process of all systems) in the face of results that will inevitably confirm what they had done before. Eventually, there appears to be a moment when there is nothing else to be said or done. But there will also be other researchers who are less accommodated and more inquisitive. They will search for other puzzling “boxes” to be opened. That is exactly what happened to Givón, though very early in his career due to the variety of spaces he explored. This new pathway in exploring ideas and “boxes” allowed us to interact more consistently with psychologists, psychiatrists, neuroscientists, engineers, phonoaudiologists and linguists to try and find new methodological approaches to language (Resende et alii, 2015; Mollica & Lopes, 2015; Guerra, 2015; Abraçado, Dias & Lima-Hernandes, 2015; Vicente, 2015; Gonçalves Segundo, 2015; Paixão & Nogueira, 2015; Bertoque & Casseb-Galvão, 2015; Resende & Paula, 2015; Silva & Komatsu, 2015; Ballesteros & Resende, 2015; Chulata, 2015) while concurrently taking a look at non-typical speakers (Cunha, Bordini & Caetano, 2015; Tamanaha & Perissinoto, 2015; Alarcão & Silva, 2015; Silva, Moreli & Roma, 2015; Lima & Rehberg, 2015; Lima-Hernandes, Módolo & Paula, 2015).

As the saying goes, an extraordinary look at linguistic data analysis requires a likewise extraordinary mind. This is the golden dream of every researcher: become a renowned scholar in their field of study. We should thus wonder how we could possibly educate good linguists when we nevertheless induce them into super-specializing in a certain field as soon as they start up their college life. A brief glimpse at linguistics programs will show us that students will go through several theories and will soon be entangled in a vast forest of interwoven branches of countless trees deeply rooted on a flat surface. And this surface will ultimately mirror a standardized analytical approach to a universal research agenda. This is particularly so in the field of grammar: there are more and more specialized linguists in a specific tree in their first undergraduate year. Notwithstanding their specialization skills, these

linguists are unable to tackle some theoretical-methodological problems such as representing emerging usage forms like serial or supporting verbs, which materialize in specific communicative situations and are canonically categorized as non-typical.

To say the least, it is arguable to conceive that extraordinary minds will come up in such strictly standardized environments where insights and inferences play nothing but a secondary role. Alternatively, Givón's pathway will show us how to deal with non-typical situations even though we have taken a linguistically typical model as a starting point. Givón was a Biology and Agriculture graduate but took up Biochemistry as he moved to the USA in 1959. To him, this appeared to be a good manner to continue his education in a totally new environment. In an interview to Sonora University Professor Zarina Estrada Fernández, later published in one of Givón's books (cf. Givón, 2015a), he said he did not learn English until he joined school at the age of seven. He already mastered Spanish from home usage, Hebrew in the city he lived in, and Arabic as learned from the other side of the street. This superdiverse environment gifted him with a self-multifaceted view in his own everyday life. Givón was apparently familiar with (and trained in) such concepts as additional language, foreign language, mother language, official language, heritage language, and root language way before he actually became a linguist. In order to become a linguist, all he had to do was perform a slight functional slide or recategorization without feeling the effects of this sharp "category bleaching" as Eve Sweetser so brilliantly explained this type of changing linguistic forms.

Once he was immersed in superdiverse environments in his everyday social circle, Givón became a genealogically hybrid linguist not only in his education, but also in his personal interests. He was a completely non-typical person in terms of social myths and that is the very reason why he was so skillfully able to jump outside the box in which people insist he should be kept. This is the way he describes his

hybrid pathway while using a discourse on his “crazy life” mostly in English and partly in Spanish.

Chapter 3. Building up non-typical interaction

Some words in Givón’s works will catch our eyes, such as *conundrum*, *puzzles*, and *self*, among others. These terms will probably find no room either in formal or structural linguistics. In *Context as other minds* (2005)⁶, much is said about the interlocutor’s role in a specific language usage situation. We soon became familiar with the potential contribution of such “outside-the-box vocabulary” to looking at things in a different way, building up the box in a new way, and matching the color with a newly conceived script. This new box is pure linguistics, if such a thing exists.

Integrating one’s body to grammar and revisiting the relation between phylogeny and ontogeny are rather unconventional ideas. This is particularly so if we gather memory types (episodic and working; long and short term), reasoning types (abductive, inductive etc.), and adaptive ways as we demonstrate how to describe the grammar of a language. Likewise, it may sound quite incompatible to combine grammar with discourse, context, and pragmatics. However, these are precisely the little pieces that altogether will assemble Givón’s insight on the holistic being and the grammar that represents this condition. As we do so, we learn how to connect mind and grammar. Of course, this is nothing but our own interpretation and is certainly not comprehensive of Givón’s theory complexity.

Givón’s deeper research in the field of Cognitive Linguistics leads us to understanding the principles that guide the gradient language complexity. This is achieved by means of ontogenetic human gradient maturation and phylogenetic gradient evolution (Givón, 2005).

⁶ Lima-Hernandes (2015) has promoted Givón’s theories on context from this new perspective.

Maybe Damásio (2010) was right when he asserted that “self comes to mind”⁷, thus allowing us to revisit Maturana & Varela’s (2001)⁸ idea of language as a self-created being in an interaction world that assimilates its experiences into its own self (“embodiment”). Some years later, this idea was explained in grammaticalization process studies as some sort of cognitive categories coupling (body > person > object > location > time > quality). Givón sheds light on all these voices and connects them all by providing evidence that the brain has engendered grammar similarly to its flexible functioning, thus responding to requests and putting forward its own demands by means of interaction.

The following sections will cover two key principles – markedness and iconicity – of these human co-specific developmental and evolutionary movements. We shall do so according to Givón’s ideas.

3.1. Markedness – a strategic way to cast attention on linguistic codification

Cognitive attention processing has most commonly been discussed in children’s development. Research is usually driven to children at home (parental-elicited attention to a theme or an object, i.e. the child should pay attention to something or someone) or at school during educational development (i.e., demand for concentration on the

7 According to Damásio (2010), rather than studying the brain like every neuroscientist has done thus far, we should contribute with novel ideas as to how the brain has created such complex a mind as we have today. The steppingstone to this is revisiting the great legacy on which we can count nowadays: “Before we attempt to make some headway on the matter of the human brain constructs a conscious mind, we need to acknowledge two important legacies. One of them consists of prior attempts to discover the neural basis of consciousness, in efforts that date back to middle of the twentieth century.” (p. 7). As we see it, this legacy has been applicable to linguistic research since late 20th century.

8 Maturana & Varela have contributed to this field with their idea of *autopoiesis*, as they refer to structural coupling (individual-society merging) in a maturation scale guided by one’s living within cognitive complexity categories (i.e., system and environment interact on an iterative basis).

classroom central spot where the teacher, the board, and main didactic-pedagogical activities are supposed to be the focus of attention). Everything that lies outside these concentration focuses is deemed as negligible to the main attention focus. This arrangement certainly tells us a lot about students' role in such a school model, but it also does unveil much more about where students placed in peripheral spots of these marked classroom limits are expected to drive their attention to.

However, attention is a basic cognitive process we naturally resort to in order to gather information, practice actions, focalize, and concentrate. It is vital for activating memories and learning on the whole. Attention is so critical for human development that it should be the most widely discussed subject in teacher training, for this would enable instructors to identify their students' mental spaces and cognitive skills and thus operate classroom contents more efficiently. As a matter of fact, attention has been a guiding process for building a highly complex communicative system since the earliest human development stages. This can be observed as we study children in interaction in their various development stages.

Lack of attention can lead to poor life quality and put the life of children and those around them at risk. Attention is crucial as we cross the street, eat fish, or drive a car. The same applies to language as we attempt to reach intercomprehension goals and reply to situational demands. At old age, attention is affected by several factors such as people's not adapting to their new condition when they can no longer take actions that demand quick responses and skills typically available in younger organisms. This also includes basic daily routines such as not drinking enough water for proper hydration or eating products that are especially suitable for old age. Effects are more harmful when old age brings along a neurologic pathology that will ultimately impair higher cognitive functions. Organic responses can also be adversely affected by prescribed medicine or drugs and result as a physiological backlash to degenerative diseases.

A modern time language and linguistics professional is thus expected to act as an expert who masters such knowledge and is promptly able to identify and tackle problems of this nature in a multidisciplinary team. It is important to distinguish hesitation as conversational tool and strategy from “hesitation” apparently derived from lack of motivation. Likewise, a language professional should be aware that high speaking speed can actually be a sign of other causes rather than simply being in a hurry to say something.

In this chapter, we will look at attention as a key cognitive function for human species evolutionary adaptation (though not exclusively) and for sociocultural insertion. Tomasello (2003) states that humans have cognitive social skills to understand that certain elements (both linguistic and behavioral) can be selected in their environment. In a particular situation, each individual can thus take over specific remarkable features within their own universe. Language is part of joint attention scenes in which understanding someone’s intentional action entails another person’s action goals in relation to his/her intentional states. This occurs in a context where the speaker and the hearer should share information so as to jointly act towards commonly related action and language. Through socially established agreements, this works as a processing, adaptive and sociocognitive tool that enables people to set up and reshape symbols and linguistic constructions out of other existing forms.

We will now use examples of syntactic coding in language usage to provide evidence on how this attention was shared during the linguistic complexity building process.



Figure 1: Markedness principle illustration

Figure 1 depicts the role of markedness in a specific communicative sequence. The upper-level red-tipped match stick in a sequenced line of black-tipped sticks leads us to perceiving what is standing out in the picture. Our attention system is then directly driven to focus on the red-tipped stick. The in situ location is key to understand a context that stands out in a sequenced series, i.e. planning is required to reach a contrasting effect. This exercise bears a complexity degree: the more mature a person is, the quicker he/she will spot the contrast built in the sequence. This elementary exercise allows us to refer to three key criteria for markedness/complexity correlation as we learn how distant applied syntactic arrangement is from common usage in society:

- a) **Configurational complexity (structural/constructional):** A marked configuration tends to be more complex (or longer, heavier, more distant from that in commonly used practice) as compared to unmarked configuration.
- b) **Frequency array complexity:** A marked construction is likely to be less frequent than its corresponding unmarked counterpart.
- c) **Cognitive complexity** – A marked construction tends to be more cognitively complex than an unmarked construction. Just as important, a marked construction will require higher linguistic knowledge (i.e.,

higher mental effort, more attention, longer processing time) as compared to an unmarked structure/construction.

Although these criteria were listed separately, there is a correlation between configurational markedness, cognitive markedness, and low occurrence frequency.

In short, context plays a critical role in analysis: the same construction can be marked in one context but can stand as unmarked in another. It will always be necessary to consider usage in *situ*. That is the reason why Givón (1995) – as well as all following functionalist and sociocognitive studies – agree that markedness depends upon context. Hence, the need to include communicative, sociocultural, cognitive, biological, and historical factors in the analysis.

3.2. The iconicity principle – searching for Narcisus

As we grasp how a principle works, we will soon try to invalidate it. This would be a great finding for a linguist, whose name would then be forever referred to in handbooks and compendia. But why is a principle so theoretically relevant?

Principle derives from the Latin word *principium*, which means *the beginning of it all*. As a result of metaphoric slide, principle was later used to refer to something that is valid and unquestionable because it is primary, i.e. the *origo* of all other disclosed, more complex truths. A functionalist's daily work includes the principle of iconicity to a more complex extent and – as far we see it – more dependent on the sociocultural logic that has symbiotically settled down in a person's mind. As time passes by, this logic will survive as something recklessly stagnant and opaque, deeply rooted, and ingrained in language grammar.

In several study fields, especially cognitive studies, we learn that the mind has a great passion for analogy. Comparing is a mechanism to acknowledge similarities and differences in order to register, file and eventually settle down the knowledge acquired. Accordingly,

comparing is a learning mechanism. As one activates this mechanism, each information linguistic input (whether similar or identical) in a given context will imply easier processing, less energy, and mitigated mental distress. Because it aims at survival, analogy is basically an anatomic strategy.

Language is a survival mechanism, too. Not only does it enable people to form bonds, but also allows human species to learn about the past (just like we are doing right now in this interaction instance) and projects us forward into the future (by means of younger minds and their insights). Each mind that learns a mother tongue is like an evolution device. Surviving does not mean storing energy only, it also means sharing (i.e., give and receive affection and attention). A way to accomplish this is building information routines in a grammar with scarcely known complexity layers.

Grammar (the linguistic system) is a cognitive gain that reveals the aforementioned passion for analogy in the light of one's mind. Calculation mechanisms monitor input items and organizes them according to markedness gradients. This is a highly complex, economic system powered by metaphor and metonymy, which, in turn, should no longer be regarded solely as discourse resources or figures of speech. They are actually powerful grammar evolution tools that use dazzling wires not completely known to date. These wires include the *iconicity principle* and *cognitive categories*, which are guided by human senses such as vision (figure and ground⁹). There appears to be no doubt that syntactic complexity is an achievement for human species in the art of communicating through, among other things, a vocal apparatus and

9 An example of such gain is found in *To see and not to see*, by Oliver Sacks (1995). In this true story, a blind man recovers sight after a successful surgery. However, as his brain had no prior training on seeing things, his focalizing and vision plan categories, among others, were not gained until he went through a lengthy training program. This program included experiencing his everyday routines in exercises that were most of times quite frustrating. Seeing is not only a biophysical gain, but is also social and subjective.

biophysiology. We should bear in mind that pragmatic intentions and prosody can give shape to semantic forms (morphology).

The more a word or construction is repeated (i.e., the more usual or frequent it grows), the more generally used (social adherence), productive (in varied contexts and roles), and automatic it may be, thus requiring less cognitive effort and implying lower attention demands. However, it is important to point out that what is thereby settled is not only the word, but the context in which it is consistently and routinely used:

[...] decreased mental effort and lower attentional demands (Posner & Snyder, 1974; Schneider & Shiffrin, 1977; Schneider 1985; Schneider & Chein, 2003; *inter alia*).” The interaction between rhythmic-hierarchical structure, increased expertise and a more strategic deployment of limited attentional resources is also found in complex motor routines (‘schemata’) employed in walking, grasping, typing, dancing or piano-playing (Shapiro, 1978; Shapiro & Schmidt 1980; Thelen 1984). (Givón, 2009, p. 287)

Likewise, the less common something is, the less frequent, productive, accessible, and routinized it will be. It will therefore take higher energy and time demands to be processed because more conscious attention is required. That is to say higher conscious attention leads to slower and more careful context monitoring. The opposite scenario shows that more common and usual things entail more automatic processing, less effort, and a lower degree of conscious context monitoring. It is somewhat like writing a regular school essay versus a college application essay: the latter will certainly demand more conscious attention to be deployed because it is not a routine task. On the other hand, no prior regular writing practice implies that a person will lack writing and energy saving skills as required for an ordinary school essay.

Everyone has in themselves an internalized background of experiences (like a repertoire). Not all of these experiences will require

the same degree of attention because they have been submitted to a wide range of input intensity. Learning how to foresee how much attention (and energy) a situation will require is also a judgment skill previously developed by individuals. This calculation skill originates from experiencing frequency. We calculate the energy to be spent on the basis of how frequently these experiences have occurred. Frequency is therefore a highly relevant factor in linguistic experiences.

Interactional situations are not the only condition where significant input plays a key role in the corresponding response. Each of us has some spots inside where experiences are paired and processed. According to Damásio (1996, pp. 95-96), impaired or harmed neurological conditions will somehow result in limited reasoning and decision making as well as narrowed emotions and feelings. This leads us to the conclusion that embodiment and language act accordingly and in such a way that if one of them is affected, the other will materialize this systemic distortion on the grounds of iconicity.

First, there is a region of the human brain, the ventromedial prefrontal cortices, whose damage consistently compromises, in as pure a fashion as one is likely to find, both reasoning/decision making, and emotion/feeling, especially in the personal and social domain. One might say, metaphorically, that reason and emotion “intersect” in the ventromedial prefrontal cortices, and that they also intersect in the amygdala.

Second, there is a region of the human brain, the complex of somatosensory cortices in the right hemisphere, whose damage also compromises reasoning/decision making and emotion/feeling, and, in addition, disrupts the processes of basic body signaling.

Third, there are regions located in prefrontal cortices beyond the ventromedial sector, whose damage also compromises reasoning and decision making, but in a different pattern: either the defect is far more sweeping, compromising intellectual operations over all domains, or the defect is more selective, compromising operations on words, numbers, objects, or space, more so than operations in the personal and social domain. [our highlight]

In short, everything humans produce for their own comfort and survival stems from this needs-use *calculus*, but the whole systemic set must be fully functioning so that responses are suitable to situational/contextual demands. In early development stages, a human being has no paired conditions based on which he/she can project any intention whatsoever. However, his/her attention system will be working in full swing. In mature developmental stages, it is not exceptional that losses are signaled in a biophysical manner. The same occurs to language and grammar as a response to calculation. We count on a complex framework that provides us with energy saving and long survival. Everything that is productive and frequent will engender a framework that is ultimately rooted in grammar. This grammar emergence process can be referred to as grammaticalization. Unlike many other processes, it is not conscious but is rather a human call for anthropic experiences whereby the human species is struggling for survival in the language world.

For these reasons, iconicity is an unmarked theme in Givón's works. The instances to which we are led for recognizing how it works are difficult to observe in more grammatical language layers. What really matters is the fact that as soon as we identify them, we can immediately acknowledge shared intentions, motivations, and attitudes as linguistically marked, though they are highly used in social terms by the people in a certain group.

Having an upcoming researcher successfully spot how the iconicity principle is acting on his/her object of study usually takes long training followed by great familiarity with the data being analyzed. And this, in turn, requires time as well as good category and selection criteria for proper data review. Familiarity with the study object – i.e., wide awareness of the established dynamics for usage – will provide a data analyst with suitable conditions for the insights yet to come.

Iconicity-based linguistic studies have allowed for further analyses and progress in providing evidence that some subprinciples will be

more strongly acknowledged as contextual motivation identification methods. This sheds light on Givón (2005) assumption of “context as other minds” where dynamics is pictured as a martial art fight scene, for example.

This also applies to the *quantity subprinciple*: the larger and more relevant is the amount of information to be conveyed to the interlocutor (which is often associated with predictability), the larger is the amount of form to be used in its morphosyntactic coding. According to Givón (1995b, p. 49),

- (a) A larger chunk of information will be given a larger chunk of code.
- (b) Less predictable information will be given more coding material.
- (c) More important information will be given more coding material.

As Votre (1992) postulated about this subprinciple, longer forms will trigger more information, unpredictable information, and relevance for thematic continuity.

Another subprinciple – *the subprinciple of distance* – prescribes that the more distant pieces of information are from each other, the more distant they are placed in their syntactic arrangement:

- (a) Entities that are closer together functionally, conceptually, or cognitively will be placed closer together at the code level, i.e. temporally or spatially.
- (b) Functional operators will be placed closest, temporally or spatially at the code level, to the conceptual unit to which they are most relevant. (Givón, 1995b, p. 51)

Some years prior to that, Haiman (1983, p. 782) referred to this concept as follows, “The linguistic distance between expressions corresponds to the conceptual distance between them.” The cognitive basis of associative memory is primarily associated with this subprinciple. Placing cognitively related structures syntactically closer to each other will allow the associative memory to perform quicker processing. Cognition is therefore somehow reflected in syntax.

All simpler and more expected information – i.e., already predicted by language users – will be expressed by means of a less complex grammatical and morphological mechanism and will be given less coding. Unpredictable information will conversely be assigned longer (i.e., a larger amount of form) or more complex (though of the same size) coding. It follows that what is at stake is not only form size, but also thought complexity, which is likely to reflect in the complexity of the expression, i.e. “the more disruptive, surprising, discontinuous or hard to process a topic is, the more coding material must be assigned to it.” (Givón, 1983, p. 18) Choosing a construction over another is never arbitrary or void of meaning.

Givón (2009, p. 12) also points out some correlations between linguistics and cognitive complexity:

- a. **Coding:** More complex mentally-represented events are coded by more complex linguistics/syntactic structures.
- b. **Processing-I:** More complex mentally- represented events require more complex mental processing operations. Therefore,
- c. **Processing-II:** More complex syntactic structures require more complex mental processing operations.

He notes that a general trend in language is having these three criteria combined together and that the common – association between structural markedness, cognitive markedness, and low frequency comprises the overall reflection of iconicity in grammar (Givón, 1995, p. 28). As one looks at linguistic constructions in different languages, one will find that what is cognitively complex in one language will probably be so in the other language. To this sense, Cummins & Swain (1986, p. 155) state that

(...) any language task which is cognitively demanding for a group of individuals is likely to show a moderate degree of interdependence across languages. In general, significant relationships would be predicted between communicative activities in different languages which make similar contextual and cognitive demands on the individual.

Using inaccuracy linguistic constructions, for instance, is thus not complex in one particular language only. This can be observed in other languages because intention itself is more complex. Therefore, every item (or construction) that undergoes a grammaticalization process will become more abstract and more complex. As they bear this in mind, linguists will be capable of designing action plans and checking the occurrence contexts of this phenomenon as a useful and safe strategy to measure complexity levels in expressions.

In the following chapters, we will apply these cognitive and linguistic principles to some phenomena that have been especially investigated by Brazilian linguists.

PART II

SETTING THE FOCUS ON OBJECTS

Chapter 4. Acquisition, usage, and language loss processes

In this chapter we look at how recursion shapes grammatical processes and provide evidence as to how linguistic complexity plays a role in language acquisition and the subsequent stages of grammatical evolution in language use. As we do so, we shall focus on how some of Givón's widely explored concepts can be applied, particularly those grounded on the iconicity principle.

We will start by exploring how cognitive functions have favored the rising of human communication. We will then discuss how human ontogeny – from a baby's evolution since its birth – denotes the steady acquisition of more complex communication forms.

Syntactic complexity and iconicity or markedness will then be examined in various phenomena such as *(i)* initial proposition constructions, *(ii)* verb-based discourse markers, *(iii)* correlated propositions with negative polarity and focalizer, *(iv)* combined clauses with appositive constructions, *(v)* politeness strategies in Eastern languages, and *(vi)* cognitive and communicative motivations while using the gerund in Portuguese varieties.

We will further approach grammar in its social and cross-cultural dimensions, i.e. grammar as something rooted in cognitive and social aspects. This will be illustrated by examples of Chinese-Brazilian onomastics and the negative assessment of the gypsy community. The following section discusses the cross-linguistic approach to syntactic complexity by comparing Portuguese from Brazil to Nheengatu in analogous functional contexts.

We will wrap up the chapter with some research on how aging affects language skills, with examples of impaired communicative skills as a result of Alzheimer's dementia (AD). This research also shows how music plays a role while interacting with the elderly.

4.1. Linguistic complexity in language acquisition

As we look at primate phylogenesis and human evolution as postulated by Givón (2009), we will soon reach the conclusion that humans are unlikely to have developed a specific language area in the brain, but rather they have adapted preexisting neurocognitive brain modules. Semantic memory skills, event representation, episodic memory, working memory, belief status representation, executive attention, complex hierarchy etc. have emerged in different evolutionary stages from originally independent, non-linguistic functions. However, it is widely known nowadays that verbal language could never have developed without previous module combinations. This means that several adaptations and connections have occurred in such brain modular structures throughout human phylogenesis in such a way that human communication emerged as a final product.

According to Givón (2009), when cognition is directly represented in language it means that the principle of iconicity is acting. Givón provides a good example of iconicity by placing together cognition and syntax, as shown in the table below:

Cognition		Language/grammar	
<i>System</i>	<i>Units</i>	<i>System</i>	<i>Units</i>
semantic memory	concepts	lexical semantics	words
episodic memory-I	events/states	propositional semantics	clauses
episodic memory-II	event chains	discourse pragmatics	clause chains

Table 2: Cognitive representation systems (Givón, 2009, p. 11)

Table 2 suggests a direct relation between cognitive and syntactic complexity, thus showing that the more complex a piece of information is, the more complex its linguistic coding will be. An example of highly complex information coding is clause chains, which represent event chains commonly placed elsewhere in space and time. The more recursion is demanded from interlocutors, the more complex their communication situation will be, and thence more complex clauses will be produced in their discourse. Givón (2009) points out that recursion played a key role in the rise of human communication grammatical complexity. In pre-human societies where our big primate relatives had the need to extend their foraging areas, new cognitive resources such as episodic memory had to be activated. This brought about the need to gain new communicative resources such as the act of referring to something in order to communicate important findings for the group (i.e. food, shelter etc.), which were generally spread around in space and time. It would therefore not take long until a more complex linguistic communication came to existence.

The study of human communicative complexity evolution in phylogenesis is obviously quite theoretical. We can go no further than inferring theories on the grounds of evidence found in modern big primate social behavior as well as in studies on linguistic change and variation. We will nevertheless dare say that a third inference pathway (maybe the most important of them all) can help us to use it as a comparison tool: the study of human ontogeny.

Givón (2009) is definitely cautious as he compares phylogeny to ontogeny with a view to studying linguistic evolution. He explains that the subjects being studied (human babies, human adults, and pre-adults) display very different evolutionary stages in their brains. Although he does not wish to compromise with comparing primate phylogeny to human ontogeny, Givón dedicates many chapters to describing language acquisition by both the human species (phylogeny) and the human baby (ontogeny). He then reaches the conclusion

that mental representation has occurred long before language in both scenarios. Givón acknowledges that cognitive representation is found not only in pre-human species, but also is a prerequisite for language acquisition. This means that although it might appear somewhat unwise to compare all the events a human baby undergoes in its ontogeny with the evolutionary events experienced by human species, it would be likewise unreasonable not to acknowledge the huge similarities between human ontogenetic and phylogenetic evolutionary paths. This is particularly so in the study of pre-linguistic communication and language acquisition.

The body relies on a primary nature and so does its survival. The body is the means by which a baby will have its first experiences in the world. As they evolve, babies experience the world around them and react to it. First experiences come with skin and mouth sensations (feeling cold or hot, having a wet diaper etc.). Later, as their motor coordination develops, babies will find a way to access their hands and feet until they eventually take them to their mouth. Actually, the mouth is the final goal of every tiny object babies can possibly grab, as if guided by the need of tasting every single thing around them. Until this stage everything is seen from the bottom up. And then comes a moment when reality literally flips around: babies find out they can lie on their stomach and raise their head. From this novel perspective, they learn that they can catch the objects they want and will soon realize that moving their limbs will result in faster space exploration. Later comes the impulse to stand up and take the first steps, followed by a newly discovered notion that “I am like the other, and the other is like me” (the so-called self-conscious proprioception). In typical children development, verbal language acquisition starts out of whatever the baby has learned and experienced through its body. All previously received input will then be gradually expressed through quite unpredictable forms, since input is comprised by language and visual, hearing, emotional, sensitive and haptic stimuli. These will all

come out as a set of rather meaningless combined elements. This was observed by Oliveira (2021) in a longitudinal study with a baby named Gu since his earliest embodiment stages.

In the earliest childhood stage, baby communication is essentially pragmatic, highly based on context, and expressed through interactional demands. We can thus classify this stage as deontic modality, i.e. a stage based on manipulative discourses with no epistemic theory of mind. The child does not yet know how to identify its interlocutor's belief states (actually, the child does not want to do so because it is evolving from the sensorial-motor development stage to the egocentric stage).¹ Givón (2009) states that pre-grammatical children – a stage where children's communication is remarkably dependent on their joint attention space (JAS)² and is based on clauses no longer than two-word clauses – bear highly iconic and context dependent communication. To counterbalance the lack of grammar in this stage, some highly iconic rules are recruited for the JAS, such as intonation, spacing, sequencing, and quantity rules. In this sense, two factors ensure that the intentionality of babies, whose speech is telegraphic and lack grammatical articulators, is understood: (a) the adult is willing to understand what is being communicated, and (b) babies are willing to put into use all their basic, concrete and body-centered resources in order to achieve what they want, i.e. finger pointing, stiffer body, facial expressions, emphatic voice tone on the desired object, topicalizing the intended goal in discourse and so forth.

1 According to Piaget (1971), until the age of two years babies are focused on understanding their own body and see it apart from other objects/people they interact with. During this period their attention is driven to the concrete world around them. As they turn two years old, children reach their utmost language acquisition level and start driving their attention to their own self. This is referred to as the egocentric development stage and goes on until the age of seven years.

2 Physical or mental space where attention is shared through triadic interaction. Tomasello (2003) notes that babies achieve this skill around the age of nine months.

An example of baby pre-syntactic communication iconic system can be found in a *corpus* excerpt from Oliveira's doctoral thesis (2021). The author's goal is to observe, describe, and examine the whole language acquisition process of a typical baby from his birth until 30 months of age. Oliveira explains that the baby, named Gu, is the son of an Ecuadorian father and a Brazilian mother, currently living in Brazil but in a bilingual Portuguese-Spanish environment. After his mother's normal pregnancy with no clinical events, Gu was born at term and achieved all developmental stages as expected: he first lay on his stomach and raised his head at age three months, sat down at six months, stood up at seven months, and started walking at 12 months. During this time, his relationship with the environment was mediated by his body: he would cry to express basic needs (feeling hungry, dirty diaper etc.) and gradually started realizing that he could use his hands to push and pull the objects in which he was interested such as his baby bottle and his favorite toys. As he flipped around and lay on his stomach, he made attempts at moving around to reach the objects he wanted. As he started crawling, he soon stood up and explored his surroundings. These events took place as he was around seven months old and were concurrent with the emergence of the permanence notion (the "where's mummy" game).

At the age of eight months, his protoconversation gained mimetic features. Gu appeared to be trying to imitate adult discourse by working on his intonation and making his body stiff, particularly when he was challenged. When he was around ten months old, Gu and his mother's ball playing clearly showed that his JAS was in progress, as he would interact both with his mother and ball at the same time (in the so-called triadic interaction). At this age, he began to babble his first words (*mamá* and *papá*) especially when he wished to be held by one of his parents with a clear intention to move from one place to another. However, Gu's JAS was not completely settled until he was 12 months old, when he demonstrated that he could definitely

understand the intentions of the adults with whom he interacted. That was when he started off his one-word stage.

At age 24 months, Gu achieved what Givón (2009) refers to as the two-word stage. Oliveira (2021) illustrates Gu's two-word stage with his *vamos* [let's] + *x* sentences: *Vamos passia?* [Let's have a walk?], *Vamos brincá?* [Let's play?], *Vamos comê?* [Let's eat?], *Vamos fazê estrela?* [Let's draw a *estrela* (=star)?]. Oliveira points out that Gu knows he should not say **Vamos comida?* [**Let's food?*] or **Vamos chupeta?* [**Let's pacifier?*] as he understands that the construction *vamos* [let's] foretells that there will be a movement, which in turn will result in an action. Hence the established scheme *vamos* [let's] + *V*, where *V* works as a verb slot.

Oliveira (2021) notes that Gu applied this construction for the first time by using the verb *passear* [go for a walk], which indicates that he had grasped his body's spatial movement concrete relationship in the context used by his mother. Soon afterwards, his two-word clause included other verbs such as those which do not necessarily imply spatial movement (like *Vamos comê?* [Let's eat?]) and then *Vamos fazê estrela?* [Let's draw a *estrela* (=star)?]. The latter construction leaves no doubt as to the auxiliary function of *vamos* [let's], which is placed in the scheme to do nothing but mark the interlocutor's demand to do something together with the hearer (exhortative function). The *Vamos comê?* [Let's eat?] and *Vamos fazê estrela?* [Let's draw a *estrela* (=star)?] constructions suggest a grammaticalization ontogenetic upload of the verb *ir* [go], which had its use in PB shifted from spatial movement to time movement and eventually specialized as a future marker.⁴

3 Translator's note: "Estrela" is the Spanish word for star. In Portuguese, the word is "estrela". In this example, the baby uses Portuguese and Spanish, meaning "Let's draw a star".

4 Translator's note: The Portuguese construction *let's* + *V* is formed with the verb *ir* [go] as in *Let's go* + *V*. The English verb *let* has no corresponding Portuguese translation in this particular construction.

Despite the fact that this theory does make sense, Oliveira (2021) poses some pertinent questions: How come Gu knows all that if he is as young as two years old? It took generations until the verb *ir* [go] was grammaticalized, so how is it that babies understand its more abstract usage? In the beginning, the use of *vamos* [let's] was basically iconic and literally represented spatial movement (as in *let's go*). Some hypothetical explanations to this are: (a) Gu has heard all different constructions with *vamos* [let's] + *V* and finally understood usage contexts, so he just imitated it in the right way and is not necessarily aware of the abstract nature of *ir* [go] (linguistics-based hypothesis); (b) Gu has not necessarily heard the more abstract constructions that emerged later and, as he uses *vamos* [let's] + *V*, he has the actual intention of inducing his interlocutor into a movement towards an action (e.g. *move on, I want to eat*). Therefore, schematization occurs at the level of language deontic function (pragmatics-based hypothesis); (c) once he grasps the meaning of the world around him on the grounds of his own body, Gu's reasoning (higher cognitive function) infers that the *vamos* [let's] + *V* scheme indicates moving his body in the surrounding space, but can also represent his interlocutor's will to move and accomplish his desire (embodiment-based hypothesis); or (d) all hypotheses are correct, given that in cognitive terms there is not one single way to understand, process, and produce linguistic constructions (holistic hypothesis).

Learning how to use the verb *ir* [go] in the *vamos* [let's] construction was a turning point in Gu's life. He understood that he can use it to have people take action *for* and *with* him, i.e. he could thenceforth manipulate his interlocutor to reach not only the objects he desired, but also to achieve desired actions by using his interlocutor as a tool. Concurrently to this basically manipulative communication accomplishment, Gu went on developing other skills. As he says *Vamos passidá?* [*Let's go for a walk?*] he is clearly stating something he desires and, depending on his social life, he appears to be developing the awareness

that using a question is a more socially effective manipulative strategy in his culture. This shows us how language shifts from deontological to epistemic modality. In other words, although it is legitimate to refer to a certain degree of arbitrariness in natural language syntax, it is likewise reasonable to state that language is strongly iconic and requires high attentional demand in the JAS during the human ontogenesis pre-grammatical stage.

As they observed the pre-grammatical stage in ontogeny (as was done with Gu) and the early stages of second language acquisition (pre-grammatical pidgin), cognitive researchers (Tomasello, 2003 and Givón, 2009, among others) have resorted to phylogenesis as the basis for their inferences on human species language acquisition.

4.2. Linguistic complexity and pragmatics

A) Building the logic of a thesis

We agree with Givón (2018 [1979]) when he states that language structure reflects the structure of the human mind. This idea underlies all his works and soon took shape in our research. The rules that prescribe social living and human interactive gathering can be paralleled with those who determine how a first paragraph comes before a second as we are writing an essay. Even the most outgoing person will have a hard time jotting down his ideas for a first paragraph in an essay. That was noted by Vicente (2014) as she reviewed teenagers' writing samples and their complaining about how difficult they found it to set a link between an essay proposal and the thesis itself. In other words, they faced a huge obstacle as they were elicited to write an argumentative text.

As she looked over 1600 argumentative essays written under typically stressful college entrance exams, Vicente (2014) hypothesized that iconicity was an efficient tool to understanding this phenomenon. She suggested that since a thesis is some sort of fractal within which lie

textual argumentative possibilities, the way a thesis was written could be assessed on the grounds of informational amount and linguistic complexity. Likewise, it would be possible to perceive content *integration* both in semantic and syntactic levels. Let us take the following examples from essays written by applicants for a Brazilian university with a very competitive admission process. The examples (translated from Portuguese from Brazil) will show the essay title and the first paragraph where the thesis can be found:

[1] Title: *The end or the beginning?*

Let us talk about individualistic nations that set barriers, obstructions, even for visitors.

(FUVEST University Entrance Examination essay, 2009)

[2] Title: *Social liquefying*

In his “Liquid Modernity”, sociologist Bauman portrays the crumbling of social tissue and its consequences on human relationships by using the interpersonal relationships, subjectivity, and individual freedom meltdown metaphor. Everything is irreversibly melting down though the liquid state is paradoxically amorphous. As we look at this context in the current scenario, we notice that social relationships have become more and more liquid just as described by the Polish writer. Values like selfishness have gradually overcome others like sympathy. (FUVEST

University Entrance Examination essay, 2011)

Although this is a non-conversational activity (i.e., writing rules *must* be applied), the author of text [1] did not actually realize that. Vicente (2014) explains that the applicant felt as if he/she were face to face with his/her interlocutor (the examiner) and turned a written product into a conversational piece. This was materialized in the use of “*Let us*” whereby the writer chose to use a verb form combined with *us*, thus including the examiner in the “conversation” and setting up the stage for a typical face-to-face exhortative function. The writer was therefore unable to set a distance from him/herself as he/she was building his/her thesis. Furthermore, the writer set up his/her thesis in a two-clause paragraph. The information amount associated with

the simple nature of syntactic coding denotes the iconicity principle in action. The writer's poorly complex semantic formulation projects information amount on a similarly poor pragmatic setting as well. In general, little effort on contents reflects low assessment indexes.

In contrast, text [2] shows a writer who applied a more robust universe of information as distributed in various clauses. In this excerpt, Vicente (2014) shows that the writer's syntactic arrangement started with accessory clause forms and eventually expanded the semantic context to a significant extent as each new clause in the paragraph strengthened the reader's comprehension. While text [1] bears less information amount and a lower number of forms (meaning that simple things are expressed through less complex morphological and grammatical mechanisms), text [2] shows a contrasting scenario by delivering more information and form to allow for a more complex expression of morphological and grammatical mechanisms.

[3] Title: *Mankind and overcoming: borders*

In 1750, when Portugal returned Sacramento to Spain in exchange for the right to take possession of the lands west of the Tordesillas line, most of Brazilian borders were definitely settled. In addition to the aforementioned Treaty of Madrid, another key treaty was the Petrópolis Treaty, through which Acre became a part of Brazil. Nowadays, we shout out proudly about our long borders for the sake of national sovereignty. Ironically, in this time of well-defined borders, a telephone company has launched its "live without borders" slogan. What sort of overcoming does the aphorism refer to? (FUVEST University Entrance Examination essay, 2009)

As we go through text [3], we notice that *Portugal* is the subject of two predicators (*return* and *take possession*), formally connected in parataxis and yet with clear consecutive semantic effects (hypotaxis). Further, the first sentence has a complex hypotactic clause combination. This is one of the forms used to connect information, in addition to relative clauses (with a restrictive semantic function in the argumentative focus). Progressive complexity takes shape as contents

are arranged in a specific order. The integration and linear ordering subprinciples are thus accomplished in the text.

As she applied a statistical approach to the data, Vicente found that an opening paragraph is more likely to start with a statement/declarative clause (texts [1], [2], and [3]) than with a provocative questioning construction (as in text [4]).

[4] Title: *Psychological border*.

In psychological terms, to what extent can a man reach another man's mind? As research develops, it will not be long until our psychological borders are overcome. (FUVEST University Entrance Examination essay, 2009)

In this framing, the writer puts more efforts to invite the reader to think about the theme at the beginning of the text. Also, the writer creates an effect through which an answer or solution for the theme is then expected from the reader. This expectation is nevertheless not always met, thus leading the reader (in this case, the examiner) to assign a negative assessment to the thesis.

Of course, these kinds of complexity do not cover all the cases identified by Vicente (2014), but they do allow us to understand that complexity degrees can be extracted from argumentative choices in essays.

B) Contrast coding in correlative constructions

It is very interesting to learn that our eyes do not see objects, but actually capture them so that the ventral occipital lobe will process and return them as vision. Although contrast is primarily a resource developed for visual skills, we can metaphorically extend its meaning towards syntax. One of these resources in PB is the set of correlative conjunctions, which enable us to place contrasting elements side by side. That was noted by Ribeiro (2014) as he investigated the use of correlative constructions in college entrance exams writing samples.

The attention focus is then denied and shifted to another spot in the chain.

The mechanism underlying this effect appears to be syntactic coordination whereby two information chunks are sequenced. The first chunk brings along negative polarity, whereas the second one signalizes process focalization. Thus, this comprises a powerful set of syntactic-semantic-pragmatic tools that result in an argumentative game: the first item in the pair is launched in negative polarity and is later helped by the second pair item, a focalizer that guides the reader's attention to what is actually intended to be discussed. Since this is an exceedingly elaborated syntactic tool, using it implies higher complexity and a higher degree of cognitive processing. The correlative pairs in PB are *não... mas apenas, não que... porém, não que... mas, não é que... mas que*, as shown in the examples below:

[5] *Não cabe aqui longamente os fatores dessa dissolução, **mas apenas** destacar que é justamente no campo dos relacionamentos cotidianos, especialmente a amizade, que vemos com mais clareza essa dissolução. [It would **not** be suitable to provide a lengthy description of the factors that led to this dissolution, **but** we could **just** point out that everyday relationships, especially friendship, is a particular field where we can find this dissolution clearly.] (FUVEST University Entrance Examination essay, 2007)*

[6] *Se em uma nação marcada pela diferenciação entre negros e brancos, aristocratas e plebeus, patrões e proletários algum dia será possível haver condições igualitárias e justas, é difícil afirmar. Mas o empenho para que isso ocorra tem que acontecer, por isso manifestações como a do grupo “Contra Filé” e a existência de partidos como o PSTU é benéfica. **Não que** eles estejam totalmente certos, **porém** é bem-vindo a oposição aos conservadores princípios dos antigos sinhozinhos e coronéis. [Whether there will ever be egalitarian and fair conditions in a nation marked by the differences between black and white, aristocrats and plebeians, bourgeois and proletarians, is difficult to say. But efforts to achieve that are mandatory, and that is the reason why demonstrations from groups like “Contra Filé” and parties like PSTU are beneficial. It's **not that** they are totally right, **but** an opposing movement to the conservative principles by old slave masters and colonels is really welcome.] (FUVEST University Entrance Examination essay, 2005)*

[7] ***Não que** a grande mídia tenha elevados padrões de qualidade e profissionalismo, **mas** é sempre mais fácil cobrar as responsabilidades por um jornal impresso ou uma transmissão gravada do que de um e-mail encaminhado ou de um comentário anônimo postado em um “blog”. [It's*

not that the mainstream media have outstanding quality and professionalism standards, but it is always easier to claim responsibility from the press or television broadcasting than from an anonymous e-mail posted in a blog.] (FUVEST University Entrance Examination essay, 2008)

[8] *Não é dizer que o estudo acadêmico não tem valor, mas que a produção deve ser julgada pelo que ela é, não por quem a fez, possibilitando a real separação de joio e trigo, em vez do joio bonito e do trigo feio.* [This **does not** mean that academic education is worthless, **but** production should be assessed for what it really is rather than for whom has made it, thus making it possible to separate the sheep from the goats instead of separating good-looking goats from bad-looking sheep.] (FUVEST University Entrance Examination essay, 2008)

[9] *Nesse quadro, os excluídos não têm papel de sujeitos, mas sim de objetos da História. Os ricos vivem às custas dos pobres, entretanto, os detentores do capital.* [In these circumstances, the excluded ones will **not** play the role of subjects, **but rather** objects in History. The riches live at the expense of the poor, however the capital [remains in the hands of the rich].” (FUVEST University Entrance Examination essay, 2004).

In each of the examples above, the negative focus contributes to emphasizing the correlative marker (morphosyntactic function) and also brings attention to accomplished assessment (semantic-pragmatic function). The second element of the correlative pair appears to be a resource to introducing one’s opinion where the language user is concerned about his/her *ethos* in the presence of an interlocutor.

In text [9], the correlative pair **não** (polarizer)/**mas sim** (focalizer) flags a discursive-pragmatic strategy in an apparently low complexity, since the negative-positive pair is highly recurring in lower cognitive effort usage. However, the underlying strategy shows that a polarizer voids the information in the first sequence (probably because it is shared with and known by the interlocutor) and overlays another informational sequence preceded by a focalizer. This focalizer ensures relevance to the new information. In this sense, the apparently simple coding is actually concealing a strategy to foretell shared knowledge and immediately presents what should be, surprisingly to the interlocutor (from the writer’s perspective), a totally new relevant piece of information.

Here, negative polarity is not completely expressed by introducing negative information. Instead, it emerges by not acknowledging what the interlocutor is supposed to know and by imposing a new anticipated truth as something known solely by the writer. It is thus possible to identify form and function (meaning) as two aspects that are intrinsic to the analogic process and are bound according to the speaker's needs. The speaker assigns the form with meanings that are targeted at the interlocutor as new information, but resorts to existing linguistic forms and constructions in order to code more concrete, basic functions.

C) The markedness principle in verb-based discourse markers

If we take interaction as a continuous process of building up and negotiating meanings (Hilgert, 2005), we can envisage that interlocutors use discursive forms and strategies to avoid disagreeing with each other's assumptions, ensure that their intentions are successfully achieved, and check out shared knowledge and information. As they engage in interaction, interlocutors take on their own responsibilities in building up and negotiating meanings in specific utterance contexts, including:

- a) speaker's responsibilities: maintain the communication channel and avoid undefined topics, lexical ambiguity, and syntactic complexity that is unsuitable to shared information;
- b) hearer's responsibilities: maintain the communication channel and avoid mistaken identification of speaker's information, assumptions, and intentions so that mutual understanding is sustained.

Both speaker and hearer play an active role in maintaining their communication channel as they are unceasingly monitoring themselves and each other to avoid misunderstanding. If nonetheless any misunderstanding arises, speaker and hearer are ready to find where it occurred so that they can promptly manage it, suggest a solution,

and resume interaction. This means that if they sense that successful communication and meaning negotiation are somehow threatened as a result of any of their own responsibilities, speaker and hearer will use some resources to solve the problem they have caused to their expected discourse flow.

Although they are commonly referred to as *rephrasing*, these negotiation resources emerge in the *phrasing* process itself whenever an utterance is originally put into a particular form and in a particular instance where ideas and intentions are meant to be expressed. We could thus open to debate whether there is such a thing as original phrasing: given that in language nothing comes originally from zero, each and every interlocutor will engage in interaction with previously assumed beliefs, ideologies, and intentions based on which they will take part in conversation and take action on what they hear or say. For the sake of clarity, we will henceforth take *phrasing* in its broad sense and (a) we will use the more mentally and cognitively comprehensive terms *elaborate* and *elaboration* rather than *phrasing* or *rephrasing*; (b) *elaboration* is herein meant not only the process of setting a discourse act, but also the semantic-syntactic, pragmatic, and discursive rearrangement of any information and/or intention that howsoever emerges in discourse or is expressed by interlocutors in a particular utterance. Elaborated discourse is therefore whatever is phrased or rephrased by interlocutors during interaction. In this sense, Marcuschi (2002) finds it critical to acknowledge that phrasing includes both phrasing and rephrasing text forms.

It is noteworthy to mention that speaker and hearer play a symmetric role in interaction. Although some assign the speaker with an “active role” (i.e., someone who actively produces meanings and acts on the other) and the hearer with a “passive role” (i.e., someone who does nothing but is passively taking the meanings conveyed by the speaker), it is our understanding that interaction is a “two-way

road” where both subjects play an *active* role by building/rebuilding and negotiating/re negotiating discourse with their own techniques, forms, and discursive strategies. As Julião da Silva (2010) noted, verbal interaction cannot be analyzed unless the following is considered:

a) text building activities (the “original” nature of discourse): how the text and its utterances are built concurrently with its production in varied discourse levels such as semantics (building a text based on its meanings), pragmatics and function (the conversation act is an action guideline and supports language functions within a social, situational, and contextual framework with coercion and expectation forces), metadiscourse (language acts on itself so that language users manage conversation and build a chain of utterances), and culture (language is bound to culture because it acts on multiple channels and semiotic levels).

b) text rebuilding activities (the redirected nature of discourse): text discontinuity features, i.e. how the information flow is deviated from its original course because, in principle, the speaker could find no other way to build it immediately or definitely.

Far from being a hindrance to successful interaction, discourse discontinuity encompasses a set of tools aimed to ensure text building and meaning negotiation as well as manage interaction. As she examines the conditions in which written language is produced, Moraes (1997) highlights that concurrent planning and production in conversation ultimately leave their marks in spoken language syntax. What apparently seems confusing, chaotic, and discontinuous in a dialog is actually a complex pragmatic and cognitive groundwork for elaborating utterances. This is endorsed by the fact that at the end of the day speaker and hearer will not only succeed in managing meanings but will also lead a successful natural conversation.

This supposedly convoluted verbal interaction as speaker and hearer engage in interaction and meaning elaboration – which Hilgert (1997) referred to as giving form and linguistic organization

to contents, ideas or the communicative intention as a whole – most frequently feature discourse markers⁵ (DM).

The framework of utterances with DM can be examined in the light of functionalist theories, especially the markedness principle as discussed by Givón (1991, 1995, 2018). This has been a guideline to Julião da Silva’s research as we shall see now.

Typical features of DM and markedness

In a key contribution to Brazilian Conversation Analysis research, Risso, Silva & Urbano (2002) provided a systematic list of the core features of a DM. In this list, the authors pointed out basic features and representative components based on which a form can be classified as a typical or atypical DM. To pursue this further, recent Brazilian grammars based on functionalist theories (such as the “contemporary Brazilian Portuguese grammar” as referred to by Vieira, in Faraco & Vieira, 2016) have paid some attention to DM, which not until long ago were utterly ignored and regarded by prescriptive and normative grammars as nothing but spoken language forms. This new analytical approach not only made it easier to examine DM, but also included these forms within the scope of linguistic functionalism and cognitive linguistics. So what does it take to be a DM? The following chart is brief checklist of what Julião da Silva takes as the core features of a DM:

5 Risso, Silva & Urbano (2002) renamed as **discourse markers** those structures formerly known as **conversational markers**. According to the authors, *conversational* covers a limited field as it refers to forms used in conversation only. Julião da Silva agrees with such a broader approach and has used **discourse markers** in all his research works since then.

(a)	DM operate as verbal mechanisms in an utterance, act in the text-interaction organization level, and perform functions that are commonly assigned in interpersonal relation projections.
(b)	DM operate in the utterance level rather than in the informational level. However, they ensure that informational contents are effectively anchored on a pragmatic basis.
(c)	DM display various levels of semantic-referential transparency.
(d)	As for their role in clause syntactic embedding, DM are basically independent forms.
(e)	DM are most commonly used with a boundary marking prosodical feature.
(f)	DM do not suffice as full utterances. From a communicative perspective, they are not autonomous forms. This is one of the reasons why they do not fall into “interjection”, “vocative”, or “phrasal word” categories.
(g)	In their most usual pattern and usage, DM are one- or two-word forms with three stressed syllables at the most.
(h)	In spite of (g) above, a higher number of lexical units or stressed syllables in a DM can be motivated by the markedness principle: (a) structural complexity (the marked structure tends to be more complex (or larger) than the corresponding unmarked one), and (b) cognitive complexity (the marked category tends to be more cognitively complex-- in terms of mental effort, attention demands or processing time--than the unmarked one).
(i)	In their form, DM can be more or less fixed and are unlikely to feature phonological, inflective or constructional variation. The high tendency of DM to emerge as fixed forms is endorsed by the fact that few DM result from contraction (<i>não é - né</i>), repetition (<i>ahn - ahm ahm; etc - etc etc</i>), inflective change (<i>entende? - entendeu?</i>) or phrasal extension (<i>digamos - digamos assim</i>).

Table 3: Basic core features of DM

In the research described here, Julião da Silva has focused on (h) and (i) to examine how the markedness principle as described by Givón (1991, 1995) can be observed in DM usage. The three criteria of the markedness principle (structural complexity, frequency distribution, and cognitive complexity) show us that the marked category tends to be more complex (or larger) and less frequent as compared to its corresponding unmarked category. The marked category also tends to demand more mental effort, attention demands or processing time. It is worth noting that as Givón (1995, p. 27) says “tends to be” (rather than “is”) he considers that markedness depends on context, “Markedness is a context-dependent phenomenon par excellence. The very same structure may be marked in one context and unmarked in another.” This careful approach to context dependence is likewise suitable to the functionalist approach to DM, which may act as such depending on

the context. The following examples illustrate this context dependence with *saber* [know] and *querer* [want] verb-based DM:⁶

[10] *E ficaram ficou todo mundo discutindo onde ia e ninguém sab-/ dizia nada... até que ele ele se irritou... se irritou mesmo... Quer saber, não vou a lugar nenhum ele disse. [And then everybody went on talking about where they'd go and nobody kne-/said nothing... then he he he got upset... really upset... You know what, I'm not going anywhere he said.]*

[11] *Ninguém quer saber aonde ele foi. [Nobody wants to know where he has gone.]*

In [10], *quer saber* can be classified as a DM on the basis of the core features listed in Table 3, although it should not be taken as a typical DM because features (c), (d) and (f) are not strongly applicable. However, the context (and collocation) in which *quer saber* is used leaves no doubt as to its pragmatic-discursive nature as a DM. In contrast, in [11] – a hypothetical sentence in Portuguese – *quer saber* does not constitute a fixed form or phrase by itself. Here, *quer* works as a modal verb to *saber* and holds back its full semantic traits (“want”). This is easily verifiable as we operate a “minimal pair” change in the sentence and replace *quer* by *deseja* [wishes]: this commuting operation will result in a proposition with identical semantic value as compared to the original clause (“Nobody *wishes to know* [*deseja saber*] where he has gone.”). As opposed to [10], *deseja saber* [wishes to know] has no pragmatic-discursive function in this context and is therefore not a DM.

As he invoked the markedness principle criteria, Julião da Silva came to the following conclusions:

a) Marked DM are more structurally complex. Based on DM core feature (g) in Table 3 (“In their most usual pattern and usage, DM are forms limited to one or two words with three stressed syllables

6 These examples are from Julião da Silva’s private *corpora*. Note that the best English equivalent to *quer saber* (which literally means “[do] you want to know?”) is *you know what?* Unlike the Portuguese two-verb DM, its corresponding English DM is a one-verb form.

at the most.”) and the structural complexity criterion, we can infer that typical DM are syntactically less complex forms because they operate in the utterance level rather than in the informational level (as described in (b) in Table 3). It then follows that atypical DM tend to have more complex or larger structural complexity.

b) Marked DM are less frequent. As motivated by the frequency distribution criterion whereby a marked category tends to be less frequent than its corresponding unmarked category, typical DM are more frequently found in most Portuguese spoken language *corpora*⁷ as compared to atypical DM. Let us take the *saber* verb-based DM family (*sabe*, *sabia*, *tá sabendo*, *quer saber*, *vai saber*) as an example: the structural complexity markedness criterion confirms that *sabe* is the least marked DM of all family members and is also less complex as compared to its counterparts. Moreover, the subjectivity mark in *sabe* is lower than that in other *saber*-based DM: as a non-DM it addresses singular *you* (“*you [singular] know*”); as a DM it can be pragmatically replaced by its plural-*you* form (*sabem*; “*you [plural] know*”). Lastly, it can be expressed by a less phonologically complex form (*sab*) with the same pragmatic-discursive function. The frequency distribution markedness criterion also validates this, given that *sabe* is the most frequently found DM in all *corpora* used. As a conclusion, *sabe* is the unmarked DM of all *saber* verb-based DM family.

c) Marked DM are more cognitively complex. Among the three markedness criteria, cognitive complexity establishes that the marked category tends to be more cognitively complex. To this extent, a marked DM would demand more attention, effort, and cognitive effort than its corresponding unmarked DM. In his study on cognitively complex

7 *Corpora* organized by and used in Julião da Silva’s research as well as those on <https://comet.fflch.usp.br/corporaportugues>.

DM, Julião da Silva examined some typical verb-based DM and noted that verbal aspect plays a key role in markedness.

Markedness in verb-based DM features

Givón (2018 [1979]) refers to aspect⁸ as he points out that

in the grammaticalization of verbs into tense-aspect markers, concrete verbs of spatial location, motion or possession are bleached into various temporal operators, most commonly: a. sit/stand/lie/stay > progressive aspect b. go > future tense/modal c. come/arrive/have > perfect > perfective/past (*On construing a universe: Space, time, and being*, p. 237).

We do believe that verbal aspect should be considered as one examines verb-based DM. In this sense, Julião da Silva has noted as follows:

a) *entendeu?* [*you got it? = you know what I mean?*] – In this DM, the simple aspect (here with the verb in the simple past) expresses a completed action that occurred in a single instant in the past. In interaction, it indicates that the cognitive contents in the previous clause is completed, while in the discourse level it flags that the speaker has finished his/her reasoning. The structural complexity criterion in this DM aspect applies to the extent that a completed process or reasoning is reflected by a less pragmatically complex form. As a less complex form, DM is therefore an unmarked DM.

b) *tá entendendo* [*you know what I mean?; meaning literally “are you understanding”*] – The present progressive aspect describes an incomplete

8 Travaglia (2016) defines aspect in Portuguese as a non-deictic verb tense category through which duration and/or stages of a situation are marked. These stages can be considered from different perspectives such as progress, completion, and accomplishment. A similar approach to aspect is adopted by Souza & Machado (2020), who associate aspect to the internal time projection of a clause. To these authors, it is the aspect that enables us to visualize an action in its various moments, e.g. when it is finished, as it develops or is repeatedly performed, when it begins and so forth.

action in progress. In this particular case where *tá entendendo* DM is used, the verb *entender* [*understand*] is used in the present continuous tense to indicate that the cognitive contents of what was said before is yet to be completed and thus demands continuous attention and cognition effort from the hearer. As opposed to (a) above, the structural complexity criterion of markedness motivates a marked DM here: the progressive aspect iconically reflects a process or reasoning that is still in progress, which in turn emerges in language as a more structurally complex form (*estar* + gerund).

c) *é o que eu tô dizendo* [*that's what I'm saying*] – This larger, more complex DM is commonly used in turn-taking strategies. Here, the present progressive aspect does not refer to the speaker's incomplete action or reasoning but rather projects the state of meaning negotiation (or topic) as a whole. As the speaker takes the turn and uses this DM, he/she endorses and validates what he/she has just heard, and makes shared meanings converge by using a metadiscursive mechanism. The structural complexity criterion motivates a more complex discursive operation (i.e., endorse the interlocutor's speech contents, take the turn, and successfully complete the discussion with shared endorsed meanings) that is operated by a strongly marked DM with discourse deixis (*that* [=what you have just said] is [equivalent to] what I'm [=have been] saying) and based on a progressive aspect verb (*dizer* [*say*] in the gerund). The cognitive complex criterion of markedness coincides with the structural complexity criteria in this case, as they both motivate more complex discourse dynamics. Unlike (a) and (b) above, the subjectivity mark in this DM does not project the *hearer* (“you got it?”; “you know what I mean?”), but actually operates in turn-taking and projects the *speaker* (“that's what I'm saying). As he/she does so, the speaker accomplishes his/her intention to validate the speaker's speech contents, take the turn, and successfully complete it on a shared cognitive basis. This DM bears great structural and cognitive complexity and is therefore marked.

In addition to aspect, the expression between verb and argument (i.e., voice) can also be examined in the light of markedness. Let us examine two examples of *entender* [understand] verb-based DM:

a) *entendi* [got it (literally, “I understood that”)] – The active voice projects an implicit direct complement (object) to the verb and complies with the SVO canonical word order in Portuguese (“[I]_S [understood]_V [what you have said]_O”). Because this DM has low structural complexity and demands little cognitive effort it is an unmarked DM.

b) *tá entendido* [got it (literally, “[that] is understood [by me]”)] – The passive voice projects an implicit subject that is acted upon and a complement as an action performing agent. It also highlights the cognitive contents of the shared information/meaning (“that”, implicit) and erases the interlocutor as a typical agent subject. This more complex operation demands more cognitive effort as motivated by the structural and cognitive complexity criteria. Thus, this is a marked DM.

However, as we examine verb-based DM, we should always bear in mind that markedness is a context-dependent phenomenon as highlighted by Givón (1995). In the examples above, *entendeu* was categorized as unmarked but can emerge as a marked form in another context. This is shown in the following examples where the same DM is examined on the basis of its suprasegmental morpheme:

a) *entendeu?* ↗ ↘ – When it is used at the end of an utterance with rising intonation immediately neutralized by subsequent falling intonation, this DM has its interrogative nature voided. The speaker’s intention to check whether the hearer actually understood what was said does not operate here and the previously shared information is not open to debate or verification. The speaker takes for granted that the hearer has understood (and agreed with) what he/she just said and uses this DM to end a communicative chunk. In this context, *entendeu?* has low cognitive complexity and is unmarked.

b) entendeu? ↗ – When it is used at the end of an utterance with the typical Portuguese interrogative rising intonation, this DM reinforces interaction as it ends a communicative chunk with a comprehension monitoring sign. In contrast to (a) above, *entendeu?* is cognitively more complex in this context and is therefore marked.

Based on the functionalist theoretical framework, Julião da Silva suggests that verb-based DM should be examined not only in their morphosyntactic and pragmatic features, but also to the extent that aspect, voice and suprasegmental morphemes are motivated by the markedness principle and its criteria. In a broader analytical sense, this approach would combine ethnomethodology-based conversation analysis studies and the study of talk in interaction with cognitive and mind research. After all, we wouldn't mind inviting the mind to conversation.

D) More complex constructions: combining clauses

The grammaticalization process shows that a change is gradually taking place and stems from pragmatic-discourse motivation. Givón represents language use regularization process in a diachronic pathway: discourse > syntax > morphology > morphophonology > zero.

This means that there is a moment when certain constructions are applied in interaction with a different function and are supported by cooperative discourse. These constructions eventually end up fitting into a grammatical function whose systematic use would normally occur otherwise. Because language is an activity that entails both cognitive access (retrieving previously stored words and constructions) and motor routines (articulation), we use constructions *several* times a day, week, or year. These constructions are finally affected by repeated actions. Repetition will then cause these constructions to become regular and later crystalize to earn a fixed syntagmatic profile in their status. This will result in a stricter order where the insertion of linguistic

elements is hindered in more cohesive reading. A construction can also be eroded to some extent, thus giving rise to a new grammaticalized construction. To illustrate Givón's theory, we shall now review the outcome of two research works by Dias (2007; 2019) on the appositive construction *quer dizer* [*I mean*] and the *acontece que* [*but then*] construction.

Appositive constructions come to surface as a base unit or matrix (A) and an appositive unit (B). The latter “expands A by elaborating its meaning, causing higher characterization of a phrase in A, making information clearer to the hearer, providing details, or adding features to A.” (Dias, 2007, p. 104). An appositive construction can come along with connector or may otherwise express it as an introduction to some sort of rewording (paraphrasing). Of the connectors we found in our research (*ou seja, ou melhor, isto é, por exemplo, quer dizer*), we will focus on *quer dizer*. The texts used as sources for speech data and historical Portuguese are samples from PEUL/RJ, PROCON/JF, and NURC/Brasil as set up by Tarallo (1994).

According to Dias (2007) the *quer dizer* construction bears two plain verbs in non-grammaticalized forms.⁹ The volition verb *querer* [*want*] works as a modal verb to the second verb *dizer* [*say*]. Both verbs preserve their verbal syntactic-semantic autonomy by selecting arguments and making verbal agreement, as shown in the following examples:

[12] “*Dizede, minha senhora, porque chorades, e eu vos porrei i alguem- conselho, ca já mais serei leda em mentre vos fordes triste*”. *E a donzela non lhe quer dizer porque chorava.* [*Say to me, milady, why thou criest and I shall give thee some advice, as n’er shall I be happy whilst thou art sad. Yet the lady doth not want to say to him why she was crying.*] (Tarallo, 1994)

[13] *Não é bem isso, vamos ver (interferência de aluno) certo, (es)tá certo Maria, tu quer(es) dizer alguma coisa? (...) a minha pergunta (...) mas, não, não fala em interpretação, vamos*

9 Translator’s note: *quer dizer* literally means *wants/wishes to say*. The best equivalent discourse marker in English is *I mean*.

*ficar com translação, resumo, é ela, a Maria já (ininteligível) não é Maria? [Not quite so, let's see (student interferes) right, that's right Maria, you **wanna say** something? (...) my question (...) but no, let's not talk about interpreting, let's stick to transferring, in short, it's her, Maria has already (not intelligible) isn't that so Maria?] (NURC/SP)*

Semantic usage features of *quer dizer* – both in [12], a 14th century text from a popular medieval *cantiga*, and in [13], an excerpt from a 20th century NURC formal speech *corpus* – have not disappeared as shown in the examples.

A study on the changes of *quer dizer* shows a usage example where fluid borders between constituents indicate linguistic change. Here, the verbs keep their autonomous behavior in the syntactic level, whereas they bind towards a *this means* meaning in the semantic level. The persistence of the ground idea results from the semantic nature of the verb *querer* [*want*], which is used as a modal verb to the *dicendi* verb (*dizer* [*say*]) unlike other less general *dicendi* verbs such as *perguntar* [*ask*], *indagar* [*ask*], *falar* [*speak/tell*] and so forth. The two verbs in *quer dizer* bind up to form a single chunk and specialize in a specific use, namely the intention to express *meaning*, as shown in 20th century excerpts and “Sample oo” from PEUL/RJ. This shows us that the original verb has preserved its semantic traits to a certain extent.

[14] *Repeindimẽto tanto **quer dizer** como teer o home por mal a cousa que ha feyta ssem guisa e auer vóontade de se partir della. E por ende en lat-i diz o que sse repeende “peniteo me”. [Repenting **means** both as a man judges as a misdeed something he has done without will and as he is willing to put himself away from it. And that is why in Latin a man will say “peniteo me” if he is repented.]*

[15] *então não dá para eles chegar e desfilar à vontade e se acabar porque eu acho que ali o negócio também e ficar aquelas moça muito nua e não dizendo (no pé) não **quer dizer** nada eu prefiro mais ver a cabrocha no chão e dizendo no pé (riso) (“eu”) sou mais de (fala rindo) ver. [so there's no way they'll come and join the parade as they wish and have the hell of a fun 'cause I think that's the thing and then those chicks are naked and not saying (on their feet) (laugh) (“I”) would rather (laughs while speaking) just watch.] (CENSO/PEUL/RJ) (Dias, 2007).*

In this so-called intermediate stage, *quer dizer* means *means* and is applied in different settings as it is sided by X (*tanto [both as]*) and Y (*como [and as]*), thus giving rise to a comparative tone. In the course of time, *tanto* was inserted between *quer* and *dizer*, and later was sided by *como* until it was finally dropped. It seems clear that in 21st century language this comparison is no longer perceived. For Givón, this is a case where discourse takes one single meaning as a starting point to shaping syntax (though we can still identify a more independent verb behavior in this case). Comparison is gone, but a new meaning has bound the two verbs close together in what Hopper (1991) refers to as decategorization.

The common use of *quer dizer* as *I mean/this means that* contributes to the construction's third stage, i.e. the textual connector function. In this function, the construction waves all its verbal functions, becomes a clause connecting text organizer (or stands as a focalizer in constituent boards), and racks up pragmatic functions. In the end, the construction will represent the speaker's speech and the speaker will have embodied his/her own voice.

Once it is grammaticalized, *quer dizer* will be used to introduce an appositive unit that rewords the base unit, which in turn emerges as a clause, several clauses, or phrases. *Quer dizer* will then mean *another way to bring meaning to what has been previously said or indicated by the speaker's inferences*. The grammaticalized function displays the construction with additional meaning extensions such as correction, conclusive assessment, assessment, conclusion, rewording/repeating/confirming, causal connection, specification among others (Dias, 2007), and is usually the "least linguistically heavy" unit. Appositive units introduced by *quer dizer* typically display a rewording function, which in this case means that the target-form performs functions that are not identified in the source-form. However, both sources can be concurrently applied in synchrony scenarios. This is a case of decategorization as observed from the 16th century on, but largely

applied in the 20th century. Based on Givón's findings, we can say that discourse was an aiding tool as a new meaning emerged and gave rise to a new connector for articulating clauses in parataxis (Dias, 2004). This is illustrated in the following example by Dias (2017, p. 112):

[16] – *[Ah, mas até chegar no dia dessa cesária, esses quinze dias me parece que passou assim – parecia que era um século que nunca acabava de passar aquilo. E aquilo ali eu sofria com aquilo, não é? Porque eu vinha para o trabalho e ficava preocupado: Ela vai levantar da cama, ela não pode andar e tomando dezoito ampola de umas injeções lá que- que a doutora passou, porque era para a criança não ter problema respiratório porque ia sair antes do tempo.*

– *Então, foi um tratamento assim uma coisa! A doutora é muito boa, não é, a doutora Janete. Mas um tratamento assim, eu tinha que- seis hora da manhã, injeção, meia-noite, injeção, meio-dia tinha que ir um cara ir aplicar a injeção]. **Quer dizer, eu ficava doido...***

*[[Oh but then until the C-section day came, those fifteen days seemed they would never pass by, it felt like a century that would never end. And that, I really had a hard time with that, you know? 'Cause I came to work and was worried... "she will get out of bed, she can't walk, she's taking eighteen shots of an injection that the doctor prescribed," all this because the child would be due before the right date and all this should be done so there was no suffering to the child. But this treatment, I had to... six in the morning, injection, midnight, injection, noon... a guy had to come by to give her a shot.] **I mean, it was driving me crazy...**] (Censo/RJ)*

The base unit (in brackets) is the reference element and is linguistic “heavy”, while the appositive unit (underlined) conveys the speaker's rewording as he sets the focus on making it all clear and uses a “very light” clause. The appositive unit is a conclusive assessment in which the speaker expresses how he feels about the treatment prescribed to his wife before she gave birth to their child. It somehow works as an addendum that summarizes and wraps up what the speaker had said.

It is noteworthy that among the various original modal alternatives – *ou seja, quer dizer, quer significar, significa dizer* – only *quer dizer*, the most generic and commonly used one, underwent specialization. The *principle of persistence* (Hopper, 1991) is also worth mentioning here, since the basic meaning (*it means/meaning*) persists in the textual connector stage. The status of *quer dizer* shifts from propositional to

textual/discursive, thus losing its verbal nature and changing to a new linguistic category throughout a grammaticalization process.

Our second approach refers to *acontece que [but then]*,¹⁰ a contrastive construction that works as a text connector. It introduces an unexpected event and is used as a non-prototypical connector in semantic relations as compared to more prototypical conjunctions like *mas [but]*. As Dias & Correa (2020) reviewed *corpora* from CIPM, PHPB, *Domínio Público* and *Corpus do Português*, they noted that this new construction took the following language change (micro)steps:

Pattern 1	[(x times <small>adverbial adjunct</small>) happens <small>verb</small> (y times <small>adjunto adverbial</small>) [that <small>integrative conjunction</small> + subjective clause]]
Pattern 2	[[X <small>contrastive connector</small> [it happens that] <small>focalizer</small>] <small>contrastive/focalizer connector</small>]]
Pattern 3	[As it happens] <small>text/focalizer connector</small>

Table 4: Patterns of *acontece que*

In the above linguistic change pathway, we see the *acontece + que* construction with the verb *acontecer [to happen]* + subjective clause in a contrastive context, usually marked by antonymous lexicon and sided by the *vezes [times]* adverb to reinforce the notion of time. The verb *acontecer [to happen]* holds back its lexical verb meaning as shown in the following example (rarely used in modern times, though):

[17] *Per Naas, que q(ue)r diz(er) s(er)pent(e), se entende o diaabo, que cerca a alma p(er) desvairadas tentação-oes. E **acontece** alghu-as vezes **que** ella he tam cansada de longuament(e) combater q(ue) q(ue)r assi como rrequerir paz, isto he, que ella esta 'acerca de consentir e obedecer ao diaabo. [By Naas, which means serpent, one should understand devil, who approaches one's soul with deranged intentions. And it **happens** sometimes **that** she is so weary of struggling that she will crave for peace, that is, she is prone to consent and give in to the devil.] (Livro 2. Capítulo 58. Fólio 48r. Século XV)*

¹⁰ Translator's note: *acontece que* literally means *as it happens*. The best equivalent discourse marker in English is *but then*.

This excerpt is framed within a contrastive context where *acontece que* undergoes linguistic change and eventually gains an information focalizer function, whereas the *mas [but]* conjunction will perform the function of introducing something unexpected. Other examples of connectors are *e [and]* and *agora [now]*, with contrastive semantic value and a position prior to the contrastive connector *acontece que*. The following is an example of this pattern:

[18] *Dentro dos sindicatos, temos filiados a diversos partidos, com predominância para o PT e o PSB. Mas, acredito que se o trabalhador rural tivesse consciência política, faria todos os governadores. Somos a maior categoria no Estado. [Sei que o nosso voto vale tanto quanto o dos demais], mas acontece que o analfabetismo e a pressão psicológica em que a pessoa do campo vive, são muito fortes. E ainda tem a fome. Ninguém consegue pensar de barriga vazia. O processo de conscientização política para as camadas mais pobres, sejam rurais ou urbanas, ainda é um problema muito sério. [In unions there are associates to several parties, mostly PT and PSDB. But I believe that if farm workers were more politically aware, they would elect all [state] governors. [I know our vote is as worth as anyone else's vote,] but as it happens, the illiteracy and psychological pressure in the countryside are overwhelming. And there's also hunger. No one can think with an empty stomach. Developing political awareness in underprivileged classes, whether in farming or urban areas, is still a critical issue.]* (Título [Title]: Manoel dos Santos. Data [Date]: 09-14-1997)

In the example above, Dias & Correa (2020) note that *mas acontece que [but as it happens]* introduces unexpected information as to what a vote is worth. In other words, votes are all worth the same, but farming workers' illiteracy and the psychological pressure they suffer are opposing to what a vote is supposed to be worth (counter-argumentation). The contrastive connector *mas [but]* is applied to oppose the information it introduces in relation to the previous clause. The *acontece que* chunk is then applied to set the focus on newly provided information.

Opposite lexical units are presented with opposite information, which allows for total or partial informational contrast with the information provided in the previous clause. A similar phenomenon occurs in [18], where new or partially new information is introduced

but now without the *vezes* adverbial adjunct marginally positioned in the construction.

Lastly, the inference process suggested by the speaker will cause the *acontece que* chunk to assimilate the features of prototypical adversative conjunction *mas [but]* as well as most of its features. This has led to grammaticalization of *acontece que*, which was eventually included in the paradigm of the so-called “contrajunctive” constructions. In this case, the text connector *acontece que* occurs in coordinate clauses/sentences, which, as suggested by Givón (2001, p. 240), have preserved their separate and parallel status. In other words, the construction sets up a closed informational unit (a chunk) and enters the non-prototypical contrastive paradigm. As *mas [but]* is used, coordinated units will feature in a described situation, although in this case the clause introduced by *mas [but]* will cause the information to emerge as more relevant and important than the information conveyed by the previous coordinated clause (Dias & Correa, 2020).

Let us review the following example of textual connector:

[19] *Estou vendo no dia-a-dia uma legião de pequenos empresários quebrando. A quebraadeira está enorme. Isso é verdade, não adianta escamotear a verdade. **Acontece que** o ajuste da economia tem sido em cima dos pequenos e médios por conta da elevadíssima taxa de juros. O governo alega que tem de ficar assim para equilibrar as finanças. Claro, está alta porque financia o déficit interno. Se baixar, o governo não vai suportar porque a pressão das taxas é precisamente dos credores da dívida interna brasileira. Título: Nelson da Mata. Data: 17/08/1997 [Day after day I see loads of small business owners going bankrupt. Bankruptcy is all around the place. This is true, there's no way you can hide it. **As it happens**, economic measures are taken on small and mid-sized [business owners] with soaring interested rates. Of course, [these rates] are high because they finance internal deficit. If they decrease [the rates], the government will collapse because the [interest] rate pressure comes precisely from Brazilian foreign debt creditors.] (Nelson da Mata. 17.AUG.1997)*

The *acontece que [as it happens/but then]* construction has undergone a routinization and suggested inference process to assimilate the contrastive semantic values (by opposing to and eliminating the

previous information) of the prototypical conjunction. We are given the information that small business owners are going bankrupt and therefore expect/infer that they are not include in tax adjustments. However, we see that this is not true as new information is provided in such a way as to oppose the expectation held by the previous clause.

The construction form in [19], pattern 3, is used in a fixed position at the beginning of the sentence as the verb *acontecer* [*to happen*] is conjugated in the 3rd person singular of the indicative mood present (*acontece* [*happens*]). To that extent, Dias & Correa (2020) point out that “the verb no longer selects a subject argument¹¹ and the integrative conjunction no longer introduces a subjective complement clause. A new construction is thus formed as the verb *acontecer* binds to the conjunction *que* [*that*].”

As it binds to *que* [*that*], the plain verb loses its lexical category and fits into the textual connector grammar category. The verb gains autonomous nature and follows the discourse pathway towards syntax until it becomes a connector in its morphosyntactic features. Based on Bybee (2016), Dias & Correa (2020) noted that the grammaticalization process occurred here by means of such mechanisms as analogy, generalization, habituation, growing autonomy, and suggested inference.

4.3. Complexity in cross-cultural studies

A) Politeness in Korean, Mandarin, and Portuguese

Givón’s assertions on language can be applied to Mano’s (2014) comparative study of joint attention in Korean and Mandarin. As she looks at language as a sociocultural activity that should therefore be studied within the context it is used, Mano searched for sociocultural

¹¹ Translator’s note: Unlike the English construction *as it happens*, where *happens* necessarily selects *it* as a subject, the Portuguese construction allows for a verb (*acontece* [*happens*]) with no explicit subject.

factors that could possibly motivate the use of politeness signaling marks in each of those languages.

Her research shows that Korean verbs have four different suffixes for the same verb tense while they are used in politeness and formal context in various constructions. In higher degree formal and politeness forms, conjugation is more complex and requires verb suffixes with more components, whereas less polite and more informal forms require a few or none whatsoever component. Take the following examples of non-inflected verbs: 읽다 [*read*, translit.: ilgda], with a consonant-ending stem and 가다 [*go*, translit.: gada], with a vowel-ending stem:

[20] Declarative clause:

- | | | | | | | |
|-----------------|---|--------------|---|------------|---|-----------|
| 1. 읽습니다 | > | 2. 읽는다 | > | 3. 읽어요 | > | 4. 읽어 |
| [1. ilgseubnida | > | 2. ilgneunda | > | 3. ilgeoyo | > | 4. ilgeo] |
| 1. 갑니다 | > | 2. 간다 | > | 3. 가요 | > | 4. 가 |
| [1.gabnida | > | 2. ganda | > | 3. gayo | > | 4. ga] |

[21] Interrogative clause:

- | | | | | | | |
|------------------|---|----------|---|------------|---|-----------|
| 1. 읽습니까 | > | 2. 읽니 | > | 3. 읽어요 | > | 4. 읽어 |
| [1. ilgseubnikka | > | 2. ilgni | > | 3. ilgeoyo | > | 4. ilgeo] |
| 1. 갑니까 | > | 2. 가니 | > | 3. 가요 | > | 4. 가 |
| [1. gabnikka | > | 2. gani | > | 3. gayo | > | 4. ga] |

The example shown in (1) is regarded as a high politeness and formality degree form, while (2) is oftentimes used in written texts either with no specific interlocutor or to represent a speaker's speech to him/her own self. As it does not imply any specific *other*, this form is

considered neutral as to politeness, but is regarded as formal if it is used in written media such as newspapers and academic essays, for instance. In contrast, it can also be taken as informal in some situations where we address something more intimate about our hearer. The explanation lies on the reasoning that if a person allows another person to hear his/her own thoughts, it then follows that the formality between these two people should stand at a lower degree. On the other hand, (3) is labeled as formal and polite, but to a lesser degree as compared to (1). In (4), it should be noted that although it is considered as informal and impolite, the latter feature may be lost depending on the context. This means that the intimacy and familiarity degree between speaker and hearer is determinant as to whether form (4) may be used or not, particularly because it reflects how close speaker and hearer are to each other rather than impoliteness itself. Yet, not every additional suffix is directly related to politeness and/or formality degrees. Verbs with final consonant-ending stems may embed an additional component (a vowel) to make pronunciation easier, which ultimately explains that the verbs with consonant-ending stems in (2) and (3) display the same amount of additional syllables.

Based on the subprinciple of quantity, we will observe how cognitive complexity emerges in generally higher complexity inflected forms. The *+polited* and *+formal* traits are signalized as the different inflected forms merge linguistic and sociocultural factors that should be taken into consideration in usage. To this sense, social, professional and personal relations, intimacy degree, speaker's age as compared to the hearer's, communicative situation context (formal or informal) etc. do play a role while choosing a form over the other.

This subprinciple also acts in Mandarin interrogative clauses as a relation is reflected between more cognitively complex forms and a higher amount of information, as well as a greater number of characters in form construction. We noted that depending on the context, the intention underlying the spoken clause can motivate

specific constructions. This is illustrated in the following example, where choosing an interrogative token or a construction that states and denies the verb to ask a yes-no question is not associated with politeness in some cases. This is because while one chooses to use this construction, the speaker may display traits of impatience, expectation or pressure so that the hearer is apparently elicited to reply quickly.

[22] 你 要 买 这 辆 汽车 吗?
 nǐ yào mǎi zhè liàng qìchē ma

[you-pron.] [want-verb] [buy-verb] [this-pron.] [measure word] [car-noun.] [interrog. token]

‘Do you want to buy this car?’

[23] 你 要 不 要 买 这 辆 汽车?
 nǐ yào bú yào mǎi zhè liàng qìchē

[you-pron.] [want-verb] [not-adv] [want-verb] [buy-verb] [this-pron.] [measure word] [car-noun]

‘Do you want to buy this car or not?’

The form in [22] can be considered as marked, as it is less common than [23] in yes-no questions. Moreover, it features higher cognitive and structural complexity, since its use may signal not only a question, but also the speaker’s will to gather some information as well as his/her concern in having a quick reply or his/her putting pressure on the hearer. However, as noted by Givón (1995), context plays a key role in labeling a form as marked or unmarked, since the context will reveal the actual speaker’s intention as he/she chooses one form over the other.

In another study, Mano (2016) looked at command constructions in Portuguese and in Mandarin on the grounds of Brown & Levinson’s (1987[1978]) face and politeness strategies. This research led her to emphasize that there is a correlation between form and function as she

reviewed some interesting data that could contribute to this study.¹² As we examine command constructions, we deal with events that are threatening to one's face, since it represents "the basic claim for territories, personal preserves, right to non-distraction – i.e. freedom of action and freedom of imposition." (Brown & Levinson, 1987[1978], p.61) In other words, one's face is related to one's free will. Negative politeness strategies (Brown & Levinson, 1987[1978]) will therefore address the interlocutor's negative face thus ascribing value to a non-imposing attitude towards the hearer. These strategies imply that the speaker is willing to impose something upon the hearer, who is therefore likely to be taken aback or embarrassed because the negative face represents one's willing to remain free from taking action. These assumptions share a common ground with Givón's (2009, p.320) as relates to deontic and epistemic speech-acts:

It is worth noting in this connection that manipulative (deontic) speech-acts already contain within them the germ of declarative (epistemic) speech-acts — as Gricean presuppositions (Austin 1962; Grice 1968/1975). *That is, some background knowledge must be there in order for the deontic speech-act to be felicitous.* (our highlight).

In this regard, depending on the presuppositions the speaker holds about him/herself and about the hearer, he/she will code the speech-act in a different fashion either by using politeness signals or not and by preserving or exposing his/her face. As noted in the aforesaid research (Mano, 2014), using such signals is not an arbitrary action – instead, it is motivated by sociocultural factors underlying languages. It then follows that as we use command and politeness constructions on the grounds of iconicity principle, our focus does not lie solely on *how* we

12. This is a comparative study of politeness forms as used in Mandarin and Portuguese structures of this sort. The study also applies questionnaires to explore how native speakers of both languages perceive politeness degrees in different constructions.

say (i.e., form) *what* we intend to say (i.e., function, intention), but also implies choosing the best construction so that the interlocutor realizes what the speaker means. And this should be accomplished by the speaker with threats on the hearer’s face and in compliance with the sociocultural factors shared by both interlocutors according to the speaker’s presuppositions.

A close look at the study will show that the principle of iconicity – with an emphasis on the subprinciples of quantity and linear ordering – is indeed acting. As Givón (1985, p.10) notes about this principle, it is a sign that “more *important* or more *urgent* information tends to be placed first in the string”, i.e. the order will be determined by important and/or urgency. Brown & Levinson (1987 [1978], p.93) also refer to organization and order as factors that interfere with politeness strategies. The authors associate organization and order with *topicalization* and *focus*. However, rather than examining syntactic order in general, they debate on cases where the same expression is placed as an initial or a final string. In the data reviewed by Mano (2016), this ordering is examined more deeply, thus showing that the constructions regarded as less polite by participants (as in [24] and [25]) in the questionnaire displayed fewer components, while the more polite ones were those with more signaling forms (as in examples [26] and [29]):

[24]	(你)	开	门	
	nǐ	kāi	mén	
	[you-pron.]	[open-verb]	[door-subst.]	
	“Open the door.”			
[25]	你	开	门	吧
	nǐ	kāi	mén	ba
	[you-pron.]	[open-verb]	[door- subst.]	[aux.token.]
	“Come on, open the door.”			

[26] 不好意思, 能 麻烦 你 开 一下 门 吗?

bùhǎoyìsi, néng máfan nǐ kāi yíxià mén ma

[sorry-expr.] [can-verb] [bother-verb] [you-pron.] [open-verb] [measure word] [door-subst.] [interrog. token]

“Excuse, can I bother you to open the door a little bit?”

[27] Tem como você abrir a porta?

[there be/3PS PRES-verb] [noun phrase] [pron.] [(Ø) verb]. [def. art.] [noun.]

“Is there a way you (could) open the door?”

[28] Você poderia abrir a porta?

[can/3PS COND.-verb] [pron] [verb.] [def. art.] [noun.]

“Could you open the door?”

[29] Com licença, será que você poderia abrir a porta?

[verb phrase] [pron.] [verb] [conjunc.] [pron.] [can/3PS COND.-verb]
[verb] [def.art.] [noun]

“Excuse me, I wonder if you could open the door?”

Based on Mano’s research, we can note that adding a token does not necessarily implies being more polite. Both languages in the examples allow for constructions that are seen as less polite events though they display more components as compared to others with fewer characters/ words. As mentioned before, these additional components may flag speaker’s impatience or pressure upon the hearer for a quick reply. This is the case of Mandarin interrogative clauses, as referred to before, which can also be used in commands, and Portuguese expressions such as *tem* [27], *dá para você...?* as compared to simply using a modal verb (e.g. *poder*) [28].

We should also note that less polite expressions start up their coordination with an order/request and do not add a politeness token until the end of the sentence. In contrast, more polite expressions apply various strategies in the initial positions of the clause and will display an order/request further on in final positions. This principle shows that

the most polite constructions are those that apply politeness strategies in the beginning of the clause and further mitigate their commanding nature not only by expressing that in the use and contents of each token, but also in the manner used to do so. In other words, they resort to a strategic construction sequenced order to show (or trying to show) to the hearer that preserving his/her face is more important than the actual order/request (usually “disguised” as a question).

These two subprinciples help us understand how iconicity acts upon politeness strategies in commanding clauses so that the speaker searches for the best way to have the hearer do what is expected. This applies both to the speaker’s intention to have a wish accomplished as well as to have face preserving factors and sociocultural exposure requirements duly complied with. According to Mano, this is apparently accomplished by wiping out the commanding nature of command constructions with negative politeness strategies such as being indirect or vague, mitigating impositions, apologizing etc. (Brown & Levinson, 1987[1978]). These resources reflect high cognitive complexity, as the speaker feels the need to offset his/her intention in the linguistically level so that he/she is more likely to be successful in his/her request. However, this offsetting should not be random or arbitrary as this could cause the interlocutor not to grasp the message conveyed. These strategies are ruled and regulated by sociocultural conventions. It takes a watchful speaker to master and use such strategies to successfully accomplish his/her goals and intentions. Not knowing the extralinguistic factors that trigger the use of these flagging constructions may lead to misunderstandings and uncomfortable situations between interlocutors. A mindful speaker will place these politeness tokens in such a way as to reshape meaning, tell a joke or even be ironical. It remains to be further studied how politeness strategies relate to prosodic traits and play a key role in this research field not only by taking language as a sociocultural activity,

but also by indicating how cognitive complexity is reflected in syntactic complexity.

B) Cognitive and communicative motivations while using the gerund in Portuguese language varieties

As linguistic constructions were considered to support cognitive and communicative functions and are therefore motivated and iconic, Gomes (2021) has done some research to examine the motivations to using the gerund in three Portuguese varieties: Portuguese from Brazil (PB), Portuguese from Macao (PM), and Portuguese from Portugal (PP). The researcher explains that she selected such varieties based on their vast existing cultural background that leads to quite different linguistic contexts. Each variety materializes its uses in a particular fashion, as each of them has a diverse cultural and experiential component. Portugal (a colonizing nation) stages its own linguistic repertoire, which differs from the linguistic scenario in Brazil (where linguistic norm has been settled by countless migratory and indigenous influences) and in Macao (with a multicentered context that has nonetheless undergone a recent decolonization process).

Based on Givón's theoretical approaches such as iconicity, Gomes (2021) examined the cognitive and communicative forces applied in gerund linguistic constructions as used by Brazilian, Macao, and Portuguese speakers. Data were collected from interviews published in online radios such as TFS, TDM, and UNESP from January 1, 2019 to January 1, 2021. The grounds for this research lie on the assumption that language is shaped by communicative pressures, i.e. the way speakers use language and how such use reflects local experience structures. The goal of this research is to shed light on how these processes operate, why each gerund use is structured in its discourse form, what information is organized and how this is performed, and what such organization is reflected in communicative goals.

Gomes applied the principle of iconicity to examine a gerund construction found in the early stages of the collecting *corpus*. She observed that two constructions currently used in PP ([aux. *ter* [*have*] + *vir* [*come*]_(gerund) + prep. *a* + verb_(infinitive)]) – durative and projective constructions – indicated a verb action (started in the past) that is continuous and ongoing:

[30] *Eu penso ahmm de forma ahm regular é ... naquilo que gostaria de concretizar e têm-se vindo a alterar ao longo do tempo...primeiro que quando eu aceitei esta função... não estava à espera que viesse uma covid 19... com tudo aquilo que implicou de ahm de impacto que pra atividade do próprio *** quer para as comunidades [I think ahmm on a regular ahm basis it's ... what I'd like to accomplish and has been changing [= "coming to changes"] along the time ... first when I agreed to take this position ... I never expected something like COVID-19 to come through ... with all the impact ... ahm ... it had on the activity of [what] the *** himself wishes for the community] (P4TSP¹³, 2020).*

[31] *Eu sei que os professores tem vindo a ser obrigados ou convidados a fazer muita formação [I know teachers have been ["being"] compulsorily led or invited to attend many training programs] (P3TDM, 2020)*

The preposition *a* followed by a verb_{infinitive} after *vir*_{gerund} indicates a future projection. Thus, a construction such as *tem vindo a ser* is more complex than *vem sendo*, for instance, both in construction and in form.

The second subprinciple related to iconicity, the subprinciple of integration, prescribes that what is mentally gathered will likewise cause syntactic gathering. This subprinciple comes to surface when a speaker consistently uses two words or expressions together, thus causing them to be settled as a new language use. An example of that is the *assim sendo* [*thus/this being so*] conclusive connective construction, as found in the *corpus*.

¹³ Each subject was identified by a tag, where the first letter refers to nationality (Brazilian, Macanese, or Portuguese) followed by an identifying number, the radio station name, and the year when the interview was published.

Another example is the tendency to use the gerund following the auxiliary verbs *ir* [*go*] and *vir* [*come*] in durative periphrastic constructions, which does not occur in the following example of MP:

[32] *Posso lhe explicar que uma das coisas que tem acontecido comigo na minha...na minha vida é que sendo nascido em Moçambique... tendo uma cultura chinesa e também ocidental... as tradições chinesas foram passadas pelos meus pais... é...a medida que vou ou estou a envelhecer...provavelmente tenho que ir a procura de minhas raízes. [I can tell you that one of the things that has happened to me in my... in my life is that having been born in Mozambique... having a Chinese and also Western culture... Chinese traditions were passed [on to me] by my parents... that is... as I will [=am going to] or [as I] am growing old ... I will probably have to go searching for my [own] roots.] (M10TDM, 2020)*

The example above shows that what actually leads to using or not the gerund is the closest – and therefore the most integrated one – auxiliary verb as related to V2. Because it is closer to the verb *envelhecer* [*grow old*], the *estar* [*be*] auxiliary verb will determine that the second verb should be used in the infinitive form. In both PP and MP, there is a tendency to use periphrastic constructions formed by *estar* (as an auxiliary verb) + *a* (preposition) + verb in the infinitive form. To investigate the principle of linear ordering (i.e., the order of components in an utterance is motivated by the order of information relevance in interaction), Gomes examines the following example:

[33] *O objetivo é continuar como um Espírito maldito é...no mundo dos vivos para se vingar da pessoa que lhe fez mal...e ao mesmo tempo pedir a deus só que... sendo ele de descendência chinesa... não vai parar ao deus católico, mas vai parar ao mundo dos mortos chineses, e ele não percebe. [The goal is to go on like an evil Spirit is... in world of the living to revenge on those who did him some harm... while at the same time pray to god but.. as he is [=“being he”] of Chinese descent... will not reach the catholic god, but will reach the Chinese dead people world, and he doesn't realize [that]. (M10TDM, 2020)*

In [33], we observe that the causal adverbial clause *as he is* [=“being he”] of *Chinese descent* is an argument that favors conclusion and is therefore located in a topical (outstanding) position because it works as an argument and also comprises a piece of information already conveyed by the speaker.

The subprinciple of linear ordering is associated with gerund uses in circumstantial clauses. Here, the gerund stands as a participial clause constituent likely to develop into an adverbial function clause to indicate various circumstances such as cause, manner, time, contrast, target, and condition. In conditional clauses, we have noticed that seven out of eight examples have protasis (i.e., gerund clause/condition) as an antecedent to apodosis (i.e. result clause). This does not occur in one example only:

[34] *Estivemos a ver os números em novembro e dezembro de facto... quer dizer...esses dois meses estamos a ter aumento pra além dos dez por cento... e por causa disso estamos a ver...a se criar é com o ano novo chinês... se é possível atingir 9 a 10 por cento de aumento **comparando com o ano passado**. [We've been looking over the numbers in November and December actually... I mean... [in] these two months we have been having an increase higher than ten percent... and that is why we have been thinking... to set it up in the Chinese New Year... whether it's possible to reach a nine or ten percent increase **as compared [= "comparing"] to last year.**] (M10TDM, 2020).*

In [34] protasis occurs after apodosis because it bears new information. Also, apodosis is subordinated to the previous clause. Some of the shared knowledge is in apodosis, as the increase has already been mentioned by the speaker (hence the inversion). Therefore, the structure is used in relation to its function, i.e. it reflects the speaker's communicative intentions.

As discussed before, grammar rules derive from usage and usage results from communicative intentions. This means that language reflects the structure of our experience. As interaction takes place, what we say is structured on the basis of what we assume in relation to the other, as we guide our hearer's look by means of words and signalize, through language, what relevance degree should be assigned to what we say (Givón, 1992). Gomes has collected several examples that reflect the principle of iconicity in discursive levels. Let us examine the following constructions:

[35] **Falando dessas questões** de novas tecnologias que já não são tão novas assim ... é é... mas **falando destas questões** comé que vê por exemplo a questão do controle parental em relação aos conteúdos que os que as crianças e os adolescentes podem exceder...acha que é importante? [*Speaking of those issues* about new technologies that are not that new in fact... that is... but **speaking of those issues** how do you feel for example about the issue of parental control of the contents that can be exceeded by children and teenagers... do you think this is important?] (P3TDM, 2020);

[36] **Olhando pra frente...** é claro que nenhuma escola, nenhum jardim de infância pode garantir em absoluto que uma situação dessas não volte a acontecer... é mas que garantias é que o jardim de infância pode dar aos pais... que... acontecendo... o caso é acompanhado da maneira que deve ser? [*Looking ahead...* of course no school, no kindergarten can absolutely ensure that a situation like that will never happen again... that is... but then what guarantee can a kindergarten give to parents... that... if it does happen... action will be taken as required?] (M10TDM, 2020).

In the examples above, the boldfaced clauses show a gerund in a topical position (following a pause and at the beginning of a sentence), although this gerund sets the ground as it conveys information that has already been shared. Gomes explains that in these cases the gerund is a discursive strategy aimed at guiding the hearer in terms of speaker's intention-action, i.e. a speakers will set up the ground of their interaction with a goal to place the hearer within a frame. The gerund will therefore arise to carry out a discourse collaborative function: throughout interaction, the speaker has elaborately planned his/her strategy so as to manipulate discourse in a projective manner by resorting to what is known or believed to be known by the hearer.

C) Chinese-Brazilian names and hybrid parallels

As we adopt Givón's (1995, 2005) key language principles or perspectives, we should look at language as a sociocultural activity embodied by human experience. From this perspective, language usage reflects mental complexity and pragmatics as linguistic interaction displays language users' intentions. In other words, linguistic iconic structures support a cognitive, communicative, and sociocultural

function. This applies to various linguistic forms, including naming people, as shown by Zhang (2021) in his doctoral thesis currently in progress. For younger generations, making up names has a well-defined goal driven by wishes of good luck and success, and has gradually been ritualized in nearly all cultural cycles. In China, for instance, a father should give a name to his child no later than three months following birth and will do so on the grounds of several aspects such as the five elements¹⁴ of Taoist philosophy. This sort of linguistic and cultural practice occurs because “the form of all human inventions is chosen for a purpose.” (Givón, 2005, p. 247).

In this research, a bilingual Chinese-Portuguese questionnaire was used to examine usage and learning context in the Chinese and Portuguese languages spoken by Chinese immigrants in Brazil. The replies to the questions raised relevant issues for discussion in this field. The questionnaire was applied in Chinese community schools based in São Paulo during the 2019 and 2020 school years. Among the relevant issues raised in the research is the construction of Chinese-Brazilian students’ names from Givón’s (1995, 2005) theoretical perspectives. In the questionnaire, students were firstly requested to provide their names as follows:

What is your name? _____ And what is your Chinese name? _____

你的名字是? _____ 你有中文名字吗? 请写出。 _____

Transliteration (nǐ de míngzì shì? _____ nǐ yǒu zhōngwén míngzì ma qǐng xiěchū.)

¹⁴ These five elements (or 五行 – Wu Xing in pinyin) are *fire* (火, *huo* in pinyin), *water* (水, *shui* in pinyin), *metal* (金, *jin* in pinyin), *wood* (木, *mu* in pinyin), and *earth* (土, *tu* in pinyin). Altogether, these elements explain all phenomena and movements in Chinese ancient, traditional philosophy. When a child is born, he/she can be compensated for whatever is missing in his/her fate by adding one of these five elements as a symbolic part to his/her name. This is still practiced by most modern Chinese citizens and is regarded as immaterial and cultural heritage from their Chinese ancestors.

As bilingual Chinese-Portuguese students with Chinese as a heritage language in learning and usage (Jeannings-Winterle & Lima-Hernandes, 2015), respondents provided their name in Portuguese in the first part, followed by their name in Chinese (Chinese ideogram) in the second part of the question. As they were born in Brazil, students have romanized names, i.e. names that are represented in the Portuguese language alphabet and are basically used at school and in their otherwise everyday interaction with Brazilians. The Chinese name, written in Chinese ideograms, stands primarily as cultural and family legacy: it is more often used in children's restricted home communication with parents and grandparents, and are seldom used outside their home or immigrant community. However, students know how to spell their Chinese names quite well. Based on the linguistic pattern construction model proposed by Lima-Hernandes (2010), we noted that the Chinese names provided in the questionnaire can be sorted in seven onomastic patterns. These patterns are outlined as follows according to their original ordering:

1. Chinese surname transcription in pinyin¹⁵ + pinyin name transcription (e.g. Li Xiaoming¹⁶)

15 Chinese is a pictorial language with ideograms in its written form and a history that dates back to thousands of years ago. However, pinyin (拼音) – or more formally Hanyu Pinyin (汉语拼音) – is a transliterated or Romanized form of Mandarin, an official and standardized *lingua franca* in China based on a Northern dialect and spoken by the Han dynasty, the most prominent in the Chinese nation. The Hanyu Pinyin plan was originally conceived by Chinese linguist Zhou Youguang with a view to making Mandarin more popular both nationwide and abroad.

16 李小明 (Li Xiaoming, in pinyin) is a fictitious Chinese name used to refer to a person of male gender. We can notice that the pinyin name transcription has the same order as an originally Chinese name: “Li” (surname) followed by “Xiaoming” (name). That is the reason why modern Chinese names are written as “*surname*” (from the father's family) + “*name*” (one or two characters or ideograms).

2. Chinese name transcription in pinyin + pinyin surname transcription (e.g. Xiaoming Li)
3. Typical Portuguese name + Chinese surname transcription in pinyin (e.g. Maria Li)
4. Typical Portuguese name + Chinese name transcription in pinyin + Chinese surname transcription in pinyin (e.g. Maria Xiaoming Li)
5. Typical Portuguese name + mother's Chinese surname transcription in pinyin + Chinese surname transcription (e.g. Maria Wang Li)
6. Typical Portuguese name + Chinese name transcription in pinyin + mother's Chinese surname transcription in pinyin + Chinese surname transcription in pinyin (e.g. Maria Xiaoming Wang Li)
7. Typical Portuguese name + Chinese name transcription in pinyin + Chinese surname transcription + mother's Chinese surname transcription in pinyin (e.g. Maria Xiaoming Li Wang)

Except for pattern 1 where the respondent provided a true transcription of his/her Chinese name, all other patterns (2 to 7) have been modified for several sociocultural reasons. In pattern 2 the Brazilian name formation (i.e., name followed by surname) is observed and the name is provided according to Brazilian conventions by reversing to the name-surname format with a marked name. In patterns 3 to 7 we can observe that a hybrid name building decision was made as the respondent adopted a typically Brazilian name followed by his/her surname transcribed in pinyin. This reflects the respondent's first step towards the social practice of being inserted in the Brazilian context, while it echoes the preservation of respondent's Chinese surname as an indexation to his/her rooted language-culture, i.e. the country of origin. Pattern 3 is the most common among Chinese-Brazilian names as they are acknowledged, identified, and self-informed as "Maria", for instance, instead of "Xiaoming". In pattern 4 the respondent's adopted Chinese name is articulated with the original Chinese name, though

in reversed order. This yields a longer name construction which becomes even longer as the mother's surname is included to provide more information.

Based on the iconicity subprinciples, Zhang (2021) states that the more information is provided, the longer a form will be. And the more complex the name is, the more complex are the constructions recruited. For instance, patterns 6 and 7 are heavier than patterns 1 and 3 and are therefore more complex as they arise in a hybrid construction from merging two cultures. As compared to all other patterns, pattern 1 strongly places the surname at the beginning of the full name, whereas in the other patterns the name is adapted to the Brazilian format so that the individual name is prioritized. This contrast can be particularly explained by the linear ordering iconic subprinciple: most important information tends to occupy the first place in the syntactic chain or a place that represents its relevance from the subject's perspective.

The different word order between Chinese and Brazilian can be examined in the light of cultural perspective as suggested by some psychologists. Ishii (2013, p. 124) states that "culture is a collective-level phenomenon comprising both socially shared meanings, such as ideas and beliefs, and associated scripted behavioral patterns." This approach is mirrored by Leme (2011), who maintains that a determined culture includes symbolic patterns of practices, values, and beliefs that are shared in a social group. Given its individualization features, Brazilian culture puts emphasis on the subject's name and projects the surname to the final position of a syntactic chain. In contrast, the Chinese are strongly influenced by traditional Confucianism where one's family, roots, and origin are highly valued and highlighted, and thus build up their name with a topicalized position.

Givón (2005) describes relevant paradoxes for understanding language dynamics. He takes the Yin/Yang paradox to explain language complexity and suggests that adaptive compromise occurs both in biological and cultural evolution whereby form complexity will always

correspond to emerging demands. Based on Zhang (2021), we can look at these variously patterned Brazilian names in their indisputably hybrid construction nature within a specific migration context. In the PB case, this occurs because an additional language is aggregated to the subject's repertoire, not resulting in loss of the heritage language, that is rooted in the subject. Also, it comes as a precious gift granted by the subject's Chinese family origins. This is basically reflected as the father's surname is preserved and pinyin Chinese forenames are placed in a topic position, thus making the prosperity meaning quite evident. This hybrid form naturally reveals not only hybrid identity, but also a very special way to cognitively perceive and grasp interaction and social life in Brazil.

D) Iconic parallels in intercultural assessment

Most of the times, migrations imply uneven contact between cultures. Given their intensive geographic mobility, gypsies are usually regarded as weird subjects and face discrimination against their community. A study on written and spoken language samples will show us how opinion and assessment are expressed through adjective constructions. In Portuguese from Brazil (PB) this was verified by Spaziani (2016), who applied the principle of iconicity to her studies on this matter. As she examined historical data in PB, she noted that the assessment chain towards the gypsies shows a highly discriminatory attitude against this community. Below are some examples in which she studied how this assessment is expressed and how it is generally echoed in discourse:

[37] *Cigano Ladrão - O cigano Millano Nocolich, residente á rua da Consolação, homem de maus antecedentes, dado aos vícios do jogo e da embriaguez, teve, há dias, uma desintelligencia com sua amante Bella do Gaeta, cigana também. [...] Fugiu com um collar composto de sete medalhas de ouro pertencente á sua amasia. A policia, porém prendeu-o, quando se encontrava no botequim da rua da Consolação, 480.[...] [Gypsy thief – Millano Nocollich, a gipsy who lives on Consolação street, has a wicked background, and is prone to gambling and drinking, has recently had an argument with his beautiful lover Bella do Gaeta, a gypsy as well. [...]* He

ran away with a seven-gold medal necklace that belonged to his loving partner. However, the police later arrested him at a sleazy bar at Rua da Consolação, 480. [...] (O Estado de S. Paulo newspaper, 24.MAR.1920)

The paragraph shows that the assessment was topicalized and was further developed in a negative sense. The negative polarity in the assessment field permeates the whole descriptive set by means of several items that are collectively shared about the gypsy community. The reason for this lies on the fact that the mind organizes pieces of information on the basis of how relevant they are and the linear ordering of subsequent ideas eventually reinforce this polarization.

If a word is unintentionally placed away from another, this means that they are also conceptually apart from each other. The following online dialog between three teenagers (03.MAR.2011) confirms this assumption:

[38] – *Odeio cigano. Povo mais porco e imundo, impossível. Fora que, não tem nacionalidade. Ou seja, nem brasileiros são.*

– *Vocês são ciganos???*

– *Não somos com prazer!*

– *E provavelmente você nem conheceu ciganos mesmo, como disse no tópico acima o povo que mais parece mendigos são “calons”, não ciganos de verdade.*

– *Não sou cigano, não, cara!*

– *Só estudei com uma loira bem bonita no EM que era cigana, a guria tinha traços muito europeus, desde então nao sei mais definir o que é um cigano.*

[– *I hate gypsies. The dirtiest, filthiest people of all. On top of that they have no nationality. That is, they're not even Brazilian.*

– *Are you gypsies???*

– *We're glad we're not!*

– *And you probably have never met a gypsy, as I said before, the people that look most like beggars are the “calons”, they're not actual gypsies.*

– *I'm not a gypsy, man!*

– *I met a really good-looking blond girl at grammar school who was a gypsy, she had European features, since then I can't tell who is a gypsy from who is not anymore.]*

(*O Cigano [The gypsy]*. Edited message¹⁷).

The linear ordering strategy assigns informative weight and puts emphasis on the coded intention. In this sense, the structure of a grammar construction indicates the structure of the concept it expresses. It takes longer for a robust amount of information to be processed, hence its higher cognitive complexity. Therefore, as negative assessment information is inserted it will lead the reader to adhering to a negative-focused discourse that has no argumentative ground but is nevertheless filled with sided categories.

[39] *Adolf Hitler não apenas matou judeus em nome de uma superioridade da raça ariana, matou também comunistas, ciganos, prostitutas, deficientes físicos etc.! Esse deputado, que me recuso a escrever o nome, não defende só a ditadura em que ele como militar tinha privilégios, em que se torturava, censurava e matava em nome da moral e dos bons costumes e se roubava tanto ou mais que hoje, só que ninguém podia denunciar, ele defende o preconceito contra todas as minorais, gays, negros, nordestinos, e amanhã serão as mulheres, os judeus e todos que contrariem sua noção de raça superior. [Adolf Hitler killed not only Jews in the name of a superior Arian race, but also communists, gypsies, prostitutes, physically impaired people etc.! This house representative, whose name I refuse to write down, supports the dictatorship during which he had many privileges as a military, when people were tortured, censored, and killed in the name of morals and proper practice, and corruption was like or worse than it is now, but no one could report that... he also encourages prejudice against all minorities, gays, black people, Northeasterners, and tomorrow [he will do so against] women, Jews, and anyone who goes against his superior race ideas.]* (Online message¹⁸)

A similar intention is shown in the following example, where the subprinciple of cognitive complexity is acting and the typically PB *fora que [not to mention]* opinion discourse marker is topicalized (cf. Spaziani, 2016)

17 25.JAN.2012 03:48. (http://forum.jogos.uol.com.br/sabe-galera-eu-tenho-certeza-que-um-dia-vou-me-casar-e-ter-filhos-e-uma-familia-porque_t_1862904?page=5)

18 <http://blogdotas.com.br/2011/03/29/preconceito-racial-sexual-social-nao/#comment-95940>

[40] *Fora que esse papo de “perdoar” tem tudo a ver com o cristianismo, até a palavra vive na boca de padres e pastores, que, escondidos, não perdoam nada. O povo cigano (o verdadeiro...), só para dar um exemplo, não tem esse papo de “perdão”. Ao contrário, adoram e valorizam uma vingança e não medem esforços para realizá-la. Para eles, vingança é um prato que se come quente. E bem quente! Beijós, Ricardo. [Not to mention that this whole thing about “forgiving” has everything to do with Christianity, this word is often used by priests and preachers who, in their secret way, never forgive anything. The gypsy people (I mean the true ones...), just as an example, have nothing like this “forgiveness” thing. On the contrary, they love and give value to revenge and will do anything to be revengeful. For them, revenge is a dish best served hot. Quite hot, I’d say!] Yours, Ricardo.]*

(Online¹⁹)

Language users manipulate language (and its grammar) by interacting in and for everyday life, both in their thoughts and actions, thus causing ideas to twine together. These ideas gain new meanings along life through metaphors in somewhat of a merging process. That is highlighted by Bernardo (2009), who states that conceptual metaphors result from the relation between source domain and target domain while turning more concrete, sense-accessible items (i.e., the conceptualizing domain) into more abstract contents. Let us examine the following example:

[41] *Um dos problemas, segundo o educador alemão Mairele Krause, é que os ciganos, por sofrerem com a perseguição, estabeleceram uma cultura de segredo e proteção que torna difícil entendê-los e estudá-los. David Mayall, um acadêmico que escreveu a história dos ciganos nos últimos 500 anos, afirma ser difícil definir uma identidade para este povo, pois elas são múltiplas. [According to German educator Mairele Krause, one of the issues is that because they have suffered from persecution, gypsies have set up a culture based on secrets and protection that makes it difficult to understand and study them. David Mayall, a scholar dedicated to writing gypsy history in the last 500 years, states that it is hard to define an identity for these people because they have multiple identities.] (O Estado de S.Paulo newspaper, 19.MAY.2013 12:33)*

In this example, merging appears as something evident in the integration subprinciple, where suffering, persecution, secrets, protection, difficulties are associated with the cognitive complexity

19 <http://thiagolasco.blogspot.com.br/2010/10/ferro-e-fogo.html>

implied in getting the picture of “the last 500 years” and “multiple identities”.

Therefore, in the light of the linear ordering subprinciple, Spaziani (2016) observed that the syntactic position may not affect text understanding, although, from a pragmatic perspective, all that is relevant and essential to the discourse project will arise in a topicalized position. Moreover, as we set a sequence of terms that altogether allow us to build negative concepts against a community, we are ultimately putting the integration subprinciple into action. Both on linear ordering and idea integration, lies the cognitive complexity derived from grasping more complex syntactic structures and from concurrent meaning comprehension. In the texts examined above, these forces allowed for endorsing the discourse focus on the gypsy community stigma either by reinforced negative polarity or outstanding topicalization.

There are many possible ways in which merging is motivated by social interaction through a re-signifying process. All these ways, however, will definitely stem from metaphorically modified concepts in the speaker’s social life.

4.4. Contrasting Portuguese from Brazil (PB) and Nheengatu

This section is based on an assumption by Givón (2012), as explored by Cunha (2021). This assumption worked as a trigger for comparing Brazilian languages and is worded as follows:

It is a sad tribute to the conceptual poverty of a scientific discipline, even a would-be one, that a practitioner feels bound to apologize, abjectly, every time s/he takes an inferential-abductive leap and comes up with ideas whose inductive or deductive provenance is less than 100-percent secure. [...]. I would like therefore to open this concluding chapter by exorcizing bad scientific habits, and cannot imagine a better way of doing that than to offer the following observation, made clearer to me after better acquaintance with the work of pragmatist philosophers of science [...]. May it be chanted daily like a mantra: (1) “While observed facts, facts deduced from

facts, and logical consequences deduced from theories are the flesh and bones of scientific inquiry, its heart and soul are, still, abductive speculation about where the facts might fit, and why they are the way they are. (Givón, 2018 [1979], p. 225-226)

As we look at language(s) from a panchronic, crosslinguistic perspective, some relatively disconnected similarities will catch the researcher’s eyes. As he states that “the genesis of grammar is the most recent elaboration of an old and perhaps still unfolding evolutionary story,” (Givón, 2009, p. 353) Givón means that language use goes far beyond merely complexifying the ability to abstract coding as referenced in objective realities, i.e., the rising of displaced reference.

A hundred years ago, Edward Sapir stated that language is a historical product and languages as variable whether they are examined as autonomous systems or compared to one another. In his words, “Language moves down time in a current of its own making. It has a drift.” (Sapir, 1921, p.123) A quick illustration of this alleged drift is the fact that although English and Portuguese languages use identical forms to refer to *Meleagris* birds, these forms refer to different places. This homonymy does not occur in Spanish:

	Portuguese	English	Spanish
Bird	<i>peru</i>	<i>turkey</i>	<i>pavo</i>
Country 1	<i>Peru</i>	<i>Peru</i>	<i>Perú</i>
Country 2	<i>Turquia</i>	<i>Turkey</i>	<i>Turquía</i>

In Portuguese, the bird is homonymous with a South American country (Peru), whereas in English the bird is homonymous with another country (Turkey). This brief example illustrates how language complexity evolves by displacing immediate referents and setting up an intricate universe that generally brings about quite puzzling coincidences. These three languages are the most widely spoken in the Americas, hence their illustrative comparison in our example.

Yet, we do not know if languages can be represented by a sole common protolanguage. What we do know is that languages have undergone constant variation and are still varying along the time. It is noteworthy that “dealing with linguistic change requires a prior task of identifying forms that were once in *x* state and later evolved to *y* state.” (Casseb-Galvão; Lima-Hernandes, 2012, p. 153). In this brief discussion, we will echo Cunha’s (2021) suggestion to examine the *será que [I wonder if]*²⁰ construction in Portuguese from Brazil and the *será* construction in Nheengatu. These constructions do not share a common origin. Nevertheless, they refer to corresponding functional contexts and yield intriguing coincidences.

“Será que” in Portuguese from Brazil

Portuguese from Brazil includes interrogative constructions with *será que*. In his “Gramática do português brasileiro” (2010, p. 124), Perini includes *será que* constructions as he explains how yes-no questions work:

To express a closed interrogative clause in PB, one should add a rising intonation contour to the affirmative structure:

[4] Você já terminou a faxina? [*You have finished the cleaning?*]

[6] O governo vai aumentar o imposto de renda? [*The government will*

raise income tax?]

To add uncertainty, one can start the sentence with *será que*:

[7] Será que o governo vai aumentar o imposto de renda? [*I wonder if the government will raise income tax.*]

(Perini, 2010, p. 124)²¹

Likewise, Moura Neves (2000) points out some usage examples with *será que* in her “Gramática de usos do português”. The examples

20 This construction is literally translated as “*will it be that...?*”. The best equivalent discourse marker in English is *I wonder if*.

21 Example numbers as used herein are the same as those originally found in Perini (2010).

are presented in two sections, but neither is exclusively dedicated to *será que* usage. First, in a negative interrogative utterance subsection of a chapter on adverbs (Moura Neves, 2000, p. 311), Neves examines interrogative tags such as *não é?* [*isn't it?/isn't that so?*] or *nê?* [*the contracted form of "não é?"*] to show that these constructions “display a negative expression in a final clause segment following a full clause (subject-predicate), are separated by a pause, and have marked intonation.” The author goes on to say that these constructions can be compared to English tag questions. In the same section, she includes examples with *será que não* [*I wonder if... not*] as shown below:

The positive expectation conveyed by the **NÃO** particle can be reinforced by inserting other elements, such as **SERÁ QUE**:
 Mas, **será que** você **não** soube disso sempre? (A) [*But... I wonder if you haven't always been aware of that?*]
Será que não posso entrar tarde uma noite? (SEN) [*I wonder if I could ever come in late one night?*]
 [...]
Será que não serei eu que mereço perdão, **e não** ele? (ALF) [*I wonder if I am not the one who deserves forgiveness rather than he?*]
 (Moura Neves, 2000, p. 311).

Further on, in section 3.2. (“Alternância entre um fato e uma **eventualidade**” [Alternating fact and **eventuality**]) of a chapter dedicated to coordinate conjunctions (Moura Neves, 2000, p. 777-778), Moura Neves provides some examples with *será que* as she examines the occurrence of this construction concurrently with the *ou* [*or*] conjunction. (Here, the author includes *seria que* [*I wonder if... would possibly... (literally, “would it be that”)*] in her analysis.) She explains that “the former utterance is **assertive declarative**, while the latter introduces an **eventual alternative (general questioning, with a verb in the conditional form or any other eventuality mark)** (Moura Neves, 1999, p. 778 – highlighted by the author), as shown in the example below:

Mas eu não posso pagar mais. Ou será que apertando as despesas posso pagar dois mil e duzentos? [But I can't pay more than that. I wonder if I could possibly manage to pay two thousand two hundred if I were to live on a tight budget?] (EL).

(Moura Neves, 2000, p. 778 – highlighted by the author)

Let us briefly examine the grammaticalization of the verb *ser* [*be*] in *será que*. As we look at *será*, we shall describe it as an indicative mood simple future form of the verb *ser*. Castilho (2010, p. 399) states that “*ser* is a verb with a complex etymology,” since three Latin roots have converged in its conjugation: (i) *esse*, from vulgar Latin *essere*; (ii) *sedere*, which, among other forms, will form the simple future (*será* [*will be*]); and (iii) *ire*, which has yielded forms such as *fui* [*I was*], *foste* [*you were*], *fosse* [*if I/you/hel/she/it were*], among others. *Será* falls into the Roman language grammaticalization of the phrase “infinitive + verb *haver*” to express the future: *há de ser* > *ser* + *há* > *será*.

However, in spoken contemporary PB the simple future is expressed by the *ir* [*go*] + *infinitive* phrase. Simple future constructions without the auxiliary verb *ir* [*go*] are nowadays restricted to written language or more formal spoken contexts where speakers are monitoring their speech:

[42] *Eu ficarei aqui* [*I will stay here*] > *Eu vou ficar aqui* [*I'm going to stay here*]

[43] *Eu verei aquele filme amanhã* [*I will watch that movie tomorrow*] > *Eu vou ver aquele filme amanhã*. [*I'm going to watch that movie tomorrow*]

Perini (2010, p. 124) points out that “rather than an example of simple future usage, *será que* is actually a settled phrase (some speakers will also say *será se*).” As he agrees with Perini (2010), Castilho (2010) provides examples by explaining that “both future forms live concurrently within the same language framework: as a matter of fact, synchrony and diachrony live peacefully together in panchrony.” (Castilho, 2010, p. 405):

[44] *Será que ele vem?* [I wonder if he's coming.]

[45] *Será que vai chover hoje?* [I wonder if it's going to rain today.]

Whether it comes along with or without more words, *será que* is certainly a PB construction used in uncertainty or eventuality interrogative clauses. We believe that eventuality as shown in Moura Neves (2000) is relevant to our discussion because it refers to doubt or uncertainty as previously described by Perini (2010). The same relevance is found on the fact that our discussion also leads to the principle of markedness. In PB, speakers can form interrogative clauses by simply varying their intonation pattern. These are unmarked utterances and are therefore more common. However, as we use *será que* we generate marked interrogative clauses, which in turn reinforce uncertainty or eventuality by means of a question. Their being marked is the very reason why constructions of this sort are less common.

“Será” in Nheengatu

Tupinambá, referred to as Tupi after 1870 (Dietrich, 2015, p. 12), was the most widely spoken language along the Brazilian coast when Portuguese colonizers arrived in the 15th century. Regrettably, it is considered a dead language nowadays.

However, several languages of the Tupi-Guarani family are still spoken in Brazil by an appalling small number of people. Nheengatu (from *nhe'engatu* = *good language*), also known as “Amazonian general language”, stemmed from Tupinambá in the 17th century and was a language commonly spoken in the Brazilian Amazon until 1850 (Dietrich, 2015, p. 13). Navarro (2012) refers to Nheengatu as “modern Tupi”:

In the heart of the Amazonian forest, the most preserved of all its regions (Northwestern Amazon), far away from agribusiness, informal mining, and deforesting, people speak a language that has played a key role in the history of the largest region in the country. This language is the General Language, also known as Nheengatu

or Modern Tupi. Unlike other languages that could be classified as ethnic languages (i.e., spoken by indigenous people), General Language was more widely spoken than Portuguese in that region, including the indigenous people, until the Amazon Rubber Boom in 1877. As a language that witnessed a time when catholic missions and rescue troops were pushing forward Brazilian Amazon borders along its large rivers, General Language is currently spoken by more than six thousand people in a territory that covers parts of Brazil, Venezuela, and Colombia. (Navarro, 2012, p. 245).

In his “Curso de Língua Geral” handbook (Navarro, 2011), Navarro provides some grammar forms used in Nheengatu interrogative clauses. Among these, we shall pay special attention to *será* as applied in general questions (Navarro, 2011, p. 18):

- [46] *Maria uikú será igara upé? – Is Maria in the canoe?*
 Maria u-ikú **será** igara upé
 Maria 3PS *estar* question *canoe* postposition
- [47] *Reputari será pirá? – [Do] (you) want fish?*
 Re-putari será pirá?
 2P sing. *want* question *fish?*
- [48] *Remunhá será maã amunhá? – [Do] (you) do what I do?*
 Re-munhá será maã a-munhá?
 2PS *do* question *what* 1PS *do*
- [49] *Nti será indé? – (Is it) not you?*
 Nti será indé?
 Not question *you?*
- [50] *Mira será indé? – (Are) you (a) person? [from Stradelli]*
 Mira será indé?
 (A) person question *you?*

The “Vocabulário Português-Nheengatu/Nheengatu-Português” by Ermano Stradelli (published in 1929 after his death) also examines the *será* form in two of its sections. First, in a subsection on negative and

interrogative verbs in the chapter “Esboço da Gramática Nheengatu” [An outline of Nheengatu grammar]. Second, *será* is explained as a dictionary entry. Below are the two references to *será* in his dictionary, as shown by Cunha (2021):

An outline of Nheengatu grammar

The interrogative form results from sentence construction, expletive tags, and interrogative demonstrative pronouns or adjectives use and position (§ 120) – *auá, maá*, and their compounds.

Expletive tags include *paá? taá? será?* and are not excluded when interrogative pronouns are applied, though their use is not mandatory [...]. (Stradelli, 2014 [1929], p. 85-86)

Dictionary entry

SERÁ? Interrogative expletive tag with no particular meaning. *Miná será indê?* Are you (a) person? *Omundu ocenoicári será ixê?* Did you send for me? *Resó putári será cuá rupi?* Do you want to go this way? (Stradelli, 2014 [1929], p. 481-482)

As we look at current language usage, we might raise the hypothesis that the expletive/interrogative clause *será?* has emerged in Nheengatu out of people’s contact with Europeans either through the Portuguese language or maybe through Spanish, where *será que* is also used (though less commonly) in interrogative clauses. Nonetheless, Cunha (2021) explains that ancient Tupi (Tupinambá) language data feature *será/çerá* in three publications (Carvalho, 1987; Navarro, 2006; Navarro, 2013), described as follows:

“Dicionário Tupi Antigo-Português” by Carvalho (1987):

ÇERÁ. Uncertainty tag, same as *acaso, por ventura (sic), quiçá, talvez* [=maybe/perhaps]. When used with negative verbs, this tag bears the opposite meaning, like *sem dúvida [no doubt/certainly]* (and the verb shifts to the affirmative form). Adverb: *provavelmente [probably]*. When used with a negative verb, it means *certamente [certainly]*. **As an adverb, this word works as an uncertainty tag to indicate that the speaker is asking a question** (our highlight and comments).

Both the “Método moderno de Tupi antigo” (Navarro, 2006) handbook and the “Dicionário de Tupi antigo” (Navarro, 2013) feature *serã* spelled with an *-s*, as shown in the Tupinambá excerpt below:

SERÁ (adv.). [...]. 3) (interrogative) by any chance/probably? *Serã?: Aipó tekó-pysasu abá serã ogúeru...? – That new law, who could possibly have brought it?* (Anchieta, Teatro, 4). [...]. (Navarro, 2013, p. 441)

SERÁ is an interrogative tag similar to **-pe**. It can be translated as *será que?* in Portuguese. It follows the word upon which the question emphasis is placed. (...) It can likewise be used in affirmative clauses, meaning *maybe/possibly*. E.g.: *Mamõ serã xe sóúne? Where could I possibly go to?* (Anchieta, Cat. Bras., I, 221). (Navarro, 2006, p. 266 – grifos próprios).

Let us now examine two clauses from Navarro (2006), as suggested by Cunha (2021). Navarro obtained his examples from the plays written by José de Anchieta (1534-1597), a Jesuit priest who first described the Tupi(nambá) grammar²²:

[51] *Mamõ serã xe sóúne? – Where could I possibly go to?* (Anchieta, Cat. Bras., I, 221).

Mamõ	serã	xe	só-û-ne
<i>Where</i>	question	1P sing.	go-circumstance-future

[52] *Abá serã ogúeru? – Who could probably have brought her?* (Anchieta, Teatro, 4).

Abá	serã	ogúeru?
<i>Who</i>	question	3P sing. reflexive+bring (*erur)

Based on the above Tupinambá language examples, Cunha (2021) first invalidates the hypothesis that the *serã* grammar form was directly borrowed from Portuguese. *Serã* originates from *serã*. However, what remains open to debate is whether *serã* derives from grammaticalization

22 *Arte de gramática da língua mais usada na costa do Brasil*, 1595.

in the Tupinambá language or emerged as a product of the contact with the Portuguese in the 15th and 16th centuries. Further reviews on this matter are therefore required.

As stated by Cunha (2021), it appears that the constructions examined in these examples have no common grounds in their origin, although they all refer to similar functional contexts. Both languages are spoken in the Brazilian territory, which enhances the degree of coincidence of the issues discussed herein. In Nheengatu, *será* is the grammatical mark used in yes-no questions. In PB, *será que* is a marked construction that emphasizes uncertainty or eventuality in interrogative clauses. The unmarked construction is preferred by PB speakers while using interrogative clauses, while more specific constructions will tend to feature *será que* as prescribed by the functionalist principle of markedness. In this sense, restricting our analysis to synchronic ideas could lead us to incorrectly inferring that Nheengatu *será que* was borrowed from Portuguese from Brazil. As he applies his principle of markedness, Givón (1995) holds that while a structure can be marked in one context, it can otherwise be unmarked in another context. Markedness is dependent on usage context, including the speaker's perspective and intention. Givón goes on to say that, in this sense, contexts should be examined on the grounds of communicative, sociocultural, cognitive, or biological factors.

As he contemplates language syntactic complexity on ontogenetic and phylogenetic bases, Givón (2009) provides an explanatory model to describe and examine multipurposed discourses. Speaking a language goes far beyond merely displacing reference by using linguistic signs. It is something else rather than just executing declarative speech acts. A linguist is therefore expected to speculate on how we produce utterances beyond situational and context domains, and should particularly investigate how we do so on the grounds of our own intersubjectivities by using other grammars and mental models.

As it is coded in the various existing linguistic construction categories (such as the emergence of deictic pointers, for instance), language complexity encompasses the construction of mental models for the interlocutor's mental states during communication. This can be observed as language users alternate declarative states with modalized needs or knowledge about referents. In this regard, a satisfactory research program on linguistic factors should necessarily take the relevance of cognition into account:

It is also noteworthy to look closely at the *cognition* concept. This word has embraced various meanings that have been used in many texts in quite a comprehensive manner. Let us take *tongue* as meant for *language*, for example. This term is ultimately a metaphor for the organ used to produce sounds, i.e. the physical raw material for bringing thoughts and ideas into actual existence. As a matter of fact, the tongue is an organ that serves as a tool for accomplishment and practice. Being a part of the process, it metonymically represents the whole process. Cognition, while more aligned with advancements in biology, psychology, psychiatry, and neurology refers to a starting point for creating as well as the moment when binds and relations are established in processing and elaborating, i.e. the mind. (Lima-Hernandes, 2015, p. 15).

The debate on markedness principle leads us to a likewise important principle of language functioning, namely the iconicity principle. This principle refers to natural correlation between linguistic form and function. Despite the relatively diffuse nature of functionalism in language science – where it is sometimes presented to early researchers as a non-uniform set of ideas – we will wrap up this discussion by emphasizing the commonly acknowledged assumption that language structure somehow reflects human experience structure itself, as it “discloses the features of human world conceptualization or the features of human mind.” (Cunha; Costa; Cezario, 2015, p. 22). Reading Givón is definitively an inspiring way to learn a bit more about this intriguing research field.

4.5. And then having coffee in the kitchen no longer means intimacy: the pathologic ageing of language

Language is a superior cognitive human skill. It serves as a supporting basis for thoughts to be turned into a remarkable communication tool but is nonetheless subject to deteriorating along the time. Some will experience this in a lower fashion with no effect on their social life. Others, however, will undergo an overwhelming aging experience in which their organism goes through changes that are significant and impactful as growing from childhood to teenage. Yet, the phenomena encompassed in these changes are the direct opposite of each other. In teenage, myriad neurons and hormones are rearranged as a consequence of whatever seems to be a novel experience. The body will crave for movement and attitude that will hurl oneself into a world of uncertainty, though guided by the will to live through a great amount of compelling innovation.

In contrast, old age has furnished one's body with habits, practices, and routines with no big news in the horizon. What happens in the world around aged people will scarcely cause any amazement or surprise. The mind is settled and dedicated to saving its vital energy with well-established routines from wake-up to bedtime. Nature has successfully played its role to relentlessly accommodate a young body into an old one in the course of time. The striking marks of a lifetime will show up in most aging individuals as physical decline and sometimes nearly irreversible damage in cognitive processing. This is particularly true insofar as language skills are concerned.

In this case, pathologic ageing is featured by impaired physical functions and several cognitive restraints usually related to memory. Compromised memory functions are inevitably associated with language skills. As Givón (2009) states, language

(...) is, by all accounts, one of the defining characteristics of *Homo sapiens*. It is deployed in a wide range of adaptive contexts: social interaction, cultural transmission, education, literature, theater, music, humor and play, love and war. Of this rich array of useful applications, one may single out two core adaptive functions that make all the rest possible: the mental representation, and communication of information. (Givón, 2009, p.41)

The complexity of living organisms' adaptive situations is evidence that human beings hold the capacity of both acquiring and losing language. Language loss develops into an impaired ability to perceive some practices that are celebrated by closely acquainted people in Brazilian everyday life, such as having some coffee at the kitchen table, as mentioned earlier in this book. Impairment to having coffee at the kitchen table can be iconically extended to impairment of mentally diseased interlocutors who can no longer say or remember who they are or where they come from, give an opinion about a dramatic issue, or make up their mind whether they should tell it to others or not. The intimate setting of the coffee-in-kitchen scene will gradually suffer the steady interference from some sort of dementia that eventually undermines old people's sense of perception and communication until it eventually affects their cognitive functions, change their behavior, and reshapes their personality and intellectual-cognitive skills. Among the various types of dementia, Alzheimer's disease (AD) is the most common condition as it affects 50-60 percent of all dementia cases worldwide. AD affects at least 5 percent of people aged above 65 years (Ortiz & Bertolucci, 2005) and this may amount to as much as 26 percent among those aged 84 years or above (Cayton, 2000).

AD acts in a serious, slow, progressive fashion on human superior cognitive functions, causing, among other adverse effects, language and grammar decline as noted by Soares Santos (2021, pp. 87-88). This assumption was based on several research studies (Hamilton, 1995; Ochoa *et al.*, 1996; Barreto, 2005; Morato, 2008; Damásio, 2000) to describe each AD symptom stage as follows:

In AD **early stage**, patients will display **anomies** such as difficulty with finding words to name objects and replacing words by more specific terms. Early AD patients will tend to use words with broader meanings by resorting to **hypernyms** (e.g. *clothing* for *shirt*). In spontaneous settings, there will be an increased use of **deixis** and **rewording**. In the **intermediate stage**, there will be a sharp decline in patients' communication skills as refers to the ability to grasp information that requires abstract reasoning. This occurs because **concrete reasoning** is enhanced to such an extent that it compromises remote memory. Finally, the **advanced stage** makes verbal communication extremely challenging, as the patient can experience **aphasia**, writing disorders (**dysorthography, agraphia**), and declined reading skills (**alexia**). The condition evolves to complete silence scenarios (mutism) in connection with several changes such as **apraxia** and **agnosia**. (SOARES SANTOS, 2021, pp. 87-88)

Modern world habits have made it possible for AD patients to live longer and more comfortably. A person's everyday habits since childhood builds episodic, long-term memories on a continuous basis. According to (Givón, 2009, p. 22-23), these memories are "long-term repository of propositional information about unique events, states or specific individuals, all known to us through life-time experience; or of their concatenations in longer chunks of coherent discourse." This contributes to developing a taste for habits that are less stressing to mental structure and can be adapted in case of age-associated degenerative brain disorders.

There is significant medical research stating that AD patients can benefit from music therapy. Tomsom (2018), Brown, Martinez & Parsons (2004), Jacobsen (2015), Campos & Graveto (2010) agree that there are strong reasons to believe that music therapy will improve the interactive quality of AD patients. As they are exposed to pleasant music to their ears, elderly AD patients who have forgotten recent facts such as their relatives' names or have grown unable to speak, for instance, will sing along whole songs from distant past years.

In her doctoral thesis, Soares Santos (2021) provides evidence that music plays a favorable role in elderly AD therapy. She examined interactive linguistic patterns by elderly Brazilian and Portuguese AD patients and showed that such patients expressed feelings for the music they listened to. This leads to the conclusion that language decline is a partial phenomenon associated with varying brain degeneration degrees.

This neurologic adaptive approach suggests that elderly AD patients have some sort of linguistic consciousness first numbed by the disease and later awakened by music, which, according to Givón (2009, p. 22), is a lexical repository of “our culturally-shared view of the external, mental and social world.”

The chart below is found in Soares Santos’s (2021) study on an advanced stage AD patient whose cognitive skills, especially linguistic, were seriously compromised. Even though verbal communication with the patients appeared to be unfeasible, it was clear that communication was made possible through music:

Chart 35 – Communicative activity 4: *Subject Id10*

I don't know what happened to me./ You put a spell on me!/ How come/ I'm so crazy for someone/ like you?			
Stimulus	Interlocutors	Narrative excerpts	Notes
NO MUSIC	MS	[...] "So, Ms. Id10, you have worked as a teacher? (1) "Congratulations! What grades did you teach? (2) "Do you like music?"(3)	Id10 is lying in a couch with her back on a pillow, slightly bending forward (1) - "She did. She was a very competent teacher," FG answers for Id10. (1) - It seems she cannot recall that. She closes her eyes and brings her hand to her forehead in a search for memories. (2) - FG adds: "She used to teach children." - I put the headphones on her ears.
	Id10	"(...)." (1) "(...)" (2) "I... don't... know... here..." (2) "She shook her head."	She had hardly listened to the song when she became upset and refused to keep the headphones on. I put on some background music.
WITH MUSIC	MS	"Are you enjoying this song?"	- Seconds later, she seemed to calm down with the music. The stressed expression in her face was softened. I then focused on checking the effects that the song enjoyed by Id10 had on her behavior, as it was impossible to do so through verbal language.
	Id10	"She smiled sweetly."	

Source: RPT outcome (Soares Santos, 2021)

The elderly lady's body did react to the song she had chosen because, as noted by Soares Santos, she had a slight grin on her face. This provides evidence that she was pleased as she understood the song and therefore engaged in communication.

As they are exposed to pleasant music to their ears, elderly AD patients who have forgotten recent facts such as their relatives' names or have grown unable to speak, for instance, will sing along whole songs from distant past years. Elderly AD patients react positively to music because their linguistic awareness is proportionally equivalent to their neurological and psychological compromising in each stage of human life.

No matter what mechanism could provide evidence to the outcome observed in this study, there appears to be no doubt that music of whatever sort has positive effects on amplified consciousness and language consciousness. Maybe this could lead us back to our cozy kitchen and have some good coffee, now with some nice music on the background.

AFTERWORD

Working with T. Givón

by Sebastião Votre

I shall start by drafting a critical review and interpretation of the research pathways modeled by T. Givón's works, at the research centers in which I worked, and as Sociolinguistics, Functional Linguistics, and the studies on information status, discourse towards syntax, and grammaticalization/degrammaticalization alternatives were settled. The research works I will refer to are herein described in a somewhat twisted train of thought that relies both on a timeline and logical reasoning.

I was at PUC-Rio when correlational Sociolinguistics came forth in 1975 with the leadings works of Anthony Naro and Miriam Lemle for the *Competências básicas do português* (CBP) research project. This project was funded by MOBRAL (*Movimento Brasileiro de Alfabetização*), where I rendered services as a consultant. Gregory Guy, whose academic advisor was then William Labov, participated in the project as a computational consultant and analyst of the data collected in Rio de Janeiro city district. This collaboration made us familiar with the statistics package designed by William Labov at the University of Pennsylvania linguistics laboratory, and the University of Montreal under the scientific advice of Gillian Sankoff and T. Givón.

Naro was then a professor at PUC and UFRJ, where he advised master's and doctoral students who were interested in studying linguistic usage variable phenomena in the CBP *corpus*. Naro was my advisor. As I was then influenced by Labov's studies on /r/-preserving pronunciations in New York city, and Celso Cunha's assumption that school education was bringing back the use of final /r/, I delved in that research theme.

PUC boasted the perfect conditions for research with an excellent mainframe computer. We soon became common users of the IT Center, especially after midnight, when we could count on more available memory. Great contribution was then shared by the Montreal group as they studied *joual*, a popular variant of *français parlé*.

As I look at our previous work today, I should say it was guided by remarkable empirical drive, little theoretical knowledge, plenty of technology, and a focus on coding and analysis resources. In that decade, the research carried out by PUC and UFRJ was strongly led by generative and philological theories. Historical grammarians played a huge role in that time. But the CBP project could manage that breach: Miriam Lemle dedicated herself to measuring to what extent embedding was syntactically rooted, while Naro would study variation and change phenomena.

The studies on language change facilitated our acquaintance with Gillian Sankoff's and T. Givón's research on discourse shift to syntax. Gillian had a background in Anthropology and was quite aware of the then existing criticism of functionalism, whilst polyglot Givón was in search for a grammar processing model that could be associated with different aspects of evolution, diachrony, the rise of infant speech grammar, and pidgins and creoles. His research and experiments on language empirical studies drove him away from root transformations. Further studies emerged out of the conception that synchrony and diachrony are mutually related to each other, thus restoring the assumption that unstable variation and change are closely connected and that individual variation and change reflect and deflect macrochanges.

The *corpus* collected for examining Competences was multimodal, with a focus on adult speech during their literacy education. The interviews were recorded and transcribed in the same fashion as the *Le français parlé Montréalais corpus*. Based on the *MOBRAL corpus*, I did some research on the final vibrant dropping by Rio de Janeiro illiterate

citizens. As I analyzed the data, I also came across diphthong rising in *mês* > *meis*, *dez* > *deiz*, *nós* > *nóis*, which I later examined with Labov.

Our UFRJ and PUC-Rio studies were strongly influenced by those performed in the Québec province, particularly at the two francophone universities in Montreal and the Université Laval in Québec City. We would read and discuss several papers based on the 1971 *Le français parlé corpus*. We built a relationship with Gillian Sankoff (UdeM), David Sankoff (UdeM), Henrietta Cedergren (UQAM), Suzanne Laberge, and now deceased Pierrette Thibault. We would also go through western US Coast articles, especially those published by Sandra Thompson and T. Givón, whose theoretical and empirical studies were collected in his landmark publication, *On Understanding grammar* (1979).

The Sankoff/Cedergren *corpus* was extended in 1984 and 1995 to widen its analysis spectrum as well as variation and change studies by including conversation analysis and discourse variation. The most remarkable linguistic influence came from the University of Pennsylvania, with William Labov's *Linguistics Lab* and *Corpus Language variation and change*. Labov and Gillian, then at the University of Pennsylvania, welcomed us as doctoral and post-doctoral students from different Brazilian colleges, which enabled us to contribute to collecting methods, data processing, and ongoing analyses.

As the founders of Brazilian variationist and functionalist Sociolinguistics in Brazil, we would frequently hear negative judgment not only on the quantitative apparatus used in this new approach, but also on its so-called feeble theoretical grounds. In an agrarian metaphor, we were referred to as someone who was "counting the cows in the pasture." On the other hand, since we had drifted towards a functionalist approach as a result of sociolinguist anthropologists like Gillian Sankoff and Diane Vincent, we were never taken too seriously by the then dominating generative team, to whom our approach lacked consistence and theoretical support.

We then started communicating with the Québec group about the *français parlé* – mostly with Gillian Sankoff, David Sankoff, and Diane Vincent – and embraced Givón’s theories to a greater extent. Our basic reference was Henrieta Cedergren’s research on Panamanian Spanish phonology at UQAM. The sociological drive of this Québécois research stemmed from Pierre Bourdieu’s production on distinction and cultural capital. Today I understand that we were searching for an integrated approach to grammar as a device that results from human maturation, special resource development, and motor skills specialization.

Research work at UFRJ was featured by devising and implementing the *Censo da Variação Linguística da UFRJ* project (“*Censo*”), collecting and analyzing data from 64 subjects late in 1989 and in early 1980 (later enhanced by information from 32 subjects in 2000), and a plan to proceed with a new complement as soon as the COVID-19 pandemic allows us to go outdoors and collect recorded data.

The multiplying power of the *Censo* project is reflected in new groups that were set up thereafter, such as the *Dialetos sociais cearenses* and the *VARSQL* projects. Leaders in those early generations have paved the way for sociolinguistics research group and initiatives to challenge the then prevailing bias towards the language used by educated people. And sure enough we were systematically assailed by critics who strongly advocated for prescriptive grammar and regarded us as too tolerant of what they deemed as the vicious undermining of truly educated language. We were unaware of Roland Barthes’s position against language fascism, as our goal was to give credit and acknowledgment to the language spoken by underprivileged citizens.

Our work at the Linguistics Lab in 1980 led us to meet Professor Ellen Prince (who sadly died in 2010), whose research focused on the relative weight of information status in syntactic structures. Professor Prince introduced me to Susumo Kuno’s empathy theories in syntax and was crucial to a functionalist turnaround in our group. Gillian,

who was then my academic advisor, also played a key role in our theoretical shift as she showed us the texts written by Givón (a former colleague of hers) and proved that linguistic functionalism was drifting away from functionalism in anthropology and sociology.

In 1986 I was a Postdoctoral Fellow at University of California, Los Angeles (UCLA) with Sandra Thompson as my academic advisor. That was my gateway into definitely adopting functionalism theories with a focus on the concepts of transitivity (developed by Sandra Thompson and Paul Hopper), morphologization, and syntactization (tested by Sandra Thompson and devised by T. Givón, Gillian Sankoff, and Penelope Brown) using Papua New Guinea Tok Pisin pidgin data. From that point onwards, our new challenge was to find the origins of grammar in discourse and the movement towards regularity in multiple origin languages.

Thompson uncovered innovative ways to investigate variable phenomena. She suggested that instead of studying two variants concurrently, we should rather focus on one single variant and investigate the contextual weight in which it occurred. That was exactly what Naro and I did as we laid our hands on the verb-subject order without comparing it to its alternative counterpart, i.e. the subject-verb order. She encouraged us to study syntactic phenomena in texts of different sorts while keeping control of text size for due comparison. Likewise, she encouraged studies in which lexical order showed that a constituent gains a new function as it is moved to the left, as in: Today the weather is not suitable for a walk, I think.

In this sense, a constituent movement to the right supported the analysis of detached participial clauses as in: The hunters walked up the mountain, carrying axes and rifles.

Orientation was not quantitative. Each construction was thoroughly analyzed as we searched for communicative motivations in the form used.

At UCLA we had a closer contact with T. Givón's postulates. He had previously worked there with Thompson while studying the pathway from discourse to grammar and Sankoff's ideas on the origins of discourse syntax based on Tok Pisin data, where a desired communicative function would rule form arrangement. The studies developed by both researchers supported Dwight Bolinger's concept of language as a flexible domain reality that continually adapts itself to cope with communicative functions.

The adaptive approach to grammar had already been introduced in Givón's *On understanding grammar* (1979). In this acclaimed work, the author postulates that the first version of the grammar system results from consolidating various domains of knowledge and human biology.

That was also the source for driving our attention to the role of diagrammatic iconicity as a one-to-one relation in function and form. The studies on Tok Pisin, then in full development, provided evidence that in certain pidginization contexts interaction-generated forms were closely related to their contents. These ideas were the framework for our *Discurso & Gramática* program.

My collaboration with Université Laval in 1992 reinforced my commitment to Givón's theories. Having Diane Vincent as my academic advisor and Mary Laforest as my colleague, I turned my focus onto grammaticalization and degrammaticalization processes using *Approaches to grammaticalization* as a guiding reference.

Vincent had just written her thesis on *Les ponctuels du langage*, where she examined particles she deemed as meaningless, such as *là* and *voilà*. Her thesis was a starting point for our studies on grammar margins in *Gramaticalização no português do Brasil*. In joint authorship with Vincent and Laforest, I had the paper *Grammaticalisation et post-grammaticalisation* published by *Langues et linguistique* journal.

As I was at UNILAVAL, I also wrote *Linguística funcional – teoría e práctica*, a report based on T. Givón’s theory on the pathways from discourse to grammar. Hence the name of our research group, *Discurso & Gramática*. Below is an extract of the introduction to this report:

“The first four chapters [of this report] are mostly based on research developed by linguists who share the ideas of T. Givón, Paul Hopper, Sandra Thompson, Russel Tomlin, and Jack Dubois.

T. Givón’s theory is so deeply rooted in chapter three (on basic functions and principles), that he could be literally quoted in each and every paragraph of that chapter. I suggest that the readers who are interested in a deeper approach to Givón’s ideas look into the bibliography in this report.” (I had 12 bibliographic references as the report was published.)

I said chapter 3 is about the reasons why we should give priority to functions, and presents the features of informativity, contrastivity, figure and ground, and transitivity. It further describes the functionalist principles of markedness with a detailed discussion on quantity, proximity, and linear ordering. Iconicity became a key reference in the works produced by the *Discurso & Gramática* group in the 1990s.

That decade witnessed the utmost influence of Givón’s theories – our *Discurso & Gramática* group was actually named after Givón’s *From discourse to syntax*. The *corpus* was basically built according to Anthony Kroch’s guidelines.

I want to give a special acknowledgment to Sandy and Talmy from UCLA for our joint projects on the functionalist approach in the late 1990s. A functionalist version of variationist sociolinguistics was the springboard for my studies on language use in authentic communication contexts with Anthony Naro, in which we searched for extralinguistic factors associated with lexical ordering. Prompted by T. Givón and Sandra Thompson – then a professor at UCLA and a former colleague of both of us – we carried on a non-variationist study on the verb-subject order without comparing it to its alternative counterpart (i.e., the subject-verb order). We had collaborated with Sandra Thompson when Naro worked as a visiting professor at UCLA

and I served as a visiting scholar at UCLA and UCSB. We then examined data from the *Programa de estudos do uso da língua*, whose *corpus* we had collected from 64 informants with a special view on speech data.

A close contact with Gillian Sankoff and Suzane Laberge's research on pidgins and creoles at the University of Montreal along with Givón's diachrony studies on the same issue inspired us to searching for syntax in discourse. We found the evidence from Tok Pisin investigation quite compelling to what was then referred to as linguistic functionalism (a rather troublesome label, given the strong criticism of the functionalism theory in anthropology). With the support from Gilian and Givón, the functionalist trend grew stronger and several approaches to this movement were established as they interacted with other trends on studying language use.

Below is a paragraph that summarizes the essence of our views on the verb-subject order, as illustrated by a few examples:

“(...) we found out that the verb-subject order is dependent upon communicative factors: VS tends to occur in ground contexts detached from the topic chain flow; and in these constructions the subject is not the item of which one is talking about. As a result, the subject in VS tends not to be referred to earlier in discourse. It is typically non-agent and non-individuated, since agent and individuated referents would usually work as the focus of attention. For the same reason, it is typically little affected.”

Let us look at these five examples:

- (1) *Às vezes é calmo, a vez é... Agita à beça esses homem maluco aí. Fica andando, assim, de revólver. Aí, agita o morro todo. [Sometimes it's quiet, sometimes it's... They mess up a lot, those crazy guys. They go around just like that, with guns. Then the whole community is messed up.]*
- (2) *Nem sempre ganha o favorito. [Not all the times “wins the favorite.”]*
- (3) *O dia que umenta o custo de vida, umenta tudo. [When “increases the cost of living”, it all increases.]*

The following are examples of post-positioned subject with an explicit direct object. This structure was scarcely found in the *corpus*:

(4) *Se você chegar em Pernambuco, ele não fala a mesma coisa que fala o baiano.* [If you go to Pernambuco, he [=a guy there] won't say the same as "says a guy from Bahia".]

(5) *A nossa barraca, por exemplo, esse ano faturou uma faixa de dez mil cruzeiros. ... Eu errei. Trinta mil cruzeiros faturou a nossa barraca.* [Our [market] tent, for example, made something like ten thousand cruzeiros... No, that's not right. Thirty thousand cruzeiros "made our tent."]

As a fellow scholar at Université de Laval in collaboration with Diane Vincent in 1992, I worked out plans for a larger project to study the so-called expletive particles, i.e. words with no particular classification that were until then left apart in the analyses. Vincent was dedicated to studying *les ponctuants* (such as *là, oui,* and *par exemple*). Following the same lines as the Geneva group research, she defended that these particles had no meaning whatsoever. Our group in Rio de Janeiro was already working on grammar margins and trying to find out remaining meaning traits associated with denotative forms like *les ponctuants*.

The 1992 Report

The first part of the 191-page fellowship report, named *Linguística funcional, teoria e prática* and with free access at the university's magnificent library, was meant to cover the research I had done there in collaboration with Québec linguists and based on the theories in the two volumes of *Approaches to grammaticalization*. The second part was a detailed description of the ongoing studies at UFRJ research group on the grammar status of those forms as well as their possible shift from discourse to grammar and degrammaticalization processes.

Ever since our first coauthored publication (*Gramaticalização no português do Brasil* in 1996), the *Discurso & Gramática* group members have been enhancing and reviewing concepts, testing and adjusting analysis methods, suggesting sound metaphorization theories, and

moving forward in the approach to metonymizing mechanisms. We have placed a more careful focus on our form and formalization analysis tools, with closer attention to the possible effects of frequency in grammaticalization as well as testing principles, models, and strategies to analyze form movement in different functional domains on a cognitive, structural and social basis.

Throughout my academic pathway, I can definitely say that the contribution of Givón's theories was of paramount relevance in my full professorship lecture at UFRJ in 1995, named *A base cognitiva da gramática* and later published in *A construção da gramática* (2012). His research outcomes are ingrained in the debate that Naro and I had with Milton do Nascimento in *Mecanismos funcionais do uso linguístico*, published by DELTA journal. His influence is likewise remarkable in the chapters my *Discurso & Gramática* research group colleagues and I published in 2012.

Givón 2015 & 2018

I will now briefly describe my current commitment to two landmarks in Givón's research, particularly *On Understanding Grammar* (Academic Press, 1979) and its revised, corrected and updated edition (John Benjamins, 2018). I will also make some comments about his chapter on "Human language as a combinatorial system" published in *Linguistic Analysis* (cf. Givón, 2015). According to Givón, this combinatorial system has an automatic adaptive device with two core adaptive functions that make all the rest possible: (i) mental representation; and (ii) the communication of information. Communication encompasses adjustments that are controlled by iconicity and result in morphologization, syntactization, and a zero-target, thus wrapping up the changing cycle according to linguistic universals and usage circumstances.

I have tested and validated Givón's hypotheses on the relation between variability synchrony and changing flow diachrony as I

examined syntactization processes (*meia cansada, meio dia e meio, menos química*) and the dilemma of non-grammar binding (inflected infinitive and double participles). Like Givón, I see grammar as the last bond in human evolutionary chain in the search for complex communication. The evidence to this phylogenetic statement stems from children's language acquisition and most particularly when a pidgin turns into a creole, as well as diachrony. Abstract grammar levels are acquired in a later stage in children's speech and later validated as creoles develop. The bioprogram provides grounds for one's grammar development. Pre-grammatical pidgin communication is prior to grammatical communication. As far as we know to date, language diachrony reflects several aspects of human biological and mental development.

Conclusion and final remarks

As I see it, there are sound reasons why functionalism applies tools for a more coherent, widely explanatory description of form and meaning, with enhanced capacity and a broader scope of analytical categories. The occurrence frequency of an examined item, which emerged in a correlation between what speakers used more often and what grammar coded more promptly, has gained a higher status in research, irrespectively of statistic resources.

Nowadays I cast a revised, more comprehensive view on the relevance of empirical work and how it should be performed. I do so under the strong influence of Western USA functionalists, especially Givón and Thompson from UCLA. In a self-criticism effort, I partly acknowledge my emphasis on empirical work as due to T. Givón's contribution to understanding grammar as an automatic processor of human devices in mental organization and communication.

The revised, corrected, and updated edition of *On Understanding Grammar* (2018) reinforces Givón's legitimate approach to cultivating and enhancing the scope of functional linguistics by looking at other

relevant aspects of the relation between language and its mediate and immediate contexts. Finally, I would like to wrap this up by reinforcing the theories set forth by Dwight Bolinger (Givón's academic advisor) and broaden his concept of language as a flexible entity that is continually adapting to new mental and communicative demands. It is noteworthy that language is also adaptive to ideological, socioeconomic, political, pedagogical, and religious pressures. Ideology is now acknowledged and regarded as relevant, while Valentin Volóchinov's *Marxism and the Philosophy of Language* relevance has been reassured. It is this very attitude of being open to new pressures and input that should lead language professional analysts like linguists into deeper interaction with their sociology, anthropology, education, social psychology, "applied" linguistics, biology, and language philosophy fellows.

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