

## SMALL CLAUSES: ORIGINS AND STATE OF THE ART

*Marcos Carreira<sup>1</sup>, Maria José Foltran<sup>2</sup>, Andrea Knöpfle<sup>3</sup>*

### ABSTRACT:

This paper presents (part of) the debate on what has been called Small Clauses (SC), discussing its origins and state of the art. In a nutshell, they refer to a subset of constructions that express a tenseless subject-predicate relation. The proposals regarding the existence of SCs and their structural descriptions go along with the historical development of the Generative Program itself, raising important questions on grammar proposals and providing empirical findings. In this article, we present an historical background of some of those proposals that involve SCs and summarize some of their most prominent researchers, along with prototypical examples and Brazilian Portuguese data, when relevant.

**Key-words:** Small Clauses; Secondary predication; historical background.

### RESUMO:

Este artigo apresenta parte do debate sobre o que tem sido chamado de Small Clauses, sua origem e estado de arte. Small Clauses (ou Miniorações) se referem a um subgrupo de construções que expressam uma relação sujeito-predicado que não apresenta marcas de tempo (*tense*). As propostas relacionadas à existência de SCs e suas descrições estruturais acompanharam o próprio desenvolvimento do Programa Gerativista, levantando questões importantes sobre propostas de gramáticas e trazendo descobertas empíricas. Neste artigo, apresentamos uma retomada histórica de algumas propostas que envolveram SCs e resumimos alguns dos seus pesquisadores mais importantes, juntamente com exemplos típicos e dados do Português Brasileiro quando relevantes.

**Palavras-chave:** Small-Clauses; predicação secundária; retrospectiva.

<sup>1</sup> State University of Ponta Grossa, Ponta Grossa, Paraná, Brazil. E-mail: [marcos.carreira@gmail.com](mailto:marcos.carreira@gmail.com)

<sup>2</sup> Federal University of Paraná, Curitiba, Paraná, Brazil, CNPq (grant 304767/2016-6). E-mail: [mariajose.foltran@gmail.com](mailto:mariajose.foltran@gmail.com)

<sup>3</sup> Federal University of Pernambuco, Recife, Pernambuco, Brazil. E-mail: [deaknoepfle@gmail.com](mailto:deaknoepfle@gmail.com)

## INTRODUCTION

Since the beginning of the studies in transformational generative grammar, *complex predication*, *secondary predication* and *Small Clauses* have played a crucial role in the theory, with their grammatical configuration going alongside with the empirical findings, especially because they are claimed to represent key aspects of the theory of grammar that have been proposed and developed since then.

Given their importance, we believe Small Clauses (and their terminologically correlates, even the sometimes argued small clauses non-existent status) deserve an overview in this volume. Therefore, the aim of this article is to discuss the historical background of some proposals that involve these constructions, as well as some of their most prominent researchers.

The phenomena of Small Clauses (SC henceforth), situated in the syntax-semantic interface, has been one of the more controversial concepts in linguistics literature and has engendered a quite lively empirical debate, which suggests that they can occur in different contexts and by different specifications.

The term SC refers to a subset of constructions that express a subject predicate relation, but a not tensed one. The most general assumption is that the predicate in a SC can be a verbal phrase (VP) with a non-inflected verb, an adjectival phrase (AP), a prepositional phrase (PP) or a noun phrase (NP). The most prominent discussions favor the construction with AP or NP predicates. For the sake of time and clarity, we will concentrate on the constructions that motivated the use of the term (constructions with AP and NP predicates) and describe them through the most typical examples in the literature and some Brazilian Portuguese (BrP) data, when relevant.

The constructions exemplified in (1) were always at the center of the debate: the complement of *consider* type verbs<sup>4</sup> (1a), subject-oriented predicates (1b) and object-oriented predicates (1c).

- (1) a. Mary considers John **intelligent**  
b. Paul arrived **happy**  
c. We ate the meat **raw**

Verbs like *consider* select a complex complement which presents two constituents: in (1a) *intelligent* is a property applied to *John*, thus there is a predication relation between them. The same happens to *happy* applied to the subject *Paul*, in (1b), and *raw* applied to the object *the meat* in (1c). The concept assumed by the majority of researchers of the field is that SCs are always dependent on a main clause and, by its nature, are morphologically less complex than full clauses, in the sense that they lack tense or, in other words, they lack INFL. This assumption raises an important question: what are the conditions to establish a predicate relation? The answer to this question depends on the notion of

<sup>4</sup> *Consider* type verbs mean generally ECM (Exceptional Case Marking) verbs. Perception verbs (like see in *I saw the children play in the garden*) are included here. We will let perception verbs aside because they show some peculiarities that we will not be able to develop here. Those who are interested in the complementation of perception verbs in BrP, see Rodrigues (2006).

predication that is assumed. To make it clearer, we will consider the examples in (2).

- (2) a. **Raw** meat is good for your diet
- b. John ate the meat **raw**
- c. This meat is **raw**

It is possible to say that *raw* predicates (*the*) *meat* in all sentences above. In (2a), *raw* conveys an attributive reading: it distinguishes the referent of the subject from others in a given context; in (2b), *raw* describes the state of the meat when an eating event is taking place; (2c) is a typical example of an adjectival phrase in a predicative use, mediated by the copula. These examples allow us to say that the distinction between attributive and predicative readings must not be understood exclusively at a semantic level, but at a syntactic one as well - this one related to internal syntactic properties of a given expression, that can be implemented in different ways, according to the language in question.

In a language like English, the position of the adjective establishes the distinction between the attributive and predicative readings. When the adjective is before the noun, it gives the predicate an attributive reading. In a predicative reading, adjectives follow the noun, as shown in (3):

- (3) a. John ate the **raw** meat
- b. John ate the meat **raw**

In BrP, the two readings are generated by the same word order (4).

- (4) João comeu a carne **crua**.  
John ate the<sub>[FEM]</sub> meat<sub>[FEM]</sub> raw<sub>[FEM]</sub>

Only the context can disambiguate the sentence in (4), making one of the readings available. In German, this distinction is more evident: predicative adjectives occur postnominally, like in English, and show no agreement marks, and attributive adjectives occur in prenominal position, thus agreeing in gender and number with the noun (5).

- (5) a. João aß das Fleisch roh  
João ate the<sub>[NEU-ACC]</sub> meat<sub>[NEU]</sub> raw<sub>[BARE]</sub>  
'The meat was raw when John ate it'

- b. João aß das rohe Fleisch  
John ate the<sub>[NEU-ACC]</sub> raw<sub>[NEU-ACC]</sub> meat<sub>[NEU]</sub>  
'Within the pieces of meat available, John ate the raw one.'

It is worth noticing that nominal modification (attributive) and the predicative uses of adjectives consist on different forms of predication, but generally only the latter is considered as a predicate. Rothstein (2001) tackled this problem, but this matter is not at the center of this discussion<sup>5</sup>. Defining

<sup>5</sup> In Carreira (2015) the reader can find this discussion rebuilt. The author takes the hypothesis of both attributive and predicative reading being an instantiation of predication and try to develop a unified theory of predication, where the predicative and attributive are derived from the same local relation and the difference in the reading comes from the visibility the structure of predication have to the T head of the sentence.

the configurations and conditions under which the predication relation can be established is a challenge for linguistic theories, particularly when they concern SCs.

The notion of predication is far from being a consensual concept. One problem is to understand the relation between the semantic properties of predicates and the internal structures where they appear. It is consensual that the term predication refers to the semantic and syntactic relation between a predicate and a subject. Such relation is usually described as occurring at the sentence level. The SC assumption extended that notion to a level below the sentence where it is not tensed.

Based on thematic theory, many researchers assumed that the predication relation is achieved by the saturation properties of a lexical item. A lexical item, like a verb, denotes an open function and its open positions must be fulfilled by an argument. These items have a theta-grid that specifies their thematic properties, and that must be closed by an argument. In that sense, theta-assignment corresponds to the saturation of these arguments. Theta-roles are semantic properties and establish thematic relations between a theta-marker (a predicate) and its arguments. Subjects have a special status in this relation and, contrary to complements, which may or may not be realized depending on the nature of the predicate, are obligatory<sup>6</sup>.

However, as pointed out by Heacock (1994), Rothstein (2001) and other authors, the special status of subjects cannot be derived from the lexical properties of heads. Rather, the theory of grammar must recognize a primitive syntactic relation of predication. Rothstein (2001) assumes that the division of a proposition into subject and predicate does not follow from any semantic notion, but from a structural property defined in purely structural terms. She defends a theory of predication based on the grammatical saturation relation between argument and predicate constituents, independently of their thematic relations.

Thematic relations and the structural view of predication are the background of the theories that we will be presenting in this paper. Both notions are at the basis of the discussion, but each one is seen as more or less prominent to the analysis of SC depending on the author.

This paper is organized in five sections. In section 1, we present the roots of the SC concept in the seminal work of Chomsky: *LSLT* (Chomsky, 1955) and in *Syntactic Structures* (Chomsky, 1957). In the debate of SC constructions, Chomsky's ideas are referred to as *Complex Predicates theory*. Section 2 is devoted to the debate between Edwin Williams and Tim Stowell, that proposed the *Theory of Predication* and to the *Theory of Small Clause* respectively, as both theories are always in the center of this discussion. In section 3, we develop the configurational approach of predication based on Rothstein's work. The concepts assumed in this theory allow us to distinguish SCs from adjunct predicates and, within the adjunct predicates, from secondary predicates. In section 4, we deal with the relation between copular sentences and SCs. At last, in section 5, we conclude the paper.

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<sup>6</sup> The requirement that every predicate has a subject has been formalized in generative grammar as the *Extended Projection Principle* (EPP) by Chomsky (1981, 1982). The EPP stipulates that every clause must have a DP subject. When a predicate does not assign a thematic role to an external argument (e.g., *snow, rain*), the subject must be realized by an expletive in languages like English

We tried to take a didactic approach of the issues involved in the theme, but we will assume some background knowledge about generative grammar that we cannot take the time, or space, to explain.

## 1. SMALL CLAUSES AND SYNTACTIC STRUCTURES

In this section, we will address the reasons why it is important to bring the Small Clause debate to a volume dedicated to honor the 60 years of the publication of *Syntactic Structures*. The reasons are attached to the history of the generative grammar, since we can find Chomsky's notes about this kind of construction since the famous *LSLT* (Chomsky 1955), which circulated around the field in the form of a mimeographed book and was finally published in 1975. Thus, even before *Syntactic Structures*, Chomsky has tried to address some complex predicate phenomena, as the constructions headed by verbs like *consider*, that posed some questions to the theory of grammar formulated in the *LSLT*, questions that Chomsky (1955) tried to address in a unified manner.

*Consider*-like verbs challenged the rule of passivization, which took the direct object of a transitive verb (in a kernel sentence) and moved it to the subject position. In sentences like (6a) below, if we take the string *John a fool* as the direct object, then the rule of passivization would not be able to derive (6b):

- (6) a. They consider John a fool  
b. John was considered a fool

A solution proposed by Chomsky (1955) was to assume verbs of that kind as the occurrence of compound verbs, i.e.: V + Predicate. Therefore, the sentence in (6a) would be derived from the kernel sentence in (7) below:

- (7) They consider a fool John

The proposal takes the string underlined in (7) as a compound verb, which takes the NP *John* as its complement. This is the same analysis we find in Chomsky (1955) about particle verbs like *bring-in* (*The detective brought him in*; which is derived from the kernel *the detective bring-in him*). The advantage of Chomsky's views comes from the unification and the simplification of the theory of grammar, since it is not necessary to still have another transformational rule of passivization to account for these cases and that the compound verbs are not seen as new entities in the lexicon or in the ontology of the grammar.

This analysis was taken later as the basis of *complex predicate formation*, which takes the verb and the adjective as a complex unity, as we find in Cardinaletti & Guasti (1995:2): "Complex predicate view: There is no constituent formed by the NP and the XP, but the NP is an argument of the complex predicate formed by the main verb and the XP. This analysis is first proposed by Chomsky (1955/75)."

In fact, in *Syntactic Structures*, the specific debate about SCs and complex predicates are not in the main text, but the SC construction and its debate came back explicitly when the generative

grammar took its way into the unified and representational module of the X-bar theory, because of the endocentricity principle that would be related to *consider*-type verbs.

Small Clause constructions were, therefore, something challenging since the beginning of the theory of Transformational Generative Grammar and we will see ahead the most prominent studies that followed by Williams and Stowell.

## 2. WILLIAMS AND STOWELL

Edwin Williams and Tim Stowell shared one of the most important debates in the discussion of the syntax of predication and the SC structures, between the mid 70's and the 80's. This section is dedicated to present both proposals and their importance to the theory of grammar.

Williams (1975) is known as the first article to use the term Small Clause, but the author's aim in the paper was to give an approach to sentences with verbs ending in *-ing*, as *The man driving the bus is Norton's best friend* and to propose a derivation to that construction from *the man who is drive the bus....* Nowadays, the terminological word is used to refer to the kind of constructions discussed here and presented in the introduction. We will discuss Williams's *Theory of Predication*, before seeing Stowell's work.

### 2.1. Williams (1980): The Theory of Predication

Williams (1980) played an important role in this debate, thanks to some of the concepts and restrictions about the syntax of predication found in his seminal work. The c-command restriction and the locality of predication are two of them. Both of these restrictions are assumed or somewhat reconstructed in his proposals.

It is important to notice the fact that Williams (1980) was worried about how to deal with predication using the tools he had in the end of the 70's. He was not trying to implement the assumptions of X'-bar theory. These worries, on the other hand, were very important to Stowell (1981) analysis, as we will see below.

To account for the predication relation, Williams proposed some very important procedures: (i) a rule of predication, which required a coindexation between an NP and an XP predicate (such as AP, PP, NP, VP), as shown in (8); (ii) a c-command condition on predication, which requires that every predicate phrase must be c-commanded by its subject, as shown in (9); (iii) a coindexing procedure, as listed in (10), which works more as a filter in the PS-level (the PS-level is a structure of predication, a level of the model of the grammar presented in Williams (1980));

- (8) Rule of predication:  
*Coindex NP and X (X being a predicate phrase)*

(9) The C-command Condition on Predication:

If NP and X are coindexed, NP must c-command X or a variable bound to X.

(10) Coindexing Procedures:

- a. ...NP... AP... → ...NP<sub>i</sub>...AP<sub>i</sub>...
- b. ...NP<sub>i</sub>... AP... → ...NP<sub>i</sub>...AP<sub>i</sub>...
- c. ...NP<sub>i</sub>... AP<sub>i</sub>... → ...NP<sub>i</sub>...AP<sub>i</sub>...

Besides that, the author also takes some advantages of the position of the predicate to postulate two kinds of government on predication: a thematical and a grammatical one. If the predicate phrase is thematically governed, it is in the VP, and it predicates of the theme of V, as in (12); if the predicate phrase is grammatically governed, it is out of VP, and it is a predicate of the grammatical subject of the sentence (the copular sentences in the examples are somewhat special), as in (11), below, where the indexes indicate the predication relation:

Grammatically Governed	Thematically Governed
(11) a. NP <sub>i</sub> VP <sub>i</sub> - John <sub>i</sub> died <sub>i</sub>	(12) John gave Bill the dog <sub>i</sub> dead <sub>i</sub>
b. NP <sub>i</sub> VP <sub>i</sub> X <sub>i</sub> - John <sub>i</sub> left <sub>i</sub> nude <sub>i</sub> / John <sub>i</sub> left <sub>i</sub> singing <sub>i</sub>	
c. NP <sub>i</sub> be X <sub>i</sub> - John is sick / John <sub>i</sub> is [near Larry] <sub>i</sub>	

However, for Williams's system to work properly, it is important to say something about what Williams takes as predicates. To the author, aside from the fact that an AP, and some other categories, are listed as predicates, the nature of a predicate is related to the theta grid of the head of the phrase. We can see this explicitly stated in Williams (1983), as cited below:

(13) Subject as external argument:

The subject of a predicative phrase XP is the single argument of X that is located outside of the maximal projection of X. (Williams, 1983:287)

The definition in (13) shows, clearly, that the predication relation is attached to the thematic structures of the head phrase. Thus, a predicative phrase is a phrase with an argument marked in the lexicon to be an external one. This shows us that the *Theory of Predication* is somewhat open to research developments of the lexicon or of the theory of mapping from argument structure to syntax.

Williams (1983) develops this syntactic approach to predication a bit further and adds, to the theory above, the process of *vertical binding*, which makes possible to the grammar to percolate (move up) the index marked as external in the head to the maximal projection within which coindexation takes place.

Thus, for Williams, it is not necessary that the complement of verbs like *consider* have a SC-complement, because predication can occur without the formation of a clause, being only necessary that the subject c-commands the predicative phrase.

## 2.2 Stowell and the X-bar theory

The main point of Stowell's doctoral thesis was not the structure of SC constructions *per se*, but the simplification of the grammar. He proposed the elimination of phrase structure rules and the redundancy existent between the rules and the lexicon: "The major claim of this thesis is that the component of categorial rules does not exist, and that its major empirical effects can be deduced from other components of grammar." (Stowell, 1981:2)

Stowell defended that the grammar could derive the empirical coverage of phrase structure rules from the interaction among some modules of the grammar, mainly the module of Case. Therefore, Stowell (1981) needed to advance more evidence to motivate the position of *spec* in order to fully adopt the X-bar schemata and to abandon the categorial component. In this scenario, the SC construction data served as a crucial evidence for the *spec* position across various categories, where the grammar would accommodate the *subjects*. That is the main contribution of Stowell to the SC discussion, and why this debate is so important.

At this point, we have a general view of Stowell's questions around SC, therefore, we can analyze some of the details of the proposal.

(14) I consider John foolish

(15) We believe Mary to have left

The *Small Clause Theory* takes the NP *John* and the AP *foolish* in (14) as a clause, just as we can take the string *Mary to have left* in (15) as a clause. For Stowell (1991:183), a "clause is a maximal projection XP, containing a subject NP in its *spec* position and a predicate phrase X". The DP *John* is located in the *Spec* position of the AP *foolish*, in the same way as the DP *Mary* is located in the *spec* position of clausal IP *to have left*. Thus, if this analysis can be maintained, then SC-Theory has the advantage of simplifying the grammar and unifying the analysis. For Stowell, the SC constructions are a good evidence of the existence of the *spec* position in other categories.

Therefore, the assumptions of the SC-Theory are as listed: (i) the subject position of a predicate phrase will be fulfilled if it can take a Case from outside the SC, via ECM; (ii) a clause is a phrase with an X' predicate; (iii) predication is clausal, i.e., predication occurs in a strictly local relation between DP and X', thus de XP immediate dominates the subject DP and the predicate X' (in a nutshell, they form a constituent); (iv) there is no label SC, because SC is a dummy label for the maximal projection of a predicate head whose *Spec* position has a subject; (v) the locality or the domain of predication "... is an XP, such that the X' category directly dominated by XP is predicated of the *spec* of XP" (Stowell, 1991:183); (vi) the SC can be a complement (subcategorized) of the verb (as in (14) above), or an adjunct (as in the example in (16) below).

(16) John [<sub>VP</sub> [<sub>V</sub> ate [the meat]<sub>i</sub>] [<sub>SC</sub> PRO<sub>i</sub> raw]]



In (16), as we can see, the SC has a PRO in the subject position.<sup>4</sup> By doing this, Stowell respects the locality of predication as well as the necessity of it being a clause (a constituent).<sup>7</sup>

After overviewing these two essential proposals (Williams's and Stowell's) involving SC constructions, we will discuss the relation between SCs and secondary predicates in the section ahead.

### 3. SMALL CLAUSES AND SECONDARY PREDICATES

Cardinaletti and Guasti (1995) present the SC debate confronting three theories: the *Theory of Complex Predicates* (Chomsky, 1955), the *Theory of Predication* (Williams, 1980) and the *Theory of Small Clauses* (Stowell, 1981, 1983). However, although these theories have special characteristics, it is not always clear in which exact way they contrast. As stated above, Chomsky assumes a purely syntactic approach to the problem, in which he stipulates that a clause must have a subject and that the obligatoriness of the subject position follows from syntactic properties of inflection. For Williams (1980, 1983), the structure of the sentence is projected from the thematic properties of the verb and the subject is just the last argument to be inserted in. Principles of compositionality, together with structural mechanisms, guarantee that the subject is the external thematic argument of the head of the maximal projection. Stowell (1983) argues that the special status of subjects must be generalized to allow all major syntactic categories to contain a structural position. Thus, the concept of subject was reduced to the concept of specifier, as pointed in the previous section, which makes predication always be a strictly local relation, and sometimes mediated by empty categories.

Another approach to subjects and clausal structure comes from Rothstein (1983, 2001). She claims that predication is a distinguished relation which determines the most basic concept of the structure of clauses, noting that this property is not projected from the lexical structure. The great evidence for this is related to sentences with expletive subjects. These sentences are the proof that there are structural conditions which are independent of saturation properties<sup>8</sup>. Therefore, all of them are related with structural assumptions of the grammar. We will devote this section to Rothstein's analysis that lead us to the distinction between SCs and secondary predicates.

#### 3.1. Distinguishing SC and Secondary predicates

For Rothstein, maximal projections can only be licensed in one of two ways: either they must be arguments, licensed by theta-role assignment, or they must be predicates. A predicate is a structurally open syntactic constituent and predication is a relation between a predicate and a structurally closed constituent, in which the latter closes the former by filling the open positions in it, and this cannot be defined in terms of theta-role assignment. Thus, a XP predicate must be linked to a subject, according to the *Rule of Predicate-Linking*, as stated below:

<sup>7</sup> An interesting discussion of the problems in Stowell's proposal can be seen in Williams (1983) and Heycock Heycock (1994).

<sup>8</sup> Heycock (1994), following Rothstein's assumptions, also recognizes a primitive syntactic relation of predication. She claims that syntactic predication is as fundamental to the structure of clauses as theta-assignment is. The syntactic core of a clause must simultaneously be a projection of argument structure and a well-formed predication structure. She claims that this view is a solution to the distribution of pleonastic elements (expletives), to the relation between small and full clauses, to anomalies in copular constructions and to violations of the theta-criterions. All these issues posed problems to the theory of grammar at that time.

- (17) a. Every non-theta-marked XP must be linked at S-Structure to an argument which it immediately c-commands and which immediately c-commands it.  
 b. Linking is from right to left (i.e., a subject precedes its predicate). (Rothstein, 1983:27)

The *Predicate Linking Conditions* have, therefore, two different clauses. The author hypothesizes that clause (a) may be universal, while clause (b) is language specific. The defining condition predicts that X is predicated of Y (or is a predicate of Y) if, and only if, X is linked to Y under the Rule of Predicate-Linking.

A consequence that follows from the rule of Predicate-Linking is that once there is a predicate node, there must be a subject to saturate it. The subject - defined in (18) - is licensed by the grammatical principle in (19), which makes no reference to thematic roles.

(18) B is the *subject* of A iff A is predicated of B. (Rothstein, 2001:49)

(19) Every syntactic predicate must be syntactically saturated. (Rothstein, 2001:47)

These assumptions are based on the fact that the only position in the clause that can be non-theta-marked is the subject position<sup>9</sup>. Any other arguments in the clause depend on thematic properties of the lexical head or the predicate. Besides that, even non-inflected predicates require a subject, thus, the obligatoriness of the subject cannot be explained by properties of inflection<sup>10</sup>. The predicate licensing rule holds equally for all predicates, no matter what lexical properties the head may present.

The definition of clausal subject follows from a distinction between two forms of predication formulated by Rothstein (1983): primary and secondary predication. Later, Rothstein (2001) refines her previous work adding the terms ‘clausal predication’ and ‘adjunct predication’ to the analysis. She explains that true secondary predicates are more restricted than adjunct predication, as we will demonstrate in the following lines.

First, we will analyze the definition of primary predication (Rothstein, 2001:72) and show its application to the data.

- (20) a. A is a *primary predicate* of B, iff A is predicated of B, and A and B c-command each other and B is not theta-marked outside the predication relation with A.  
 b. if A is a primary predicate of B, then A and B form an instance of *primary predication*.<sup>11</sup>

Primary predication occurs when the subject and the predicate form a constituent together and when the subject is not thematically licensed outside the predication relation it occurs. In a sentence like *Mary won the race*, *win the race* is a primary predicate of *Mary*, since *Mary* is not theta-marked by

<sup>9</sup> To come up to this conclusion, Rothstein develops a detailed analysis about expletives (she terms them pleonastics). She observes that pleonastics are restricted to clausal subject position.

<sup>10</sup> Rothstein claims that the only way a predicate in a grammatical sentence can avoid satisfying the principle in (57) is if it shifts to another non-predicative type. This kind of type shifting, which is structurally triggered, occurs within nominals, where APs which are normally predicates have a modifying function.

<sup>11</sup> In 1983's work, Rothstein defines primary predication as follows: "X is a primary predicate of Y if and only if X and Y form a constituent which is either theta-marked or [+INFL]" (p. 162).

anything other than the head of the VP predicated of it and they form a constituent. Thus, primary predicates are clausal predicates. This definition, however, includes the complementation patterns of ECM verbs such as *consider* and *make*. The constituent that is formed by an instance of predication which meets the conditions described in (20) can be an inflected IP or a non-inflected one. The former will be a clause and the latter will be a SC.

- (21) a. John considers [Mary very smart]  
b. She made [John angry]

The complements of the verbs in (21) have an internal binary structure, where there is no relation other than predication (there is no inflection and the predicate doesn't case-mark the subject). It is worth noticing that Rothstein will use the term Small Clause in a more restricted way than Williams and Stowell. For her, SCs are binary structures that present the following properties: (i) the subject (DP) and the predicate (XP) form a constituent; (ii) there is no inflection; (iii) the DP is neither semantically nor syntactically selected by the matrix verb; (iv) the DP satisfies the requirement of the predicate. This kind of structure meets the conditions pointed out in (20), thus characterizing these structures as forms of primary predication.

Now we are able to understand the meaning of secondary predication. Let's first analyze the definition.

- (22) a. A is a *secondary predicate* of B iff A is predicated of B, and A and B c-command each other and B is theta-marked by a head not contained in A.  
b. If A is a secondary predicate of B, then A and B form an instance of *secondary predication*<sup>12</sup>. (Rothstein, 2001:123)

This definition would account for the sentences below in (23).

- (23) a. Mary ate the carrots **raw**  
b. She drinks her coffee **black and bitter**

The adjunct predicates (*raw* and *black and bitter*) are directly predicated from the direct object. Unlike primary predication, the subject of secondary predicates (*the carrots* and *her coffee*) is theta-marked in a relation outside the predication relation: they are theta-marked objects of *eat* and *drink*. There are some points that should be highlighted about that claim: (i) secondary predicates have to have a subject theta-marked by another lexical head and expletives, which are not theta-marked by another lexical head or by anything, are not acceptable subjects for them; (ii) secondary predicates don't form a constituent with their subject; (iii) secondary predicates are adjuncts and do not need to license their subjects DPs, meaning that if they are dropped, the resulting sentence would still be grammatical (e.g., *Mary ate the carrots* / *She drinks the coffee*).

The difference between the two forms of predication is that in a primary predication all saturation relations are between the subject and the predicate, yet in a secondary predication, where the subject of a predicate is also theta-marked outside the predication relation, this subject is part of two different

<sup>12</sup> Rothstein 1983's definition of secondary predication is a little bit different from the 2001's work: "X is a secondary predicate of Y if and only if Y is an argument of another lexical head, and is dominated by S." (p. 167).

saturation relations: it saturates a position in a theta-grid of the matrix verb and saturates the predicate predicated by it.

Differing from Stowell, Rothstein assumes an analysis for these constructions which predicts that the adjunct predicates directly from its subject without the intervention of PRO, because PRO subjects of secondary predicates cannot fail to be in a governed position<sup>13</sup>.

In her previous work (1983), Rothstein's notion of secondary predication was larger and secondary predicates and adjunct predicates overlapped. In her latter work (2001), adjunct predicates are divided into two kinds: (i) secondary predication, or object-oriented adjuncts as defined above; (ii) subject-oriented predicates that occur in sentences like (24).

(24) John drove the car drunk

For sentences like this, the author assumes that a predicate (*drunk*) is absorbed into another predicate (*drive*) and the highest predicate (*drive drunk*) enters into a primary predication relation with the subject. Thus, it is an instance of an indirect predication.<sup>14</sup>

Another distinction made by the author in her 2001 publication concerns resultative constructions. Secondary predicates discussed so far are termed *depictives*, in the sense that they express the state in which their subject is when the assertion of the main predicate holds. For instance, the sentence *Mary ate the carrots raw* means that *Mary ate the carrots and the carrots were raw when she ate them*. Depictive constructions must be distinguished from resultative predicates, such as in (25), where the predicate gives the state of its subject at the end of the event given by the main predicate.

(25) They watered the tulips flat

The definition of secondary predication is appropriate for this kind of sentence, since the subject of the predicate *flat* is the theta-marked object of *water*. But, among the resultatives examples, there are the intransitive resultatives (26) that pose a problem to Rothstein's theory.

(26) He cried himself sick

In (26), *himself* is not a theta-marked argument of a lexical head, therefore the definition of secondary predication is not appropriate for the relation there. The sentence doesn't fit the definition of primary predication as well. Nevertheless, resultative constructions continue to be treated in the realm of Small Clauses, thus more information about them is still useful.<sup>15</sup>

Resultative constructions data have been used in (classical) approaches on Small Clauses, especially

13 Rothstein (1983) claims that PRO would be governed in this position. In order for PRO not to be governed, the constituent must be outside the VP. In the other hand, the absence of PRO would violate the theta-criterion. To solve this problem, she assumes Schein's (1982, apud Rothstein 1983) suggestion to weaken the theta-criterion: "Any two theta-roles  $\theta_1$  e  $\theta_2$  cannot be assigned to the same NP if and only if the  $\alpha$  that selects  $\theta_1$  also selects  $\theta_2$ ."

14 Absorbed predicates are subject-oriented predicates. Rothstein took this kind of predicates apart from secondary predication motivated by the c-command restriction postulated in the definition. In these cases, the predicate does not c-command its subject.

15 The intention in what follows is to provide empirical data along with some generalizations. The structural descriptions of resultative constructions is subject to debate, as we can see in works by Carrier & Randall (1992), Hoekstra (1988, 1992), Kratzer (2005), Knöpfle (2014), *inter alia*.

as empirical support to the discussion about the existence or not of such constituent.<sup>16</sup> Resultatives are usually seen as a kind of causative construction, present, for instance, in languages like English (Carrier & Randall, 1992; Levin & Rappaport, 1995), Dutch (Hoekstra, 1988, 1992) and German (Kratzer, 2005). In resultatives, the main verb (V) denotes an action (whose agent is expressed by the subject (DP<sub>nom</sub>)) and the resulting state of such action is denoted by the combination of an AP (or PP) and an accusative DP. Let's see some examples taken from German:

- (27) a. Er hat das Taschentuch \*(naß) genießt  
 He has the tissue wet sneezed  
 'He sneezed over the tissue, making it wet'
- b. Markus hat sein Gehirn \*(kaputt) gesoffen  
 Markus has his brain damaged drunken  
 'Markus drunk in such a way that he damaged his brain'

This brief presentation is just the tip of the iceberg, of course. A whole lot of questions arise regarding the possibilities of combining a V, an AP/PP and a DP<sub>acc</sub> to yield the core of a well-formed construction. The most intriguing questions lay on thematic and verb selection issues; as we can see below, the verb does not semantically select the DP<sub>ACC</sub>, yet, the dropping of the AP yields ungrammatical data.

Resultatives are not possible in Brazilian Portuguese,<sup>17</sup> as shown in (28):

- (28) a. \*Ele bebeu a chaleira vazia  
 He drunk the teapot empty  
*Intended meaning:* 'He drunk the teapot empty'
- b. \*Ele espirrou o lenço molhado  
 He sneezed the tissue wet  
*Intended meaning:* 'He sneezed over the tissue, making it wet'

There are, however, some similar constructions in BrP, which are perfectly possible.

- (29) a. Ele desenhou o círculo (torto).  
 He drew the circle bent
- b. Ele fabricou a cadeira (torta)  
 He manufactured the chair bent

The above data, which appear to be resultatives, were once called so (Foltran, 1999; Lobato, 2004). But, as noted by Foltran (1999), they exhibit some important differences, especially regarding telicity. The removal of the secondary predicate does not change telicity, contrary to the resultatives seen in

<sup>16</sup> As, for example, Schein and Stowell's discussions in Cardinaletti & Guasti 1995's volume.

<sup>17</sup> At least not with the same structure and same aspectual properties, i.e. the completeness of the event is compositionally formed by the combination of (usually) an action verb and the sequence AP + DP<sub>ACC</sub>; in other words, AP + DP<sub>ACC</sub> turn atelic events into telic ones. For a closer discussion and empirical demonstration from BrP data, see Foltran (1999), Barbosa (2008) and Knöpfle (2014), inter alia. For the aspectual properties of resultatives and argumentation in such lines, see Hoekstra (1988), (1992).

German.<sup>18</sup> Lobato (2004) argues that BrP doesn't allow resultatives such as *hammer the metal flat*, but for structures such as *painted the house yellow*, modification of the adjective yields well formed data.

(30) a. João pintou a casa bem amarelinha  
John painted the house very yellow<sub>diminutive</sub>

b. \*João pintou a casa amarela  
John painted the house yellow

We can push Lobato's claim much farther, assuming that the extra modification on the adjective can be the responsible for yielding well formed data, even in structures as *hammer the metal flat* – and as long as the verb is a transitive one.<sup>19</sup>

(31) a. \*Ele martelou o metal achatado  
He hammered the metal flattened

b. Ele martelou o metal super achatado  
He hammered the metal very flat

c. \*Ele flanelou a mesa limpa  
He wiped the table clean

d. Ele flanelou a mesa bem limpinha  
He wiped the table very clean<sub>diminutive</sub>

Based on the data above, we should question if BrP could have some kind of transitive resultatives. The answer would be no, based on the contrast seen between German and BrP in the following data:

(32) a. Hans hat den Fußboden sauber gefegt  
Hans has the floor clean swept  
'Hans swept the floor clean'

b. Hans hat den Fußboden schmutzig gefegt  
Hans has the floor dirty swept  
'Hans swept the floor dirty' (because he used a dirty broom)

(33) a. João varreu o chão bem limpinho  
John swept the floor very clean<sub>DIMINUTIVE</sub>  
John swept the floor, and the floor ended up clean

18 Levinson (2010) analyses the adjectives in (29) as modifiers of a noun, i.e. they are predicates semantically distinct from resultative predicates.

19 (i) \*João correu a calçada (toda/super) fina. *intransitive*

John ran the pavement all/very thin.

(ii) \*Ele bebeu a chaleira (toda/super) vazia. *intransitive*

He drank the teapot all/very empty

- b. \*João varreu o chão bem sujinho. (on the resultative reading)  
 ≠→ João swept the floor, and the floor ended up dirty. (because he used a dirty broom)

To summarize the resultative debate, we can affirm that *genuine* resultatives don't have the same structure as the constructions seen in BrP; however the latter and their structural description is still subject to investigation.<sup>20</sup>

#### 4. COPULAS, SMALL CLAUSES AND PREDICATION: (A)SYMMETRY

An important issue concerned to SCs, as pointed out by Cardinaletti & Guasti (1995), is the relation between SCs and copular constructions, since many researchers consider copular sentences as inflected counterparts of SCs. The classical work by Moro (1997) raises the question of how to configurationally capture the 'subject-object symmetry' seen in a subclass of copulas, contrary to what is observed in other DP-verb-DP constructions, in which 'subject-object asymmetries' are the empirical evidence for having the 'DP subject' in a more prominent position (the external argument). Copulas present regular asymmetry, as in (34a) where we have a 'canonical (copular) sentence', meaning that the extraction from the pre-verbal DP is impossible (34b), whereas fully possible from the post-verbal DP (34c). The same asymmetry is not observed in the 'inverse (copular) sentence', as the data in (35) shows:

- (34) a.  $[_{NP}$  a picture of the wall] was  $[_{NP}$  the cause of the riot]
- b. \*[which wall]<sub>i</sub> was<sub>j</sub>  $[_{NP}$  a picture of *ti*]  $t_j$   $[_{NP}$  the cause of the riot]?
- c. [which riot]<sub>i</sub> was<sub>j</sub>  $[_{NP}$  a picture of the wall]  $t_j$   $[_{NP}$  the cause of *t<sub>i</sub>]?*
- (35) a.  $[_{NP}$  the cause of the riot] was  $[_{NP}$  a picture of the wall]
- b. \*[which riot]<sub>i</sub> was<sub>j</sub>  $[_{NP}$  the cause of *ti*]  $t_j$  [*NP* a picture of the wall]?
- c. \*[which wall]<sub>i</sub> was<sub>j</sub>  $[_{NP}$  the cause of the riot]  $t_j$   $[_{NP}$  a picture of *t<sub>i</sub>]?*

In order to capture this anomaly in symmetry, the author proposes that the copula *be* selects a "bare" SC (a constituent in which there is no functional structure, and both DP are sisters who project the SC). The difference in behavior, shown in (34) and (35), would be related to a different DP raising, to Spec/IP in each case, as we can see bellow:

- (36)  $[_{IP}$   $[_{DP}$  a picture of the wall ]<sub>i</sub> was<sub>j</sub>  $[_{VP}$   $t_j$   $[_{SC}$   $t_i$   $[_{SC}$  the cause of the riot]]]]]      *canonical*
- (37)  $[_{IP}$   $[_{DP}$  the cause of the riot ]<sub>i</sub> was<sub>j</sub>  $[_{VP}$   $t_j$   $[_{SC}$   $[_{DP}$  a picture of the wall ]  $t_i$  ]]]]      *inverse*

The idea of raising the DP from the SC constituent was developed by Moro (2000) in his proposal of Dynamic Antisymmetry. The author suggests that movement and phrase structure are fully dependent, so that movement is triggered for linearization purposes, breaking symmetry points.<sup>21</sup> The

20 For an empirical description of BrP related data compared to resultatives, see Knöpfle (2017).

21 The author adopts a weaker version of the antisymmetry of syntax: before linearization (at the interface with the articulatory-perceptual

SC structure, conceived as a phrase that has both DPs in mutual c-command, was used as an empirical ground to make a point in which symmetry has been generated and movement then comes to rescue the structure for linear word order. Again, SCs are key structures for broader grammatical proposals; here, they were taken as the empirical correlate for a symmetry point driven by the operation *merge*.

The claim that *bare* SCs exist, i.e. ‘subject-predicate’ structures lacking any internal functional structure, was refuted by den Dikken (2006) in his theory of predication. Diverging from Moro’s symmetry in the geometry of syntax, den Dikken proposes that all *subject-predicate* structures are mediated by a functional head called *Relator*. This head is responsible for establishing the asymmetrical c-command between the subject and the predicate. In other words, all ‘subject-predicate’ relations are hierarchically asymmetrical and non directional, and are mediated by *Relator*:

- (38) a. [<sub>RP</sub> [<sub>XP</sub> SUBJECT] [<sub>R</sub> RELATOR [<sub>YP</sub> PREDICATE]]] (Predicate-complement structure)  
 b. [<sub>RP</sub> [<sub>XP</sub> PREDICATE] [<sub>R</sub> RELATOR [<sub>YP</sub> SUBJECT]]] (Predicate-specifier structure)

The configurations in (38) state that all *subject-predicate* relations are established inside the Relator Phrase (RP) – responsible for the locality of the predication. The *Relator* head is conceived as a placeholder for any head that could mediate that relation, and crucially, it is not a new functional category. As a placeholder, *Relator* can be phonologically null or occupied by a functional preposition, a T or a copula for instance. An example of reverse predication, where *Relator* is realized as a copula and a preposition, can be seen in (39) (*ibid*: 35):

- (39) a. This butterfly is big for a butterfly  
 b. [<sub>RP</sub> this butterfly [Relator=*be* [<sub>RP</sub> [<sub>AP</sub> big] [<sub>R</sub> Relator=*for* [<sub>DP</sub> a butterfly]]]]]

The SC structure, being a ‘subject-predicate’ relation, is also mediated by *Relator*. This proposal can be related to Bowers (1993) one, where the SC is asymmetrical and mediated by a functional category, but differently, it is not seen as a new functional category, as Bower’s “Pr” (the functional head that projects the SC constituent). Also, SCs can’t be the projection of the predicate head, as seen in Stowell (1981, 1983).

Den Dikken (2006) generalizes his proposal arguing that in all constructions involving secondary predication, the complement of V is a SC instantiated as a RP (Relator Phrase). On these grounds, the empirical generalization for SCs holds the following: “A small clause is a subject-predicate structure lacking tense.” (den Dikken, 2006:60). The author brings examples to that claim as in (40):

- (40) a. Brian [<sub>VP</sub> considers [<sub>RP</sub> [Imogen ] [<sub>R</sub> RELATOR [<sub>AP</sub> smart]]]]  
 b. Brian [<sub>VP</sub> give [<sub>RP</sub> [the book] [<sub>R</sub> RELATOR [<sub>PP</sub> to Imogen]]]]  
 c. Brian [<sub>VP</sub> hung [<sub>RP</sub> [his shirt] [<sub>R</sub> RELATOR [<sub>PP</sub> on the line]]]]  
 d. Brian [<sub>VP</sub> hammered [<sub>RP</sub> [the metal ] [<sub>R</sub> RELATOR [<sub>AP</sub> flat]]]]  
 e. Brian [<sub>VP</sub> ran [<sub>RP</sub> [the pavement ] [<sub>R</sub> RELATOR [<sub>AP</sub> thin]]]]

component), points of symmetry are tolerated.



His analysis, therefore, treats (canonical) SCs (40a), double object constructions (40b-c) and resultative constructions (40d-e) as instances of secondary predication constructions in which V selects a RP lacking tense: “A small clause is a tenseless RP” (*ibid*, 2006:61).

## 5. CONCLUDING REMARKS

This paper intended to provide an overview of the most prominent studies on constructions that express a subject predicate relation without tense, known as Small Clauses. The debate between Williams and Stowell laid the foundations for the discussion about these constructions and established the assumptions we need to consider when we think about them. Notions of predication, interrelating at the semantic and the syntactic levels, constitute the basis of these phenomena. All the debate here presented had an underlying purpose: to delineate the configuration of grammar. When the authors here presented managed to perform this task, they brought out some empirical facts that initiated one of the most lively debate in the history of grammar. As we’ve seen, when Rothstein entered the discussion, she established new directions in conceiving predication. Such a view allowed us to make interesting distinctions in the design of grammar and in the data also. As we went through the different theoretical frames, the empirical coverage changed as well. This overview is completed by the presentation of copular construction and the possibility to enrich the Small Clause analysis with functional nodes, as done by den Diken.

We hope this paper managed to help those who are interested on getting into this field. We would like to make the readers aware that there are a series of semantic notions involved in these constructions that we let aside because for space and clarity reasons. We are in debt to many researches who were dedicated to the theme by the same reasons. We refer the interested readers to deepen their knowledges in the references we have used and in the bibliography therein.

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