

# A flood of senses: a collostructional study on the quantifying binominal construction in Brazilian Portuguese

*Uma enxurrada de sentidos: uma análise colostrucional das construções binominais quantificadoras*

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**ABSTRACT:** We study the uses of the quantifying binominal construction *uma enxurrada de NP* (a flood of NP) from a usage-based perspective. Our main goal is to identify the nouns with which the construction preferably combines to understand the potential semantic interplay between the construction's meaning and the noun *enxurrada* (flood). Our general hypothesis is that NPs recruited by the construction must be semantically coherent with it (Goldberg, 1995). Thus, the semantics of *enxurrada* interplays with the construction's meaning. After the analysis, we realized the construction *uma enxurrada de SN* (a flood of SN) brings with the idea of movement, cause and consequence.

**KEYWORDS:** Quantifying binominal constructions; *uma enxurrada de NP*; Collostructional analysis; Usage-based Linguistics.

**RESUMO:** Estudaremos os usos da construção binominal quantificadora *uma enxurrada de NP* (*enxurrada de ações*) sob a perspectiva da Linguística Funcional Centrada no Uso. Objetivamos entender com quais nomes a construção preferencialmente se combina para estabelecer se a relação entre tais nomes e o nome quantificador *enxurrada* dão à

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construção um sentido específico, para além da quantificação. A hipótese geral do trabalho é que os SNs encontrados no slot da construção estabelecem coerência semântica (Goldberg, 1995) com *enxurrada*, sendo assim, o seu sentido literal deve exercer influência no tipo de nome que é recrutado. Após a análise, concluímos que se percebe a ideia de movimentação, causa e consequência; portanto, entendemos que tais sentidos são coerentes com a semântica do nome quantificador *enxurrada*.

**PALAVRAS-CHAVE:** Construções binominais quantificadoras; uma *enxurrada de NP2*; Análise colostrucional; Linguística Funcional Centrada no Uso.

## Introduction

This study aims to describe the binominal quantifying construction *uma enxurrada de NP* (a flood of NP) in Brazilian Portuguese. In order to understand the collocational specificities of the construction, we calculate the force of attraction between the construction and the lexemes with which it combines (NP) – colostrucional analysis. We analyze instances such as *uma enxurrada de ações* (a flood of stocks), *uma enxurrada de críticas* (a flood of criticism), *uma enxurrada de dólares* (a flood of dollars). The construction *uma enxurrada de NP* (a flood of NP) is named binominal because it presents a relationship between two nouns, namely, the quantifier noun (QN) *enxurrada* (flood) and the quantified noun – herein called NP – within the construction. In addition, we assume that *uma enxurrada de NP* (a flood of NP) is linked to the more schematic construction *INDEF ART NP1 de NP2*, inheriting from this highly-abstract template the meaning of large indefinite quantity, as it can be seen in the example below:

- (1) <p>: É em janeiro que a Bolsa de Valores de São Paulo poderia receber **uma enxurrada de recursos** externos dos fundos internacionais (*CORPUS BRASILEIRO*)  
(*It is in January that the São Paulo Stock Exchange could receive a flood of external resources from international*).

According to Verveckken & Delbecque (2018), binominal constructions are pathways heading towards a specific interpretation of the quantity expressed by a referent, in addition to those expressed by traditional quantifiers, such as *muito* (*many/much* in comparison to *a lot*). Therefore, when it comes to *uma enxurrada de NP* (a flood of NP), there may be a different conceptualization from that evoked by canonical quantifiers.

The general hypothesis of this work is that the semantics of the QN contributes to the meaning of the construction. Likewise, the semantics of the QN *enxurrada* (flood) must influence the lexeme that fulfills the slot of NP. Thus, we believe that the

construction in focus in this research has a different collocational distribution from other related binominal quantifying constructions in the network, such as *um monte de NP2* (lit. a hill of NP/ “a lot of NP”), *uma montanha de NP2* (lit. a mountain of NP/ “a lot of NP”), etc.

In the present study, we rely on Goldberg (1995)`s assumptions and investigate whether the lexemes found in the construction slot (NP) accommodate semantically to the meaning of *enxurrada* (flood) as a quantifier noun. According to the author, the Principle of Semantic Coherence holds that only semantically compatible roles can be fused, that is, compatibility exists when one of the roles can be characterized as complementary to the other.

Considering that *enxurrada* is a large stream of water, normally as a consequence of a pouring rain, bringing with it substantial outcomes of highly harmful potential, we assume the meaning of *uma enxurrada de NP* construction interacts with (the semantic groups of) items recruited by it in the overall usage situation. Thus, the investigated construction possibly has in its frame characteristics that are inherited from its quantifier name *enxurrada* (flood), such as the imagetic scheme of MOVEMENT and the metaphor of a FORWARD path. We also postulate that there is a cause and consequence relationship since a flood is the outcome of heavy rain and, at the same time, the cause of several unfolding events.

As Langacker (2006) puts, the speaker is the spectator in the very conceptual scene in which they engage on. The cognitive model proposed by the aforementioned author values the visual aspect in the emergence of meaning for linguistic forms as well as the symbolic nature of language, organizing the experience in a coherent cognitive fashion according to what our cognition sets out for salience (this cognitive work is referenced as construal). Our experience-based meaning organization implies the cognitive construction of perspective, that is, a particular way of perceiving and conceptualizing the world.

As for this study, we rely on the theoretical assumptions of Usage-based Linguistics. According to this theoretical framework, linguistic knowledge emerges from the speaker's experience with linguistic use. In a bottom-up dynamics, more specific uses lead to the abstraction of more general. Considering all the above, language is considered

as a large inventory (or network) of constructions, which are acquired and updated based on our linguistic experiences, from the phonetic to the pragmatic level.

In this research, we carried out a search for the construction *uma enxurrada de NP* in *Corpus Brasileiro* (Brazilian Corpus) (Sardinha, 2010), available on Linguateca webpage. In order to achieve the goals of this work, we perform a collocation analysis (Stefanowitsch; Gries, 2004). This type of analysis aims at measuring the force of attraction between lexemes and constructions (collocational force). In addition, we also analyze the results qualitatively, striving for a theoretically grounded interpretation of statistical results.

The present paper is organized as it follows: the first section presents a discussion on the meaning relationship between the QN *enxurrada* and the nouns quantified by the construction in focus. Such relationship interpretation is circumscribed from a Usage Based Linguistics point of view, as well as by contributions from the body of work on binominal quantifying constructions. The second section presents the methodology, the statistical analysis and the outcomes. Finally, we will present our final remarks highlighting the main points of the present study.

## **1 The QN *enxurrada* (flood) and the quantified nouns**

It is consensual in the literature on Usage-Based Models that language is shaped by domain-general processes and language use. In this work, we will focus on the conceptualization process which mediates cognitive organization of experience and semantic content. For Diessel (2019), the general domain of conceptualization is concerned with the construal of meaning, which would in turn be shaped by this domain. Conceptualization is also not language specific and it is inspired by research on vision. Pioneering research on conceptualization comes from gestalt psychology (Koffka 1935), which shows that vision involves more than the passive recording of sensory cues, as visual perception is guided by general cognitive principles such as the figure-ground distinction and the enrichment of perceptual information through inference. Inspired by this research, usage-based linguists have developed a conceptual theory that the meaning of linguistic expressions is structured by general processes of conceptualization, including metaphor, metonymy, fictive motion, force dynamics, and so on. In this way,

based on the author, we seek to establish how we can conceptualize the specific meaning of *uma enxurrada de NP2*, expanding the general idea of quantification by means of its semantic interplay with the quantified noun reference.

According to Langaker (1987), construal is a mental image created by the speaker, that is, the relationship between the speaker and the situation he conceptualizes and describes. The concept of construal implies one's general ability to choose between a set of alternate linguistic and non-linguistic means to describe a given situation. In alignment with the author, we believe the conceptual image that is constructed when one recruits a quantifier construction such as *uma enxurrada de NP2* interfaces with the meaning of the QN *enxurrada* (flood), so that the lexemes that instantiate the quantified-noun slot of the construction reflect matching characteristics to the inherent meaning of this quantifying noun, such as movement and the cause/consequence relationship.

Verveckken and Delbecque (2018) study the conceptual-image persistence of quantifying nouns in contexts of binominal quantifying constructions. The authors discuss whether quantifying nouns are polysemic items, that is, whether their quantifying-a-large-quantity meaning is additional or literal; or whether yet the interpretation of quantity becomes plausible in the binominal construction. According to the research, the second hypothesis is less acceptable, as there is still the possibility of literal interpretation in binominal constructions, as in the example of *um monte de terra* (a mound of earth). The fact we can use quantifier nouns in non-binominal constructions also seems to be an argument against the second alternative, as we see in the Portuguese construction: *eu falei um monte para ele* (lit. I said a mound to him/ "I said a lot to him").

For the authors, the quantifier noun plays a fundamental role in the conceptualization of quantity, thus establishing its own semantic contribution. Consequently, when we change the quantifier noun in a quantifying construction, we will cause a semantic "slip", that is, the semantic roles may lose the compatibility which is essential for the Principle of Semantic Coherence (Goldberg, 1995). Verveckken and Delbecque (2018) believe that quantifier nouns are not fully interchangeable with each other due to the specific semantic nuances that each one of them carries.

According to the authors, there is conceptual persistence in binominal quantifying constructions. Therefore, in every conceptualization activity a quantifier noun may strongly call for specific lexemes. So, its conceptual image will always reflect in them

and such reflective property sorts out quantifier nouns from canonical quantifiers. Due to this characteristic, the authors classify these quantifiers as intermediate in a continuum between quantitative expressions and qualitative expressions since, besides the presupposed quantification, the QN is capable of attributing certain specific characteristics to its related referents. We believe that, over time, it is possible that the literal meaning of the quantifier noun will become increasingly opaque, though.

Verveckken and Delbecque (2018) also understand that iconicity plays a role in the conceptualization of binominal quantifying constructions. Iconicity is based on the idea of a motivation for the structure of languages. Functionalism postulates three subprinciples for iconicity: the subprinciples of linear ordering, quantity and proximity. The first-mentioned subprinciple is important for understanding Verveckken and Delbecque (2018)'s take on binominal quantifying constructions. Once the quantifier noun is mentioned and processed first, it determines the schematic image of NP. Thus, the quantified noun would be conceived by means of the conceptual image previously activated by the QN. A conceptual image evoked by a quantifying noun is like a mental space, paraphrasing Verveckken and Delbecque (2018).

Regarding binominal constructions, the authors demonstrated that the meanings they describe vary according to the context. The different conceptual facets present different degrees of schematicity and, as a result, the discursive context and the constructed scene determine a set of facets established in specific occurrences. By pairing up the ideas of Verveckken and Delbecque (2018) with those of Langacker (1991), we have that the meaning of an expression is not only defined by the conceptual image evoked, but it also has its roots on the way it is construed. Therefore, the construal is characterized in terms of the speaker's perception of a given situation. Hence, the communicative context can prompt the speaker to choose the construction *uma enxurrada de NP* when one intends to express the idea of movement in addition to that of large quantity. The contextual setting given in following piece of data illustrates the point we have just presented.

- (2) <p>: Em suma, **uma enxurrada de investimentos** tem *chegado* ao país.  
(CORPUS BRASILEIRO)  
(In short, **a flood of investments** has arrived in the country).

Verveckken and Delbecque (2018) also discuss the alternation between two quantifier nouns, classified by the authors as almost synonymous, namely: *alud* (avalanche (EN)/ avalanche (PT)) and *aluvión* (flood (EN)/ enxurrada (PT)). Despite this synonym relation, there are idiosyncrasies evoked by the conceptual image of each QN in the binominal quantifying constructions they figure in.

Initially, the authors highlight that both quantifier nouns profile a considerable number of NPs (quantified nouns) that emerge simultaneously and unexpectedly, evoking experiential references that may lead to drastic situations. For the sake of clarity, we refer specifically to the effects caused by natural phenomena such as a flood. Nonetheless, they present examples in which there is no possibility of exchanging quantifier nouns without changing the meaning. Let us look at the following examples:

*“Un aluvión de nuevos negocios, y nuevos empresarios desconocidos meses atrás”* (A flood of new businesses, and new entrepreneurs unknown months ago) (Verveckken & Delbecque 2018) e *No nos hemos visto “inundados” por un repentino alud de productos agrícolas e industriales”* (Have we not seen ourselves “flooded” by a sudden avalanche of agricultural products and industrial (products)) (Verveckken & Delbecque 2018)

In the first example, with *enxurrada* (floods), the meaning of the construction is presented as positive, as attention to politicians took a backseat. In the second example, conversely, the sudden arrival of foreign products is harmful to domestic agriculture. The authors understand that the *avalanche* (avalanche) construction creates the idea of defeat, or a case in which the victim was not prepared to compete. This situational context is more easily combined with the conceptual image of avalanche. Therefore, if instead of *avalanche* (avalanche) we had, in the second example, the quantifier *enxurrada* (flood), the construction would outline the possibility of defense.

The authors also establish the following features as conceptual facets of *aluvión* (flood (EN)/ enxurrada (PT)): i) a simultaneous arrival from different points; ii) unexpected entities which “show up” suddenly and are iii) able to be devastating and cause victims. In addition, the flood either provokes a reaction or it unfolds from an identifiable cause. The researchers conceive *alud* (avalanche (EN)/ avalanche (PT)) as very similar in terms of its conceptual facets. Some distinctions are drawn, though. We highlight herein the ones we consider most important: just as it happens in literal floods, the data on *alluvión* (flood (EN)/ enxurrada (PT)) suggests that the NP floods the victim

from all sides, from different starting points. Nonetheless, with *alud*, it happens in a different fashion, as the starting point is just one, thus contributing to a more incisive interpretation of the data.

**Figura 1: imagem conceptual de *alud* x *aluvión***



**Source:** Verveckken & Delbecque (2018, p.134)

According to Verveckken & Delbecque (2018), speakers seek to use congruent and coherent elements in their speech, therefore, in their search for speech coherence, speakers would opt for the most well-suited QN. According to the authors, QN have their combinatorial preferences. Roughly speaking, these matching choices end up strengthening the original semantics of the quantifier name. Additionally, their work suggests that it is not only the image of NP that accommodates the conceptual image introduced by QN, we must also consider the role that NP plays in the quantifier noun choice, as there is a mutual adjustment between the images associated with QN and NP. Thus, certain types of NP constantly appear with a given quantifying name, or with a specific group of QN. The scholars exemplify their stance by saying that negative referents usually recruit QN such as *alud*, *alluvium* or other natural phenomena such as storms or earthquakes (in Portuguese). The NP would thus be evoking conceptual images that maximize their senses, pairing up their reference, in a two-way-street fashion, with matching QN:

The idea is that the co-occurrence of lexical items sharing one or more conceptual facets with NP1 increases the relative prominence these components have in the Frame evoked by the broader discourse. In other words, NP2 and the larger context co-determine the facet(s) of NP1's conceptual image which are updated in particular occurrences (Verveckken & Delbecque, 2018).



Regarding the conceptualization of binominal quantifying constructions, Tavares (2019) argues that the quantified entities hold on to a compatibility relationship with NP1. Therefore, in Portuguese there are constructions such as *um mar de luto* (a sea of mourning) and *um mar de informações* (a sea of information), as well as *uma porrada de informações* (a punch of information) (see Tavares, 2019); Notwithstanding, it would not be possible the usage of *uma porrada de luto* (a punch of mourning) (see Tavares, 2019).

The aforementioned author defends that image schemes serve as a source domain for the metaphor in the quantification process, depending on which lexeme is used as a quantifier. In relation to *uma enxurrada de gols* (a flood of goals), *uma avalanche de protestos* (an avalanche of protests), *um vendaval de influências* (a gale of influence) and *uma enchente de cartas* (a flood of letters), the activated metaphor is QUANTITY IS MASSIVE MOVEMENT OF FLUIDS (cf. Tavares, 2019).

Based on the work revisited in this section, we will move on to the methodology and analysis of the data for *uma enxurrada de NP* (a flood of NP) We consider, in our analysis, that in addition to establishing an indefinite quantification of referents, the construction with *enxurrada* (flood) brings to the table more specific meanings, typical of the meaning relationship created in the semantic accommodation going on between the quantifying and the quantified nouns. We aim to demonstrate the most categorical and representative uses of the construction by carrying out an analysis that evaluates the strength of attraction between the lexemes and the construction *uma enxurrada de SN2* (a flood of NP).

## 2 Analyzing *uma enxurrada de SN2* (a flood of NP2) data

To develop the analysis intended in this research, as a first step, we accessed the [www.linguateca.pt](http://www.linguateca.pt) website. The *Linguateca* portal provides access to some corpora. Among them, we collected data from the Brazilian Corpus (SARDINHA, 2010), which is a collection of 991,800,000 words of Brazilian Portuguese. This corpus is the product of a research project captained by Tony Berber Sardinha, with funding granted by Fapesp. As argued by the researcher, the corpus significant size is due to the overall source initially enabling its compilation: the linguistic oral and written production of a massive population of speakers of Portuguese, in multiple textual genres.

In this corpus, we searched for the word *enxurrada* (flood) and collected all the data found congruent to the construction *una enxurrada de NP* (a flood of NP) *as in una enxurrada de críticas* (a flood of criticism). In this research, we work towards understanding the construction's preferred contexts of usage. We also strive for obtaining some relevant information about the meanings with which it may be particularly associated. In order to do so, we carried out a collocation analysis on our database.

This type of analysis encompasses a family of three corpus-oriented methods applied to investigate different types of associations between lexemes and constructions. Such methodological strategy makes it possible to know which lexemes are being attracted or repelled by the construction. This way, we can not only understand its preferences, but also know if there is in fact a relationship between the quantified nouns in the slot and the construction's quantifier noun. The three types of collocation analysis are: collexemic analysis, distinctive collexemic analysis and covariational analysis. Collexemic analysis verifies the strength of attraction of lexemes towards a construction slot, while distinctive collexemic analysis measures the strength of attraction of lexemes in a slot of two or more constructions. The third method, covariational collexemic analysis, observes the strength of attraction of lexemes in two or more slots of a given construction (cf. Gries; Stefanowitsch, 2004).

In the present study, we used collexemic analysis, which aims to observe the degree of attraction between names and a slot in a construction. This type of analysis takes into account i) the frequency of occurrence of the nouns instantiating the schematic slot of a given construction, ii) their frequency in the corpus as a whole, and also iii) the number of words in a specific corpus. Based on a triangulated average between these data, collocation analysis displays the force of attraction between the item and the construction on focus.

All statistical analysis was run on R program, a free software for statistical computing and graphics. The choice for this software was motivated by previous studies which carried out their analysis using this tool, such as the ones captained by Stefan Gries. To perform the collexemic analysis and run it in the program, we placed all occurrences of the construction slot listed in an Excel document and arranged them in a single column. The objective of the analysis is to numerically envision the forces of attraction between the lexemes and the construction.

In the analysis herein, we only consider the head of a NP. Therefore, nominal modifiers and complements were not encoded in the Excel data list entries. Furthermore, if the same given noun appears at times with the modifier *beautiful*, and at times with *ugly*, we computed it as the same entry, due to our premise that the item being recruited by the construction is the same, what changes are the possible classifications. Compound nouns such as *guarda-roupa* (wardrobe), or possible collocates, such as *mandados de segurança* (writs of mandamus), were considered as the same entry. In cases of coordination, like a bunch of nonsense and nonsense, we consider each of the NPs as a sole source of input, since the items do not represent the same semantic unit, therefore holding on to their individual meaning and being quantified separately. The example below illustrates how we classified, as an entry, only the head of the NP:

- (3) <p>: **Uma enxurrada de novos restaurantes** que ao longo do ano são inaugurados na cidade, boa parte é constituída de empresas cujos donos não têm qualquer relação profissional com o métier da cozinha. (CORPUS BRASILEIRO)  
(*A flood of new restaurants is opened in the city throughout the year, many of which are owned by individuals with no professional connection to the culinary field*)

In the piece of data above, only the head of the NP (that is, restaurants) was considered as an entry. Its additional qualifications were left out, since, by commutation, we could have, for example, other attributes attached to this head, such and *baladados* (*trendy*), *caros* (*expensive*), *clássicos* (*classic*) and so on. We, henceforth, focused on the more semantically profiled relationship between *a flood of* and the noun it quantifies.

In the Brazilian Corpus, we observed 227 different types of lexemes instantiating the slot in *uma enxurrada de NP2* (a flood of NP2) and 466 occurrences of the construction in the analyzed corpus. To save space, we will present here the 30 lexemes most attracted to the construction *uma enxurrada de NP2* (a flood of NP2). A collostructional strength above 3 is considered relevant, with a probability of error of 0.1%. The *p value* or probability of error is the probability of missing the analytical target when one rejects the null hypothesis, that is, the hypothesis that the observed phenomenon happens by chance, there being no relationship between the research variables. Moreover, it is important to note that our analysis was not only statistically-based. We also shed

some light on qualitatively properties of our occurrences, mapping out discursive features, describing them from a usage-based perspective.

In this section, we shed some light on the meanings found among the greatest collostructional forces in our data. As we know, a collexeme analysis seeks to demonstrate that items with high attraction strengths are not being recruited at random. Thus, we believe that these (categories of) lexemes can give us substantial insights on the meanings evoked by *uma enxurrada de NP2* (a flood of NP2) since the construction meaning seems to emerge from the bilateral relationship between the quantifying noun and the quantified one. The table below synthesizes the statistical information provided by our collostructional analysis:

**Table 1 – *Uma enxurrada de NP2* collostructional analysis**

Noun	Frequency in the corpus	Frequency in the construction	Expected frequency	Collostructional strength
1. <i>Ações (stocks)</i>	219177	48	0.1	109.61
2. <i>Dólares (dollars)</i>	43365	25	0.02	67.69
3. <i>Denúncias (complaints)</i>	32230	13	0.02	33.50
4. <i>Processos (court cases)</i>	144240	14	0.07	27.38
5. <i>Pedidos (request)</i>	23888	8	0.01	20.21
6. <i>Cartas (letters)</i>	27117	8	0.01	19.77
7. <i>Acusações (charges)</i>	20737	7	0.01	17.79
8. <i>E-mails (emails)</i>	3669	5	0	15.89

<b>9. Críticas</b> (criticism)	49215	7	0.02	15.16
<b>10. Reclamações</b> (complaints)	9901	5	0	13.74
<b>11. Demissões</b> (layoffs)	10684	5	0.01	13.57
<b>12. Investimentos</b> (investments)	86297	7	0.04	13.46
<b>13. Protestos</b> (protests)	12083	5	0.01	13.31
<b>14. Produtos</b> (products)	187956	8	0.09	13.07
<b>15. Mensagens</b> (messages)	19417	5	0.01	12.28
<b>16. Telefonemas</b> (phone calls)	5060	4	0	11.87
<b>17. Informações</b> (information)	238321	7	0.11	10.40
<b>18. Medidas</b> (measures)	146993	6	0.07	9.84
<b>19. Dinheiro</b> (money)	166772	6	0.08	9.52
<b>20. Livros (books)</b>	83807	5	0.04	9.11
<b>21. Importações</b> (imports)	27532	4	0.01	8.93
<b>22. Notícias (news)</b>	32419	4	0.02	8.65

23. <i>Contestações</i> ( <i>pleadings</i> )	164	2	0	8.53
24. <i>Projetos</i> ( <i>projects</i> )	134255	5	0.06	8.10
25. <i>Mandados de</i> <i>segurança</i> ( <i>writ</i> <i>of mandamus</i> )	314	2	0	7.96
26. <i>Recursos</i> ( <i>resources</i> )	323381	6	0.15	7.82
27. <i>Besteiras</i> ( <i>nonsense</i> )	566	2	0	7.45
28. <i>Inaugurações</i> ( <i>inaugurations</i> )	1156	2	0	6.83
29. <i>Portarias</i> ( <i>regulations</i> )	2782	2	0	6.06
30. <i>Liminares</i> ( <i>preliminary</i> <i>injuctions</i> )	4367	0	0	5.67

authors` own elaboration

Considering the outcomes, we were able to establish two tightly close and important categories: financial and justice. The first category includes nouns such as *dólares* (dollars), *investimentos* (investments), *dinheiro* (money), *recursos* (resources) and *empréstimos* (loans). Inside this first category, the most frequent example is *dólares* (dollars), which appears 25 times in the corpus. However, the categorical arrangement is made up of other items, such as *recursos* (funds), *investimentos* (investments) and *empréstimos* (loans) are operations carried out with money. It is important to highlight that such lexemes are understood as a category due to the semantic proximity that exists among them. Let us look at some additional data:

- (4) <p>: Rombo em dólares. O jogo de ganhar juros sem iguais no mundo atraiu **uma enxurrada de dólares** especulativos. (CORPUS BRASILEIRO)  
(*Deficit in dollars. The game of earning unparalleled interest rates in the world has attracted a flood of speculative dollars*)
- (5) <p>: Lastro mais do que suficiente para **uma enxurrada de investimentos** alemães na F-1, que, com Frentzen, só deve aumentar. (CORPUS BRASILEIRO)  
(*More than enough ample backing for a flood of German investments in F-1, which, with Frentzen, it is likely to increase*).

In example 4, we see that there is dollar speculation in the financial market and, in example 5, there are financial investments in Formula 1. The second category contains 7 members, namely: *ações* (stocks), *processos* (legal proceedings), *medidas* legal measures, *mandados de segurança* (writs of mandamus), *portarias* (official orders) and *liminares* (injunctions). The noun *medidas* (measures) was found in all data as being modified by *provisória* (provisional), which is a government measure that take effect quickly. This category is broader than the previous category, as we identified more features-sharing nouns. The lexemes of this category are semantically similar, being all related to justice and law and because of that we categorize them as a group. Let us look at some data that illustrates this interpretation in the examples below, taken from the analyzed corpus:

- (6) <p>: o governo corre o risco de *enfrentar* **uma enxurrada de processos** na Justiça, advertem advogados trabalhistas. (CORPUS BRASILEIRO)  
(*the government runs the risk of facing a flood of legal proceedings in the court, warn labor lawyers.*)

The example postulated categories illustrate well the meanings that *uma enxurrada de NP* profiles. Firstly, the binominal quantifying constructions share, at a more schematic level, the large indefinite quantity meaning. Secondly, each binominal construction seems to establish its own meaning, by means of a complex interaction with the meaning of the NP. As for *uma enxurrada de NP*, we state that the QN *enxurrada* profiles a cause and consequence relationship inherited from its literal meaning. This

meaning also evokes the inference of movement (since a flood is a current caused by a strong storm).

In the examples from the financial category, the data demonstrate the sense of movement that is typical of financial market speculation. We saw, then, in the contexts, the “entry” of capital into a market, whether financial or Formula 1. In example 6 of the justice category, we can see, contextually, the facing of adversity (the flood). Therefore, *uma enxurrada de processos* (a flood of lawsuits) is a possible consequence that the government may face. In the later example, *uma enxurrada de medidas provisórias* (a flood of provisional measures) is the cause of the loss of labor rights. We will now comment on the collostructional forces of the names most attracted to construction.

The greatest collostructional force is that of the lexeme *ações* (legal actions), which was (109.61), followed by *dólares* (dollars) (67.69) and *processos* (legal proceedings) (27.38). In addition to these items, we also observed: *medidas* (measures) (9.84), *contestações* (responses) (8.53), *mandados de segurança* (writs of mandamus) (7.96), ordinances (6.06) and *liminares* (injunctions) (5.67) – which represent the justice category; and *recursos* (resources), *investimentos* (investments) and *dinheiro* (money) – members of the financial category – are very attracted to construction. After a qualitative data analysis, we interpreted that the meanings constructed by the nouns most attracted to the construction slot are in semantic coherence with the quantifier noun *enxurrada* (flood) in the contexts found. Let us look at some illustrative piece of data below:

(7) <p>: A reclamação foi geral e a Telebrás ficou ameaçada de **sofrer uma enxurrada de ações** judiciais por parte dos assinantes. (CORPUS BRASILEIRO)

*(The complaint was general and Telebrás was threatened with suffering a flood of lawsuits from subscribers)*

(8) <p>: It is not surprising that **a flood of money** is causing some specific problems. (CORPUS BRASILEIRO)

*(Não chega a surpreender que uma enxurrada de dinheiro venha causando alguns problemas específicos.)*

(9) <p>: Blat teme ainda **uma enxurrada de acusações**. (CORPUS BRASILEIRO)

*(Blat still fears a flood of charges)*



In the examples above, we saw the recruited nouns *ações* (legal actions), *dinheiro* (money) e *acusações* (charges) (collostrutlional force: 17.79) and the verbs *sofrer* (to suffer) and *temer* (to fear). The ideas constructed in the observed contexts indicate that, in these cases, an *enxurrada* is interpreted as something destructive, which brings harmful consequences. That is why we believe that the combination between the highlighted verbs and the construction is not random. In the first piece of data, there is also the presence of the word *ameaçada* (threatened), that is, *uma enxurrada de ações* (a flood of legal actions) represents a threat in this context. The pieces of data with *temer* (to fear) also demonstrate the construction of meaning relatable to fear or apprehension. We, then, conclude that the QN is influencing the way we understand these lexemes and it would also be the motivation behind the highlighted verbal choices. Therefore, iconicity is a coercive force for the way we use language.

We know that a *enxurrada* caused by a storm can have many consequential events. Considering that, we believe this noun can profile at its semantic basis the meaning of cause, that is, the reason for something to happen, as we said before. This reason is understood as powerful enough to trigger a set of consequences, which “accommodates” the lexemes that instantiate the construction with the meaning of the quantifier name *enxurrada* (flood), but which will not always be interpreted as harmful.

The construction in focus in this research also seems to profile the meaning of origin. Next, we will see specific pieces of data illustrating situations interpreted as effects of *uma enxurrada de* (a flood of NP2), as in the case of *importações* (imports) (collostrutlional strength: 8.93):

- (10)<p>: Hoje, o Brasil amarga um «rombo» monstruoso na balança comercial, *por causa da enxurrada de importações*. (CORPUS BRASILEIRO)  
(Today, Brazil suffers from a monstrous 'deficit' in the trade balance, due to **the flood of imports**)

In the example above, it is possible to see that certain situations occur due to the lexemes recruited in the construction, as evidenced by the expression *por causa* (due to). In other contexts, we realize that, in a cause and consequence relationship, the

construction does not evoke the reason but rather the consequence of previous discursively inferred events. We find below some data which are illustrative of such a state of affairs:

(11)<p>: As mudanças na Previdência e as declarações de FHC e do ministro Paulo Renato (Educação) de que haverá maior cobrança de eficiência das universidades federais 'tão *provocando uma enxurrada de pedidos* de aposentadorias de professores. (CORPUS BRASILEIRO)

*(Changes in the pension system and statements from FHC and Minister Paulo Renato (Education) about increased demands for efficiency in federal universities are causing a flood of retirement requests from teachers)*

(12)<p>: A coluna que escrevi sobre o «No Code», último disco do Pearl Jam, *provocou uma enxurrada de cartas*, a maioria escritas por meninas que cultuam Eddie Vedder, cantor da banda. (CORPUS BRASILEIRO)

*(The column I wrote about 'No Code', the latest album by Pearl Jam, triggered a flood of letters, most of them written by girls who idolize Eddie Vedder, the band's singer).*

In the previous data, we saw *pedidos* (requests) (20.21), *cartas* (letters) (19.77) in contexts in which the word *provocar* (trigger/provoke) is used. Hence, we have that specific referents may give room to the usage of *uma enxurrada de NP*, being *enxurrada* as consequential in its metaphorical meaning as it is in its literal one. Let see more examples:

(13) <p>: O anúncio de que duas novas drogas, angiostatina e endostatina podem eliminar vários tipos de câncer em ratos sem efeitos colaterais *causou uma enxurrada de telefonemas* para o Instituto Nacional do Câncer dos EUA (NCI). (CORPUS BRASILEIRO)

*(The announcement that two new drugs, angiostatin and endostatin, can eliminate several types of cancer in mice without side effects caused a flood of phone calls to the U.S. National Cancer Institute (NCI))*

- (14) <p>: Essa discussão *gerou* **uma enxurrada de livros**, dos EUA à Austrália, debatendo um novo modelo de educação masculina, que propõe mais atenção e compreensão com os garotos. (*CORPUS BRASILEIRO*)  
(*This discussion has generated a flood of books, from the USA to Australia, debating a new model of male education that advocates for more attention and understanding of boys*).

In the data above, we can see the exemplars *telefonemas* (phone calls) (11.87), *livros* (books) (9.11) in sentences with verbs that give interpretative room for the construction as a consequence: *causar* (to cause), *gerar* (to generate), and other examples like *ensejar* (to give rise to), *levar* (to lead to), *causar* (to cause) and *resultar* (to result). Furthermore, we can see a piece of data which contains the literal expression “the consequence of”.

- (15)<p>: A *consequência* das restrições impostas pela Previdência *foi* **uma enxurrada de ações** na Justiça, todas reclamando direito adquirido. (*CORPUS BRASILEIRO*)  
(*The consequence of the restrictions imposed by Social Security was a flood of lawsuits, all claiming acquired rights*).

What is more, we believe the piece of data above illustrates a crucial point: the cause and consequence relationship is a symbolic extension of our representation regarding the floods typical flowing fashion (it occurs suddenly and unexpectedly). In the next three examples provided below, we can see three verbs that indicate movement: *chegado* (arrived), *virá* (will come) and *adentrou* (entered). Additionally, the data set above presents the following quantified nouns (NP2s): *investimentos* (investments), *mandados de segurança* (writs of mandamus) and *portarias* (decrees). In their respective contexts, these nouns arrive in large quantities and abruptly, indicating a change of flow, whether in economy or in justice.

- (16) <p>: Em suma, **uma enxurrada de investimentos** tem *chegado* ao país.  
(*CORPUS BRASILEIRO*)  
(*In sum, a flood of investments has been flowing into the country*).

(17) <p>: E aí, **virá uma enxurrada de mandados de segurança** iguais, de cada um dos implicados. (*CORPUS BRASILEIRO*)

*(And then, there will come a flood of identical writs of mandamus, from each of those involved).*

(18) <p>: Qual não foi a surpresa de todos quando **uma enxurrada de portarias** do INAMPS *adentrou* os gabinetes dos gestores públicos em janeiro de 1991. (*CORPUS BRASILEIRO*)

*(What a surprise it was for everyone when a flood of INAMPS decrees entered the offices of public managers in January, 1991)*

We also observed the noun *entrada* (entry) and the verbs *trouxe* (brought) and *invadiu* (invaded) in the *corpus*, which also imprint a sense of movement. We can also identify this movement-meaning imprinting in contexts with the verb *receber* (to receive). This verb indicates a transfer action, which brings with it the idea of movement. In our data, it is possible to identify this conceptualization with the names, emails (e-mails) (15.89) and informações (information) (10.40).

(19) <p>: Desde que foi escolhida como vencedora do Prêmio Hans Christian Andersen. considerado o Nobel da literatura infanto-juvenil. ela tem recebido **uma enxurrada de e-mails** com elogios, cumprimentos e pedidos de autógrafos. (*CORPUS BRASILEIRO*)

*(Since being chosen as the winner of the Hans Christian Andersen Award, considered the Nobel of children's literature, she has received a flood of emails with compliments, greetings, and autograph request.)*

(20) <p>: Nos últimos tempos todo o povo brasileiro tem recebido **uma enxurrada de informações** e elogios a Curitiba e aos governantes d'as cidade. (*CORPUS BRASILEIRO*)

*(In recent times, the entire Brazilian population has received a flood of information and compliments for Curitiba and the city's leaders).*

The QN *enxurrada*, linked to the concept of movement, brings with it the idea of dragging things or people all over the way of its course. Therefore, we believe that there is, unconsciously, the association of floods with a “threat”, or with perilous situations. In our analysis, we observed contexts in which there is a sense of “facing danger”, in these cases, the speaker interprets the quantified name as a situation of risk or problem. Verwekken and Delbecque (2018) argument that QN *enxurrada* can refer to devastating and cause-victims situations, as well as being used in detrimental situations. Below we have some data in line with this understanding:

(21) <p>: No momento, os laboratórios ligados à Associação Brasileira da Indústria Farmacêutica *defendem-se* de **uma enxurrada de acusações**, que compreendem desde formação de cartel, passam pelo superfaturamento de insumos e pelas falsificações e chegam ao boicote aos medicamentos genéricos. (CORPUS BRASILEIRO)

*(At the moment, laboratories associated with the Brazilian Association of the Pharmaceutical Industry are defending themselves against a flood of accusations, which range from cartel formation, go through overpricing of inputs, involve counterfeiting, and extend to the boycott of generic medications).*

(22) <p>: O CFO e a Fifa vêm *enfrentado* há meses **uma enxurrada de críticas**, que vão da política de distribuição de ingressos ao policiamento excessivo programado, ou mesmo à adequação da venda de canivetes com o logotipo da Copa. (CORPUS BRASILEIRO)

*(The CFO and FIFA have been facing a flood of criticism for months, ranging from the ticket distribution policy to the excessive planned policing, or even the appropriateness of selling knives with the World Cup logo).*

(23) <p>: **Uma enxurrada de mensagens** *atacam* a atitude «ditatorial» do supermoderador. (CORPUS BRASILEIRO)

*(A flood of messages attacked the 'dictatorial' attitude of the supermoderator).*

Based on these examples, there is the meaning of “bumping into” with the *enxurrada* (flood). Once that happens, one must face it. The examples bring the verbs *atacaram* (attacked) and *enfrentar* (to face).

Finally, we still find cases in which we see evidence pointing at the speaker's activation of the name *enxurrada* (flood) in its literal meaning - that of water flow, flood. Below, we can note the verbs *afoga* (drowns) and *arrastado* (dragged into) as clues of the speaker's conceptualized connection between flood and water. What is more, we do recognize that, out of the pair of verbs we have just presented, only *afoga* (drowns) is mainly associated with the picturing of watery scenes. On the flip side, the verb *arrastado* (dragged into) may also be associated with solid elements. However, as this analysis is qualitatively associated to a usage-based perspective, we depart from the immediate context in which the verb was uttered. That is, the quantified nouns *denúncias* (accusations) and *ligações* (calls) do not relate to solid references. Instead, they construe abstract references, presupposing agency acts). That said, the semantics of the contextually instantiated quantified nouns, paired up with the NP1 *enxurrada* (flood) do not, at least in some sort of immediate level, open room for solid-reference connotations regarding the use of *arrastado* (dragged into).

(24)<p>: Vargas é arrastado em **uma enxurrada de denúncias** de corrupção e ligações criminosas. (CORPUS BRASILEIRO)

*(Vargas is being dragged into a flood of corruption allegations and criminal connections).*

(25)<p>: Com esse ou com pretextos semelhantes, o governo *afoga* o Congresso **numa enxurrada de medidas** provisórias. (CORPUS BRASILEIRO)

*(With this or with similar excuses, the government drowns the Congress in a flood of provisional measures).*

## Conclusion

The conclusion we draw from the data exemplified above is that the construction *uma enxurrada de NP* preferably combines with the categories *justice* and

*financial*. Backing up such statement is the fact that we found several examples among the greatest collocation forces, as we have seen. These contexts can commonly refer to consequential events unfolding from previous ones. In that regard, the use of the construction is favored, as it establishes coherence with the meaning of the NQ *flood*, which is also a consequence of a strong storm.

A word of caution: please note that our analytical claims, outlined herein, are to be considered in the scope of our *corpus*, which is compound of multiple discursive genres and which size cannot be disregarded. We suggest the additional readings of Fumaux and Alonso (2024) and Alonso and Fumaux (2019), in which the construction herein analysed is compared to other binomial ones, such as *uma montanha de* (literally translated as *a mountain of*, but contextually better captured by *a lot of*) and *um monte de* (literally translated by *a hill of*, but contextually captured by *a pile of*). Interestingly, we do not notice the same meaning relations found in the construction presented herein.

The postulated assumption of (categories of) nouns being attracted by the studied construction is in alignment with the work of Tavares (2018). The author postulates that nouns such as *enxurrada* (flood) evoke the conception of climate. These nouns tend also to be combined with nouns from the frames *ações políticas* (political actions), *dinheiro* (money) and *texto* (text). These frames can be explained due to the journalistic *corpus* used.

In the present study, we obtained results that go along the same lines, since the financial and justice categories have some contexts close to those studied by the aforementioned author. However, even though the Brazilian Corpus contains journalistic texts, Tavares's interpretation regarding the type of corpus relevance is refuted by the evidenced amount herein. We carried out a collocation analysis based on both the frequencies of the items in the construction slot and in the corpora. Therefore, although items such as *dinheiro* (money) and *ações* (stocks) are very frequent in newspapers, the high collocation strength cannot be explained by this high frequency factor. These nouns frequency in the construction slot is much higher than the expected frequency, as can be seen in the table above. Therefore, the quantified nouns are not being recruited at random for *uma enxurrada de NP*, since the constructional choice is motivated by the contexts of use, in accordance with the principle of Iconicity. We also interpret our findings as tendencies rather than absolutes, that is, other binomial quantifier

constructions might be chosen in the contexts analyzed. We assume the likelihood of such alternation is not high, though.

## REFERENCES

BARLOW, M., KEMMER, S. (Org.). **Usage based models of language**. Stanford, California: CSLI Publications, 2000.

BERBER SARDINHA, T; MOREIRA FILHO, J.; ALAMBERT, E. **Corpus Brasileiro**. São Paulo: CEPRIL, LAEL, CNPq, Fapesp, PUCSP, 2010

BYBEE, J. **Language, usage and cognition**. New York: Cambridge University Press, 2010.

DIESSEL, H. **The grammar network: how language structure is shaped by language use**. Cambridge: University Press, 2019.

FUMAUX, N. C. A. **Construcionalização de ‘um monte de NP’: uma abordagem centrada no uso**. Dissertação (Mestrado em Linguística). Programa de Pós-graduação em Linguística, Universidade Federal do Rio de Janeiro, 2018.

GOLDBERG, A. E. **A construction grammar approach to argument structure**. Chicago/London: The University of Chicago Press, 1995.

GOLDBERG A.; CASENHISER, D. *English Constructions*. **Handbook of English Linguistics**. In April McMahon and Bas Aarts (eds.) Blackwell Publishers, 2006.

GRIES, S. Th. *Coll.analysis 3.5*. **A script for R to compute perform collostructional analyses**, 2014.

GRIES, S. & Stefanowitsch, A. Extending collostructional analysis. **A corpus-based perspective on ‘alternations’**. *International Journal of Corpus Linguistics* 9:1, 2004, p. 97-129.

LANGACKER, R. **Foundations of cognitive grammar**. Stanford: Stanford University Press, 1987. 2v.

LANGACKER, R. **A view of linguistic semantics**. In B. Rudzka-Ostyn (Ed.), *Topics in Cognitive Linguistics* (pp. 49-90). Amsterdam: John Benjamins, 1988.

LANGACKER, R. **Concept, Image, and Symbol: The Cognitive Basis of Grammar**. Mouton de Gruyter, 1990.

TAVARES, S. T. **A Construção de Quantificação Indefinida com Determinantes polilexêmicos: Uma estrutura produtiva de quantificação no Português do Brasil**. *Revista Gatilho, Juiz de Fora*, V.16, p.(1-13), 2019.



**VERVECKKEN, K.; DELBECQUE, N. Un montón de maneras de conceptualizar la cantidad: la persistencia conceptual en los cuantificadores binominales. Bulletin Hispanique, 2018.**