Narrative Comprehension: Concept Analysis and a Methodological Proposal

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Author Note

This research was supported in part by grants from the Foundation for the Support of Research of the Federal District, Brazil, the Brazilian Council for the Improvement of Higher Education (CAPES), and the Brazilian Council for Scientific and Technological Development (CNPq).

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Preprint

Abstract

Conceptual analysis is a methodological branch of scientific research. Most psychological concepts originated in ordinary language. Although a concept often changes when it becomes part of a scientific theory, analysis of its original logical functioning is a precondition for understanding and evaluating conceptual changes. In this study, we analyse the logical functioning of the concept of comprehension, using techniques of Ordinary Language Philosophy. We present as central logical characteristics of the concept: (1) comprehension is an achievement concept; (2) there can be different degrees of comprehension; (3) comprehension is a polymorphous concept and (4) it is a dispositional concept. We discuss the methodological and theoretical implications of this analysis for narrative comprehension and illustrate them with a proposal for assessment.

Keywords: conceptual analysis, comprehension, narrative

Narrative Comprehension: Concept Analysis and a Methodological Proposal

Scientific activity, according to Machado and Silva (2007), includes three complementary dimensions: (1) conceptual analysis, (2) empirical research, and (3) quantification. In the context of psychological research, however, conceptual analysis is often forgotten, with substantial negative consequences for the other two dimensions. Conceptual analysis consists in elucidating the logical functioning of concepts, thus helping us to better define our research objectives and avoid conceptual confusions, such as pseudo-empirical claims or circular explanations (cf. Bennett & Hacker, 2003; Racine, 2015; Wilson, 2001).

Conceptual Analysis, as applied to Psychology (e.g., Racine & Slaney, 2013), is a field that was influenced by philosophical works such as *The Concept of Mind*, by Gilbert Ryle (1949/2009) and the *Philosophical Investigations*, by Ludwig Wittgenstein (1953/2012). Perhaps the most relevant and often misunderstood aspect of conceptual work is that its aim is not to propose a new theory of psychological phenomena, nor to construct new concepts. The central activity consists of elucidating the shared rules of the use of psychological concepts. These concepts are not originally technical. They are born from our shared human activities and are logically prior to scientific innovations in psychological theories. Without the work of conceptual analysis, it is impossible to analyse the coherence or usefulness of conceptual innovations in the scientific and specialized fields, since it will be unclear what has changed, and how.

Technical terms in Psychology are almost always rooted in the non-technical, ordinary concepts which we share in our human activities. These ordinary concepts, in turn, draw their meaning from our practices and relationships and are governed by very complex rules of use, which we rarely have an explicit knowledge of. This means that we use the concept with

expertise in our interlocutions, but do not know how to describe the set of rules that guide us, that which is sometimes called the logical grammar of the concepts. This logical grammar needs to be mapped out deliberately.

A possible objection to conceptual analysis is that, in the context of scientific activity, the everyday use of a term is largely irrelevant, except as an object of linguistic or anthropological interest. Conceptual analysis, however, should not be confused with empirical surveys of how people communicate. The activity of conceptual analysis aims to reveal the internal or constitutive rules behind the concepts that we already know how to use.

A simple example can serve to clarify the difference between (a) empirical and (b) conceptual issues (for more examples, see Wilson, 2001). (a) We can study how children of a certain age define the concepts of family ties and discover (for example) that the concept of “brother-in-law” is more difficult for young children to understand than the concept of “brother”. This is an empirical statement. Its truth can, in principle, be decided by observation and other forms of empirical investigation. (b) The fact that the concept of “brother-in-law” necessarily implies the concept of “marriage” is an issue that has to do with the logical rules which are internal to the concept. It would be impossible (in the logical sense) to have “brothers-in-law” in a society without our marriage institutions or something similar to them. The word could exist, of course, but not the concept (if the same word existed, it would mean something else). In other words, this logical feature is constitutive of the concept, which was forged in societies with particular marriage and family structures.

The present study is concerned with matters similar to the example (b) above, in other words, with problems that are conceptual. Our first aim is to examine how the concept of comprehension operates logically in the language games that are its “home of origin”

(Wittgenstein, 1953/2012). Next, we shall discuss some specific features of the concept of narrative comprehension. Finally, we will demonstrate some implications of our conceptual analysis, by briefly presenting a practical proposal for the assessment of narrative comprehension.

Comprehension: Logical Properties of the Concept

The broad sense of comprehension in which we are interested in this paper is that of the apprehension of an idea, a concept, a text, a story, and so forth. For example, we speak of understanding a mathematical concept, the plot of a movie, a series of instructions, a philosopher's work or the main idea of an article. Although these situations may be very different from one another, we think they have enough in common to allow us to start with a general analysis of the logic of comprehension in this sense. We will then narrow down the analysis to the comprehension of narratives.

When analysing the logical grammar of comprehension, we will rely on the general techniques of analysis described by Harzem and Miles (1978), Machado and Silva (2007) and Wilson (2001), but these will not be explicated (for a useful summary of some basic techniques, see Chapters 2 and 3 of Harzem & Miles, 1978). For didactic reasons, each logical characteristic of the concept of comprehension will be treated separately. However, it is crucial to keep in mind that these different logical aspects work together. It's also important to remember that, whenever two concepts have a particular logical aspect in common, this does not mean that they are alike in all their logical features. As Harzem and Miles (1978) have noted, simple dichotomies are very rare in the complex network of human concepts.

Comprehension is an Achievement Concept

A first logical feature of the concept of comprehension (which is often overlooked) is that it does not refer to actions of any kind. Instead, it points to the *results* of actions. Ryle (1949/2009) showed that the logical function of achievement concepts is to indicate successful or unsuccessful outcomes, in other words, to indicate consequences of actions, not actions in themselves. An illustrative example is the concept of "cure." When we say, "the doctor cured the patient", we are not describing any actions or activities on the part of the physician. We are describing the outcomes of her actions. The concept of cure does not indicate an attempt, but an accomplishment.

The concept of comprehension works in a similar way. The contrast between reading and comprehending can illustrate this point. Reading a book is an activity. You can read a novel for two hours, with a five-minute break to make more coffee. This happens in time, has a beginning and an end, can be interrupted and resumed. Comprehension, or understanding, on the other hand, is an achievement, not an activity or action. It makes no sense to say that you comprehended (or understood) your book for two hours, with a five-minute break for coffee. Another example: someone could report that Juan dutifully read a paper but did not grasp much of it. But it would be absurd to say that he understood the technical paper but did not grasp much of it. In sum, it is an internal characteristic of this kind of concept to point to outcomes of what we do, not to anything we do. Differently from the concept of cure, however, such outcomes, in the case of comprehension, do not have an all-or-nothing quality, as we will see now.

Comprehension Can Have Degrees

The concept of "cure", mentioned earlier, is "all or nothing." Either one was cured, or one was not. Comprehension, on the other hand, is a concept of achievement that does not have this absolute quality. We speak of simple or more sophisticated apprehensions of a literary text, for

example. What will be considered as elementary or sophisticated, in turn, depends on the context, as we shall see.

Although comprehension is continuous, this flexibility is not unlimited. If Barbara claims to understand the main ideas of a philosophical paper, but then turns out to be incapable of saying anything accurate about it, we cannot agree that she understands it, since the conditions for speaking of comprehension are absent. We exclude, of course, situations in which one would be capable of showing one's comprehension, were there not certain obstacles to its expression, such as shyness, altered states of consciousness, situations that induce us to pretend not to understand, and so forth.

Comprehension is a Polymorphous Concept

A third important feature of the concept of comprehension is its polymorphous quality (for a discussion of polymorphic concepts, cf. Ryle, 1990/1951; Urmson, 1970). This feature is shared by many psychological concepts that express skills, competencies, attitudes, and other dispositions (Bennet & Hacker, 2003). That which counts as comprehension varies according to context. For example, the criteria we apply when deciding whether someone who is learning to drive has grasped basic traffic rules are very different from those we use when judging whether someone has understood a poem. What counts as comprehension, that is, what the person should be able to say and do in order for us to say that there is comprehension, is completely different in each case. This may seem strange at first, after all, if the same word is used in different situations, something identical must be happening. As the reader will recall, however, comprehension signals successful outcomes, and success in different activities can be completely different things. In sum, it is a logical feature of comprehension that it changes form, according to the human activity in which we employ the concept.

Before we introduce the fourth logical feature, let us make a brief digression to discuss how comprehension is usually conceptualized in psychological theory, i.e., as a private event. Given the strong dualism present in a significant part of psychological theorizing (Pérez-Álvarez, 2018), comprehension is often conceptualized as something that takes place in the mental sphere and is parallel to action. Cognitive theories, for instance, take for granted the existence of two spheres: one, the public manifestations of comprehension, and two, a private process or event that we can only access through those public manifestations (e.g., Fox & Alexander, 2011; Kintsch & Dijk, 1978; Pelisson & Rodrigues, 2017; Rodrigues, Oliveira & Rubac, 2007). A typical example of this approach is Pearson's (2009) discussion of the supposedly inaccessible nature of text comprehension, in his introduction to a handbook on empirical research:

The process of text comprehension has always provoked exasperated but nonetheless enthusiastic inquiry within the research community. Comprehension, or "understanding," by its very nature, is a phenomenon that can only be observed *indirectly* (...). We talk about the "click" of comprehension that propels a reader through a text, yet we never see it directly. We can only rely on indirect symptoms and artefacts of its occurrence (p. 3, emphasis in the original text).

The "click" phenomenon, in the above citation, is put forth as evidence that understanding is an event, something that takes place in time (presumably not in space, as mental events do not take up space, cf. Ryle, 1949 for a discussion of this point). There is conceptual confusion here, however. The "click" of comprehension is a legitimate experience in which we realize, very suddenly, that we have reached a new level of comprehension. For example, we may suddenly believe that we have now grasped a concept that had eluded us previously. The "click" experience is relatively rare (which, already, makes it a bad candidate for evidence that

comprehension has taken place) but it is undeniably real. However, it is not part of the criteria we depend on to decide whether somebody understands something. It is not what comprehension means, nor is it a constitutive part of the concept. It is possible to imagine, for example, a situation in which someone, having read a story, can remember and talk about it, answer questions and even retell the story vividly, without having had any "click" experience. No one would deny that this person had understood the story, nor would they refuse to acknowledge the presence of comprehension, on the grounds that there was no "click" phenomenon.

The opposite situation is also possible. One can undergo the experience of the "click" while trying to understand *x*, only to realize, later, that one did not really understand *x* at all. For example, when struggling with a mathematics problem, you might have a "click" or "eureka" experience at some point in the process - and fancy that you have finally grasped a solution - only to realize, later, that you are still very much in the dark. In sum, we do experience feelings of "Oh! Now I get it!" occasionally, but they are neither necessary nor sufficient for us to say that there is comprehension, and therefore are not an integral part of the concept at all.

Psychological theories distort the logical operation of the concept of comprehension when they take it for granted that they are dealing with a private event, inaccessible to others. Pearson (2009) and Snow (2003) are two examples of authors who presuppose, in their research, that we can only have access to symptoms or signs of comprehension, but never to comprehension itself. This claim, however, is muddled. It is founded on a confusion between, on the one hand, criterial evidence (i.e., the evidence that gives us license to use a concept, the facts that make the concept be the right one in a given situation) and, on the other hand, empirical evidence (empirical facts that are evidence for other empirical facts) (for a detailed discussion of the distinction between criterial and empirical evidence, see Bennet & Hacker, 2003; Glock,

1996b). For example, if Laura can define the concept of a normal distribution, give examples, identify when the concept is relevant, apply it when choosing statistical methods, and so forth, it is nonsense to insist that we still have only "signs" and "symptoms" of Laura's comprehension. Laura's abilities are not facts that point to another, inaccessible fact called comprehension (empirical evidence). They are facts which, together, warrant the application of the concept of comprehension (criterial evidence).

The conception of comprehension as a separate event from the criteria we use to apply it is rooted in Cartesian reasoning (Dennett, 2017). This reasoning can result in violations of the conditions for the meaningful use of the concept, as in Pearson's rather odd conclusion, mentioned earlier, that no one has ever seen, nor will ever see, a true exemplar of comprehension. This kind of perplexity, as Wittgenstein (1953/2012) noted, results from our failure to look at how the concept really functions in concrete situations. Doing the latter can help us remember that statements such as "I copied the poem I read yesterday" and "I understood the poem I read yesterday," as we saw before, do not function in the same way, although their superficial form is very similar (I Φ ed the poem yesterday).

Even as it becomes clear that comprehension is not something that we do, in the way that riding a bicycle is, still, the tendency to picture it as a private event is compelling. The image is that of an internal, continuous process that takes place while we act. According to this conception, being able to manifest our comprehension of something (e.g., explaining it to a friend) is just an external and superficial manifestation of understanding. Comprehension itself is seen as a deep cognitive process, unattainable to others except by indirect means. There is a powerful tendency to conjure this image when we theorize, formally or informally, about comprehension. This Cartesian picture leads, among other problems, to the difficulty of an

infinite regress. If what defines comprehension is the presence of an internal cognitive process, this internal process must necessarily be successful, since a failed process cannot explain a successful outcome. However, success, in the case of comprehension, cannot be reduced to simple reproduction. So, the internal processes that define comprehension must themselves, by logical necessity, be grounded on processes of comprehension, which in turn can only be deemed comprehension if they are themselves based on such processes, leading to an infinite regress.

One of the possible causes of this enduring propensity to represent comprehension as an inaccessible process is that it is obvious, to anyone who takes time to think about it, that comprehension is not a kind of behaviour. Certainly, the reasoning goes, any behaviour will be at best an example of comprehension, never comprehension in itself. This is correct. There is no such thing as a behaviour called "understanding,"¹ in the way there are behaviours such as "running" or "smiling." If understanding is not a behaviour, then what can it be, except something that takes place internally, simultaneously with the behaviour? This argument, however, develops without questioning a more fundamental assumption: the one that either something is behaviour, or it is a mental occurrence. This assumption, in turn, is based on the certainty that concepts are names of things or events in the world, be they physical or mental. The question that arises, based on these unexamined principles, is then "where and when does this event occur that we designate as comprehending?". We are then perplexed when we do not find it anywhere.

Comprehension is a Dispositional Concept.

In order to dissolve perplexities like the one just described, it may be useful to take a step back and question the assumption that the word "comprehension" must necessarily be used to

¹ We argue elsewhere that it is not a class of behaviors, either (Flores, Oliveira-Castro & Souza, submitted).

refer to an event, be it internal (e.g., a private cognitive process) or external (e.g., a token of behaviour). Ryle (1949/2009) explained that many concepts do not point to things or events. Instead, they summarize powers and potentialities. Psychological concepts often function in this way, such as those that describe skills, personality traits, and habits (although they may be very different from each other regarding other logical features, cf. Alvarez, 2014). Ryle (1949/2009) called concepts that summarize powers (as opposed to describing episodes) *dispositional concepts*.

We can now, therefore, add to the features already described (achievement-oriented, admitting of degrees, polymorphous) a fourth logical characteristic of comprehension: its dispositional nature. As a dispositional concept, comprehension indicates that a subject is capable, under given conditions, of producing certain results (which results, and with what degree of complexity, varies, as we have seen). The claim that someone shows comprehension warrants us to expect certain things. If Laura says she understands Portuguese, we will expect her to be able to follow a simple conversation, to give us at least a general idea of what someone is saying or of the contents of a newspaper article. Ryle (1949/2009) offered an interesting metaphor, when he said that dispositional concepts give us a "ticket of inference", that is, permission to infer certain things that a person will do or be capable of doing, given certain circumstances. For example, if Maria says she has a good grasp of logic, this gives Julia a "ticket" to infer that Maria (if she is willing and there are no other hindrances, of course), will be able to help her with her Logic 101 homework.

When comprehension is claimed, therefore, certain competencies are implied. If Juan understands a passage of a technical paper, it is expected that, *ex-hypothesi*, he can describe the text in general terms, answer questions about it and so forth. Since comprehension is a

polymorphous concept, what is required in each situation depends on what kind of thing is being comprehended, as we have explained earlier. Indeed, to be able to assess comprehension of x, the person doing the assessment needs to know about x quite well herself, for only then can she use sound criteria of what counts as understanding and not merely, say, luck or blind reproduction.

Understanding Fictional Narratives

The acknowledgment of the polymorphic and dispositional nature of the concept of understanding implies that the criteria for attributing comprehension to someone will be different according to each activity in which the concept has meaning (cf. Ryle, 1949; 1951). In the case of an instruction manual, it may be relatively straightforward to formulate the criteria that lead us to say that the instructions were understood, but the same cannot be said of narrative texts, especially fictional ones. What counts as comprehension, i.e., what counts as criterial evidence that someone has understood a story?

A misconception sometimes held by professionals who must deal with the issue of text comprehension stems from a dichotomy between “objectivity” and “subjectivity”. Educators assume that narrative comprehension is not a reliable indicator of the child's capabilities because fiction is “subjective,” in the sense that it is “vague” and allegedly opens doors to infinite interpretations. This sense of the objective / subjective dichotomy, however, is foreign to the discussion of fiction, the latter being neither objective nor subjective in this sense. To judge it in this way results, in part, from applying to it concepts which are relevant for other genres, such as didactic material. This does not mean, however, that the interpretation of fictional narrative texts has no limits or criteria, on the contrary. To speak of the comprehension of any text, including narrative fiction, necessarily implies that there are limits to interpretation. If there were none, it would not be possible to assess comprehension. In fact, the concept would not even exist.

This logical necessity is behind Eco's (1994) discussion of the interpretation of narratives. Eco claims that there are limits to the interpretations we can give to a piece of fiction. It is worth noting, however, that this is not an empirical claim, nor is it a theoretical claim specific to Eco's view of semiology. The fact that we cannot comprehend a story in infinitely different ways is an internal, conceptual characteristic of comprehension (and, in this case, of the related concept of interpretation as well). It is a logical necessity. In other words, were narrative texts (or any texts) to be open to infinite interpretations, there would be no sense in speaking of comprehension at all, since all the texts in the world could potentially give rise to identical interpretations.

To illustrate the conceptual nature of the limits of what counts as understanding a story, Medeiros and Flores (2016) offer the example of the well-known tale of Little Red Riding Hood. Although the tale has many versions, the core plot is probably known to the reader of this paper. Let us say a child heard one of the more traditional versions. If she then, while retelling the story, changed the wolf to a fox (as happened once in one of our studies), but kept the basic plot intact, we would not therefore conclude that she had not understood the story, but that perhaps she was drawing on her knowledge of the slyness of foxes in many popular tales. If she said Little Red Riding Hood was taking medicine to her grandmother (instead of wine), we would see that she was making sense of the story in relation to her background knowledge (nowadays, wine is rarely associated with getting better from colds). But now, suppose that, when asked what the story is about, the child answered that the wolf is very nice and wanted help Little Red Riding Hood, who was being very naughty, take the right path to her granny's. This interpretation would change a very central narrative function (the wolf is bad and wants to hurt Little Red Riding Hood) and would therefore be seen as a possible case of failure of comprehension (excluding,

evidently, other possibilities, such as the child deliberately avoiding the scary element or playfully making up a new version).

Naturally, different language communities will use different criteria for what counts as understanding a story. For example, specialists in folklore and oral tradition may perform and demand levels of interpretation which do not come into question when we are telling the story to a child. It is also true that different versions of stories continue to develop. In other words, the polymorphic nature of comprehension appears here in the context of narratives. In the following section, we will present a methodological proposal for assessment of narrative comprehension that welcomes such necessary variations whilst, at the same time, respecting the constraints of interpretation inherent to any story.

A Methodological Proposal Based on Conceptual Analysis: The Method of Functional Units (FUN)

Before assessing comprehension, researchers and educators need to make decisions about what is essential in a story, that is, to analyse it in units of meaning. In other words, any assessment of comprehension always derives from somebody else's comprehension (that of those who assess or those who propose an instrument). Hence, testing comprehension comprises two steps: (1) analysis of the narrative to be used as assessment material, which we will call pre-analysis for short, and (2) performance assessment, which will necessarily include comparison with the original text. Any test of narrative comprehension begins with the first activity, although this step is rarely explicated. In other words, any comprehension question or test item expresses a decision about what is or is not essential in the story, but this step is often left implicit. For example, there might be a set of questions to be answered as proof of comprehension, but no explanation or justification of how that particular choice of items maps onto essential units of

meaning in the original narrative. The model we have developed, called the method of Functional Units (FUN), makes this stage of the construction of assessment explicit.

Event Sequence and Narrative Functions.

In the FUN method, pre-analysis is based on the separate but complementary examination of two narrative dimensions: (1) Sequence of Events and (2) Narrative Functions (Flores, Pires & Sousa, 2014; Medeiros & Flores, 2016; Rogoski, Flores, Gauche, Coelho & Souza, 2015). The first is a dissection of the actions and events that make up the narrative. In this analysis, the textual sequence is not always followed; the events are arranged chronologically, even if this is not the case in the original narrative. The second analysis consists of extracting what the text "does" to link those events and actions and transform them into a story, often using what Ryle called thick descriptions (Flores, manuscript in preparation; for a discussion of thick descriptions, see Ryle, 1990/1967; 1990/1968). Some examples of narrative functions are context, motives or intentions of characters' actions, the "atmosphere" of a scene, and characters' personalities, dispositions, inclinations, and feelings. Narrative Functions need not be traceable in a straightforward manner to circumscribed text excerpts; instead, they are often diffuse and show up in different ways throughout the text. For example, the evil nature of the wolf appears in its name but also throughout the story of Little Red Riding Hood. Narrative functions may also be implicit or merely hinted at (but they need not be).

The FUN method allows for an equilibrium between the internal constraints of the narrative and variations in the expression of comprehension. In the study carried out by Flores et al. (2014), for example, the story that was read to the participants (school-age children) included a description of a grey sky that dramatized the character's feeling of grief ("The sky was grey, the rain was grey, Camilo's heart was grey ..."). This narrative function was essential to link several

events of the story meaningfully. However, the same narrative function could be (and was) expressed by the children in many ways. For example, a child could simply say, "Camilo was very, very sad on that day," without using the grey sky metaphor. Alternatively, the child could express the character's emotions through tone and body language (which also happened quite often). The FUN method allows for, indeed presupposes, such variations in the expression of comprehension.

Brief Demonstration of the FUN Method

We now offer an example of how to apply the FUN method in a practical context. We have drawn the examples from a more extensive study on shared reading and comprehension (Rogoski & Flores, submitted). The Research Ethics Council of the Faculty of Health of the University of Brasilia authorized the study. Children's parents or guardians signed an Informed Consent and children assented after participating in a demonstration of a typical session and receiving explanations about what would be expected of them. The data presented in this example include the pre-analysis of two storybooks and the assessment of the respective retelling performances of two girls, aged six and seven, enrolled in the last year of pre-school and first year of primary school, respectively, in an urban public school in Brazil. We applied the method to two different storybooks (Tables 1 and 2) in order to illustrate its use with different narrative structures.

The first story, *Wild*, by Emily Hughes, is about a little girl who was raised by animals in the forest and is then captured by humans and taken to the city, where she feels misplaced and unhappy. Eventually, she rebels and returns to the jungle, taking with her the family dog and cat. This story has a traditional structure, with an initial scene, problem, solution, and outcome. The second story, *Chá das Dez* (a wordplay in Portuguese between two meanings: "Tea at Ten

o'clock" and "Tea for Ten"), by Celso Sisto (illustrations by Duke), is a cumulative tale with comical effects. Ten ladies plan to have tea together, but each one encounters an obstacle along the way, so in the end, none of them show up. They then start planning everything again, and the tale goes back to the beginning.

[INSERT TABLES 1 AND 2 HERE]

Consistency of the FUN Method with the Logical Characteristics of the Concept of Comprehension

The FUN method is consistent with the internal logical features of the concept of comprehension reviewed earlier: (1) comprehension is a polymorphic concept; (2) it expresses achievement (3) it allows for different degrees, and (4) it is a dispositional concept. Next, we will illustrate how the FUN method relates to each conceptual feature.

Polymorphism. Firstly, the FUN method is consistent with the polymorphism of the concept of comprehension, in the sense that we acknowledge that its criteria are specific to narratives (and probably not to all kinds). Therefore, it does not aim to capture a psychological construct of comprehension in general, but to reflect our specific shared criteria for comprehension of stories. This feature of the FUN method contrasts with how texts are often conceptualized in the construction of standardized school examinations, namely, as "raw material" to which identical test items can be applied in an undifferentiated manner, regardless of text genre (for an extended discussion of this issue in the Brazilian context, see Gontijo, 2012).

Understanding a story, differently from, for example, understanding a didactic text, has less to do with reproducing "facts" and more with grasping what happened (Event Sequence in the FUN method), and how what happened is linked through context, character's traits, intentions, and so forth (Narrative Functions in FUN). Less relevant details may be changed

without affecting this basic narrative structure. Literality is thus not a criterion of narrative comprehension. Table 2 illustrates the flexibility of the FUN method in this sense. We can see that the child transformed many details, all the while preserving the basic elements of the event sequence and their linking narrative functions. For example, she changed one of the dishes mentioned in the story, *crepe suzette*, for a dish more familiar to her: cheese *empadas* (Brazilian baked cheese tartelettes). This freedom to change unessential details, so typical in the transmission of narratives, is a sign of good comprehension skills. A scoring scheme that penalized such changes would go against what it means to understand a story.

Achievement-Oriented. Secondly, the FUN method is consistent with the fact that comprehension is an achievement concept, which is why it emphasizes what a person can do in different situations. The latter is not considered some feeble spectre of “real” comprehension, but a criterion of comprehension itself. However, assessment necessarily depends on decisions about what kinds of things and situations should be tested, in other words, decisions about which tasks to include in assessment. This selection is usually constrained by time, resources, and other limitations. These limitations, as we have seen, are often misinterpreted as proof of the inaccessibility of comprehension. We agree that assessment can never be completely fool proof. However, the reason is not that comprehension is a mysterious or inaccessible event, but that research and application contexts (especially on a large scale) do not always allow for assessment in ways as varied as would be necessary. Hence the importance of choosing tasks carefully, considering those that best represent the criteria of comprehension relevant to each context.

Degrees of understanding. Thirdly, the FUN method allows for the measurement of different degrees of narrative comprehension. It is possible to have understood some narrative

functions better than others. For example, as a child hears the story *Wild* for the first time, she might grasp the girl's feeling of loneliness and sadness when she is taken away from her home and her anger at being forced to change her ways, without understanding the motives behind the adults' efforts to transform her into a "civilized" little girl. Because narrative functions are often distributed throughout the text or even implicit, the FUN method can be advantageous for capturing different degrees of comprehension, without depending on finding correspondence with literal text segments (for recent discussions of difficulties inherent to assessment methods based on one-to-one correspondence between performance and literal text units, see Hoffman, 2017; Leslie & Caldwell, 2017).

The FUN method also helps to decide what should count as a mistake when the order of events is changed in some way. For example, in Table 2, the child changed the order of the obstacles that kept each lady from attending the tea party. However, even though the order was changed, it was still compatible with Functions 2 and 3, i.e., the elderly ladies, successively, face problems that interfere with their intention to attend the party (Function 2), and these obstacles are always unexpected or out of their control (Function 3). Looking at the dimension of Event Sequence in the light of Narrative Functions helped us see that even a change in the sequence of events could not be considered a mistake in this case.

Dispositional concept. When we claim that someone understands a story, we root our judgement on shared criteria of what that someone should be able to do, given certain circumstances (if-then regularities). The FUN method opens a spectrum of possibilities for such criteria. Retelling was used as an example here because of its centrality in informal and formal assessments of story comprehension (e.g., Cleave, Bird, Czutrin & Smith, 2012; Kida, De Ávila & Capellini, 2016; Westerveld & Roberts, 2017; see also Leslie & Caldwell, 2017; Stahl, 2009).

However, the FUN method can help plan other complementary or less demanding tasks, including identification/recognition questions and exercises. For example, in Flores et al. (2014), we used three complementary comprehension measures: free retelling, guided retelling, and a sentence recognition task, all constructed using the FUN method. In the guided retelling, the prompts were scripted to help the child recognize important narrative functions. In the sentence recognition task, instead of literal sentences taken from the text, the child was asked to judge statements based on narrative functions.

Final Comments

The applicability of the FUN method to different narratives makes it a useful tool for studies using single-case designs (e.g., Flores et al., 2014; Medeiros & Flores, 2016; Rogoski et al., 2015), studies with multiple measures, longitudinal investigations or when examining the transfer of comprehension skills to new narratives. In such cases, of course, it is essential to measure inter-judge reliability. For research aiming at standardization, the method allows the use of texts of different complexities for children of different ages.

A possible objection to the use of different texts in studies using time-series or repeated-measures designs is that the materials may not be equivalent. Recent studies suggest, however, that even standardized procedures employing customized "textoids" (Marmolejo-Ramos, 2007) are subject to problems of equivalence (Kida, De Ávila & Capellini, 2016). Indeed, the insistence on making the texts completely equivalent can, in the end, result in almost identical stories, which is also a problem for the test-retest process. In previous studies using the FUN method, we accepted the risks involved in using multiple original texts, of similar genre and style but very different from each other in other aspects (e.g., tales of the Grimm brothers, Medeiros & Flores, 2016). We thus investigated the effects of our independent variables while considering the

variation in narratives. Any effect of an intervention on comprehension would have to be strong enough to show up against the inevitable and intrinsic variability of different narratives.

The FUN method can be applied to unabridged literary narratives, without the need to adapt, cut segments or manufacture texts. The possibility of using authentic published literature may benefit the ecological validity of studies, amidst a growing preoccupation related to the excessive dependence on laboratory-tailored “textoids” in studies of comprehension (e.g., Adlof, McLeod & Leftwich, 2014; Marmolejo-Ramos, 2007; McCarthy, 2015).

So far, the FUN method has been applied in research on comprehension of youth novels (Flores et al., 2014; Gauche & Flores, 2017), traditional tales (Medeiros & Flores, 2016) and children's storybooks (Rogoski & Flores, submitted). New studies and possible adaptations are necessary to apply it to other kinds of narratives. For example, in its current form, the FUN method is not suitable for application to a narrative genre familiar in Brazil (*crônicas*), consisting of short pieces blending fiction with comment on current matters or social trends. In the *crônicas*, the event sequence is not always at the forefront and the narrator's reflections and comments - often ironic or humorous- about everyday events and overlooked details of human interaction play an essential role.

In conclusion, the analysis of the logical features of the concept of comprehension alerts us to the importance, when theorizing, planning pedagogical practices or assessing comprehension, of considering the shared human activities into which the concept is interwoven. Hopefully, the analysis offered here will stimulate further discussion, as well as new developments in conceptually based research and application in the field of narrative comprehension.

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Children's' Books

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Tables

Table 1

Sample application of the FUN method to a retelling of the book "Wild".

Retelling: " (Huum)... There was a girl in the forest; nobody remembered her (huumm)... the animals adopted her and she... and she... there the animals were her teachers. The crow taught her how to speak, the bears taught her how to eat and the foxes taught her how to play. Then one day she fell asleep, two strange people picked her up and took her to a strange place, which she thought was all wrong... that she had neat hair, neat clothes ... She had everything ... then, when she ate, she ate in a strange way. She spoke in a strange way, ate in a strange way, when she played, she would bite ... Until one day she became sad. Then she said, "Enough is enough!" And everything "flew" (gesture of someone throwing things up.) Then she left the house. She messed up the whole house, left with the house pets. With the cat, with the dog."

Narrative Functions	Scored?	Event Sequence	Scored?
1-The girl was "daughter of the jungle", she was wild (she grew up with animals, learned everything she knew with them, behaved like them).	Yes	1- Setting: The girl lived in the forest with her friends, the forest animals.	SI
2-Humans seemed like bizarre creatures to the girl. To her, it seemed that they were the ones doing everything wrong.	Yes	2-The birds taught her to "speak."	SI
3- The girl struggled to adapt and to learn new ways.	Yes	3-The bears taught her how to eat.	Yes
4-Contrast between the emotions of the girl when she was in the forest (joy and belonging) and when in the city (sadness and non-belonging).	No	4-Foxes taught her how to play.	Yes
FUN score on Functions:	3/4 = 75%	5-Strange creatures (humans) turn up in the forest.	Yes
		6-The humans startle when they find the girl and vice-versa.	No
		7- The humans take the girl to the city.	Yes
		8 – She is taken to live with a doctor and his wife.	No
		9-The doctor examines her.	No
		10-The doctor tries to teach her to speak like humans and to read and write, to no avail.	Yes
		11-The doctor and his wife try to make her eat like humans, with no success.	Yes
		12-They try to make her play like humans, to no avail.	Yes

	13-One day, the girl gets very angry, hollers "Enough!" and throws all the objects in her room around. 14-She leaves with the cat and the dog. 15 – She returns to her forest and lives happily ever after. FUN Score on Events:	Yes Yes No 11/15 = 73%
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Table 2

Sample application of the FUN method to a retelling of the book "Chá das Dez" (Tea for Ten/Tea at Ten).

Retelling: "The story is called "Tea for Ten." Once upon a time, there were ten elderly ladies, all very jolly. They ... each one ... they were going to make tea. I had ... The first lady was carrying cups and a kettle. On the following pages, one ... one ... one broke her foot. Then there were only nine left. Nine old ladies, all very well-groomed, to make tea with cookies. Cookies with tea, right? One cut her finger. Only eight left. Eight elderly ladies, very pretty, to make a tea with half-moon buns. One was running a fever. There were seven left. Seven elderly ladies, very joyous, to make tea with cheese *empadas*. I tasted cheese *empadas* once. One had a fall. There were six left over. Six elderly ladies, with their gauntlets, to make tea. One stayed in bed. Only five left. Five elderly ladies, well entertained, to make tea with an English cake. One ... one travelled without warning. That was the first one. There were four left over. Four elderly ladies, very cute, to make tea with sweets. One fled, three remained. Three elderly ladies, well scented, to make tea with lollipops. One lost her teeth. There were two left. Two elderly ladies, very happy, to make tea with cups of ... those metal cups ... zinc. With the zinc cups, to make a tea and a carrot cake with chocolate topping. One got distracted by a butterfly. What comes after two? One. Just one elderly lady left to eat all alone. She got very ill. No ladies left. Then, one month (...) the following week, everyone came back to make tea. The end."

Narrative Functions		Event Sequence	
1-The elderly friends' wish to have tea together.	Yes	1- Ten elderly friends are going to have tea.	Yes
2- Successively, each lady has a different problem that keeps her from attending.	Yes	2 - Obstacle 1 (one of them needs to travel last minute).	Yes
3- What happens to each lady is always unexpected or beyond her control (catches a cold, has to travel suddenly).	Yes	3- Nine old ladies go together for tea (with cookies).	Yes
4- Constant courage of the elderly ladies (they always try again to be all together for tea and are always cheerful).	Yes	4- Obstacle 2 (one of them breaks her foot).	Yes
5- Daintiness of the elderly ladies: looking smart, perfumed, with gloves, etc.	Yes	5- There are eight old ladies left for tea (with Crepe Suzette)	Yes
6- Every time they try to organize the tea-party again, they bring another kind of food	Yes	6- Obstacle 3 (one of them has a cold).	Yes
FUN Score on Functions:	6/6 = 100%	7- There are still seven old ladies who are going to have tea (with Fruit Cake).	Yes
		8 - Obstacle 4 (one of the ladies has a fall).	Yes
		FUN Score on Events:	19/21* = 90 %

Note: As long as the child preserved the narrative functions, changes in the chain of events were accepted, such as the order of obstacles or the treats taken to the tea-party.

*The score was based on the complete chain of events, available as supplementary material from the authors.