The acceptability of person and number agreement/disagreement in Italian: an experimental study

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Abstract

In this study we compared subject-verb agreement contrasting person and number features in Italian: The design included local agreement dependencies in which 1st and 2nd person vs 3rd person subjects could match or mismatch in number with the predicate giving rise to, respectively, grammatical or ungrammatical sentences. We observed that while acceptability perception in the mismatching condition does not differ substantially across person and number values, in matching conditions (grammatical number matching), third person singular is the configuration producing higher acceptability scores. This supports the default nature of 3rd person and singular features. Also a position effect is revealed in this study, suggesting that the later the matrix subject-verb agreement appears in a grammatical sentence, the lower is the acceptability rate given to that sentence.

Keywords: 3rd vs 1st-2nd person, singular vs plural, default agreement

Declarations

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Consent for publication: Participants were informed that the anonymous/aggregated results of this experiment would have been shared within the scientific community before running into this study

Availability of data and material: data and materials are available on demand

Code availability: the on-line experiment scripts are available on demand

Authors' contributions: SM designed the experiment, created the experimental items and worked on the first draft of the manuscript; CC directed the project, and performed the analysis of acceptability judgment experiment, and drafted the first version of the manuscript; PC contributed to the analyses

and double-checked the results. All authors equally discussed the results and contributed to the final manuscript.

Abstract

In this study we compared subject-verb agreement contrasting person and number features in Italian: The design included local agreement dependencies in which 1st and 2nd person vs 3rd person subjects could match or mismatch in number with the predicate giving rise to, respectively, grammatical or ungrammatical sentences. We observed that while acceptability perception in the mismatching condition does not differ substantially across person and number values, in matching conditions (grammatical number matching), third person singular is the configuration producing higher acceptability scores. This supports the default nature of 3rd person and singular features. Also a position effect is revealed in this study, suggesting that the later the matrix subject-verb agreement appears in a grammatical sentence, the lower is the acceptability rate given to that sentence.

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1. Introduction

Mainstream theoretical analyses of subject-verb agreement (Chomsky, 1981, 1995, 2001) generally assume that person and number are syncretically represented as a feature bundle under the T head. This has straightforward computational consequences: when checking feature consistency between subject and verb, person and number features are uniformly accessed by means of a unique mechanism – Agree – that operates in a one-fell-swoop fashion (Chomsky, 2000, 2001). Agree connects the nominal and the verbal morphology to ensure person and number feature consistency.

However, the analogy in the checking mechanisms should not obscure the fact that person and number features have different interpretive properties: while person refers to the role the subject argument has in discourse, number refers to its cardinality (Bianchi, 2006; Mancini, Molinaro & Carreiras, 2013; Sigurdsson, 2004). Moreover, differences can be identified across person and number values that give rise to internal asymmetries, and thus to clear contrapositions between marked and unmarked values. The goal of the current study is to shed light on the interpretive relevance that internal person and number asymmetries in the analysis of subject-verb agreement.

1.1. Person

Person expresses the status of an argument (e.g. the subject) with respect to the participants in the speech act, namely who performs the speaking act – the *speaker* – and the entity whom this act is directed to – the *addressee*. Under this assumption, 1st person indicates identity with (or inclusion) of

the speaker and 2nd person identity with (or inclusion) of the addressee, while 3rd person refers to a contextually salient entity (or entities) that does not bear either the former or the latter role (Benveniste, 1966; Cysouw, 2003; Jakobson, 1971; Mancini et al. 2014; Sigurdsson, 2004, 2009, 2012). Person interpretation therefore contributes to establishing aspects of the subject of predication, namely who are the participants and what their roles are in an event, as well as the perspective from which an event is narrated.

An inherent asymmetry therefore exists between 1st/2nd person and 3rd person that is mainly due to the different individuals and entities picked up by their corresponding pronominal and non-pronominal forms. This distinction was first noticed by Forcheimer (1953) and Benveniste (1966), who provided distinct but convergent proposals. Forcheimer (1953) identified morphological generalisations in support of a split between 1st/2nd and 3rd person, such as the fact that 3rd person agreement is often zero, while 1st and 2nd person is normally overt, or that 3rd person is more subject to objective subdivisions such as class, gender and location than 1st and 2nd person are. Adopting a more pragmatic perspective, Benveniste (1966) proposed that, due to their intrinsic reference to the participants in the speech act, 1st and 2nd person pronouns are typically regarded as context-related forms specified for the person features. In contrast, because they refer to individuals that are being talked about and that do not bear active speech roles, 3rd person pronouns (as well as lexical DPs) are said to be specified only for the number feature. Based on this, Benveniste (1966) concluded that 3rd person is a default, unmarked form, as opposed to the marked status of 1st and 2nd person.

1.2. Number

A fundamental distinction exists between person and number features. In contrast to the evident discourse-relatedness of person, the contribution of number to delineating fundamental coordinates of the speech act is more limited. Indeed, number refers to the cardinality of the subject's referent and its interpretation determines whether the subject of the sentence refers to one or more than one entity. To clarify this point, consider a sentence like "The boy reads a newspaper". Here, determining whether one or more than one boy is involved in the reading event does not affect the role the subject has in the speech act, as it would still be a contextually salient entity that does not have any active role in the unfolding of the speech event (a non-speaker and non-addressee).

Across languages, a considerable proportion of nouns vary between a singular and a plural number, although many languages present more complex number systems (Corbett, 2000:20-42) that include dual (for two items), trial (for three items) and paucal (for a small but unspecified number of items) distinctions.

Morphologically, singular is typically regarded as the unmarked, while plural as the marked value of the number feature, based for example on the fact that singular shows more paradigmatic distinctions

than plural. For example, singular pronouns in languages like English and Italian show gender distinctions while plural pronouns do not ($lui_{masc.sg}$/$lei_{fem.sg}$, he/she/it vs. $loro_{masc.pl}$, they).

2. Processing reflexes of person and number agreement

Several studies have investigated the inherently different interpretive properties associated with person using experimental paradigms in which the behavioral and neuro-physiological effects of person and number agreement anomalies were observed during online processing. Overall, the results from these studies show a clear dissociation between the two features that is in line with theoretical analyses.

Compared to number agreement anomalies, in both Spanish and Italian the violation of person agreement has been found to generate more severe and sustained processing penalties (Biondo, Vespignani, Rizzi & Mancini, 2018; Mancini, Postiglione, Laudanna & Rizzi, 2014). Further to this, in an event-related potential (ERP) study in Spanish, subject-verb person anomalies were found to yield N400 effects, as opposed to the LAN elicited by number anomalies (Mancini, Molinaro, Rizzi & Carreiras, 2011, but see Silva-Pereyra & Carreiras, 2007). While N400 effects are typically associated with semantic-discourse processing (see review in Kutas & Federmeier, 2011), LAN effects are functionally interpreted as electrophysiological correlates of the detection of a morphosyntactic anomaly (Friederici, 2011). The qualitatively different ERP effects found in Spanish for person and number anomalies thus corroborate the idea that the two features are differentially relevant for semantic-discourse processing. Along similar lines, the greater amplitude of P600 effects for person compared to number anomalies (Mancini et al. 2011; Zawiszewski, Santesteban & Laka, 2015), and the quantitatively different repair/reanalysis procedure that this effect functionally indexes, suggest that violating person agreement has a greater impact in online processing compared to number. Finally, a recent functional magnetic resonance study in Spanish evidenced significant patterns of activation for person, but not for number anomalies in areas associated with semantic discourse processing, such as the anterior portion of left middle temporal gyrus (Mancini, Quiñones, Molinaro, Hernandez & Carreiras, 2017).

In contrast, experimental evidence on the psychological reality of the asymmetry between 1st/2nd and 3rd person is rather scarce and heterogeneous. In an ERP study, Silva-Pereyra and Carreiras (2007) used 1st and 2nd person pronouns to create number and person violations in Spanish. The results showed that number anomalies with 1st and 2nd person pronouns produced an anterior negativity followed by a posteriorly distributed P600. However, potential confounds could have obscured possible differences between person and number agreement violations in this study. Specifically, 1st and 2nd person singular pronouns were lumped together with other forms whose featural makeup is unclear between a person and a number specification, i.e. 1st and 2nd person plural pronouns. Second, part of the experimental material used by Silva-Pereyra and Carreiras consisted of polite forms of the

type '*Ustedes abren la puerta'* (You$_{2.pl}$ open $_{3.pl}$ the door), which comprise a 2nd person plural pronoun followed by a 3rd person plural verb, an agreement pattern that can be included within the unagreement phenomena (Rivero 2007), which has been be shown to give rise to a different ERP patterns compared to full agreement and full disagreement patterns (Mancini, Molinaro, Rizzi & Carreiras, 2011b). Taken together, these two factors may have given rise to a spurious electrophysiological response that does not permit to truly identify whether person and number agreement violations with 1st/2nd person subjects differ from 3rd person ones.

Using ERPs, Mancini, Vespignani, Laudanna and Rizzi, (2009; see Mancini, 2018) contrasted number agreement violations with 1st/2nd and 3rd person subjects in Italian, as in (1-2) below.

Number agreement violations with 1st/2nd person subjects:

(1) Qualcuno ha detto che io$_{1.sg}$ scrivo$_{1.sg}$ /***scriviamo$_{1}$**$_{.pl}$ una lettera a casa ogni sera
Somebody has said that I write$_{1.sg}$ /***write$_{1}$**$_{.pl}$ a letter home every night.

Qualcuno ha detto che noi$_{1.pl}$ scriviamo$_{1.pl}$ /***scrivo$_{1}$**$_{.sg}$ una lettera a casa ogni sera
Somebody has said that we write$_{1.pl}$ /***write$_{1}$**$_{.sg}$ a letter home every night.

Qualcuno ha detto che tu$_{2.sg}$ scrivi$_{2.sg}$ /***scrivete$_{2}$**$_{.pl}$ una lettera a casa ogni sera
Somebody has said that you write$_{2.sg}$ /***write$_{2}$**$_{.pl}$ a letter home every night.

Qualcuno ha detto che voi$_{1.pl}$ scrivete$_{1.pl}$ /***scrivi$_{1}$**$_{.sg}$ una lettera a casa ogni sera
Somebody has said that you write$_{2.pl}$ /***write$_{2}$**$_{.sg}$ a letter home every night.

Number agreement violations with 3rd person subjects:

(2) Qualcuno ha detto che lui$_{3.sg}$ scrive$_{3.sg}$ /***scrivono$_{1}$**$_{.pl}$ una lettera a casa ogni sera
Somebody has said that he writes$_{3.sg}$ /***write$_{3}$**$_{.pl}$ a letter home every night.

Qualcuno ha detto che loro$_{3.pl}$ scrivono$_{3.pl}$ /***scrive$_{3}$**$_{.sg}$ una lettera a casa ogni sera
Somebody has said that they write$_{3.pl}$ /***writes$_{3}$**$_{.sg}$ a letter home every night.

The results evidenced that the two types of violations elicited early negative effects that were similar in onset and topographical distribution. Yet, the distribution of late positive effects showed to be different for the two types of violations compared to their correct counterpart. Specifically, the processing of number-mismatching 1st/2nd person verbs elicited a late positive effect with a broad distribution that included frontal electrode sites, while the distribution of the P600 effect for 3rd person number violations was predominantly centro-parietal. Kaan and Swaab (2003) proposed that frontal P600 effects are a consequence of increasing complexity at a discourse level of analysis, for instance when the parser is confronted with a great number of referents to be integrated within the same discourse representation. Despite the different syntactic context that characterizes the occurrence of a frontal P600 in Mancini et al. (2009) and in Kaan and Swaab's (2003), one may similarly interpret this effect for 1st/2nd person number violations as a reflection of integration difficulties at a discourse

level. A possible side effect of number violations with 1st/2nd person compared to 3rd person is indeed the involvement of the speech act participants representation, since such an anomaly does not only imply changing the *number* of participants, it also entails changing the *type* of participants involved. Support for the interpretation of frontal positive effects as a result of discourse integration problems comes also from Filik et al. (2008), who report on a frontal P600 effect in the presence pronouns that have no antecedent in the previous sentence fragment (e.g. The in-flight meal I got was more impressive than usual. In fact, she courteously presented the food as well).

Several studies point to a prominent role of number markedness during agreement attraction in comprehension. Attraction effects have been found in both production and comprehension and arise when subject and verb are separated by a local noun that mismatches in number with the subject, triggering erroneous number inflection on the verb, as in "The key to the cabinets *are* rusty". Attraction effects are either only found or are larger when a plural intervening noun (cabinets) follows a singular subject (key), but not a plural one (as in "the keys to the cabinet is rusty") (see Nicol et al., 1997; Wagers et al., 2009 for acceptability and self-paced reading data; Acuña-Fariña et al., 2014 for eye-tracking measures). A similar pattern has been found in production, with a greater number of attraction error being elicited in singular-subject than in plural-subject configurations (Bock and Miller, 1991; Bock and Cutting, 1992; Bock and Eberhard, 1993; Eberhard, 1997). Overall, these findings were taken to suggest that morphologically marked plural distractors are stronger attractors than non-marked singular ones in both modalities.

The effect of number markedness has been also found outside of attraction configurations. In an ERP study, Alemán Bañon and Rothman (2016) reported the P600 elicited by noun-adjective number agreement violations to be larger when the anomalous adjective was marked compared to when it was unmarked (e.g. el coche$_{sg}$ que parecía ***caros$_{pl}$**/the car$_{sg}$ that looked expensive, vs. los coches$_{pl}$ que parecían ***caro$_{sg}$**/the cars that looked expensive). A similar pattern was observed for native speakers of English learning Spanish as a second language.

3. The current study

Overall, the studies reviewed above show a rather heterogeneous scenario concerning the presence of potential differences in the processing of 1st/2nd and 3rd person agreement. Moreover, to the best of our knowledge, no study has so far manipulated person and number within the same experimental paradigm to assess potential differences and similarities between the two features and their inherent markedness asymmetries in the evaluation of grammatical acceptability.

The goal of this study is to bridge this gap by assessing whether the asymmetry between 1st/2nd and 3rd person and between plural and singular values of the number feature modulate the evaluation of

agreement anomalies between subject and verb. To this end, similarly to Mancini et al. (2009), agreement between a pronominal subject and a verb was manipulated to create number agreement violations between 1st/2nd and 3rd person subjects and verb, both singular and plural, as in 3-6 below, resulting in a 2 x 2 x 2 design with Person, Number and Matching as factors.

1. *Singular*

1st/2nd person:

(3) a. Al ristorante di Giovanni normalmente — io **ordinavo/*ordinavamo** dell'insalata.
At the restaurant of Giovanni usually — I **ordered$_{1p_sg}$/*ordered$_{1p_pl}$** some salad
b. Al ristorante di Giovanni normalmente — tu **ordinavi/*ordinavate** dell'insalata.
At the restaurant of G. usually — you **ordered$_{2p_sg}$/*order$_{2p_pl}$** some salad

3rd person:

(4) Al ristorante di Giovanni normalmente — lui **ordinava/*ordinavano** dell'insalata
At the restaurant of G. usually — he **ordered$_{3p_sg}$/*ordered$_{3p_pl}$** some salad

2. *Plural*

1st/2nd person:

(5) a. Al ristorante di Giovanni normalmente — noi ***ordinavo/ordinavamo** dell'insalata.
At the restaurant of Giovanni. usually — we ***ordered$_{1p_sg}$/order$_{1p_pl}$** some salad
b. Al ristorante di Giovanni normalmente — voi ***ordinavi/ordinavate** dell'insalata.
At the restaurant of G. usually — you$_{pl}$ ***ordered$_{2p_sg}$/*order$_{2p_pl}$** some salad

3rd person:

(6) Al ristorante di Giovanni normalmente — loro ***ordinava/ordinavano** dell'insalata.
At the restaurant of G. usually — they ***ordered$_{3p_sg}$/order$_{3p_pl}$** some salad

We expected ungrammatical sentences to elicit lower acceptability patterns compared to grammatical ones. Moreover, we hypothesized that the acceptability of ungrammatical forms could be modulated as a function of the default or marked form of subject pronouns, resulting in two-ways interactions between Person and Grammaticality and between Number and Grammaticality.

In particular, we expected the acceptability of 1st and 2nd person agreement anomalies (3,5) to receive a lower score compared to sentences with 3rd person violations (4,6). Because 1st and 2nd person agreement invokes speech participant roles, its violation should block the assignment of speaker and addressee roles in the sentence, producing a more severe deviance from grammaticality, as opposed to 3rd person violations, where the subject is not associated with any speech role.

Because of its marked status, violations involving plural subject forms (5,6) were expected to cause a greater decrease in acceptability compared to violations involving singular subject forms (3,4).

Finally, if the effects of person and number markedness are additive, a three-way interaction between Person, Number and Grammaticality could emerge, due to the significantly lower acceptability scores for 1st/2nd plural forms compared to both 1st/2nd person singular and 3rd person singular/plural conditions.

4. Methods

4.1. Participants

72 native Italian speakers (center-north Italian variety) were voluntarily enrolled through a crowdsourcing platform in the acceptability judgment experiment (Female=40, Age range=20-52, M=34.49, SD=8.18).

4.2. Materials and procedure

An online platform was created for collecting acceptability judgments on a 7-points Likert scale using Javascript and PHP scripts. Each sentence was prompted at the center of the monitor, where participants had to click on a number on a bar from 1 (totally unacceptable) to 7 (totally acceptable) indicating their perceived acceptability rate of the sentence. Only after the selection of a number, the subject could proceed with another sentence. Neither the possibility of reviewing a previous score, nor the option of skipping an item was given to the subjects. No recording of any of their interactions was performed for users who decided to leave the experiment without completing all items. Before beginning, three practice items were prompted: one fully grammatical (a simple declarative sentence with transitive predicate and a PP modifier), one totally ungrammatical (illegal word order plus agreement violations), one mildly ungrammatical (unexpected PP preposing). After each practice section a brief explanation of the expected performance, according to the grammaticality level of the sentence was provided (no grammatical explanation was provided, but a scoring suggestion was given: 6-7 for the grammatical sentence, 1-2 for the ungrammatical sentence and 3-5 for the mild violation).

A total of 512 experimental sentences, of the type shown in 3-6 above, was created and Latin-Squared into 8 different lists, so that each participant could see only one version of the same item. Each

experimental list consisted of 64 items: half grammatical (matching condition), half ungrammatical (mismatching condition). 1st, 2nd and 3rd person subjects, both singular and plural were evenly distributed across grammatical and ungrammatical stimuli (resulting in 8 items per each condition). Finally, each list included 80 filler items that consisted of sentences with various degrees of grammaticality (e.g. clefts constructions and *wh-* questions).

4.3. Statistical analysis

The *R* platform (R Core Team, 2020) and *lme4* package version 1.1.23 (Bates, Mächler, et al., 2015) was used to perform linear mixed effects statistical analyses to evaluate the significant relationship between fixed factors. Models were first constructed using a maximal random effects structure, then simplified when failing to converge (Barr et al., 2013; Bates, Kliegl, et al., 2015). In the end each model included random effects slope adjustments by subjects and by items. Three factors are considered, *person*, *number* and *matching* (i.e. grammaticality) each consisting of two levels: *3rd person* (reference level) vs *1st/2nd person* for person, *singular* (reference level) vs *plural* for number and *matching* (grammatical, reference level) vs *mismatching* (i.e. ungrammatical) for the matching factor.

5. Results

A significant effect of Matching emerged, with ungrammatical (mismatching) conditions receiving a lower score compared to grammatical (matching) conditions (Match=5.92 vs Mismatch=1.76, t=-28.70, p<0.001).

The matching factor proved to be a significant predictor of the acceptability score (χ^2=7088.8418, p<0.0001), that is, overall, the experimental subjects perceive the disagreement cases very neatly.

As for the Person and Number factors, overall, neither of them by themselves are significant predictors (Person: *estimate*=0.0716, *SE*=0.0705, z=1.015, p=0.3104; Number: estimate=0.0801, *SE*=0.0701, z=1.143, p=0.2531). However, numerical trends emerged showing that 3rd person and singular number respectively receive higher scores than 1st/2nd person and plural number. However, two-way interactions were also found. Specifically, The Person X Matching interaction contributes significantly to model fit (χ^2=8.1543, p=0.01696) with the mismatch condition presenting a significant contrast: 3rd vs 1st/2nd person, *estimate*=0.1311, *SE*=0.0461, z=2.845, p=0.0230.

Similarly, a significant Number x Matching interaction emerged (χ^2=18.072, p=0.0001), driven by the higher scores for the singular matching condition compared to plural matching condition (*estimate*=0.1897, *SE*=0.0634, z=5.467, p<0.0001), while no difference arose in the comparison between the two mismatching conditions (*estimate*=-0.0252, *SE*=0.0449, z=-0.560, p=0.9439); all contrasts between matching and mismatching conditions are strongly significant (p<0.0001).

Finally, three-way Matching X Person X Number interaction is also found that significantly contributes to the model fit (χ^2=21.418, p=0.0003, Figure 1). The interaction was driven by the different impact that the Person and Number factors have on matching and mismatching stimuli. While Number had an impact on grammatical sentences, with higher acceptability (+0.19, z=4.97, p<0.001) for singular (6.02) than plural (5.83) conditions, the effect of Person was visible on ungrammatical sentences, with lower acceptability (-0.13, z=-3.30, p<0.001) for 1st and 2nd person as compared to 3rd. More specifically, considering the grammatical (matching) condition, 3rd person, singular received higher scores than 3rd person plural (*estimate*=0.3467, *SE*=0.0964, z=-3.686, p=0.0056); 3rd person singular was not significantly different from 1st/2nd person singular (*estimate*=0.1692, *SE*=0.0642, z=2.637, p=0.1428) but it is perceived differently from 1st/2nd person plural (*estimate*=0.2017, *SE*=0.0642, z=3.142, p=0.0358). As for ungrammatical (mismatch) cases, a trend towards difference emerged between 3rd person plural and 1st/2nd person plural (*estimate*=0.1758, *SE*=0.0642, z=2.739, p=0.1109).

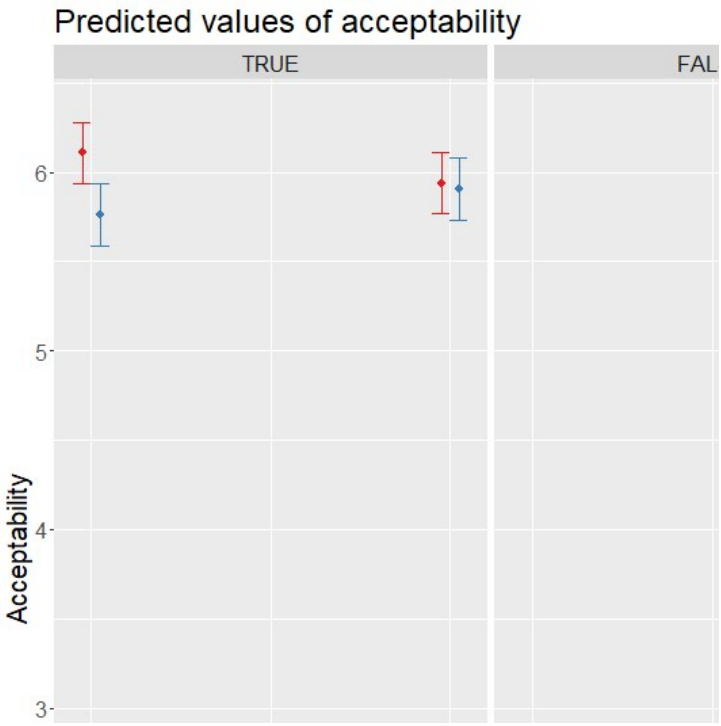

Figure 1. Matching (TRUE/grammatical vs FALSE/ungrammatical) X Person (1st/2nd vs 3rd) X Number (Singular vs Plural) interaction

We also performed an exploratory analysis on acceptability depending on the length of the sentence (the number of words in the sentence were spanning from 8 to 13 words) and the position of the relevant agreeing verb (the predicate was placed from the 4th to the 10th position).

The results showed that neither sentence length (χ^2=0.4461, p=0.5042) nor the agreeing verb position (χ^2=1.3622, p=0.2432) improved the model fit. However a significant Match X Position interaction (χ^2=20.275, p<0.0001) indicated that the later the predicates appear, the lower was the acceptability in grammatical sentences, while in the ungrammatical cases the trend was the opposite, though less marked (Figure 2.a).

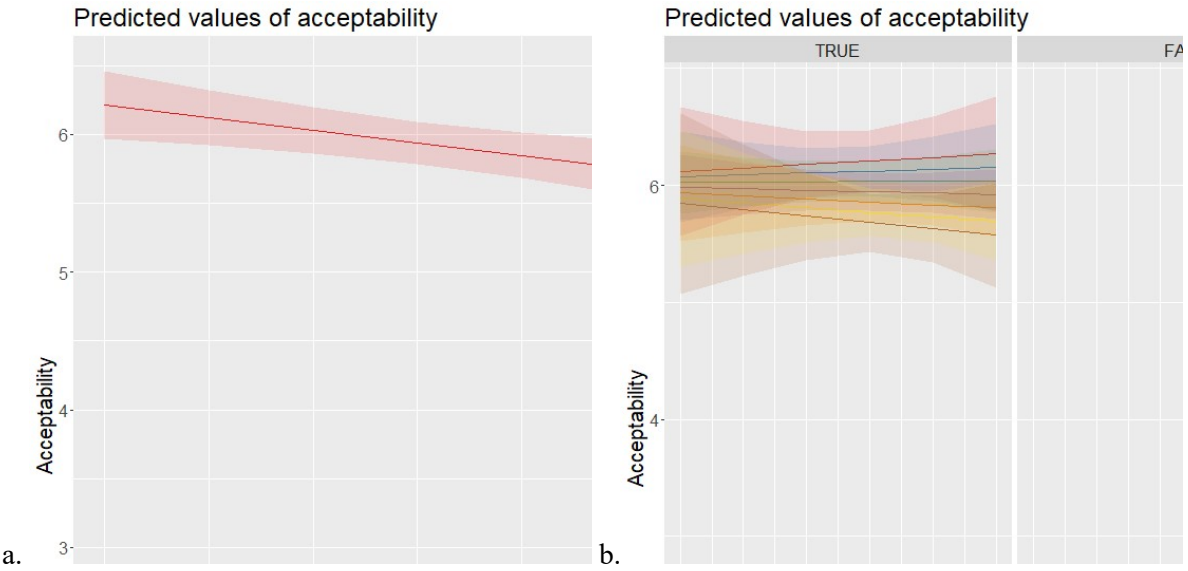

Figure 2. Acceptability in Matching X Verb Position interaction (a) and Matching X Verb Position x Sentence Length (b)

Notice that, despite the fact that sentence length does not significantly contribute to the two-way Matching X Verb Position interaction (χ^2=0.3164, p=0.9887), the numerical trend indicates that the difference is especially marked in longer sentences when the sentence is grammatical (i.e. the closer is the predicate to the beginning of the sentence, the higher is the acceptability rate), while it quickly disappear for ungrammatical (mismatch/matching=FALSE) sentences (Figure 2.b).

6. Discussion

The results confirm that disagreement is easily perceived as a factor inducing a robust degradation in acceptability. Differences between 1st and 2nd person agreement vs 3rd person agreement suggest that the second is less difficult to process and, when singular (then in a context in which both person and number are set to default), it produces the highest acceptability rates. Plurality cancels this advantage in grammatical sentences. This might indicate that the evaluation of any non-default feature (plural number and 1st/2nd person) incurs a processing cost, as shown by the higher acceptability for singular and 3rd person conditions in matching environments

In the agreement violation condition (Mismatch), the perception of the mismatch overwhelmingly reduce any possible asymmetry between singular and plural number, that but it still insignificantly rewards the 3rd person cases over 1st/2nd person.

A processing fact seems interesting to be observed: the later in the sentence the pivotal subject-verb agreement dependency appears, the lower is the acceptability rate. This indicates that the predicate somehow relieves the computational burden. The longer is the sentence the stronger is this effect, but with opposite direction in grammatical and ungrammatical sentences: grammatical ones pay a fee for the later predicate in a way that is directly proportional to the sentence length, the opposite happens with the ungrammatical ones which are scored pretty more and more uniformly while sentence length increases.

7. Conclusion

The results of this study confirm the intricate relation between person and number in agreement suggesting that the "single checking" position solution is insufficient to account for the asymmetries revealed also in off-line acceptability measures. Plural number and 1st/2nd person seem to contribute significantly with an extra processing cost in grammatical sentences, but this cost is not additive: we would have expected 3rd person plural agreement to be rated higher than 1st/2nd person plural agreement, but this is not the case. We conclude that the cost of a plural abstraction might be computationally similar to that of accommodating a 1st or 2nd person subject in the argumental structure of a verb. Future studies should investigate whether a similar asymmetry also emerges during online sentence processing.

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