Revista (Con)Textos Linguísticos, Vitória, v. 14, n. 28, p. 238-256, 2020 | e-ISSN 1982-291X | ISSN 2317-3475
Revista do Programa de Pós-Graduação em Linguística da UFES | periodicos.ufes.br/contextoslinguisticos

The PERIODICITY System in Texts of Technical Education in the Area of Civil Construction - Buildings*

O sistema de PERIODICIDADE em textos de ensino técnico da área de construção civil - edificações

Tânea Maria Nonemacher[1]

Abstract: The system of PERIODICITY, from the discursive perspective (MARTIN, 1992a; 1992b; 1993; MARTIN; ROSE, 2007) has its origin in the Systemic-Functional Linguistics (SFL) with Halliday's studies (1979/2002) and refers to the way information flows along a text from the complementarity between Theme and New. In this article, an excerpt of a text of the area of buildings is analyzed and there is an attempt to demonstrate the thematic realization patterns and the strategies used by the author to establish the method of development of the text (FRIES, 1981/1983; MARTIN, 1992b). It follows the hypothesis that the Theme in Portuguese could occur not only as the first element of a clause. The results show that, in the context of the study in question, the thematic organization patterns of the PERIODICITY system also occur by agreement to the Process (MOYANO, 2016). These results aim to contribute to the discussions as well as to encourage new research on the thematic realization in Portuguese.

Key-words: Systemic-Functional Linguistic. PERIODICITY system. Theme in Portuguese. Method of Development.

Resumo: O sistema de PERIODICIDADE, sob a perspectiva discursiva (MARTIN, 1992a; 1992b; 1993; MARTIN; ROSE, 2007) tem sua origem na Linguística Sistêmico Funcional (LSF) com os estudos de Halliday (1979/2002) e refere-se à maneira como a informação flui ao longo de um texto a partir da complementaridade entre Tema e Novo. Neste artigo, analisa-se um excerto de texto da área de edificações e busca-se mostrar os padrões de realização temática e as estratégias utilizadas pelo autor para estabelecer o método de desenvolvimento do texto (FRIES, 1981/1983; MARTIN, 1992b). Segue-se a hipótese de que o Tema em português poderia ocorrer não apenas como primeiro elemento de uma oração. Os resultados mostram que, no contexto de estudo em questão, os padrões temáticos de organização do sistema de PERIODICIDADE ocorrem também por concordância ao Processo (MOYANO, 2016). Tais resultados pretendem contribuir para as discussões e incentivar novas pesquisas a respeito da realização temática em português.

Palavras-chave: Linguística sistêmico-funcional. Sistema de PERIODICIDADE. Tema em português. Método de Desenvolvimento.

* I thank Professor Dr. Estela Inés Moyano - UNGS – Buenos Aires, whose guidelines during the completion of the Doctoral Internship - PDSE, were essential for this study. This research was financed in part by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brasil (CAPES) - Finance Code 001.
[1] Instituto Federal Farroupilha - *Campus* Santa Rosa, Santa Rosa, RS, Brasil. Endereço eletrônico: taneamn@gmail.com.

Introduction

The system of PERIODICITY (MARTIN, 1992a; 1992b; 1993; MARTIN; ROSE, 2007) is a concept used in the Systemic-Functional Linguistics (SFL), originated from the studies of Halliday (1979/2002) and concerns the complementarity between Theme and New. In this article, a text excerpt about the survey of walls of a building under construction (BORGES, 2016) is analyzed from a discursive perspective (MARTIN, 1992a, 1992b, 1993; MARTIN; ROSE, 2007). It is intended to show the thematic patterns that organize the flow of information through the system of PERIODICITY (MARTIN, 1992a, 1992b, 1993; MARTIN; ROSE, 2007) and the strategies used by the author to establish the method of text development (FRIES, 1981/1983; MARTIN, 1992a).

This paper is part of a doctoral research, whose objective is *to identify and map the textual genres instantiated in texts of the area of civil construction - buildings*. The data analyzed refer to the Brazilian context of technical education, within the scope of the Federal Institutes of Science and Technology (IFs), particularly in what refers to the course of Buildings Integrated to High School.

The curricular analysis of the course in question allowed the identification of the main texts used by the students to build their technical knowledge in the area throughout their training. This criterion allowed the delimitation of the general *corpus* of the research, that is, the books: Prática das pequenas construções (BORGES, 2016, Practices of Small Constructions) and O edifício e seu acabamento (AZEREDO, 2016, The building and its finish), are included in the bibliography of several courses as being essential for building knowledge in buildings[2]. For the present study an excerpt from one of the chapters of Borges' books (2016) will be analyzed.

This article is organized in three sections. The first one discusses the theoretical assumptions that guide this research; the second one presents the data analysis and discussion of the results and the last one brings the final considerations.

Theoretical Framework

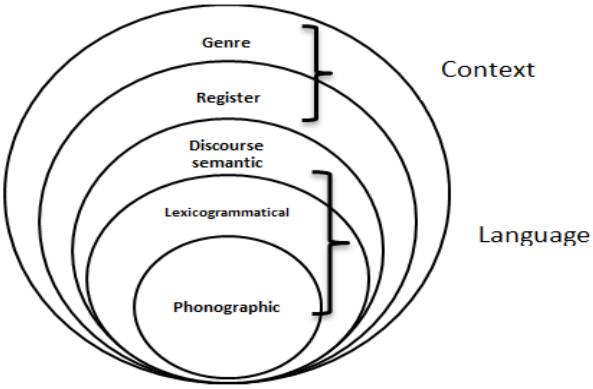
This work is related to the conception of language as a result of a social process that allows us to construct reality, to reflect and to act upon it (HALLIDAY, 1978). In this conception, language is a system of options and the text, used to carry out the most diverse actions of man with his environment, is an instance of this system. In this way, system and

[2] These are part of the corpus of analysis selected for the development of the doctoral thesis by the Post Graduate Program in Languages – Language Studies, UFRGS, Brazil.

text are two complementary phenomena in which the choices of the user in producing and transmitting a message are socially motivated (HALLIDAY; MATTHIESSEN, 2004).

Based on this functionalist and systemic view of language (HALLIDAY, 1978) there is the stratified model of context and language (MARTIN, 1999; MARTIN; ROSE, 2007), in which the context is constituted of more abstract socio-semiotic strata, that is to say, the genre and the register, realized by the language, a semiotic system integrated in its different levels (MARTIN; ROSE, 2008).

Figure 1 - Context and language stratification



From: Martin (2008, p. 30).

In this perspective, a text is the instance of a genre and this is the recurrent configuration of meanings (register variables) that determines social practices of a given culture (MARTIN; ROSE, 2008). Regardless of the social environment in which they are produced, all texts have a purpose, and in many cases, especially when it comes to a longer text, several socio-communication goals are at stake. Such a situation may lead to its realization in a more complex configuration that instances several genres, or in terms of Martin and Rose (2008), a macro-genre.

A genre/macro-genre instantiates different possibilities of expression and understanding of meanings which are performed by the variables of record. These variables, field, tenor and mode, in their turn, are performed, respectively, by the metafunctions of the language: ideational, interpersonal and textual. In this sense, the linguistic choices used to produce the meanings of language as a representation of (ideational) human experience indicate the nature of the social action manifested in the text (field). In the same way, the patterns of achievement of interpersonal metafunction refer to language as an exchange and indicate the relationships between the participants in social action and the roles they play.

Finally, the textual metafunction indicates how the discourse is explicit in the text (mode) and materializes the ideational and interpersonal meanings (HALLIDAY, 1994; 2004).

With regard to the strata of language (discourse semantic, lexicogrammatical and phonographic), these allow to verify different aspects of the same text through the analysis of different units, as shown in the table below.

Table 1 - Strata of language and respective units of analysis

Strata	Unit
Discourse semantic	Text
Lexicogrammatical	Clause
Phonographic	Phoneme, intonation, graphic units

Adaptation from Moyano (2013, p.37)

Given these assumptions, a text produced in a particular culture shows how this culture achieves a social purpose. According to SFL, it is the grammar that constructs the relevant meanings and looking at the linguistic choices instantiated in the text plays a fundamental role in understanding the meanings produced. This implies analyzing the choices made by the writer in terms of the structure and use of language as clues to understanding the path of reading[3].

The theory of stratified context and language (MARTIN, 1992a; MARTIN; ROSE, 2007) proposes possibilities of analysis in the discourse semantic stratum through several systems related to metafunctions. These systems direct the look of the discourse researcher to certain aspects of the text which, allied with each other, allow a deep and detailed view of the choices made by the author. Table 2 below illustrates these possibilities.

Table 2 - Correlation of realization

Register variables	Metafunctions	Discourse semantic systems
Field →	Ideational →	IDEATION CONJUNCTION
Tenor →	Interpersonal →	APPRAISAL NEGOTIATION
Mode →	Textual →	PERIODICITY IDENTIFICATION

Form: Martin (1992a).

[3] Even though the model proposed by Martin applies to the interpretation of other forms of expression, I focus only on the scope of the written text for the purposes of this research.

In this section, Table 2 shows the realization of the stratum of the record by means of one of the strata of language[4], the discourse semantics. Language metafunctions are performed through the systems of IDEATION, CONJUNCTION, APPRAISAL, NEGOTIATION, PERIODICITY and IDENTIFICATION; the focus of meaning is beyond prayer in the relationships constructed throughout the text as a means to show the constitutive role of language in social life.

Among these language systems related to the organization of meaning, in this work, I focus on the role of the PERIODICITY system (Martin, 1992a; 1992b; 1993; Martin & Rose, 2007) whose concept originates from Halliday's studies (1979/2002) regarding the complementarity between Theme and New. The PERIODICITY system occurs both in the macro (in the text) and micro configuration (in the clause) and its identification helps in the overall comprehension of the text, since it is possible to notice the regularity of the information flow that organizes the discourse fluidity having the text as its . In these terms, the construction of the periodicity of discourse occurs by the effect of the peaks of prominence formed by elements of two different structures, the Theme, from the thematic structure Theme-Rheme and the New, from the information structure Given-New (MOYANO, 2015).

The Theme, in many languages, is an element of the clause that directs the way information flows to achieve its social purpose. In the systemic-functional view, Theme "is the element that serves as the starting point of the message, it is what the clause is about" (HALLIDAY, 1994, p. 37).

Linked to this perspective, from the discursive point of view, understanding a text implies understanding the way meanings are realized as it unfolds. The information flow is compared to small waves that merge with larger waves and determine the rhythm of speech, with peaks of prominence in the clause, in the paragraph, and in the text as a whole. The complementarity of these peaks of prominence, which form a regular pattern of waves at a predictable rate, constitutes the system of PERIODICITY in discourse (MARTIN, 1992a; MARTIN; ROSE, 2007).

At the clause level, the smaller waves are constituted by the peak of prominence realized by the Theme, complemented by the peak of prominence of the information, realized by the New. At the discourse level, the waves expand as the text flows and are made up of

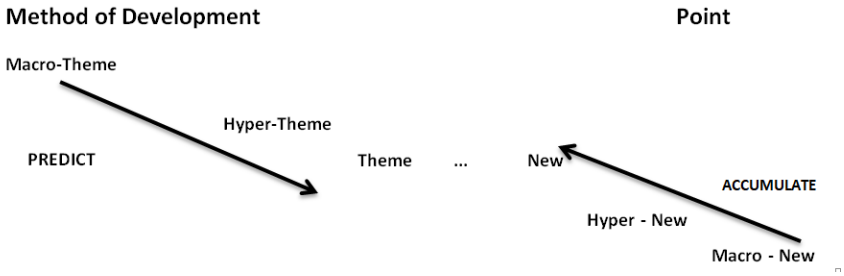
[4] As the analysis of this work is done considering the relationships in the text, we focus on Table 2, the - discourse semantic stratum. However, as shown in Table 1, as the degree of specificity in the systemic description increases, we reach lower stratum levels and take smaller units of analysis.

patterns of hyperThemes and macroThemes. Complementarity occurs in different phases of discourse by the standards of New, hyperNew and macroNew, whose cumulative function consolidates the information constructed in the text (MARTIN, 1992a; 1992b).

In this configuration, hyper-Themes consist of clauses that introduce a phase of discourse and set expectations of how the text will develop. Hyper-News, in turn, summarize and complement information announced in hyper-Themes. Likewise, macro-Themes lie beyond the clause and paragraph at a higher level in the hierarchy of PERIODICITY and encompass broader phases of discourse. These predict hyper-Themes complemented by even greater peaks of prominence that summarize and consolidate, in macro-New, the information constructed in the text and enable the opening to new information (MARTIN, 1992a; 1992b).

Figure 2 illustrates the complementarity between Theme/hyper-Theme/ macro-Theme and New/hyper-New/macro-New for the construction of the PERIODICITY system of a text. In this relationship, one constructs the method of development and the point of the text, two concepts elaborated by Fries (1981/1983) which considers the information of the Rheme as constitutive elements of the point of the text. However, Martin (1992a, pp. 448-460 and 1992b, pp. 168-173) and Martin and Rose (2007, p.192), based on the SFL, extend the discussion and propose that the point occurs by the set of News.

Figure 2 - Complementarity between elements of the periodic structure



From Martin (1992a, p. 456).

As you can see, Theme patterns can be predicted in the macro-Themes and hyper-Themes and are related to the global aspects of the text structure. In this sense, in Martin's terms (1992a, 1992b), defining the Theme as the starting point of the clause does not necessarily mean that the Theme is the first element of the clause[5], but it is the one which directs the way to be covered by the text. According to the author, the thematic choices are not random, they tend to be systematic and establish an orientation to an aspect of the field of

[5] Although that is the case in languages such as English (HALLIDAY, 1994).

discourse; therefore, it is these patterns that instantiate the method for the development of a text (MARTIN, 1992a).

The method of development "is the lens through which the field is constructed" (MARTIN, 1992b, p. 172) and informs where the text originates. In this sense, while the Theme is related to the lexical chains that guide the field and construct meanings throughout the text, the New complements the method of development and establishes the point of the discourse, that is, the direction the text follows to accomplish its purpose. Thus, the "Theme ties the text down, point elaborates it, developing it as News" (MARTIN, 1992b, p. 172).

Although the Theme is realized in different ways in different languages, in general, for its realization, the textual and interpersonal elements are optional, while the ideational ones are indispensable (ROSE, 2001). The ideational Theme or topic Theme (HALLIDAY, 1994) is usually a participant and, in languages like English, it converges with the Subject; a circumstance usually indicates a marked Theme and signals new steps in a sequence of events.

Studies on the typology of languages (CAFFAREL; MARTIN; MATTHIESSEN, 2004) showed the different achievements of the periodic structure in languages, such as Chinese (HALLIDAY; MCDONALD, 2004), Vietnamese (THAI, 2004), Tagalog (MARTIN, 2004), Pitjantjatjara (ROSE, 2004), French (CAFFAREL, 2004), Japanese (TERUYA, 2004), Telugu (PRAKASAM, 2004) and German (STEINER; TEICH, 2004). Matthiessen (2004), in a comparative study, points out that the realization of periodic meanings based on degrees of prominence, which can occur in the clause in different ways: (a) intonationally, through tonic prominence; (b) sequentially, by prominence at the beginning or end of the clause, and (c) by segment, with the use of a marker indicating the prominent element.

In Spanish, studies on the subject differ[6]. In a comparative study of Theme between declarative sentences in English and Spanish, Moyano (2016) proposes a new look in relation to previous studies. The author postulates the possibility of considering as Topic the concurring participant, expressed or elliptical, and, if expressed, before or after the Process. Another prominent characteristic refers to the fact that the signs of verbal posting agree with "one 'central' or 'major' participant of the clause, whether it is the more active participant (active voice) or the one affected by the process (passive voice)" (MOYANO, 2016, p. 191). In the occurrence of an elliptical subject, the meaning is recoverable from an element of preceding clauses or from context.

[6] For further information, verify Moyano (2010).

This study shows the verbal affix in Spanish as a device of reference related to the element of the clause that fulfills the function of the Theme and points out the accomplishment of the periodic structure in Spanish by agreement. This occurs, according to Moyano (*op.cit*), through the meaning of the verbal affix as a thematic marker located in the domain of the verbal group, indicating the participant who performs this textual function of the clause.

In Portuguese, the few studies dedicated to the topic postulate that Theme is more related to a functional definition than to its position in the clause. Since the language presents the possibility of null subject, in a clause with this type of occurrence, the verb cannot be indicated as Theme, since, "if the subject is recoverable, the subject will be the Theme" (GOUVEIA; BARBARA, 2006, p. 65).

An analysis of the meta-functional profile of Brazilian Portuguese, developed by Figueredo (2011), shows the contribution of the Theme to consolidate the text as a unit of meaning and to establish the basis of what is to come. The author follows Halliday (1994; 2004) in the sense that the theme is the starting point of the message and considers the organization of discourse closely linked to what comes first in each clause. In order to do so, he postulates that "the theme in Brazilian Portuguese has apparent realization and consequently, its identification is given by the first position in the structure" (FIGUEREDO, 2011, p. 307).

From the point of view of discourse, Figueredo (op. cit.) follows Halliday and Matthiessen (1999, p. 12) in the sense that the Theme lays the basis for the discourse that is to come. From the point of view of the clause, "the Theme is responsible for establishing the basis of interpretation for the rest of the clause, which is the Rheme, hence culminating in its point of arrival" (FIGUEREDO, 2011, p. 103).

Analysis: Theme, PERIODICITY and Method of Text Development

As explained in the introduction, we analyze fragments of a text of the construction area - buildings, used in the scope of technical high school. The focus is on the discursive sphere to identify thematic organization patterns in order to (a) verify how the system of PERIODICITY is performed and (b) take a first step to understand how to establish the field of the text.

In order to do so, we selected excerpts from a text about the building of walls on the ground floor of a building under construction. Next, the clauses were separated one by one in

order to identify the thematic selection patterns that construct the method of text development (FRIES, 1981/1983; MARTIN, 1992a, 1992b).

Table 3 shows the identification of the Theme following studies developed about Portuguese (FIGUEREDO, 2011). The clauses are separated into columns according to the function of the elements in the text, adopting the following format: in *italics* the occurrences of *Textual and Interpersonal Theme*; in **bold** the occurrences of **Experiential Theme**, if it is a **Marked Theme**, it will be **underlined and in bold**, both (marked and unmarked) with elliptical elements in brackets; and, in the last column of the table, it is the Rheme.

Table 3 - Patterns of the Theme

TXT Theme	INTP Theme	Experiential Theme	Rheme
		Ø [Nós]	Devemos deixar no mínimo um dia para a secagem da camada de impermeabilização e, só então serão erguidas as paredes do andar térreo que devem obedecer a planta construtiva em suas posições e espessuras (um ou meio tijolo).
Ø (We) must leave at least one day for the waterproofing layer to dry and only then the walls of the ground floor will be built, which must obey the building plan in its positions and thicknesses (one or half brick).			
§			
		O serviço [de levantar as paredes]	é iniciado pelos cantos, de preferência os principais e obedecer (sic) o alinhamento vertical o prumo do pedreiro.
		No sentido horizontal,	uniformizando as alturas ou espessuras das fiadas, cabe ao cantilhão funcionar como guia.
		O cantilhão	consiste de uma régua de madeira, com comprimento do pé direito do andar (distância que vai do piso ao forro graduada fiada por fiada).
		A graduação	é de 6,5 cm em 6,5 cm, pois o tijolo tem 0,50 cm de espessura e prevê-se uma camada de 1,5cm de argamassam entre duas fiadas (se a opção for pela utilização de tijolos baianos ou blocos de concreto deve-se (sic) adotar os espaçamentos correspondentes).
		A marcação dos traços sobre a régua	é feita com o auxílio do serrote, abrindo-se pequenos sulcos que assim permanecem bem visíveis.
		Os cantos	são levantados em primeiro lugar, pois_dessa forma o restante da parede será erguido sem maiores preocupações de prumo e horizontabilidade das fiadas
		Estica-se	uma linha entre os dois cantos já levantados, fiada por fiada, servindo esta de guia para os tijolos.

		A Figura 7-1	explica essa vantagem mais claramente demonstrando nela o cantilhão que se encarregará de manter todas as fiadas num mesmo plano horizontal, evitando o aspecto desagradável de uma alvenaria com linhas inclinadas e irregulares.
		Observe	ainda nesta figura a preocupação de manter as juntas desencontradas (em amarração) para evitar o cisalhamento vertical do maciço.
The service [of building the walls] starts by the corners, preferably the main ones and obey (sic) the vertical alignment of the mason's plumb-line. **In the horizontal direction**, uniformizing the heights or thicknesses of the rows, it is up to the building corner profile to function as a guide. **The building corner profile** consists of a wooden ruler, with length of the ceiling height from the floor (distance that goes from the floor to the ceiling graded row by row). ***The grading*** *is of 6.5 cm in 6.5 cm, because the brick is 0.50 cm thick and a layer of 1.5 cm of mortar is expected between two rows (if the option is for the use of Bahia bricks or blocks of concrete, (sic) one must adopt the corresponding spacing)* **.The marking of traces on the ruler** is made with the aid of the saw, opening small grooves that remain very visible by doing so. **The corners** are raised first, because in this way the rest of the wall will be erected without major concerns of plumb-line and horizontability of the rows. A line **is stretched** between the two already raised corners, row by row, serving as a guide for the bricks. **Picture 7-1** explains this advantage more clearly demonstrating in it the building corner profile that will be in charge to keep all the rows in the same horizontal direction, avoiding the unpleasant aspect of a masonry with bent and irregular lines. **Observe** in this picture the concern of keeping the joints mismatched (in binding) to avoid the vertical shear of the solid brick.			
§			
		Sempre	recebemos certa quantidade de tijolos partidos juntamente com os perfeitos.
		Esses pedaços	devem ser aproveitados nos alicerces e nas paredes de um tijolo.
		O seu emprego	deve ser evitado nas paredes de meio tijolo, pois atrapalham a amarração, além de provocarem falhas no alinhamento e no prumo.
(We) **always** receive a certain amount of broken bricks along with the perfect ones. **These pieces** should be used on the foundations and walls of a brick. **Its usage** should be avoided in the walls of half a brick, as they hinder the binding, besides causing failures in alignment and plumb-line.			

The author begins the text with the Elliptical Theme [We] referring to the subject discussed in the previous chapter (waterproofing). In the Rheme you will find the information that will direct the subject of the chapter “building of the walls” indicated by “the walls of the ground floor will be built”. This same information is taken up by the Theme of the second paragraph.

The second paragraph begins with the theme "**The service**" inferred as "the service [of building walls]" and is complemented by information on how to proceed to build the walls. Next, the Theme marked "**In the horizontal direction,**" indicates the stage in which the forms of alignments to be used in the building of the walls will be detailed. The Themes that follow "**The building corner profile**", "**The grading**", "**The marking of traces on the ruler**", "**The corners**" are elements that reinforce the information about the horizontal alignment. All of these Themes presented with the exception of the marked Theme performed by a mode Circumstance are performed by Participants. However, this linearity is broken by the thematic realization by means of a Process "Is stretch", followed by a Theme formed by a Participant "**Picture 7-1**", culminating in an elliptical Theme (you) according to the Process "**Observe**".

The third paragraph begins with the marked Theme "**Always**", performed by a time Circumstance. The marking indicates a break because it introduces a new phase of the discourse that provides information about the consequences of the use of irregular bricks in a construction, that is, they can cause "plumb alignment failures". The other Themes in this paragraph are made by Participants explicitly and by ellipse: "**These pieces**", "**its usage**".

It can be seen that the lexical chains carried out by the unmarked Themes in these fragments help to construct the field on "building of walls". They are identified by the participants who carry out most of the Themes, that is, "*the service [of building walls], the building corner profile, the grading, the marking of the traces, the corners*".

However, there is a discontinuity in the thematic realization pattern given that some Themes are performed by the Processes "**Is stretched (estica-se)**" and "**Observe**". This situation differs from Fries's (1981/1983) postulates that the Themes of the clauses of a paragraph, related to a given semantic field, create the method of development of this paragraph. In addition, the use of two Processes in the first position in the clause (thematic position according to Figueredo, 2011) also conflicts with the results of the research carried out by Rose (2011) on the thematic realization. According to the author, in general, in all languages, the Themes are participants.

Therefore, it is proposed, in this article, to look at the realization of the Theme in Portuguese, in consonance with studies of Moyano (2015; 2016) about the periodic realization in Spanish occurring by agreement. In this new analysis, presented below, we try to analyze whether the condition of the postponed concordant to the verb is an element of the same lexical chain of the Themes that construct the field, and whether this could be considered Theme in Portuguese. Moreover, there is an attempt to understand whether under the

perspective of the confluence between Theme and New, there would be a lexical pattern in the thematic choices.

Table 4, in the sequence, illustrates this analysis and presents all the clauses separated into columns according to the function of the elements. In relation to the previous analysis, presented schematically in Table 3, this new Table 4 presents the possibility of, in some clauses, the Theme to converge with the New was included. Therefore, the Processes were isolated in a new column in order to mark the agreeing element. Hence, Table 4 presents the following conventions: in *italics*, the occurrences of *Textual and Interpersonal Theme*; in **bold** the **unmarked experiential Themes**; in **underlined bold** occurrences of **marked experiential Theme**, both with elliptical elements in brackets; in ***italics, in bold and underlined*** the elements of ***confluence of Theme /New***; and finally, the column corresponding to New. The circles highlight the verbal endings and the arrows indicate the agreeing element.

Table 4 - Patterns of the Theme and confluence of Theme/New

TXT Theme	INTP Theme	Marked Experiential Theme	Experiencial Theme		Theme /New	New
			Ø [Nós]	Devemos deixar		no mínimo um dia para a secagem da camada de impermeabilização
		só então		serão erguidas	***as paredes do andar térreo***	
			que [as paredes do andar térreo]	devem obedecer		a planta construtiva em suas posições e espessuras (um ou meio tijolo).
(We) must leave at least one day for the waterproofing layer to dry and only then the walls of the ground floor will be built, which must obey the building plan in its positions and thicknesses (one or half brick).						
§						
			O serviço [de levantar as paredes]	é iniciado		pelos cantos, de preferência os principais
e			**Ø** [O serviço de levantar as paredes]	(sic) [deve] obedecer[a]		o alinhamento vertical o prumo do pedreiro
§						
		No sentido horizontal, uniformizando as alturas ou espessuras das fiadas,		cabe ao cantilhão	***funcionar como guia.***	
			O cantilhão	consiste		de uma régua de

						madeira, com comprimento do pé direito do andar (distância graduada fiada por fiada]] [[que vai do piso ao forro]])
§						
			A graduação	é		de 6,5 cm em 6,5 cm
pois			**o tijolo**	tem		0,50 cm de espessura
e				prevê-se	***uma camada de 1,5cm de argamassam entre duas fiadas***	
		(se a opção for pela utilização de tijolos baianos ou blocos de concreto		deve-se (sic) adotar	***os espaçamentos correspondentes).***	
§						
			A maração dos traços sobre a régua	é feita		com o auxílio do serrote,
				abrindo-se[b]	***pequenos sulcos***	
que assim			**Ø** [pequenos sulcos]	permanecem		bem visíveis
§						
			Os cantos	são levantados		em primeiro lugar,
pois dessa forma			**o restante da parede**	será erguido		sem maiores preocupações de prumo e horizontabilidade das fiadas
§						
				Estica-se	***uma linha entre os dois cantos já levantados, fiada por fiada,***	
				servindo	***Esta***	de guia para os tijolos.
§						
			A Figura 7-1	explica		essa vantagem mais claramente demonstrando nela o cantilhão
			Ø[o cantilhão]	se encarregará de manter		todas as fiadas num mesmo plano horizontal,
			Ø[o cantilhão]	Evitando		o aspecto desagradável de

						uma alvenaria com linhas inclinadas e irregulares.
§						
			Ø [você]	Observe		ainda nesta figura a preocupação de manter as juntas desencontradas (em amarração) para evitar o cisalhamento vertical do maciço.

The service [of building the walls] starts by the corners, preferably the main ones and obey (sic) the vertical alignment of the mason's plumb-line. **In the horizontal direction,** uniformizing the heights or thicknesses of the rows, it is up to the building corner profile to function as a guide. **The building corner profile** consists of a wooden ruler, with length of the ceiling height from the floor (distance that goes from the floor to the ceiling graded row by row). **The grading** is of 6.5 cm in 6.5 cm, *because* **the brick** is 0.50 cm thick and a layer of 1.5 cm of mortar is expected between two rows **(if the option is for the use of Bahia bricks or blocks of concrete**, (sic) one must adopt the corresponding spacing). **The marking of traces on the ruler** is made with the aid of the saw, opening small grooves that remain very visible by doing so. **The corners** are raised first, because in this way **the rest of the wall** will be erected without major concerns of plumb-line and horizontability of the rows. A line **is stretched** between the two already raised corners, row by row, **serving** as a guide for the bricks. **Picture 7-1** explains this advantage more clearly demonstrating in it the building corner profile that will be in charge to keep all the rows in the same horizontal direction, avoiding the unpleasant aspect of a masonry with bent and irregular lines.**Observe** in this picture the concern of keeping the joints mismatched (in binding) to avoid the vertical shear of the solid brick.

§						
		Sempre	**Ø** [Nós]	recebemos		certa quantidade de tijolos partidos juntamente com os perfeitos.
			Esses pedaços	devem ser aproveitados		nos alicerces e nas paredes de um tijolo.
			O seu emprego [tijolos partidos]	deve ser evitado		nas paredes de meio tijolo,
pois			**Ø** [os tijolos partidos]	atrapalham		a amarração,
além de			**Ø** [os tijolos partidos]	provocarem		falhas no alinhamento e no prumo

(We) **always** receive a certain amount of broken bricks along with the perfect ones. **These pieces** should be used on the foundations and walls of a brick. **Its usage** should be avoided in the walls of half a brick, as they hinder the binding, besides causing failures in alignment and plumb-line.

Note a: In this situation, the verb is not conjugated, it appears in its infinitive form, and the conjugation is taken from the verb that performs the Process of the previous clause. "It is a 'habitual phenomenon in the uses of oral Portuguese." (personal communication by Figueredo, 2011).
Note b: In this case, the Participant that would be the concordant was considered as Theme in case the verb that carries out the Process was conjugated.

Table 4 shows the Participants as elements of the lexical chain that constructs the field in the same way as Table 3. In the clauses of the first and second paragraphs in which there are occurrences of the marked Themes, "**only then**", "**In the horizontal direction**, **uniformizing heights or thicknesses of the rows**" and "**(if the option is for the use of Bahia bricks or blocks of concrete**" there is a kind of movement of the concordant element for the postposition in relation to the verb. In these cases, the agreement occurs with the following elements, respectively: "the walls of the ground floor", "work as a guide [for alignment]" and "the corresponding spacing".

In the situations in which the analysis of Table 3 showed the thematic accomplishment through the Process "**is stretched**", in this are other Processes "**is foreseen**", "**one must (sic) adopt**", "**opening**" and "**serving**", all with displacement of the matching element for the postposition. In these cases, again, one could postulate the confluence of Theme and New, which are performed by the following Participants: "***a layer of 1.5cm of mortar between two rows***", "***the corresponding spacing***", "***small grooves***", "***a line between the two already lifted corners, row by row***" and "***this*** *[line between two corners ...]*".

The Themes of the third paragraph are performed by the following Participants: "*[We]; the walls of the ground floor; the [wall-lift] service; act as a guide [the building corner profile]; the building corner profile; grading; or brick; a layer of 1.5cm of mortar between two rows; the corresponding spacing; the marking of traces; small grooves; the corners; the rest of the wall; a line between the two already raised corners, row by row; this [the line between two corners ...]; Picture 7-2; Ø [the building corner profile]; Ø [you]; Ø [we]; these pieces [of bricks]; its usage [pieces of bricks]*".

The analysis represented in Table 4 shows more clearly the method of development of the text adopted by the author, since it analyzes all the relations between Processes and Participants and allows us to identify the lexical choices that construct the field of the text.

Final considerations

In this study, thematic realization patterns that organize the information flow in texts of the area of civil construction - buildings were identified, in order to understand how the system of PERIODICITY occurs in these texts in Brazilian Portuguese. Furthermore, the lexical patterns that give evidence of how the field is organized in the text have been investigated. In order to do so, two perspectives were followed: (a) the first one, exposed in Table 3, related to studies on Brazilian Portuguese that consider the realization of the Theme "by the first position in the structure" (FIGUEREDO, 2011, p. 307); and (b) the second, demonstrated in

Table 4, based on the method of text development (FRIES, 1981/1983) and on the hypothesis that the Theme could be by agreement to the Process, having the confluence between Theme and New in some cases (MOYANO, 2016).

Concerning the first perspective, in the fragment analyzed and illustrated in Table 3, the Theme was performed by Participants ("*the service*", "*the building corner profile*"...), by Processes ("*Stretch*", "*Observe*") and by Circumstances ("*In the horizontal direction*", "*Always*"). As a result, it is possible to observe this variation in the elements that perform the role of Theme in the clauses (Participants, Processes and Circumstances) does not allow the identification of a lexical pattern that would indicate the method of text development and, as a consequence, it does not allow the identification of patterns in the organization of the field either.

In this sense, the second analysis perspective, expressed in Table 4, propose the analysis of the occurrence of the Theme by agreement. The results showed that, except in cases where Themes are performed by ellipsis [we] and [you], there is a lexical pattern around which information flows throughout the text. Thematic choices formed by Participants such as "*ground floor walls, mortar layer, rows, spacing, building corner profile, marking, corners, bricks, remaining wall*" construct the semantic field "building of walls" and create the method of text development.

It is emphasized that the elements related to these lexical chains do not always appear in the first position in the clause. However, sometimes in the first position, sometimes in confluence with the New, they all are, by agreement, directly related to the Processes. In this sense, it is possible to claim that the realization of the Theme and, consequently, the realization of the PERIODICITY of the text is by agreement.

Although the analysis has shown this possibility, it is emphasized that the argumentation about the realization of the periodic structure in Brazilian Portuguese by agreement refers to texts of the specific context of this research and, therefore, is not conclusive. Such results contribute to the discussions around the thematic realization and the PERIODICITY system, at the same time as they encourage new investigations that can deepen the understanding on the subject.

References

AZEREDO, H. A. **O edifício e seu acabamento**. (Rev. Ed.) São Paulo: Edgard Blücher. 2016.

BORGES, A. C. **Prática das pequenas construções**. v. 1, 8. ed, rev. ed. São Paulo: Edgard Blücher. 2016.

CAFFAREL, A. Metafunctional profile of the grammar of French. In: CAFFAREL, A.; MARTIN, J. R.; MATTHIESSEN, C. M. I. M. (Eds.). **Language Typology**: A Functional Perspective. Amsterdam: Benjamins, 2004. p. 305-396.

CAFFAREL, A.; MARTIN, J. R.; MATTHIESSEN, C. M. I. M. (Eds.). Introduction: Systemic functional typology. In: CAFFAREL, A.; MARTIN, J. R.; MATTHIESSEN, C. M. I. M. (Eds.). **Language Typology**: A Functional Perspective. Amsterdam: Benjamins, 2004. p. 1-76.

FIGUEREDO, G. **Introdução ao perfil metafuncional do português brasileiro**: contribuições para os estudos multilíngues. 2011. Dissertation (Doctorate in Applied Linguistics) - Faculdade de Letras da UFMG, Belo Horizonte, 2011.

FRIES, P. H. On the status of Theme in English: Arguments from discourse. **Forum Linguisticum**, v. 6, n. 1, p. 1-38, (August). Reprinted in PETÖFI, J.; SÖZER, E. (Eds.). (1983). **Micro and Macro Connexity of Texts**, (pp. 116-152). **Papers in Text Linguistics** 45, Hamburg, Helmut Buske Verlag, 1981.

GOUVEIA, C.; BARBARA, L. Marcado ou não marcado não é a questão, a questão é: onde está o Tema? In: MOTT-ROTH, D.; ALMEIDA DE BARROS, N. C.; RICHTER, M. G. (Eds.). **Linguagem, Cultura e Sociedade**. Santa Maria: Postgraduate program in Letras, UFSM, 2006. p. 155-157.

HALLIDAY, M. A. K. **Language as social semiotic**. London: Edward Arnold, 1978.

HALLIDAY, M. A. K. Modes of meaning and modes of expression: types of grammatical structure and their determination by different semantic functions. In: **On Grammar** (Vol. 1 in the Collected Works of M.A.K. Halliday, ed. by Jonathan J. Webster, pp.196–218). (First published in Function and context in linguistic analysis: A festschrift for William Haas. ed. by D. J. Allerton, E. Carney & D. Holdcroft, pp. 57–79. Cambridge: Cambridge University Press.) London: Continuum, 1979/2002.

HALLIDAY, M. A. K. **An Introduction to Functional Grammar**. 2. ed. London: Arnold, 1994.

HALLIDAY, M. A. K.; MATTHIESSEN, C. M. I. M. **Construing experience as meaning**: a language based approach to cognition. London: Cassel, 1999.

HALLIDAY, M. A. K.; MATTHIESSEN, C. M. I. M. **An Introduction to Functional Grammar**. 3. ed. London: Arnold, 2004.

HALLIDAY, M. A. K.; McDONALD, E. Metafunctional profile of the grammar of Chinese. In: CAFFAREL, A.; MARTIN, J.; MATTHIESSEN C. M. I. M. (Eds.). **Language Typology**: A Functional Perspective. Amsterdam: Benjamins, 2004. p. 305-396.

MARTIN, J. R. **English Text**: System and Structure. Amsterdam: John Benjamins, 1992a. doi: 10.1075/z.59

MARTIN, J. R. Theme, method of development and existentiality: the price of reply. **Occasional Papers in Systemic Linguistics**, v. 6, p. 147-183, 1992b.

MARTIN, J. R. A contextual theory of language. In: COPE, B.; KALANTZIS, M. **The powers of literacy**: A genre approach to teaching writing. London: The Falmer Press, 1993. p. 116-136.

MARTIN, J. R. Modelling context: a crooked path of progress in contextual linguistics (Sydney SFL). In: GHADESSY, M. (Ed). **Text and Context in Functional Linguistics**. Amsterdam: Benjamins (CILT Series IV), 1999. p. 25-61.

MARTIN, J. R. Metafunctional profile of the grammar of Tagalog. In: CAFFAREL, A.; MARTIN, J. R.; MATTHIESSEN, C. M. I. M. (Eds.) **Language Typology**: A Functional Perspective. Amsterdam: Benjamins. 2004. p. 305-396.

MARTIN, J. R.; MATTHIESSEN, M. I. M.; PAINTER, C. **Deploying Functional Grammar**. Beijing: The Commercial Press, 2010.

MARTIN J. R.; ROSE, D. **Working with Discourse**: Meaning Beyond the Clause. 2. ed. London: Continuum, 2007.

MARTIN, J. R.; ROSE, D. **Genre Relations**: Mapping Culture. Equinox: London and Oakville, 2008.

MATTHIESSEN, C. M. I. M. **Lexicogrammatical Cartography**: English Systems. Tokyo: International Language Science Publishers, 1995.

MATTHIESSEN, C. M. I. M. Descriptive motifs and generalizations. In: CAFFAREL, A., MARTIN, J. R.; MATTHIESSEN, C. M. I. M. (Eds.). **Language Typology**: A Functional Perspective. Amsterdam: Benjamins. 2004. p. 305-396.

MOYANO, E. I. El sistema de Tema en español: una mirada discursiva sobre una cuestión controvertida. In: GHIO E.; FERNÁNDEZ, M. D. (Eds.). **El discurso en español y portugués**: Estudios desde una perspectiva sistémico-funcional. Santa Fe: Universidad Nacional del Litoral, 2010. p. 39-87.

MOYANO, E. I. (Org.). **Aprender ciencias y humanidades**: una cuestión de lectura y escritura. Aportes para la construcción de un programa de inclusión social a través de la educación lingüística. Los Polvorines: Universidad Nacional de General Sarmiento, 2013.

MOYANO, E. I. Little and bigger waves: Theme and Periodicity in Spanish academic texts. Colloquium on Communicative Dynamism above below and at clause level: a SFL approach. Coordinator: Gerard O'Grady (U.Cardiff, UK). In: 42TH INTERNATIONAL SYSTEMIC FUNCTIONAL CONGRESS (ISFC), RWTH Aachen University, Aachen, Germany, from July 27th to 31st, 2015.

MOYANO, E. I. Theme in English and Spanish: Different means of realization for the same textual function. In: CLARK, B.; ARÚS-HITA, J. (Eds.). **Special Issue on Communicative Dynamism**, English Text Construction, v. 9, n. 1, p. 190-220, 2016.

PRAKASAM, V. Metafunctional profile of the grammar of Telugu. In: CAFFAREL, A.; MARTIN, J. R.; MATTHIESSEN, C. M. I. M. (Eds.). **Language Typology**: A Functional Perspective. Amsterdam: Benjamins. 2004. p. 305-396.

ROSE, D. Some variation in Theme across languages. **Functions of Language**, v. 8, n. 1, p. 109-145, 2001.

ROSE, D. Metafunctional profile of the grammar of Pitjantjatjara. In: CAFFAREL, A.; MARTIN, J. R.; MATTHIESSEN, C. M. I. M. (Eds.). **Language Typology**: A Functional Perspective. Amsterdam: Benjamins. 2004. p. 305-396.

STEINER, E.; TEICH, E. Metafunctional profile of the grammar of German. In: CAFFAREL, A.; MARTIN, J. R.; MATTHIESSEN, C. M. I. M. (Eds.). **Language Typology**: A Functional Perspective. Amsterdam: Benjamins. 2004. p. 305-396.

TERUYA, K. Metafunctional profile of the grammar of Japanese. In: CAFFAREL, A.; MARTIN, J. R.; MATTHIESSEN, C. M. I. M. (Eds.). **Language Typology**: A Functional Perspective. Amsterdam: Benjamins. 2004. p. 305-396.

THAI, M. D. Metafunctional profile of the grammar of Vietnamese. In: CAFFAREL, A.; MARTIN, J. R.; MATTHIESSEN, C. M. I. M. (Eds.). **Language Typology**: A Functional Perspective. Amsterdam: Benjamins. 2004. p. 305-396.

Sobre a autora

Tânea Maria Nonemacher (Orcid iD: http://orcid.org/0000-0002-1099-3005)

Doutora em Letras (Estudos da Linguagem) pela Universidade Federal do Rio Grande do Sul (UFRGS); mestra em Educação nas Ciências pela Universidade Regional do Noroeste do Estado do Rio Grande do Sul (UNIJUÍ); graduada em Letras - Português/Inglês e respectivas literaturas pela Faculdade de Filosofia Ciências e Letras Dom Bosco. É professora do Instituto Federal Farroupilha (IFFarroupilha).

Recebido em junho de 2020.
Aprovado em outubro de 2020.