

Remarks on Progressivity and Imperfectivity

Considerações sobre a Progressividade e a Imperfectividade

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ABSTRACT: we aim to investigate the morphological realizations of habitual (“usually”), continuative (“still”) and prospective (“almost”) aspects in English by means of a corpus analysis. The methodology consists in a qualitative and quantitative analysis of the online Santa Barbara Corpus of Spoken American English. The hypothesis is that the most common morphology to convey these aspects along with adverbs in English is the progressive morphology. It was found that the adverb seems not to be a factor that significantly influences the morphology. Two distinct hypotheses are presented: a) the progressive is compatible with heads hosting features that have an extensive nature, such as [+ continuative], and [+prospective], but not [+ habitual] and b) the progressive is compatible with Cinque’s (1999) imperfective features, but when it is overtly used it conveys the progressive feature, i.e the negative specification of genericity.

KEYWORDS: progressivity; imperfectivity; morphology; syntactic cartography.

RESUMO: intenciona-se analisar as realizações morfológicas dos aspectos habitual (“usually”), continuativo (“still”) e prospectivo (“almost”) no inglês por meio de análise de *corpus*. A metodologia consiste em uma análise quali-quantitativa do *Santa Barbara Corpus of Spoken American English*. Hipotetiza-se que a morfologia mais comum para gramaticalizar, em conjunto com esses advérbios, no inglês, tais aspectos é a morfologia progressiva. A hipótese adotada foi refutada, já que o advérbio não é um fator que influencia a escolha da morfologia. São apresentadas duas hipóteses: a) a morfologia progressiva é compatível com os núcleos que acolhem traços de natureza extensível, tais como [+ contínuo] e [+prospectivo], mas não [+ habitual] e b) a morfologia progressiva é compatível com todas os traços imperfectivos de Cinque (1999), mas quando é utilizada gramaticaliza o traço de progressividade, a especificação negativa da genericidade.

PALAVRAS-CHAVE: progressividade; imperfectividade; morfologia; cartografia sintática.

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1 Introduction

Concerning the category of imperfectivity, it is possible to mention, for example, three types of information of an event encoded through different aspectual features in the representation of sentences: its habituality (or focus on the ordinary property of a situation) as in “Anne **usually** runs”, its continuity (or permanence until a reference time) as in “Anne **still** runs”, and its prospection (or emphasis on the point before the beginning of the event), as in “Anne **almost** runs”. Such aspectual features, in Cinque (1999, 2006), are described as belonging to a structured set of approximately forty interlinguistically invariant functional projections that describe time, aspect, mood, modality and voice information, being the features abovementioned hosted in the head of, respectively, $Asp_{Habitual}P$, $Asp_{Continuative}P$ and $Asp_{Prospective}P$. Cinque (1999) also proposed the projection $Asp_{Progressive}P$, which is taken to host the feature of progressivity in natural languages. A common morphology employed in natural languages to convey this notion is the progressive morphology, which is formed by an auxiliary verb followed by the main verb in the gerund form in English. The precise nature of progressivity is still questionable, though. Should the progressive be taken as an imperfective morphology compatible with other aspectual notions, such as habitual and continuative? Should it be taken as an aspect itself, which conveys notions that are distinct from other aspectual ones?

This paper is aimed to analyze the morphological realizations of habitual (“usually”), continuative (“still”) and prospective (“almost”) aspects in English, associated with the present tense. The methodology consists in a qualitative and quantitative analysis of the online Santa Barbara Corpus of Spoken American English. The hypothesis of this work is that the most common morphology to convey, alongside with the adverbs under analysis, the aspects under scrutiny in English is the progressive morphology.

2 Theoretical Framework

The linguistic category of aspect is traditionally understood as the different ways of conceiving the internal temporal structure of an eventuality (COMRIE,

1976). It is important to differentiate aspectual information that can be grammaticalized in languages through morphology, adverbs, and specific particles from the one that is inherent to the lexical constituents of a sentence. While the term *aktionsart* (inherent/lexical aspect) is used for the latter, grammatical (viewpoint) aspect is used for the former.

Regarding grammatical aspect, there is a difference between atomic eventualities, conceived as an indivisible whole, and non-atomic eventualities, which emphasize the internal phases of a situation. Comrie (1976) employs the term “perfective aspect” to describe atomic eventualities, whereas he uses the term “imperfective aspect” to denote non-atomic eventualities. In “Maria ate the snack”, it is referenced a past eventuality of “eating”, of which “Maria” is the agent and “snack” is the theme. This eventuality is not emphatically described in its multiple internal phases, i.e, the event is presented as non-divisible, instantiating what is conventionally called perfective aspect. However, in “Maria was eating the snack”, it is also referenced a past eventuality of “eating”, of which “Maria” is still the agent and “snack” the theme. However, this eventuality is linguistically described in way that it allows the observation of its multiple internal phases, so that it makes sense to think of the beginning, middle and/or final stages of the eventuality denoted, instantiating what is conventionally called the imperfective aspect.

About the imperfective grammatical aspect³, for Comrie (1976), habitual imperfectivity and continuous imperfectivity are distinct aspects. The habitual imperfective aspect would instantiate an eventuality described as typical (or characteristic) of a given moment of reference. In contrast, the continuous imperfective aspect would instantiate an eventuality described as ongoing in a given reference moment, i.e., occurring in the same interval “I” in which the denoted moment would occur. In a sentence like “Maria (usually) ate the cake”,

³ According to Jakobson (1971 *apud* CANÇADO & AMARAL, 2016, p. 143), “the imperfective is considered a semantically unmarked form, because it presents distinctions in the marking of a given language and presents great variation across languages”. This conception is dialogic with that of Haspelmath (2016 *apud* CANÇADO & AMARAL, 2016, p. 143), who points out that semantically marked forms are more specific, that is, of more restricted use, than unmarked forms.

there is reference to a past eventuality of “eating”, of which “Maria” is the agent and “cake” is the theme, and it is described as having internal phases and consisting of multiple ordered occurrences of eating the cake, routinely presented at the moment of reference, thus instantiating what is called the habitual imperfective aspect. In this case, it makes sense to think, for example, that, every weekend, Maria ate a cake “X”, but she didn't eat it on weekdays, nor did she eat a cake “Y” on weekends. In a sentence like “Maria was eating the cake”, reference is made to the same past eventuality of “eating”, of which “Maria” is the agent and “cake” is the theme, and it is described as having internal phases and occurring in an interval I' similar to a referenced interval I, thus instantiating what Comrie (1976) takes as continuous imperfective aspect. In this case, it is true that for every instant X, such that X belongs to the interval I', the eventuality of “eating the cake” extends.

Comrie (1976) also understands that the continuous imperfective aspect could be divided into two subtypes: progressive continuous imperfective aspect and non-progressive continuous imperfective aspect. Although Comrie (1976, pp. 25-26; pp.102-103) attributes this difference sometimes to a morphological property and sometimes to a semantic property⁴, in this paper, we adopt the interpretation that the progressive aspect occurs when there is employment of the progressive morphology, instantiated, in English, for example, by the use of “be + main verb + -ing”, whereas the non-progressive aspect occurs when there is no categorical employment of such morphology. This does not mean, however, that it is ruled out the assumption that progressivity is opposed to what is traditionally called genericity or generic aspect (CINQUE, 1999), as we can see in the pair of sentences “Mammals are living beings” x “*Mammals are being living beings”, or “This car runs 60 km per hour” x “This car is running 60 km per hour”.

Concerning *aktionsarten*, Comrie (1976) differentiates them through three pairs of properties: punctuality and durativity, stativity and dynamicity, and telicity and atelicity. While punctuality refers to events that do not persist in time,

⁴ According to Garcia (2010, p.150 *apud* CANÇADO & AMARAL, 2016, p.143), “not even Comrie has given a definition of the circumstances in which the non-progressive continuous aspect would occur, nor does he provide examples”. Hence, Cançado and Amaral (2016) only assume the conceptual division between habitual imperfective and continuous imperfective.

that is, they have no internal duration, durativity refers to events that persist in time, possessing internal duration. The stativity feature describes processes in which there is no expenditure of energy on the part of the agent or experiencer, while the dynamicity feature describes events in which there is expenditure of energy on the part of the agent. The telicity feature refers to the linguistic boundness of the event considered, while the atelicity feature refers to the absence of linguistic boundness of the event considered.

Smith (1997) proposes a classification of *aktionsarten* that considers the feature oppositions presented above and their possible specifications for verbal predicates. Smith (1997) assumes Vendler's (1967) seminal proposal of predicates and adds to this proposal a fifth kind of *aktionsart*, the semelfactive predicates, as it can be seen below.

Chart 1 – *Aktionsarten* in natural languages

Aktionsarten	Punctuality	Stativity	Telicity
Activities	[-]	[-]	[-]
States	[-]	[+]	-
Accomplishments	[-]	[-]	[+]
Achievements	[+]	[-]	[+]
Semelfactives	[+]	[-]	[-]

Source: abridged from Smith (1997, p. 20)

Activity would, then, be identified by the negative specification of the punctuality, stativity, and telicity features. States would be classified by the negative specification of the punctuality feature and the positive specification of the stativity feature. Accomplishments would be classified by the negative specification of the punctuality and stativity features and the positive specification of the telicity feature. Achievements would be classified by the negative specification of the stativity feature and the positive specification of the punctuality and telicity features. Finally, semelfactives would be classified by the positive specification of the punctuality feature and by the negative specification of the stativity and telicity features.

Dowty (1979) presents some diagnostics to differentiate activities, from states and from achievements. According to Dowty (1979, p. 54), “activities can occur at the progressive”. However, states, since Vendler (1957), are described as incompatible with the progressive. Achievements, according to Dowty (1979), can occur with adverbial phrases of “in x amount of time” (for instance “John noticed the painting in a few minutes”), but cannot occur with durative adverbial phrases of “for x amount of time” (for instance “*John noticed the painting for a few minutes”). Achievements are unacceptable as complements of verbs like “to finish” and “to stop”, as seen in “*John finished noticing the painting” and “*John stopped noticing the painting”. Dowty (1979) differentiates between agentive and non-agentive achievement verbs, using the possibility of those verbs occurring in the imperative mode as a diagnostic of this difference. Thus, agentive verbs of achievement in English, such as “to kill” and “to point out”, can occur in imperative sentences, whereas non-agentive verbs of achievement, such as “to notice”, “to realize” and “to ignite”, cannot occur in imperative sentences.

Concerning the category of progressivity, it is worth mentioning the contributions of Montague (1973), Bennett and Partee (1972/1978/2004) and Dowty (1977). Montague (1973) considers that a progressive sentence, i.e., a sentence with the use of progressive morphology, is true at a given moment “t” if and only if the corresponding non-progressive sentence is true at all moments of an open interval at “t”. Bennett and Partee (1972) assume the existence of a semantic operator PROG in the Logical Form that is accessed in progressive sentences, establishing temporal and aspectual relations. For these authors, [PROG, Ø] is true on an interval I, if and only if: a) there exists an interval I’ such that I is contained in I’, b) I is not a final subinterval of I’, and c) the instantiated eventuality is true on I’. However, Dowty (1977) considers that in addition to establishing temporal and aspectual relations, PROG is a type of temporal, aspectual, and modal operator. For Dowty (1977), [PROG, Ø] is true on an interval I and W if and only if: a) there exists an interval I’ such that I is contained in I’, b) there exists a world W’ for which the eventuality denoted is true on I’ and W’, and c) W is exactly similar to W’ at all instants preceding and following I. Thus, in a sentence like “John is crossing the street”, there is a present eventuality of “crossing”, of which “John” is the agent and the “street” is the theme, described

as true in a world W' , and in an interval I' . This interval I' contains a sub-interval I , in which the change of status of the street (crossed x not crossed) occurs.

Based on Portuguese data, Wachowicz (2002) acknowledges that the progressive morphology may be used to convey episodic, iterative and habitual readings. An episodic reading is the one in which there is only one event placed in an interval I . An iterative reading is the one in which there are a plethora of bound and determined events, endowed with their own intervals. The habitual reading is the one in which there are many unbounded and indetermined events, endowed with their own intervals. Wachowicz (2002) assumes that the abovementioned readings are dependent on the semantic properties of the verb, of the internal argument and of the adverbs employed in a sentence. It is highlighted that verbs that indicate changes in time are ambiguous and can trigger all the abovementioned readings. It is also proposed that quantified internal arguments contribute to the triggering of episodic readings, whereas internal arguments which are not specifically quantified are ambiguous, and may contribute to the triggering of episodic, iterative, and habitual readings.

According to Godoy (1993 *apud* GUIMARÃES, 2002), there is no aspectual difference between imperfective progressive forms and imperfective non-progressive forms. There is solely morphological difference between them. However, Goldsmith & Wosetchlager (1982 *apud* GUIMARÃES, 2002) understands the progressive is in fact an aspect, not just a morphology, for it is generally used in a context of culmination. Guimarães (2002) considers that the contrast between the abovementioned forms is to be made by dint of the following criteria: a) properties of the morpheme employed in these forms, b) the *aktionsart* of the predicates, c) the triggering of generic and habitual readings and d) the temporal and aspectual relation which is constructed in these forms. It is argued that there are some constraints in progressive forms that seem not to apply to non-progressive forms: a) the progressive does not occur in verbs that indicate tracking, such as “to locate”, b) the progressive is not compatible with contingent adjectives, in constructions like “he is being human”, c) the progressive tends not to be used with stative verbs, d) the progressive does not occur in the imperative, e) in the habitual reading, the progressive does not

generally occur with defined quantified events. It is thus affirmed that the progressive is not incompatible with the habitual aspect.

Martins and Alves (2021) argue that the punctuality feature is annulled when achievement verbs with progressive morphology trigger the readings of continuity, incoativity, and termination in American and British English. The authors also understand that the progressive plays a crucial role in constraining the readings that can be triggered in predicates of distinct *aktionsarten*. Hence, it is assumed that the progressive cannot be just a morphology, for it influences the readings that can be triggered in certain contexts.

Based on a substantial body of translinguistic evidence, Cinque (1999) proposes a universal hierarchy of approximately forty functional projections that is composed by rigidly ordered heads hosting features of tense, aspect, mood, modality, and voice. On this hierarchy, the projections **Asp_{Habitual}P**, **Asp_{Continuative}P**, **Asp_{Progressive}P** and **Asp_{Prospective}P** are proposed to respectively host the features of [+/- habitual], [+/- continuative], - [+/- progressive], and [+/- prospective]. These projections also host in the specifier position some adverbs. According to Cinque (1999), Spec, Asp_{Habitual}P hosts the adverb “usually”, while Spec, Asp_{Continuative}P hosts the adverb “still”, and Spec, Asp_{Prospective}P hosts the adverb “almost”. Spec, Asp_{Progressive}P is also said to host adverbs, although Cinque (1999) does not present adverbs that can be merged in this position in natural languages.

In Cinque’s (1999) hierarchy, the abovementioned projections are base ordered in a way that Asp_{Habitual}P > Asp_{Continuative}P > Asp_{Progressive}P > Asp_{Prospective}P in all natural languages. Should we assume that the head of Asp_{Progressive}P is compatible with heads related to imperfectivity (in Comrie’s (1976) terms), and should we assume that Asp_{Habitual}P, Asp_{Continuative}P, and Asp_{Prospective}P host imperfective features in their heads, then it is possible to argue that Asp_{Progressive}P is also compatible with the features [+ habitual], [+ continuative], and [+ prospective] features. In other words, it is assumed that, when the progressive morphology is used, the feature hosted in the head Asp_{Progressive}P is endowed with positive specification. So, one could expect that it would be possible to combine

all these features in the derivation of a sentence in a language⁵. Hence, the progressive, as a feature and as a morphology, is expected to be compatible with habitual, continuative, and prospective readings. In this paper, it is precisely this that it is aimed to discuss: to what extent is the progressive morphology compatible with imperfective features, such as the habitual, the continuative and the prospective?

Cinque (1999) considers that auxiliaries would be merged in the head of the functional projections to which they would relate. Thus, auxiliaries are not considered to have a fixed merge position. In a sentence like “Mary is eating the cake”, the auxiliary “is” could be generated in the head of $Asp_{Progressive}P$, checking the feature of progressivity. Then, this auxiliary would move to higher projections, such as those of tense, to check its respective relevant temporal (present) feature.

As so kindly suggested by one of the reviewers of this papers, it is important to justify the reason $Asp_{Prospective}P$ hosts a feature which is compatible with the imperfective aspect. As pointed out in Martins and Alves (2021), the notion of prospectiveness seems to be related to a moment prior to the beginning of an event. It is argued that this notion is related to the imperfective aspects because a prospect event is not indivisible (as in the perfective aspect). Rather, it seems to be the case that focus is placed on the successive moments that occur prior the beginning of an event.

3 Methodology

This paper is aimed to analyze the morphological realizations of habitual, continuative, and prospective aspects in English, associated with the present tense. The methodology consists in a qualitative and quantitative analysis of the Santa Barbara Corpus of Spoken American English. It is hypothesized that the most common morphology to convey, alongside with the adverbs under analysis, in English the projections under scrutiny is the progressive morphology.

⁵ As kindly suggested by one of the reviewers, we do not aim to state in this paper that Cinque (1999) reckons that all the features of the *Middlefield* are necessarily combinable.

The free online Santa Barbara Corpus of Spoken American English (DU BOIS et alii, 2000-2005).⁶ This corpus was chosen since it contains spontaneous utterance of speakers of American English as a native language. Through the analysis this corpus, it was intended to investigate the morphological realizations of the projections under scrutiny, categorizing the data found according to the type of morphology used to convey such aspectual notions associated with the present tense. To fully perform the corpus analysis, the AntConc 3.5.8 software (ANTHONY, 2019), for *Windows 64 bits*, was used.

Regarding the analytical procedures, initially, the adverbial realizations of such aspects were sought through a general query of sentences with the adverbs under scrutiny in this paper (“usually”, “still”, and “almost”). Afterwards, the realizations of these projections were separated by virtue of the morphology employed (simple present tense morphology vs. progressive morphology). It should be noted, however, that the Santa Barbara Corpus of Spoken American English lacks detailed metadata on the age, gender and even origin of the speakers who participated in its creation. The corpus has a total of 249,000 words.

As so kindly suggested by one of the reviewers of this paper, it is important to explain the reason the hypothesis at hand is adopted. This hypothesis is derived from a general interpretation of Comrie’s (1976) work. Though this author never claimed that this might be a fact in natural languages, Comrie (1976) considers the progressive morphology as specifically related to the imperfective aspect, whilst the non-progressive morphology is not specifically related to this aspect. In order to investigate the compatibility of this morphology with the so-called imperfective aspect, the hypothesis of this paper was coined in an effort to assess the prominence of the progressive morphology to the aspectual information which it exclusively conveys.

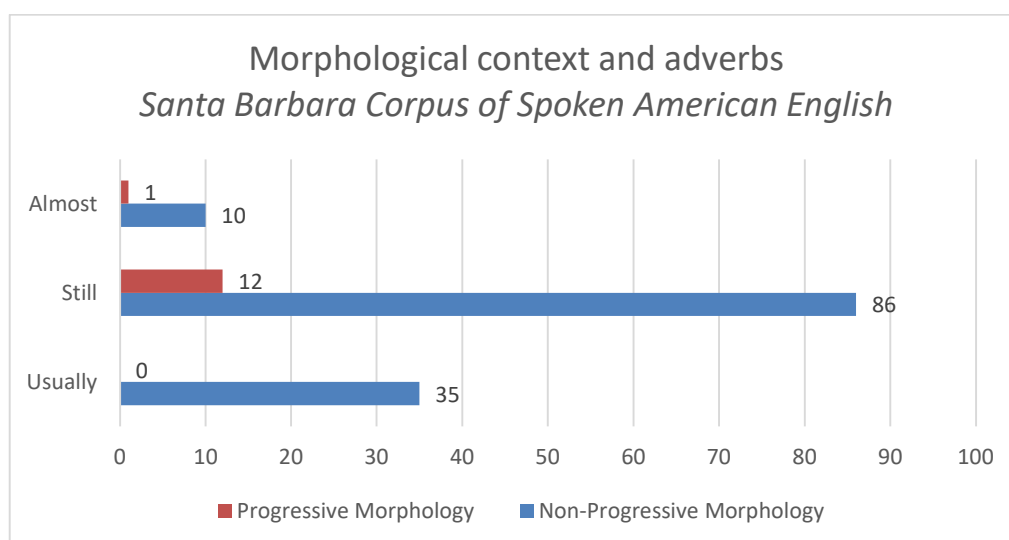
⁶ Available in: <https://www.linguistics.ucsb.edu/research/santa-barbara-corpus>.

4 Results

Regarding the results of the analysis of the Santa Barbara Corpus of Spoken American, thirty-five occurrences of non-progressive morphology, or, in the case of this analysis, simple present tense morphology, were found in contexts where “usually” was employed. No occurrences of progressive morphology were found in contexts where the abovementioned adverb was used. Eighty-six occurrences of non-progressive morphology were found in contexts of the employment of “still”. There were twelve occurrences of progressive morphology in contexts of the employment of this adverb.

Regarding the adverb “almost”, there were ten occurrences of non-progressive morphology and only one occurrence of progressive morphology in contexts of the employment of this adverb. It should be noted that, before reaching this number in contexts where “almost” is used, two occurrences of non-progressive morphology and one more occurrence of progressive morphology were excluded from the analysis. This analytical procedure is justified by the fact that only occurrences in which “almost” had direct scope over the verb were considered. Occurrences in which “almost” functioned as a quantifier were excluded.

Graph 1 – Morphological contexts and adverbs.



Source: abridged from Alves (2022, p. 92)

By making a simple frequency table of the results found, it can be observed that the progressive morphology, comparatively, had a slightly more prominent employment associated with the adverb “still” (12%), and it is marginally associated with the adverb “almost” (9%). On the other hand, the non-progressive morphology was more easily found associated with all the adverbs investigated in the analyzed corpus.

Chart 2 – Simple frequency of the type of morphology according to the adverb

	Progressive Morphology	Non-Progressive Morphology
<i>Usually</i>	0 (0%)	35 (100%)
<i>Still</i>	12 (12%)	86 (88%)
<i>Almost</i>	1 (9%)	10 (91%)

Source: abridged from Alves (2022, p. 92)

To observe whether there is statistical relevance in the data found, a Multinomial Logistic Regression test was performed in *Jamovi* software, based on R code. In this test, we took the adverbs (“usually”, “still” and “almost”) as dependent variables and the morphology (progressive or non-progressive) as the independent variable. The results of the statistical analysis performed using this test can be seen below:

Table I – Contrast almost/usually and still/ usually.

Adverb	Factor	Estimate	SE	Z	p
Almost - Usually	Intercept	6.65	27.8	0.239	0.811
	Morphology: Non Progressive – Progressive	-7.90	27.8	- 0.285	0.776
Still - Usually	Intercept	9.13	27.7	0.329	0.742
	Morphology: Non Progressive – Progressive	-8.23	27.7	- 0.297	0.767

Source: abridged from Alves (2022, p. 93)

According to these results, there is no significant correlation (p-value = 0.811) between the use of progressive morphology in the adverb “usually” and the use of progressive morphology in the adverb “almost”. Taking into account the distinction between the use of non-progressive and progressive morphology in these two adverbs, we conclude that, similarly, there is no correlation (p-value = 0.776) between the type of morphology used and these adverbs. Thus, the type of morphology is not a predictor of the adverbs referenced. With the same test, it is possible to infer that there is no significant relationship (p-value = 0.742) between the use of non-progressive morphology with the adverb “usually” and the use of this morphology with the adverb “still”. Similarly, the contrast between non-progressive and progressive morphology is not relevant (p-value = 0.767) for the adverbs “still” and “usually”. From these results, we interpret that the choice of progressive morphology is not directly related to the context of employment of the concatenated adverb.

Table II – Contrast almost/ still and usually/ still.

Adverb	Factor	Estimate	SE	Z	p
Almost - Still	Intercept	-2.493	1.04	-2.387	0.017 ***
	Morphology:				
	Non Progressive - Progressive	0.342	1.10	0.312	0.755
Usually - Still	Intercept	-9.067	26.87	-0.337	0.736
	Morphology:				
	Non Progressive – Progressive	8.167	26.87	0.304	0.761

Source: abridged from Alves (2022, p. 93)

By taking the use of progressive morphology with the adverb “still” as the intercept, there seems to be some kind of relationship (p-value = 0.017) between this morphological context and the referenced adverb. However, morphological context does not present itself as a sufficient predictive factor (p-value = 0.755) for using the adverbs “almost” and “still”. Similarly, the morphological context does not hold up as a factor (p-value = 0.761) that can explain the employment of the adverbs “usually” and “still” (p-value = 0.736).

Table III – Contrast still/ almost and usually/ almost.

Adverb	Factor	Estimate	SE	Z	p
Still - Almost	Intercept	2.486	1.04	2.387	0.017 ***
	Morphology:				
	Non Progressive – Progressiva	-0.334	1.09	-0.305	0.760
Usually - Almost	Intercept	-6.880	31.22	-0.220	0.826
	Morphology:				
	Non Progressive – Progressive	8.133	31.22	0.261	0.794

Source: abridged from Alves (2022, p. 94)

By considering as the intercept the progressive morphology employed with the adverb “almost”, it is observed that there seems to be a significant relationship (p-value = 0.017) established between the independent variable and the

dependent one. However, the morphological context does not present itself as sufficient to assert itself as a predictive factor (p-value = 0.760) in relation to the employment of the adverbs “still” and “almost”. A similar scenario is observed in relation to the morphological context (p-value = 0.794) and the adverbs “usually” and “almost” (p-value = 0.826). Although there seems to be a relationship between progressive morphology and the adverb “still” and marginally “almost”, this relationship is not enough to be taken as a predictive factor of which adverb will be used. Thus, the idea that there is no direct and categorical relationship between adverb type and morphological context cannot be ruled out.

It is interpreted that: 1) if such adverbs, according to the occurrences found and to the literature itself (CINQUE, 1999; 2006), instantiate projections that are headed by the habitual, continuative, and prospective features, and 2) if there is no direct relationship between the choice of morphology and the adverb to be employed, then there would be no direct relationship between the choice of morphology and the aspectual feature to be checked by means of movement in syntactic derivation, at least for the features considered in the occurrences: habitual, continuative, and prospective.

Thus, the choice of the type of morphology in the considered data could not be explained, apparently, by an analysis that would relate such morphology directly to one of the three adverbs. It does not seem clear from the data analyzed that there is relationship between progressive morphology and one of the three aspectual functional projections that allocate the corresponding adverbs as their respective specifiers (CINQUE, 1999). Rather, it seems to be questionable that the progressive morphology is mostly used in the conveying of the habitual, continuative, and prospective features in English.

As so kindly suggested by one of the reviewers of this paper, the absence of cooccurrence of the progressive morphology and some adverbs, such as “usually”, might be *ad hoc* or even idiosyncratic. It seems adequate to expand this analysis to a broader *corpus*, so that we may acknowledge if the restrictions found on this paper hold water. It is also necessary to employ other quantitative methods, not only Logistic Regression. It is intended to contrast the results found in this method with a Chi-squared method, so that we may be certain that they were not

influenced by the small quantity of occurrences attested on the corpus under scrutiny.

It is also suggested that perhaps what these results show is the fact that English progressive morphology is not used with the concrete adverbs “usually”, “still” and “almost”. Maybe the progressive morphology can express alone, by itself, or even with other adverbs, prospective, habitual or continuative aspects, as noted in Martins and Alves (2021).

5 Discussion

Prior to presenting possible explanations for the data found in the Santa Barbara Corpus of Spoken American English, it is worth noting that Comrie (1976), in proposing the division between perfective and imperfective aspect, considers that while the imperfective aspect denotes a situation that can be observed in its different internal phases, the perfective aspect denotes a situation conceived as atomic, that is, indivisible, with no observable internal parts. It is also claimed that the imperfective aspect, from Comrie’s (1976) perspective, could be divided into two types: habitual aspect and continuous aspect. In the realm of continuous aspect, Comrie (1976) proposes a division into two types: progressive continuous aspect and non-progressive continuous aspect. Based on this definition of imperfectivity, it was assumed that all the aspects under scrutiny in this paper ($Asp_{HabitualP} > Asp_{ContinuativeP} > Asp_{ProspectiveP}$) are manifestations of imperfectivity in natural languages.

Assuming the differentiation between progressive and non-progressive as distinct morphological manifestations of the continuous aspect, in Comrie’s (1976) nomenclature, and not of the habitual aspect, the fact that there are no occurrences of the adverb “usually” – characteristic of the habitual aspect – employed in a progressive morphological context in the corpus analyzed can be understood in light of Comrie’s (1976) own typological proposal. Comrie (1976) does not categorically associate the use of the progressive morphology with the habitual aspect itself. Thus, it is justifiable that such a combination was not employed in the data under scrutiny, as observed in the 35 occurrences of the

non-progressive morphology and the absence of the progressive morphology in the context of the employment of the adverb “usually”.

The combination of the features of progressivity – understood as the feature hosted in $\text{Asp}_{\text{ProgressiveP}}$ – and habituality – understood as the feature hosted in $\text{Asp}_{\text{HabitualP}}$ – may not be as common as the combination of progressivity and continuativity – understood as the feature hosted in $\text{Asp}_{\text{ContinuativeP}}$. Based on this, the first hypothesis to explain the results found would be to assume that it is more common to combine the progressive morphology with features that have a categorically extensional nature, such as continuativity (in the event) or prospection (in instants before the event).

It seems to be the case that the continuative and prospective features could be analyzed as features endowed with an extensional nature. It means, for instance, that emphasis on the initial, middle, and final moments of an eventuality described with these features can be placed. On the other hand, habituality does not seem to be extensional in the same way the abovementioned features are, for it does not make sense to describe the initial, middle, and final parts of a habit⁷. It just makes sense to describe a subset of intervals i_n in which the eventuality described is ordered in an irregular way. If this approach is in the right track, we could explain the reason why certain verbs, such as the aspectual ones “to begin” and “to finish”, cannot trigger habitual readings when they co-occur with the progressive morphology, as it can be seen in sentences like “Peter is beginning to study” and “Peter is finishing to study”. Not only is this ban on the habitual reading a byproduct of the *aktionsart* of these verbs, but also of the aspectual constraints that the progressive morphology and the progressive feature impose.

It is also interpreted as positive evidence of this approach that sentences such as “Peter is being used to study” cannot be grammatical in English triggering habitual reading. The aspectual verb “to be used to” seems to be employed to categorically convey the habitual feature in sentences like “Peter is used to study”.

⁷ This core assumption is also supported by Jesus (2022). It is assumed in Jesus (2022) that the habitual aspect in Portuguese is not a prototypical subtype of imperfective aspect, for it does not share all its properties with other imperfective aspects presented in Comrie (1976). Jesus (2022) argues that in habitual sentences in Portuguese the notion of habituality is conveyed as a series of bounded blocks that are repeated in a certain interval I.

However, when it is attempted to use the progressive morphology with this verb, an agrammatical sentence is the final product. Hence, one could wonder to what extent the progressive feature is in fact compatible with the habitual feature in languages such as English and Portuguese.

An alleged counterargument for this hypothesis resides in the fact that sentences such as “John is usually playing tennis on Friday mornings” are grammatical both in English and in Portuguese. However, it is interpreted that, in this case, a third aspectual feature is also at stake: the continuative one. In this sentence, it is not the case that John is playing tennis at the moment of the utterance. Rather, it seems to be the case that there is an interval I, in which John keeps playing tennis in an irregular way. Hence, the specification of the continuative feature is what makes this sentence grammatical. It is hypothesized that the progressive feature is not directly attributing its scope over the habitual feature. Rather, it is the continuative feature that is targeted by the progressive feature and the progressive morphology. Only after the direct modification of the progressive feature over the continuative feature can the habitual feature be accessed by means of VP movement. As a result, the habitual aspect could only be associated with the progressive one if, prior to this derivational moment, the progressive feature be associated with the continuative feature, an extensional feature. For the abovementioned sentence, it is thus assumed that: 1) $Asp_{Progressive}$ acts as a probe, attracting the VP to its specifier position to check the progressive feature, 2) $Asp_{Continuative}$ attracts the projection $Asp_{Progressive}P$, which hosts the VP, to its specifier position, checking the continuative feature, 3) $Asp_{Habitual}$ attracts $Asp_{Continuative}P$ to its specifier position, checking the habitual feature, and 4) the adverb “*usually*” is merged in the specifier position of $Adv_{Habitual}P$ ⁸.

Considering this proposal, the 12 realizations of progressive morphology in the context of the employment of the adverb “still” – characteristic of the continuative aspect – are explained. Comrie (1976) associates the use of the progressive morphology categorically with the continuous aspect – that is, the aspect in which one conceives a situation with internal phases which are visible

⁸ As suggested by one of the reviewers of this paper, it is important to highlight that it is not the case that in order to convey the habitual feature in $Asp_{Habitual}P$ the adverb “usually” needs to be uttered.

and simultaneous to a given moment of reference. In Cinque (1999), the adverb “still” is understood as one of the possible adverbs that can be merged into the position of specifier of the functional projection $Asp_{Continuative}P$, whose head hosts the feature of continuativity, which describes an event that extends up to a given moment of reference. It is, thus, pointed out that there is an interface relationship between what Comrie (1976) considers as continuous aspect and what Cinque (1999) conceives as continuative aspect, since the focus on the extension of the internal phases of an event may occur in contexts in which these internal phases are simultaneous to or extend up to a given moment of reference. Evidence of such an assumption can be seen in the analysis of the sentences below:

(1) John is still running.

(2) John is running.

In (1), it is assumed that there is a “running” event, of which “John” is the agent, which culminates in some present moment. In this case, the reading that “there is a running event which John performs and which extends simultaneously to its culmination at the present moment of reference” is authorized. Surely, other readings can also be licensed, but for the purposes of this explanation, the other readings are not directly relevant. In (2), there is a “running” event, of which “John” is the agent, that is in progress at some reference point in the present. According to Dowty (1977), there would be the application of a PROG operator in the logical form of this sentence, taking as reference the present event of “running”, extending it in its phases. It is thus authorized the reading that “there is a running event that John performs and that occurs simultaneously to a certain moment in the present”.

It is argued, then, that the relation between continuous (COMRIE, 1976) and continuative (CINQUE, 1999) is in the right track. Sentences in which the adverb “still” is employed could be taken as more semantically compatible with the information of the progressive feature, grammaticalized by the progressive morphology, than of the adverb “usually”. It should be noted, however, that this does not mean that only progressive morphology is observed in the context of the employment of the adverb “still”, since the use of the non-progressive

morphology had a more expressive number of occurrences (86) than the use of the progressive morphology (12). It only stands out that the combination of such an adverb to the progressive morphology is expected.

The only occurrence of progressive morphology in the context of the adverb “almost” – characteristic of the prospective aspect – is explained by this perspective. As pointed out in Cinque (1999), the adverb “almost” is merged in the position of specifier of the functional projection $Asp_{Prospective}P$, in whose head there is the prospective feature. In fact, there was a significant number of occurrences (10) of the non-progressive morphology with this adverb. However, there is also one occurrence of the progressive morphology with this adverb, which can be seen below:

(3) where we’re almost matching?

In this case, it is understood that there is a “matching” event, of which “we” is the agent, which culminates at some point in the present. In this sentence, it is not only the event itself of “matching” which is referenced, but also the moment immediately preceding the beginning of that event. This immediately preceding moment is described as extensible. For (3), it is assumed that: 1) $Asp_{Prospective}$ acts as a probe, attracting the VP to its specifier position, checking the prospective feature, and 2) $Asp_{Progressive}$ attracts the projection $Asp_{Prospective}P$ to its specifier position, checking the feature of progressivity. Only after the interaction of these features would the PROG operator in the logical form apply not only over a “match” event, but over a pre-event of “almost matching”, extending it and allowing the following reading: “there is an extensible continuous moment prior to the match”. The employment of the progressive morphology seems to be motivated by the need to grammaticalize the notion of extension of a pre-event⁹.

A second hypothesis would be to assume, as in Cinque (1999; 2006), that in the cases where the progressive morphology was overtly used, there was

⁹ It is worth mentioning that, according to Martins and Alves (2021), the prospective reading in English causes certain situations described by achievement verbs to be extensional and extended in constructions with the progressive morphology in the same way that is assumed here, i.e., adding focus on the extension of a pre-event.

checking of the progressive feature in the $\text{Asp}_{\text{ProgressiveP}}$ projection. Such a feature would oppose that of genericity, which describes situations conceived as “inherent characteristics”. Based on this idea, one could assume that the employment of the progressive morphology, especially with the adverb “still”, would be justified by the imperative of checking the progressive feature in $\text{Asp}_{\text{ProgressiveP}}$, not by an alleged compatibility of features. It would be possible to state that, in the numeration, the verbal item itself is previously specified for the progressive feature, already with the progressive morphology attached to the verbal stem. This item would later check the progressive feature in $\text{Asp}_{\text{ProgressiveP}}$, leading to the convergence of the derivation. It could be regarded as positive evidence for this second approach the interpretation that in the vast majority of the data analyzed of the adverbs “almost”, “still”, and “usually”, which appear with the non-progressive morphology, there were predicates conveying only the prospective, continuative, and habitual features, not the progressive one. Hence the wide use of the non-progressive morphology in the concordance lines analyzed.

The precise nature of progressivity is still open to debate. Both hypotheses seem at some extent adequate to explain these results, but they still require testing. To a certain extent, these hypotheses are related to the debate about the nature of progressivity itself as a morphology or as an aspect. Based on the results found, it seems reasonable to state that the progressive is compatible with some imperfective features but not necessarily with all of them.

6 Final remarks

We aimed at analyzing the morphological realizations of habitual, continuative, and prospective aspects in English, associated with the present tense. The methodology consisted in a qualitative and quantitative analysis of the Santa Barbara Corpus of Spoken American English. It was hypothesized that the most employed morphology to convey, alongside with the adverbs under analysis, in English the aspects under scrutiny would be the progressive morphology. It was observed that progressive morphology did not present itself as the most common morphological context used with the adverbs “usually”, “still” and

“almost” to convey the features hosted by, respectively, Asp_{HabitualP}, Asp_{ContinuativeP}, and Asp_{ProspectiveP}.

Based on the results found, two hypotheses were presented: a) the progressive is compatible with heads hosting features that have an extensive nature, such as [+ continuative], and [+ prospective], but not [+ habitual] and b) the progressive itself is compatible with all the features of Cinque’s (1999) universal hierarchy, but when is it overtly used it conveys the feature of progressivity, which could be regarded as the negative specification of the feature of genericity. Both hypotheses seem at some extent adequate to explain these results and still require testing. These hypotheses seem to be derived from the debate about the nature of progressivity itself as a morphology or as an aspect. It is still worth analyzing, though, if there could be any relation between the employment of the progressive morphology with other Cinquean heads that might be related to imperfectivity as well.

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